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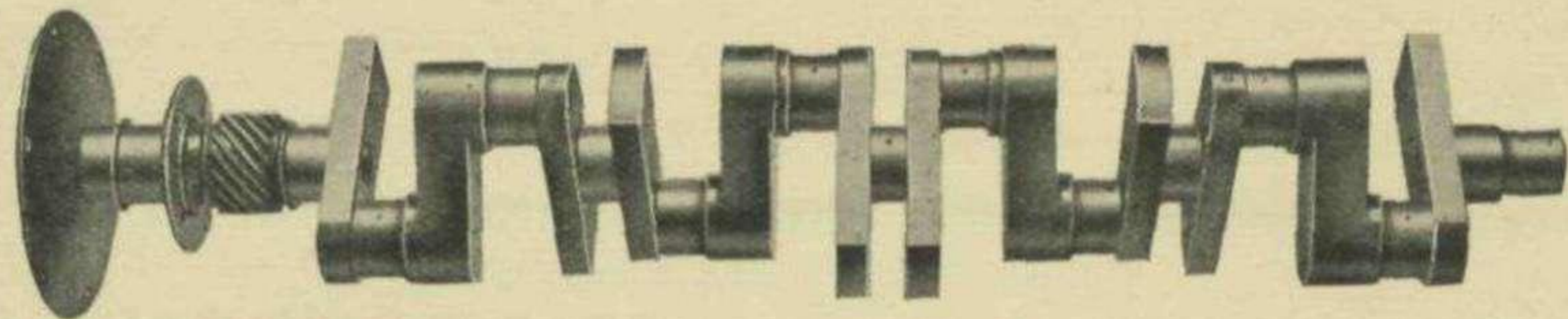
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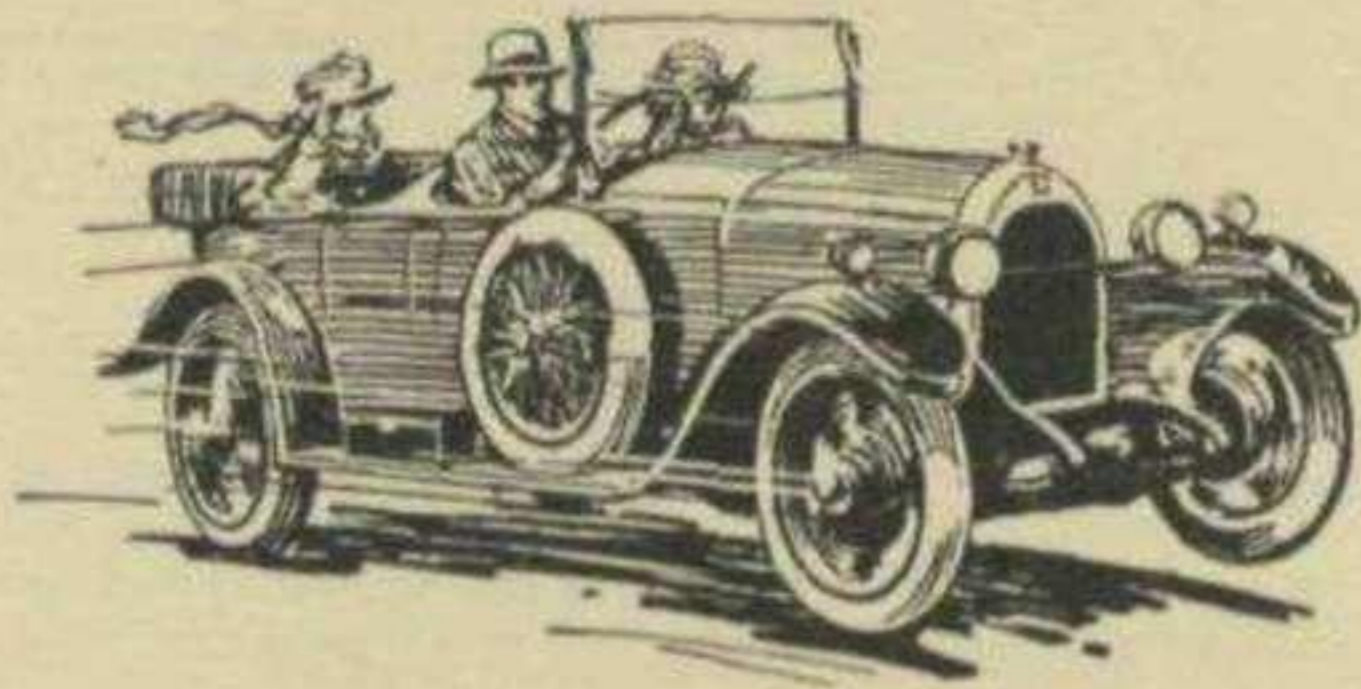
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# The BROOKLANDS GAZETTE

No 1

JULY, 1924

VOL. 1

The only Organ devoted entirely to the Sport of Motor Car and Motor Cycle Racing and Competitions.

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## Editorial Notes.

In introducing a new journal, it is usual to commence with a word of apology. We feel that very little apology is called for in respect of the appearance of this publication. We are confident that THE BROOKLANDS GAZETTE will make its own appeal to many thousands of keen motorists. This journal is not merely "another motoring paper" added to the several which already seek public support. It is something entirely new, and something which we are convinced has been very much wanted. It regards motoring from a new angle; it seeks to meet to the full the requirements of those whose chief interests are in the sporting and competition side of the movement. We have more than our own conviction to encourage us in thinking that a definitely sporting motoring journal is very much wanted. Before embarking upon the very substantial task of producing this journal, we took opinions from those whose views will always inspire respect from all sections of the motoring public and trade. The result of our enquiries was more than approval for this venture: it may be said that the proposal of THE BROOKLANDS GAZETTE was received with a burst of enthusiasm.

\* \* \*

With due modesty we would claim to meet far more than "a long felt want." We are confident that with the support of a large circle of readers and the benediction of those who control motoring sport and the motor industry, this journal is going to widely extend the general appreciation of motoring. Motor racing and competitions in general are the life blood of motoring evolution. The motor car and the motor cycle of to-day are largely the excellent productions motorists know them to be, in virtue of

### NOTICE TO CONTRIBUTORS.

All contributions, whether literary, artistic or photographic, will be carefully considered by the Editor. A stamped, addressed envelope should be sent with every contribution, and the Editor will endeavour to return all matter he is unable to accept. Neither the Editor nor the proprietors are responsible for the loss of any contributions.

### NOTICE TO CLUB SECRETARIES.

Club Secretaries are specially invited to send the Editor paragraphs about the activities of their Clubs, and, in particular, notice of forthcoming events. All reports of competitions, meetings and other events should be sent to the Editor as early as possible, and must be received by the 15th of the month, to ensure attention for the next issue. Address contributions to: The Editor, BROOKLANDS GAZETTE, 65, Victoria Street, London, S.W.1.

## EDITORIAL NOTES—continued

the refining influence of strenuous competitions. By concentrating our main attention upon such competitions, and thus helping to foster and develop them on sane and practical lines, we hope to do more than provide fine sport for those who participate in competitive motoring, and trust that we shall be serving in no small measure the larger cause of the improvement of motor vehicles to the benefit of multitudes who would themselves never enter for a motoring competition.

\* \* \*

It may be said that other motoring journals have done this in the past. They have, and all glory to them. But in these advanced days there are new ways of looking at things, and we hope to present to the motoring public something quite fresh and original in motoring journalism. Although we hold our vocation in the encouragement of the industry and the evolution of motor vehicles in no low esteem, our first duties will be to interest, instruct and help our readers. We trust they will find from this first number that we do not fail in these particulars.

\* \* \*

Amongst the contributors to the present issue, are those whose opinions carry great weight in the widely varied aspects of motoring with which they deal. It is our intention to present in subsequent numbers, similarly authoritative views on all that affects our readers' interests. But we would emphasize, in saying this, that *THE BROOKLANDS GAZETTE* will be far more than a compendium of knowledge on motoring sport. It will be essentially a newspaper. Current sporting events in this country and abroad will be regularly reported, reviewed and illustrated, and the journal will provide a faithful mirror of all that is happening in the realms of motoring sport and development. The belief that these important sides of motoring have not hitherto been catered for in the manner they deserve, is our chief inspiration in launching this journal. Another important phase of our activities will be reviewing of new cars, accessories and equipment. This we shall do in all cases, only after personal trial of the products concerned, and our criticism of them will be entirely without fear or favour. *THE BROOKLANDS GAZETTE* will, also, provide a platform upon which everything of interest to keen motorists can be freely discussed as amongst our readers. Space

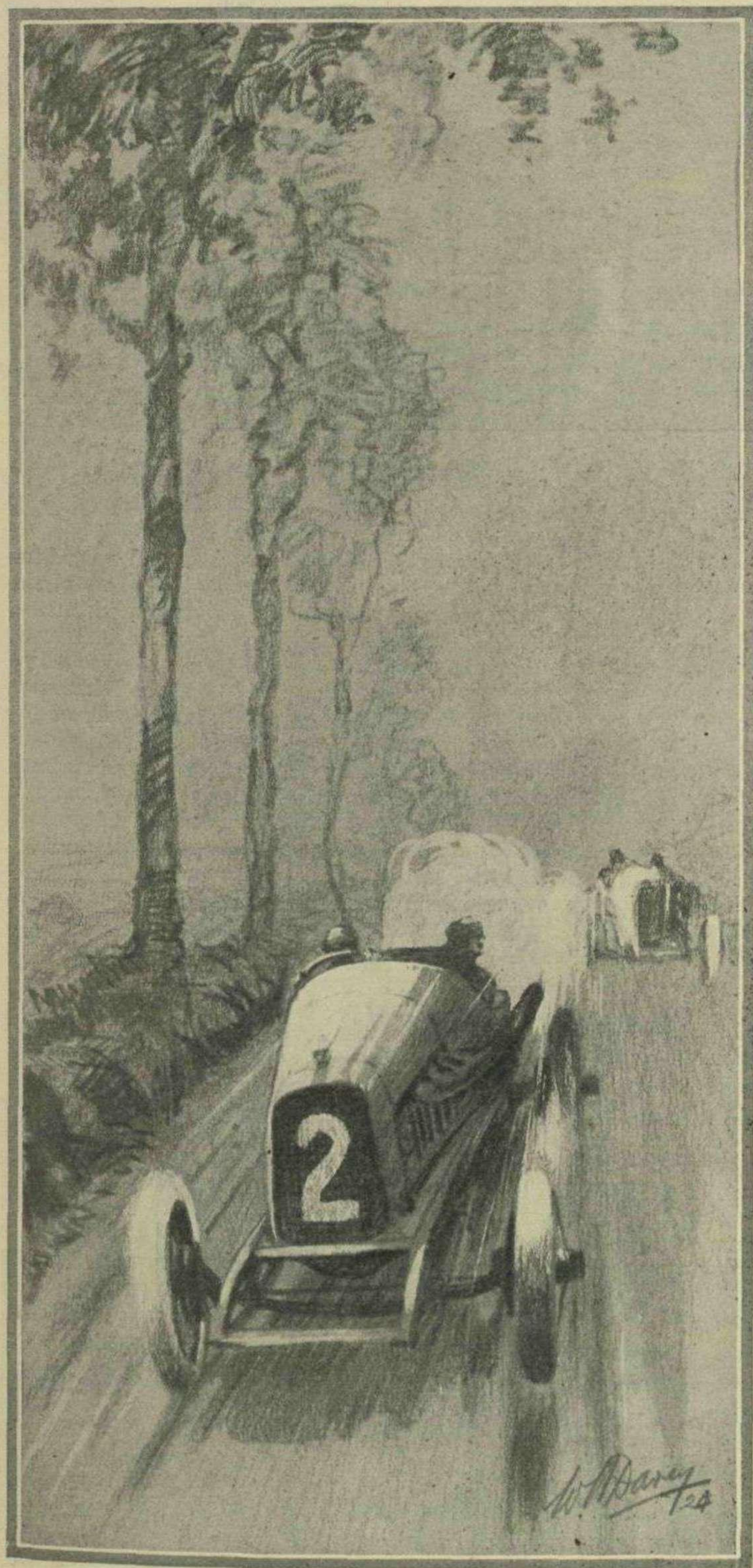
will be reserved in each issue for the publication of notes about the motoring clubs and other organisations, both large and small, and in this connection we venture to think that provincial and overseas motoring will thus have better publicity facilities than has hitherto been accorded it. We have here touched upon but one or two activities to which we shall address ourselves. We trust that *THE BROOKLANDS GAZETTE*, following upon the favourable reception it is assured, will show consistent improvement as time goes on.

\* \* \*

There is just one more point we should like to touch upon in these preliminary notes. It should be explained that *THE BROOKLANDS GAZETTE* is an entirely spontaneous and disattached enterprise. This journal is not published under the auspices of the proprietor of Brooklands Track, of the Brooklands Automobile Racing Club, or of any other public body. The fact that it has the official benediction of the B.A.R.C. and the enthusiastic approval of the majority of its members, is doubtless an additional augury for its success, and is certainly one of the encouragements which we most appreciate. But let it be remembered that *THE BROOKLANDS GAZETTE* is *not* an official B.A.R.C. publication. It is free to praise and to blame anybody, even the august body that holds court at Chronograph Villa!

\* \* \*

It will, of course, be understood, that the attentions of this journal will *not* be confined to events at the Weybridge track. It will deal in record, in picture and in criticism, with motoring activities on road and track, on water and in air everywhere. It is named *THE BROOKLANDS GAZETTE* because the word *Brooklands* is synonymous with motoring sport, wherever it is held. Although it is not everything we should like it to be, Brooklands Track was certainly to a large extent the cradle of motoring sport in this country. By the manner in which events at the Weybridge course have contributed to the general development of motor cars and motor cycles, and, indeed, of the internal combustion engine as applied to many other uses, the word *Brooklands* has a world-wide significance. We trust that *THE BROOKLANDS GAZETTE* will commend itself to all sporting motorists, as having no less a vocation.



*A ten mile straight —  
— foot down hard —  
dust for the other fellow —  
that's life!*

*A Continental impression by a  
BROOKLANDS GAZETTE artist.*



## Some Thrills with "KIM II"

by Capt. A. Frazer Nash  
A.M.I.A.E

*The famous road and track driver relates some of his exciting experiences at the wheel of the world's fastest cyclecar.*

Kim's engine started life at the old Hendon works of the G.N. Company in far-off 1913. Even as a puppy, it gave great promise—you see it had a pedigree behind it! But it was not until after the war, when its compression and timing had grown up and it had outgrown the indiscretions of puppyhood, that it attained to its full bark—and bite.

In 1919—we had learnt a few more things about high speed efficiency by then—tuning started to produce such excellent results, that I decided to buy Kim I. a revolution indicator. Several were tried, but they all went off the scale before giving useful information. Kim couldn't stand the indignity of being "clocked" by them at all. Ultimately I obtained one reading to 5,000 revs. On my reading this with half open throttle, the engine was hastily stopped, and the cast iron flywheel changed for a steel one. This was finished just in time for the Sutton Bank Climb of 1919, and I started out by myself for York in the pouring rain. On the way up I was anxious to compare the readings of speedometer and revolution indicator as a check, and on a nice smooth wet road I started trying the readings well up the scale. I had just got to 3,000 revs. on the indicator—equals 60 of speedometer—when on glancing up suddenly, I saw to my horror a sharp turn to the right over a bridge! No chance to pull up straight; so I put on brakes hard, and waited for what I expected (and really deserved). We slithered round, ran along backwards and sideways, and finally spun off the road on to the grass at the edge of the bend, where we stopped, still the right way up. I got out and inspected the car, expecting to find the tyres off and wheels buckled. To my surprise nothing was damaged at all, and I proceeded on my way resolving that a revolution indicator was a dangerous tempter. The skid on Sutton Bank corner the next day was so gentle by comparison that I have no memory of it except from a photograph which an enthusiast subsequently sent me.

The next outstanding memory associated with Kim that I have, was of the August Bank Holiday Brooklands Meeting in 1920, where, I believe, I was scratch man—at any rate, there was a fairly large field well away before my turn came to start. Since the reopening of the track, I had been very successful, as I had won every race in which I had finished, and the only one in which I had not finished was due to a broken piston. I was anxious to keep this up. Bedford on the Hillman had, however, been improving considerably, and I doubted if I could catch him; however, I determined to try, and jumped off the mark at the fall of the flag. In the first lap I had overhauled a few of the speedy ones, and on reaching the hill on the high banking in the second lap I passed all the rest except the limit man, whom I knew I could catch, and Bedford, who was still some way ahead. His car, however, was heavy, and the hill slowed him more than I thought, so that on rounding the bend after the Members' Bridge I found him right in front of me and fairly high on the banking.

### An Historic Skid.

It was then raining slightly, and a few patches on the track had got rather slippery. I pushed Kim's nose well up the bank so as to be in line to pass him, when to my surprise, Kim slid down the bank again immediately



CAPTAIN FRAZER-NASH HAS EXCELLED IN HILL CLIMBS WITH "KIM II."

## SOME THRILLS WITH "KIM II"—continued

behind Bedford, so that I had the benefit of his slip stream. Feeling the force of the wind broken, Kim fairly leapt up from 83 or thereabouts to well over 90, at which speed I was soon overhauling Bedford, and as we were now nearly on to the railway straight a win seemed certain. I steered out again to pass, but just at the same moment, Bedford turned out slightly, probably to avoid a wet patch. The extra turn proved just too much. With a terrific "swish" Kim spun clean round and dashed at the fence backwards. I felt a quick succession of jars—and then stillness. The next I was conscious of was being upside down, still in the car, with, of course, the car on top of me; a broken steering wheel was in front of my eye and I was quite unable to move.

I then notice a slight "hiss" of water, or possibly *petrol dripping on something hot!* I then had a space in which to reflect upon the possible effects of fire in this position. Nothing happened, however, and soon the cheery face of Mr. S. G. Cummings appeared in the only piece of daylight I could see, and he, together with one of the Brooklands Police Inspectors, tipped the car over enough for me to wriggle out. On examination I found my only damages were a broken collar bone, and a few cuts and bruises. Kim's, however, were far more serious, in fact, that was the end of Kim I. Except, happily, for the engine, everything was badly bent or broken. The shock had even broken the aforesaid revolution counter, and my own forehead had broken the steering wheel (I carried the marks of the binding cord over one eye for months). While I was in bed for the few days following, a new chassis and body were built up, and Kim's engine was got in just in time for the September Meeting, which was Kim II.'s first public appearance. Here the revived Kim and I were again successful. I decided, after this, however, that I would use a longer wheelbase for track work, and reserve Kim for hill climbs.

### A Narrow Shave.

The next incident of note, so far as I was concerned, occurred at Chatcombe or Kingsdown, I really forget which. On this occasion I was out to try and beat the motor-cycle record. I knew I was all right for the car record, barring accidents, I therefore did the fastest run up I could manage, I was travelling at 76 to 78 near the top when I saw that although the hill was clear up to the finish, a lot of spectators were right across the road just behind. They were all watching, however, so I did not ease up to any extent as I knew they would get out of the way as I came to them. This they did, but behind them a car was turning round in the road about 40 yards after the finish. Awkward moment! No chance of stopping or even slowing to any extent. Luckily the car was on the move, and its driver opened his throttle hard, so that I just managed to get by—a difficult enough matter, as I suppose I was still moving at about 60, and the surface was crowned and slightly loose. However, Kim II. held the road nobly, and in due course pulled up still on the road and on four wheels.

Another little incident was the one illustrated at the beginning of these notes. This occurred on Shelsley



CAPTAIN FRAZER-NASH AT THE WHEEL OF "KIM II."

Walsh in 1922, and was merely an unlucky skid into the bank, due to the surface on the corner having loosened since I inspected it earlier in the Climb. On this occasion the car cannot have tipped any more than shown in the photograph, and it came back on to its wheels quite comfortably. A quick glance assured me that the back wheel, though buckled, was still serviceable, and I carried on. Unfortunately a front tyre had also come off the rim all round except at the bolt valve, and the climb was continued with this alternately flapping the road and the steering rod, which, of course, limited the speed for the rest of the hill and spoilt the time.

### That Significant "Crack."

Speaking of Shelsley, funnily enough, another incident occurred in the year following this, although it did not actually happen until I was going back after the event. I was following some friends along a strange road when, finding the going very difficult on account of dust, I eased up slightly. After half a mile I realised that I was too far behind, so I accelerated to catch them up. I had just got into a thick cloud of dust when I found a dead right angle corner in front of me. I could not pull up, so tried to turn, but skidded all four wheels on the dust and we slithered sideways into the grass bank, which was about nine inches high. As Kim II. was skidding sideways it could not mount the bank, and therefore tipped over and stopped completely upside down, with me half inside. I tried to wriggle out, but this only made Kim's steering wheel, which was taking most of the weight, drop down another inch. *I felt something crack inside me!* Fortunately my friends had had a little difficulty with the corner themselves, so waited to see me come round. As I did not appear, they came back, and helped me out. Except for the steering wheel, Kim was practically undamaged, and I was able to finish the journey home without further repairs. I did not find out for three days that the click I had felt was a rib "gone," but it soon joined up again all right.

The foregoing incidents have been picked from memory at random, and only cover a small proportion of the "thrills" which I have experienced.



# Motor Cycling at 113 Miles an Hour

*by C.F. Temple*

*What does it feel like to hurtle round Brooklands Track faster than anyone else has ever done it on two wheels? The rider of the victorious Montgomery-British-Anzani records some impressions of present day "top-notch" racing.*

**M**OTOR cycling at one-hundred-and-thirteen miles an hour is certainly very spectacular to the onlooker, who, as is often said, "sees most of the game." This is particularly so when the machine passes within a few feet of him, as it frequently does when observed from the small grand stand adjoining Vickers' sheds at the fork of Brooklands track. It is then that the terrific speed is realised, and appreciated by the keen spectator.

From the rider's point of view, short distance records, in which the highest speeds are attained, are not particularly thrilling or interesting. The real *joie de vivre* is most keenly felt in a high lapping speed, such as is obtained by the back-markers in a handicap race.

In handicap events, one is faced at the outset with the tough proposition of catching the field; and having achieved this object, of the gratifying but responsible job of steering past them one by one. When this has been successfully accomplished, the most difficult and, to my mind, the most thrilling moments occur. The final "scrap" with the leader of the limit men then takes place. It is then that one crouches closer to the tank and talks to one's pet machine whilst endeavouring to get the final ounce of power from it. If one is lucky, there follows the exhilarating joy of flashing over the line as winner—most probably only by a few yards.

During the progress of such a race there is far more to do than merely to sit tight and steer. One must concentrate chiefly on two points. Firstly, there is the running of the engine and the behaviour of the various components, such as the oil indicator, "rev." counter, action of front forks, speedometer, and condition of the front tyre—the latter being a very important factor on a single track machine, as I have before now discovered to my cost. Secondly, one must give lively thought to the track, where and when to leave and pick up the bankings, having due regard to the disposition of the other competitors, combined with a judicious selection of the best course over the bad sections.

## Safety in Speed.

Obviously some remarkable quick thinking is often necessary in this connection. When one considers the speed at which the ground is covered, at times approximating to 175 feet per second, one can appreciate that it would probably be a fatal error to under estimate even minor necessities.

The very rare occurrence of spills goes to prove that, generally speaking, high speed racing men have full control of their faculties, and are capable of using them to the best advantage with lightning-like rapidity.

Happily, as I have said, spills, and especially fatal ones, are very rare at Brooklands. I myself am firmly convinced of the fact that there is less danger of injury in being thrown from a machine at high speed than at a moderate speed of, say, seventy miles an hour. This may sound very paradoxical, but statistics, coupled with the opinion of the medical officer of the track, seem to justify my opinion.

It has been my misfortune to be forcibly removed from my machine on three occasions, at eighty, ninety and one-hundred-and-five miles an hour, the latter two spills occurring within half an hour of each other. Needless to say at the time no comparisons were made, but I have since arrived at the following conclusion:—At eighty miles an hour the machine was not rideable, nor the rider inclined to ride again, being somewhat "cut up" about the matter in more ways than one. On the occasion of the "double event," however, the machine was ridden back to the paddock, and after being treated for gravel (or concrete) rash, I was able to drive home, though certainly I had had enough for one day. It is interesting to note that each of these three spills were caused by front tyres bursting, which accounts for earlier traces of anxiety in this article in respect of front tyres.

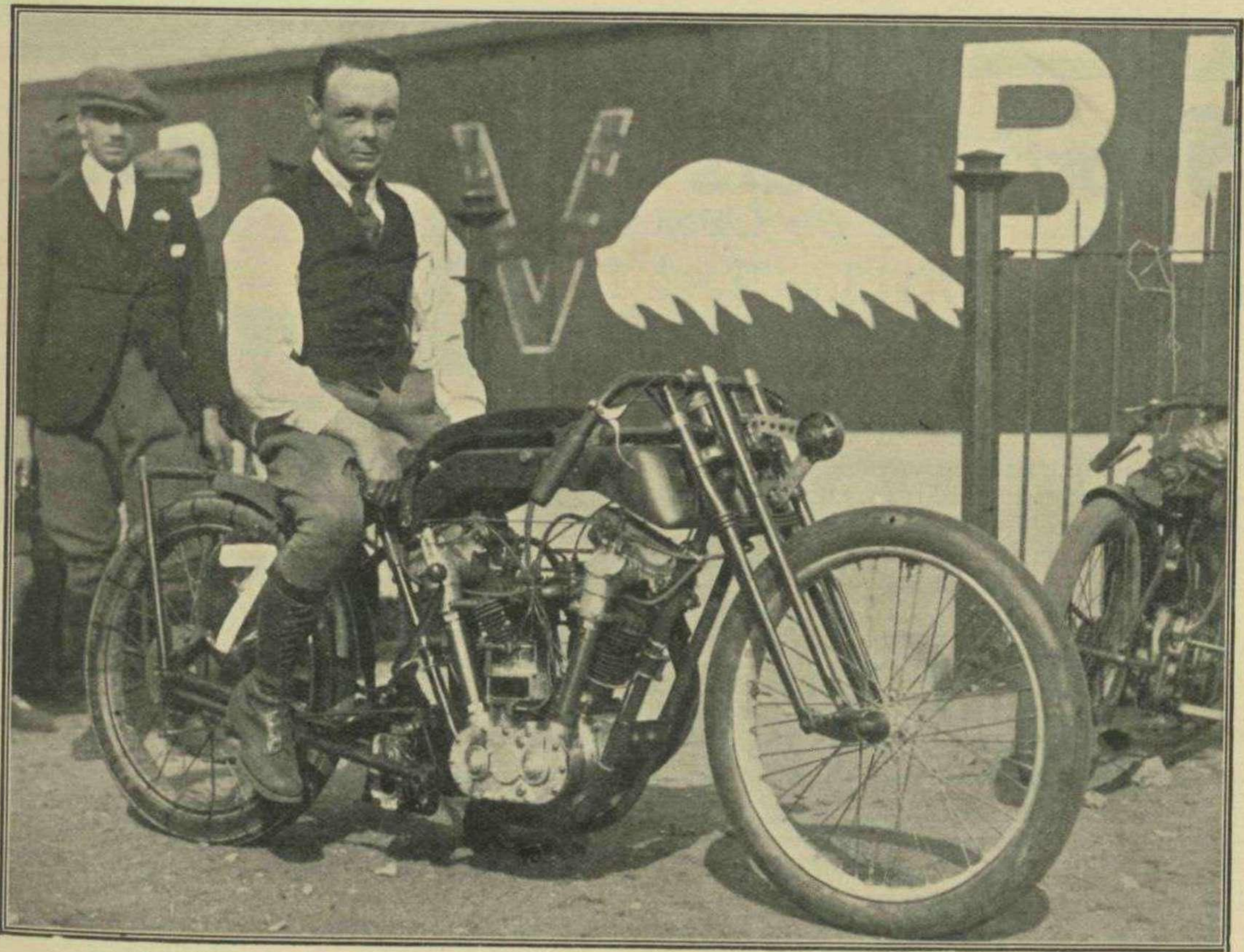
Referring to short distance record attempts, there are two phenomena which impress themselves on my mind.



## MOTOR CYCLING AT 113 MILES AN HOUR—continued.

The first being the long time it seems to take to cover such a small distance as a kilometre, whilst to the spectator it is a case of "Here he comes!" "There he goes!" "It's all over" and "Has he done it?" Secondly, whilst travelling along the railway straight and after striking a bump the machine feels as though it is suspended in the air, and quite stationary for a fraction of a second, until the back wheel makes contact and is driving again. So that really, to the rider, the whole distance seems to be a series of jumps, with intermittent stationary patches!

In view of the recent controversy respecting the new silencing regulations which are being enforced at Brooklands, a few remarks on their effect on engines and speeds may not be out of place. It is generally agreed that to fit a silencer to an engine that has been designed to run with an open exhaust, is bound to be detrimental to the speed results obtained, because the free flow of exhaust gas is impeded, and again, through having to force an additional face area through the air, resistance of which absorbs a certain amount of horse-power. In view of the new restrictions I am convinced that as



C. F. TEMPLE ON THE MONTGOMERY-BRITISH-ANZANI ON WHICH HE HAS EXCEEDED 113 MILES AN HOUR.

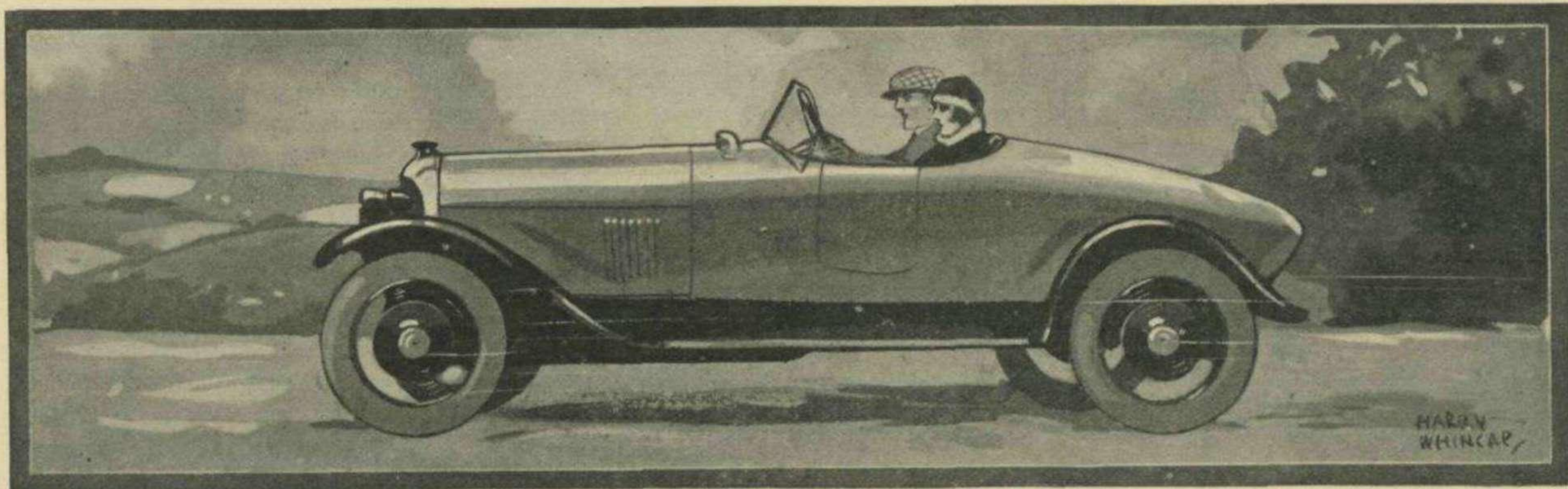
### The Vital Test.

There is no doubt that the lapping speed is of the most importance, as a test for an engine, both from the designer's point of view and that of the man in the street, to whom the lapping engine is finally delivered with modifications, as a standard product, this being the ultimate aim of all designers. With the engine I naturally include components. This being a period of high efficiency and high revving engines, transmitting enormous power, tyres are also called upon to resist tremendous strains and wear, and it is essential that they should be of perfect design and the highest quality. It may, in fact, be said that by far the highest percentage of races and reliability trials are won or lost on the degree of tyre efficiency.

a record breaking track, Brooklands will be severely handicapped, particularly for short distance records. It is quite obvious that if a record can be put up at Brooklands under the present silencer regulations, the same machine can produce a better result on the Continent, where straight roads, superior surfaces and no restrictions exist.

In my opinion motor cycle speeds will continue to advance. They are controlled by (1) contact surface, (2) tyres (lighter tyres will be required for higher speeds), (3) streamlining. In the case of any motor cycle, streamlining is a difficult proposition, but it has not yet been seriously tackled.

New types of engines will doubtless be evolved in the near future, and speeds of 150 miles an hour will, I believe, be attained at no very distant date.



# Sporting Cars on Road & Track

*By 'Open Throttle'*

No.1, The Three Litre Bentley

THE sporting car, as a class, has characteristically more distinction than that possessed by touring types. Being essentially out of the ordinary, and representing the result of concentration upon a design intended to emphasise particular motoring qualities, the sporting car usually has quite an individuality of its own. Some sporting cars, of course, are much more conventional than others; whilst there are those which seem to stand quite apart from orthodox standards.

In the latter category one may place the three-litre Speed Model Bentley. This car embodies all the qualities which one has come to consider essential in a sporting car. In addition, it has features and characteristics quite its own.

A brief review of the chassis reveals at once how interesting a proposition the Speed Model Bentley is, and this opinion is vastly enhanced when one takes the car for a trial on the road.

The engine is a four-cylinder monobloc of 2,996 c.c. capacity and 15.9 h.p. on the R.A.C. rating. Its design has much originality, which has been well justified by the results obtained. There are two inlet and two exhaust valves in each cylinder, arranged in the head and operated by a totally enclosed overhead camshaft and rockers, running in oil. Both crankshaft and camshaft are carried in five bearings. The pistons are of aluminium, designed for high compression service. Cooling is by pump circulation controlled by an automatic thermostat. Ignition on a sporting car is, of course, a factor demanding the most careful attention. One usually has to "drive on the spark" more than is requisite on a touring car, and if one desires to obtain really the best running from the Speed Model Bentley one makes no exception to this rule with it. On this car one finds *two* M.L. high-tension magnetos, having a synchronised firing point control. This system

of dual controlled magnetos enables one to obtain particularly effective ignition. Lubrication is by pressure to the main bearings and big ends, and by splash to the pistons and gudgeon pins. There is a pressure lead from the main oil supply to the hollow crankshaft, through which the camshaft bearings, cams and valve rockers are lubricated.

Carburation is by a five-jet water-jacketed Smith-Bentley carburetter. A notable point is that a petrol consumption of 25 m.p.g. at 30 m.p.h. is guaranteed. The speed model Bentley, considering its wide capabilities, is not under any condition excessive in fuel consumption. The clutch is of the inverted cone type, lined with Ferodo. It has compensated withdrawal mechanism automatically lubricated, and there is a special automatic lubricator for the clutch spigot. The four-speed gear-box gives ratios in the forward speeds of 9.35 to 1, 5.78 to 1, 4.72 to 1, and 3.53 to 1.

It is operated by a simple right-hand gate change carried on an extension of the box. The frame of the chassis is of particularly strong construction, and does not rely on the engine or gearbox for part of its bracing. Double Hartford shock absorbers are fitted to the back axle and single to the front. There are oil lubricated Wefco gaiters on all springs. Steering is by worm and wheel.

In a car of such advanced design as the Bentley, one naturally expects to find front wheel brakes, and the system of fully compensated internal expanding brakes operating on all four wheels and controlled by pedal is very effective. The hand brake operates direct on the rear wheels. Wear on the four wheel brakes can be taken up by a single adjustment.

The tank holds eleven gallons of petrol, and a two-way tap near the filling cap gives access to a reserve supply of two gallons. The cardan shaft is hollow and is loaded with oil through a plug, this reservoir providing

## SPORTING CARS ON ROAD AND TRACK—continued.

an oil supply for the back universal joint. Chassis lubrication is by oil, supplied from an oil-gun through screwed oil plugs. The only grease cup on the chassis is situated on the water pump. After the chassis has been lubricated it can be run for three months of normal mileage without further lubrication, apart, of course, from the engine's requirements.

The wheelbase of the sporting Bentley is 9 ft. 9½ ins., and the wheel track 4 ft. 8 ins. The weight of the chassis is 19½ cwts., and it runs on 820 × 120 m.m. tyres. The annual tax is £16.

From the foregoing it will be appreciated that the Speed Model Bentley is a particularly interesting car. Our road experiences with this model, although not at the moment as extensive as we should like, have convinced us that this car must possess a fascination for every sporting motorist.

The sporting Bentley is naturally a fast car. But that is by no means the sum total of its outstanding attraction. Very few sporting cars are really docile in control, many are not at all comfortable to ride in. The Speed Model Bentley is a happy exception to this too prevalent rule. We drove the Bentley quite comfortably on top gear at an exceptionally low speed, and found it very docile in traffic and those places wherein "sporting" characteristics are not over appreciated. Owing to its high gear range one must, of course, remember that the four speeds are there to be used. Gear-changing is so easy a matter, however, that one finds not the smallest objection to always starting on first and to a fairly frequent use of the lower ratios in traffic. On each gear the car is instantly responsive, its life and acceleration under all conditions being admirable.

There is one feature of the Bentley that may be described as unique, and to this we would give due prominence. How many sporting cars, or cars of any sort, will do seventy miles an hour on second gear? Their number must be very few indeed. The Bentley, however, makes light of this. One can speed up in the ordinary way on the successive gears until one is going along smoothly and comfortably at, say, forty-five miles an hour on top gear. One then changes down direct to second gear, missing third—and things begin to happen! With a slight pressure on the accelerator one can then speed up the Bentley in a few yards to fifty, fifty-five, sixty, sixty-five, and seventy quite easily—all on second. The leap forward when the increase of engine revolutions is permitted by the sudden change from top to second speed, is a thing to be experienced to be appreciated. The acceleration is quite remarkable, as remarkable as the fact of changing down at forty-five miles an hour itself. The Bentley will hang on to round about the seventy mark on second gear indefinitely, and the change down at speed with a quick double-clutch is not unduly difficult.

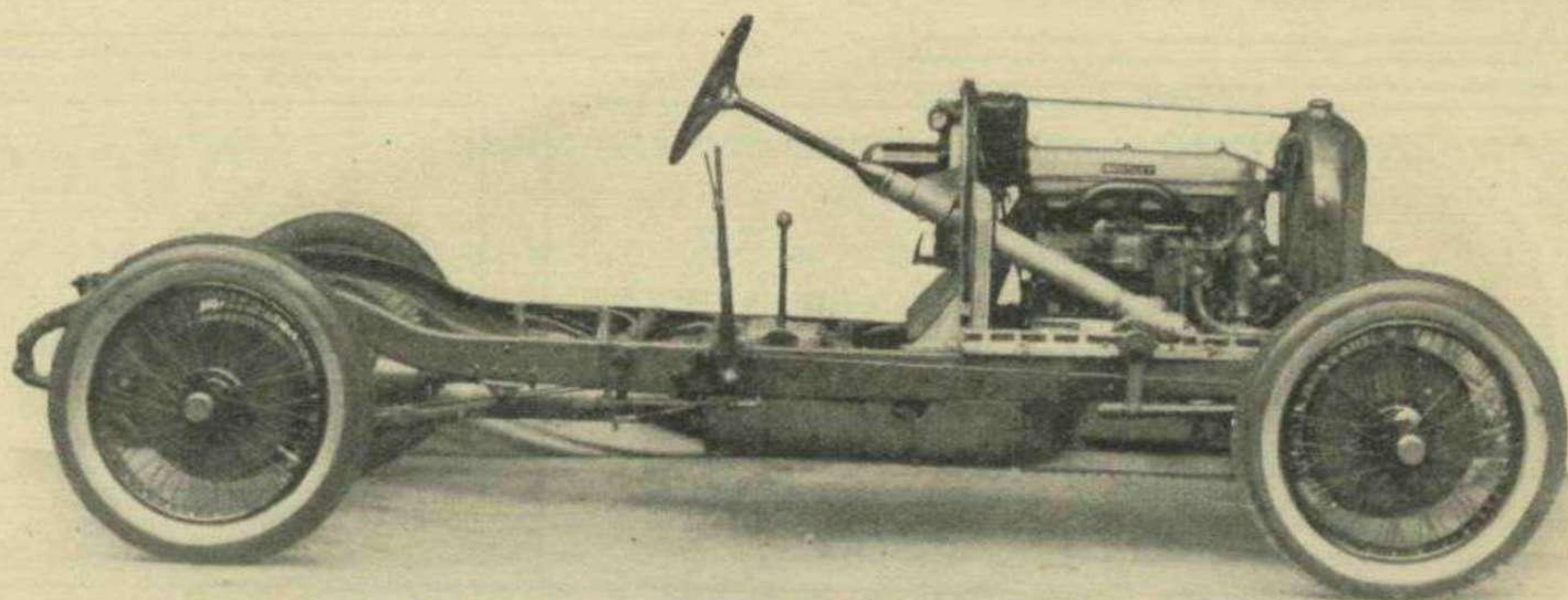
One can change into top at practically any speed, slow as well as fast, and the Bentley will attain the neighbourhood of the eighty mark without much forcing.

Steering on the Bentley is delightfully easy, comparable in its comfort to that experienced on a high quality light car. The four-wheel brakes, operated by pedal, are remarkably powerful, and very easy and smooth in operation. Although there is not an over abundance of seating room the Speed Model Bentley is quite comfortable to ride in.

The electrical and other equipment is very complete, and the general lay-out of the car very pleasing to those who desire a high quality sporting vehicle which is quite practicable for ordinary touring and exceptionally attractive amongst sporting designs for town and general use.

The price of the Speed Model Bentley with four-seater body is £1,125 and with two-seater body £1,100, purchasers being afforded the option of choosing the colour of body and upholstery. The manufacturers are Messrs. Bentley Motors, Ltd., 3, Hanover Court, Hanover Street, London, W.1. The extensive Bentley factories are at Cricklewood, London, N.W. 2.

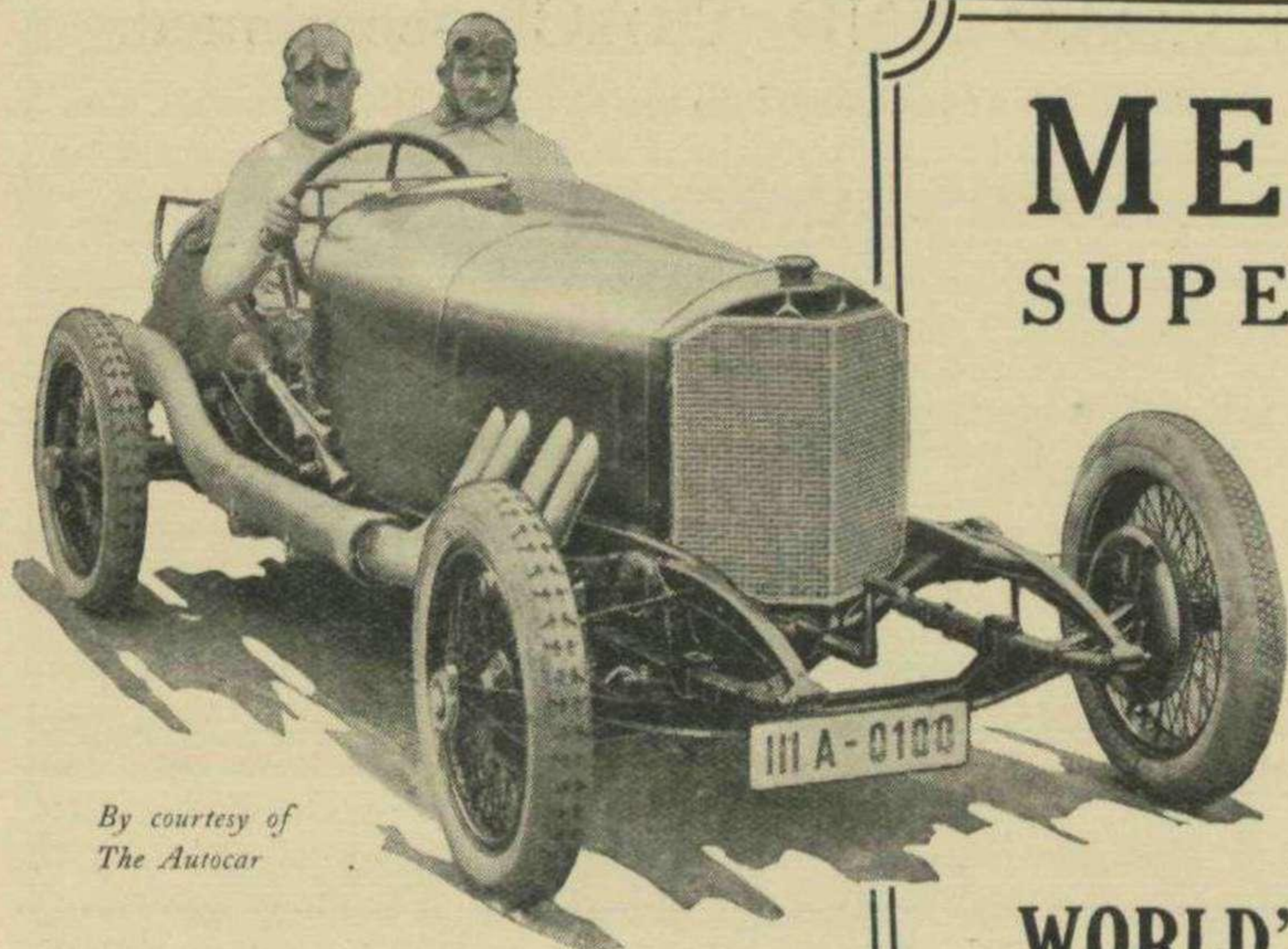
Interest in the Bentley is naturally enhanced by this car's splendid victory in the French Grand Prix D'Endurance last month. The Bentley was the only British car amongst some forty competitors, and its outstanding performance throughout the race provides a notable tribute to British engineering in general, and



THE NEAT CHASSIS OF THE 3-LITRE SPEED MODEL BENTLEY.

to Bentley design and workmanship in particular. Magnificently driven by Duff and Clement, the Bentley maintained a thrilling struggle with some of the best representatives of French automobile science throughout the twenty-four hours that the race occupied. This event is indeed appropriately named, a trial of endurance, for it is difficult to imagine a more exacting test under road conditions than this gruelling struggle of speed throughout a day and a night.

The Bentley had no mechanical trouble, and at the end of the race was in good condition and still lapping consistently. The distance covered by the Bentley in twenty-four hours with Duff and Clement alternately at the wheel, was exactly 2,188 kilometres, or 128 laps of the course. Second place was taken by the Lorraine-Dietrich, driven alternately by Stoffel and Brisson, with 2,061 kilometres to its credit.



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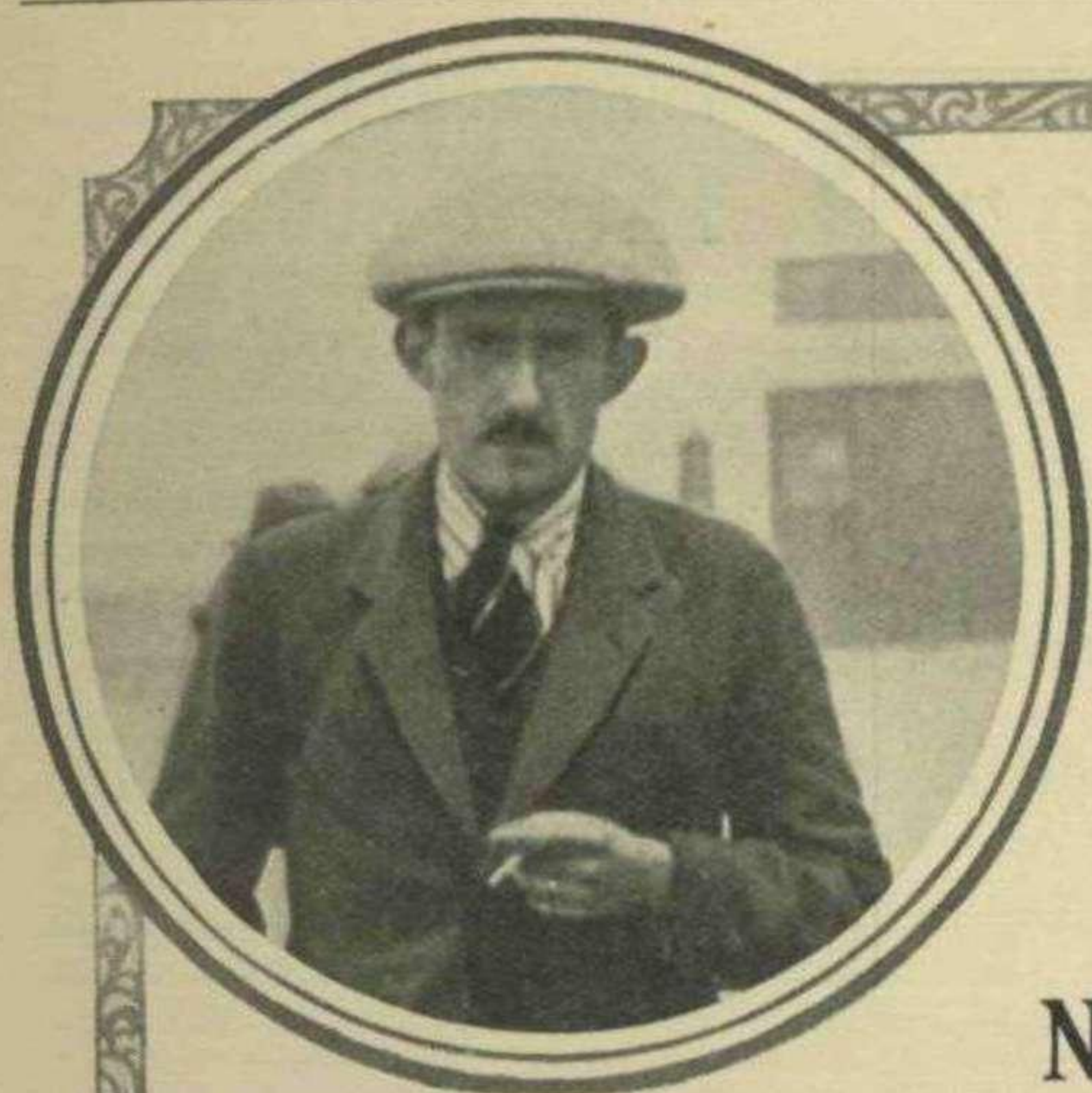
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# Motoring Sportsmen

*by the Editor*

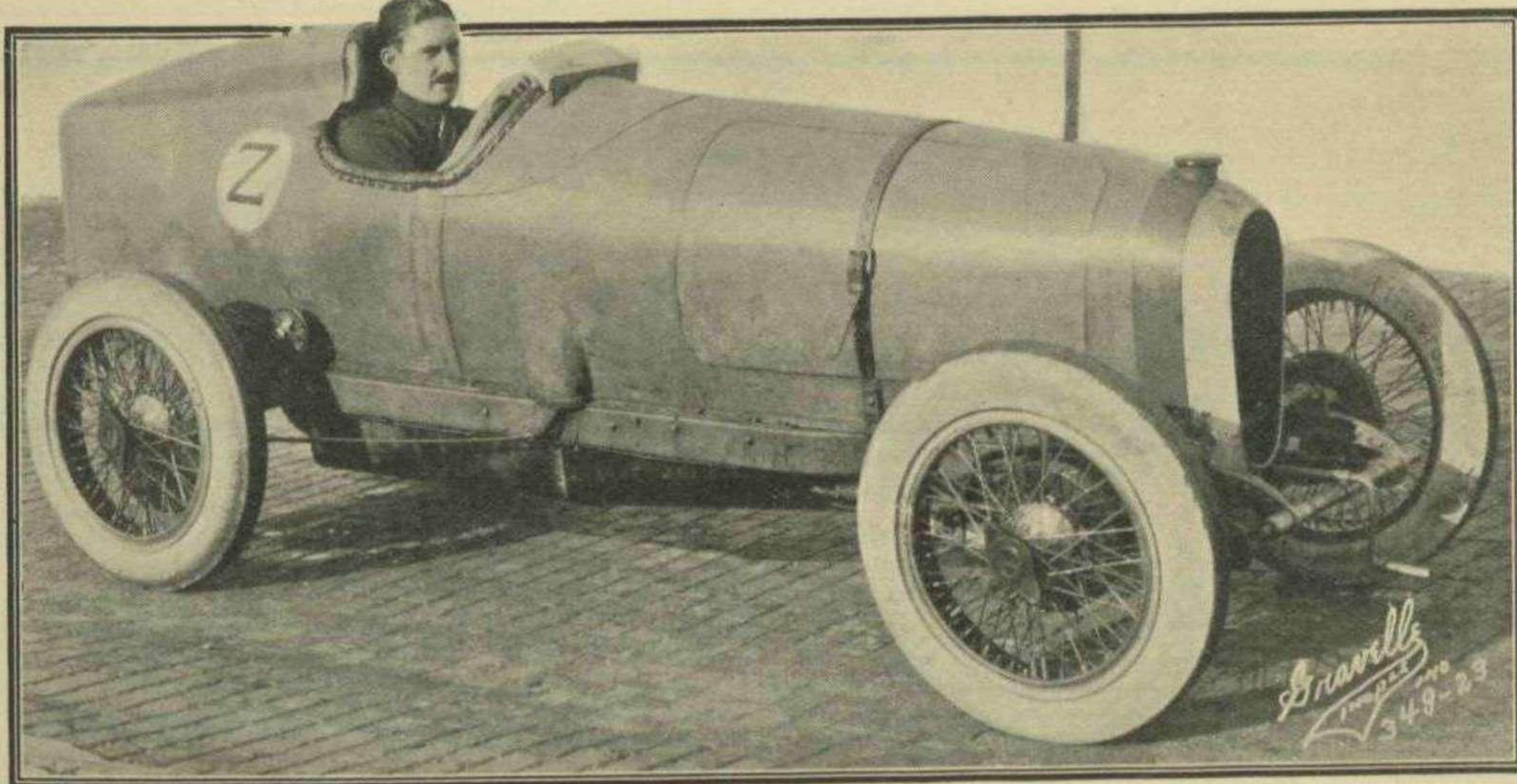
No.1. Count ZBOROWSKI.

EVERY motoring sportsman is familiar with the name of Count Zborowski. To those who know him personally, the Count positively radiates motoring enthusiasm, and certainly in recent times there has been no more magnetic personality at Brooklands. If motor racing can be born in anyone, Count Zborowski assuredly has a full pedigree. His father was one of the most active amateur competition drivers in the first days of the sport, and by many old timers is recognised as having done much to foster it in its difficult infant days. Besides being a pioneer motoring enthusiast, the late Count was a consistent rider to hounds, being one of the most prominent followers of the chase in the hard riding Irish and Leicestershire districts. He unfortunately met his death whilst driving a Mercedes car in the La Turbie hill climb of 1903.

The subject of our notice has a very versatile personality. He is, for instance, as accomplished as a mechanic as he is as a driver. One has only to see him busy in his private workshops, to realise that he is as much at home with a lathe or an oxy-acetylene welding set as behind the wheel of a racing car. At his residence at Canterbury, the Count has one of the finest private workshops in the country, its equipment being capable of dealing with practically any automobile engineering process, with the exception of casting. Prominent

amongst the remarkably complete array of mechanical devices, one finds an exceptionally good installation of brake horse-power testing apparatus, with the aid of which the Count has been able to tune up many different types of engines to a remarkable degree of efficiency.

As a race driver, Count Zborowski first came into prominence in this country as the owner of "Chitty-Bang-Bang," the famous 300 h.p. Maybach engined car, which made such a sensational advent at Brooklands in



COUNT ZBOROWSKI AT THE WHEEL OF HIS INDIANAPOLIS BUGATTI.

1920. "Chitty the First," was, one may say, more than a meteoric speed monster, for she set a fashion in super-size racing cars which has since been largely followed at Brooklands and elsewhere. She came to a sensational end whilst the Count was practising for the Brooklands Autumn Meeting of 1922. Since that date, she has been in a condition of gradual reincarnation, her second advent being only limited by the amount of time the Count is able to devote to her reconstruction.

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THE Ansaldo Car is the perfect achievement of Italy's greatest engineering enterprise and is a fine specimen of mechanical efficiency and completeness. The engine is extremely responsive, and provides under all conditions a strong, smooth and silent power.

On the road this wonderful car gives over 60 miles per hour, while its four wheel brakes, acting simultaneously, give a safety that is proved and is essential to a truly modern car.

**14 h.p.** Two Litre, Four - Cylinder, English built, 4/5 Seater Touring Body. Complete ... .. **£550**

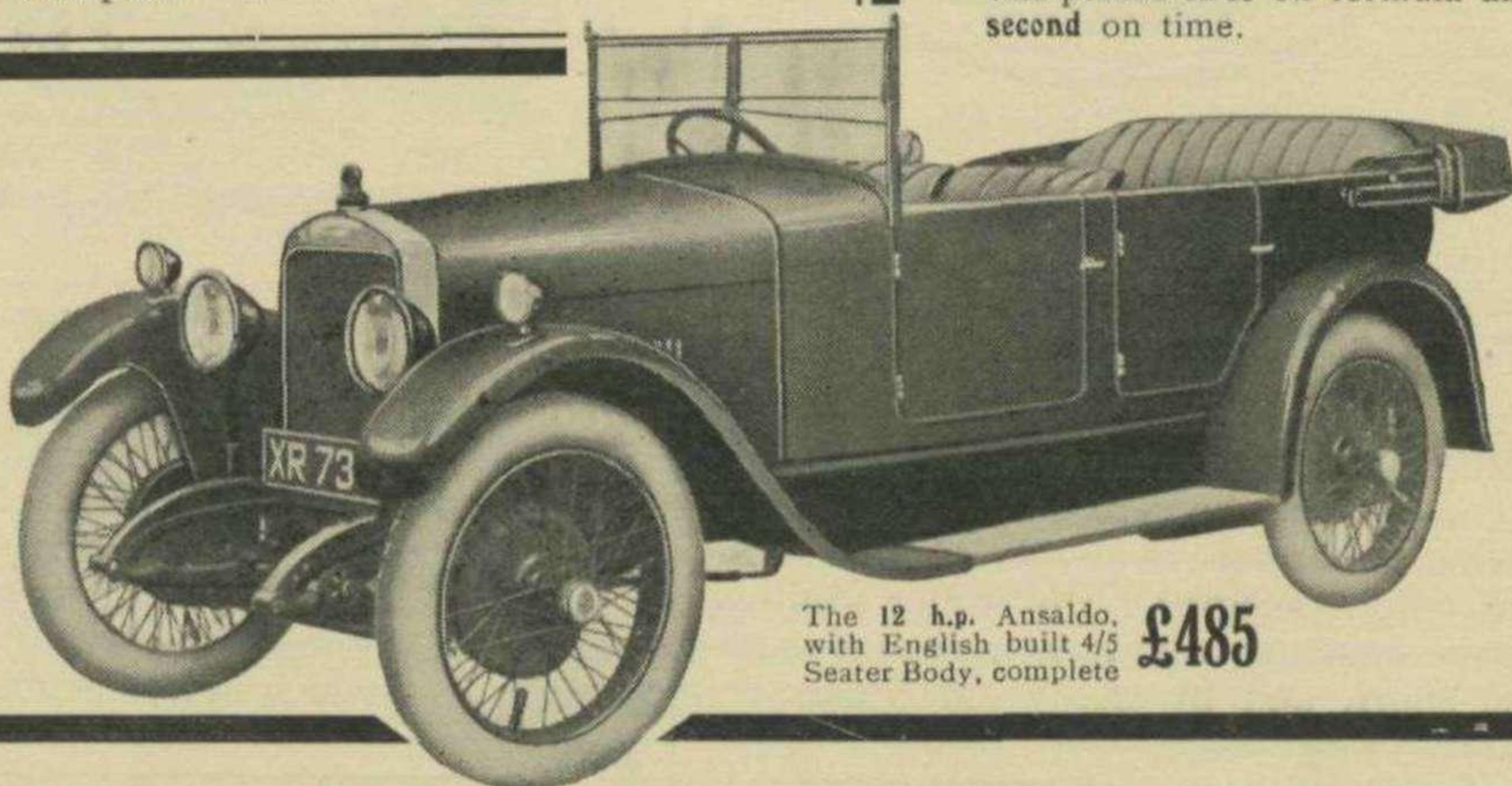
Engine—4-cyl., overhead valves and camshaft.  
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The 12 h.p. Ansaldo, with English built 4/5 Seater Body, complete **£485**

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A Standard 14 h.p. Ansaldo Car, driven by Rex G. Mundy, won a Gold Medal and the Maude's 50 Guinea Challenge Shield for Best Performance.

Herts County A. & A.C. Hill Climb at Aston Clinton, May 17th, 1924.

In the class for Sporting Cars of unlimited cubic capacity, R. F. Oats, on a 14 h.p. Ansaldo Car, was placed first on formula and second on time.

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THE ALCOHOL MOTOR SPIRIT DE LUXE for all motor and motor cycle sporting events.

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Cooler running and more rapid acceleration.

The above claims are borne out by last Season's results, a few of which are as follows:—

#### MOTOR CARS.

The Brooklands test hill record broken on three occasions by different makes of cars. 2nd, 3rd, and 4th places in the 200 miles J.C.C. race (1,500 c.c.) at Brooklands, and fastest lap of cars to finish.

Many hill climbing records and "fastest times of day" in club events.

#### MOTOR CYCLES.

80 % of the world's records made at Brooklands.

1st place in Junior; 1st, 2nd and 3rd places and Record lap at 54 m.p.h. in the Lightweight T.T. Races on the Isle of Man.

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## MOTORING SPORTSMEN—continued.

### A Specialist in Extremes.

An outstanding feature of Count Zborowski's motoring preferences, is the way in which he specialises in either extremely large or extremely small cars, and usually one finds him racing a monster of some 20 litres, or a comparative midget of about 2 litres. At the present date there are seventeen cars in his garage at Canterbury. These include vehicles ranging from the "Higham Special" which, with its 400 h.p. Liberty aero engine, is at the moment the most powerful car in the world, to the remarkable Mercédès lorry on which the Count transports his smaller racing cars to meetings about the Continent at a speed of 40 miles an hour. Another remarkable car is "Chitty-Bang-Bang II." After one appearance at Brooklands in the racing category, this car was fitted with a touring body and afterwards extensively used for touring abroad. One of her adventures as a mere tourist, was the shadowing of the Citroën-Kegresse Sahara expedition, when Count Zborowski drove her, just for fun, far into the desert, where roads are not. Having sold "Chitty-Bang-Bang II," the Count now disports himself when taking a leisurely tour upon "Chitty-Bang-Bang III," a modern Mercédès chassis with shaft drive and a mere mite of an 160 h.p. aero engine. This car is equipped in an extraordinary luxurious manner. Amongst its mechanical features are Westinghouse pneumatic brakes and a searchlight which will throw a 1,000 metre beam.

The Count's car racing is not confined to Brooklands Track. It is doubtful, in fact, if there is another amateur driver who pursues his hobby over such a wide field. In America, Spain, Italy and France he is almost as well known as at Weybridge. His driving in last year's Indianapolis race, when his Bugatti met with ill-luck, will be remembered, and one may also recall his outstanding performances on the 1½ litre Aston-Martin in the Grand Prix de Penya Rhin. In the latter event the Count secured second place in two successive years, an accomplishment (or was it a lack of luck?) which won him, amongst Spanish sportsmen, the sobriquet of "The Eternal Second." After his last visit to Indianapolis,

the Count brought home with him the big Miller car, a vehicle typical of advanced American practice, of which much is hoped.

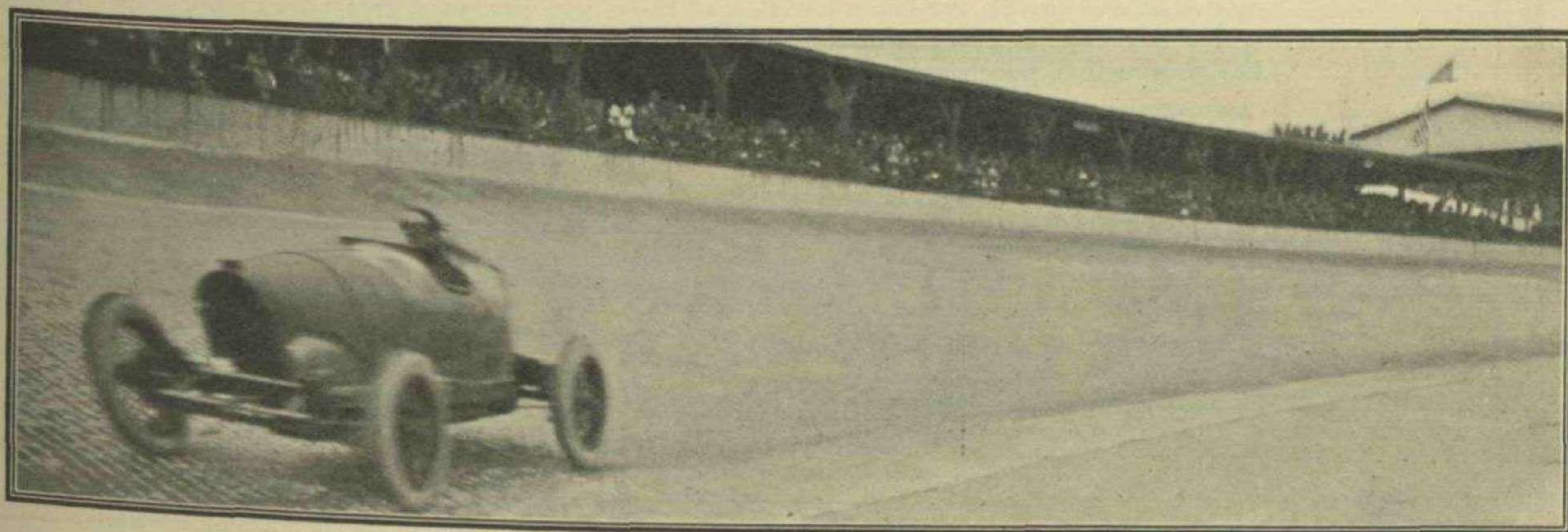
### An Embracing Versatility.

Count Zborowski's versatility extends beyond a nice taste in cars. He is, for instance, a motor boating enthusiast. It was not to be anticipated that he would be content with an engine of a mere 40 h.p. in his open river launch, and in justification of this view, one now finds an 160 h.p. Mercédès aero power unit to lift the craft along. The Count has, we understand, had one or two quite respectable thrills in navigating this "converted" river boat in choppy seas.

Perhaps one more of the Count's hobbies may be mentioned. This is his interest in model locomotives. Although he is by no means above giving attention to the delightful little engines that one may run on one's dining-room table, one naturally expects to find his passion for extremes inclining him also to something big in this connection. Witnessing to this one may mention the remarkable model of a Pacific type locomotive which is now being built to his order. If one visits the British Empire Exhibition at Wembley, and there inspects in the Palace of Engineering the prototype "Flying Scotsman," one may gain some idea of what a model of this engine one-third full size will be like. The Count's locomotive will, in fact, be 25 feet in length, will weigh 9 tons, and will be capable of a speed of 50 miles an hour. Its proportions will be such that the driver, sitting in the tender, will have his head well beneath the shelter of the cab roof, and will thus be able to drive with a comfort not yet attained in a model locomotive. To enable him to derive practical use from this locomotive, the Count is having a special track laid on his estate at "Highams," Canterbury.

Count Zborowski is, of course, also a wireless enthusiast. He has a wonderfully complete receiving set at "Highams," and can listen-in to anywhere. There is not much, in fact, that Count Zborowski misses in this world.

O. E. S.



COUNT ZBOROWSKI AT SPEED IN THE INDIANAPOLIS RACE.

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*"(Sgd.) HARRY STEVENS (Works Manager),  
"A. J. STEVENS & CO. (1914), LTD."*

Being 100% pure Asbestos (unadulterated by perishable cotton) Chekko cannot be destroyed by frictional heat. Think what this means in safety and extended service. Chekko alone is specified by the makers of the "Hersot" F.W. Brakes. It is significant that whatever brake lining manufacturers use for ordinary conditions they invariably send for Chekko to be fitted on the cars or motor cycles when racing is to be done, both at home and abroad. The greater contains the less, therefore, for all brake service, including your F.W. brakes, insist on CHEKKO. Used exclusively by the Panhard, Vauxhall, and leading car builders.

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# Some Pages from Brooklands History

## by Col. Lindsay Lloyd, C.M.G.

*The Clerk of the Course of the World's premier racing track gives some interesting opinions on the value and future of Brooklands.*

IN the pages of Brooklands history are written many things. Although it is but a comparatively short time back to 1907, when the Track was opened, the intervening years cover quite a long period in the history of motoring evolution. Much motoring history has, indeed, been made at Brooklands. Many things have been proved and disproved, the opinions and contentions of many authorities substantiated or refuted.

Has Brooklands Track contributed substantially to the development of motor vehicles? This is the question that motorists not intimately acquainted with what has happened there in the past seventeen years inevitably ask. My answer is that most assuredly it has. The Track has played so great a part in the advancement of the internal combustion engine and of automobilism in general, that one cannot do more in this brief review than just record one's outstanding impressions.

What form of test has most contributed to motoring evolution? In answering this, the first vital question in considering the improvements that have now been attained, one can confidently say: "It's the speed that tells." Road reliability trials of varied kinds have played their part, and that an important one, but in analysing all that has been accomplished in the last decade or so one is inevitably forced back upon the conclusion that it is racing and record attempts that have been by far the most productive. And where have these supreme tests been possible so unrestrictedly and so consistently as at Brooklands? Until just recently the like of Brooklands Track had not existed the world over, and where other big tracks do now exist, or are in course of construction, they have been modelled upon the great prototype of Weybridge. One may instance the new tracks at Paris, Barcelona, Monza and Marseilles.

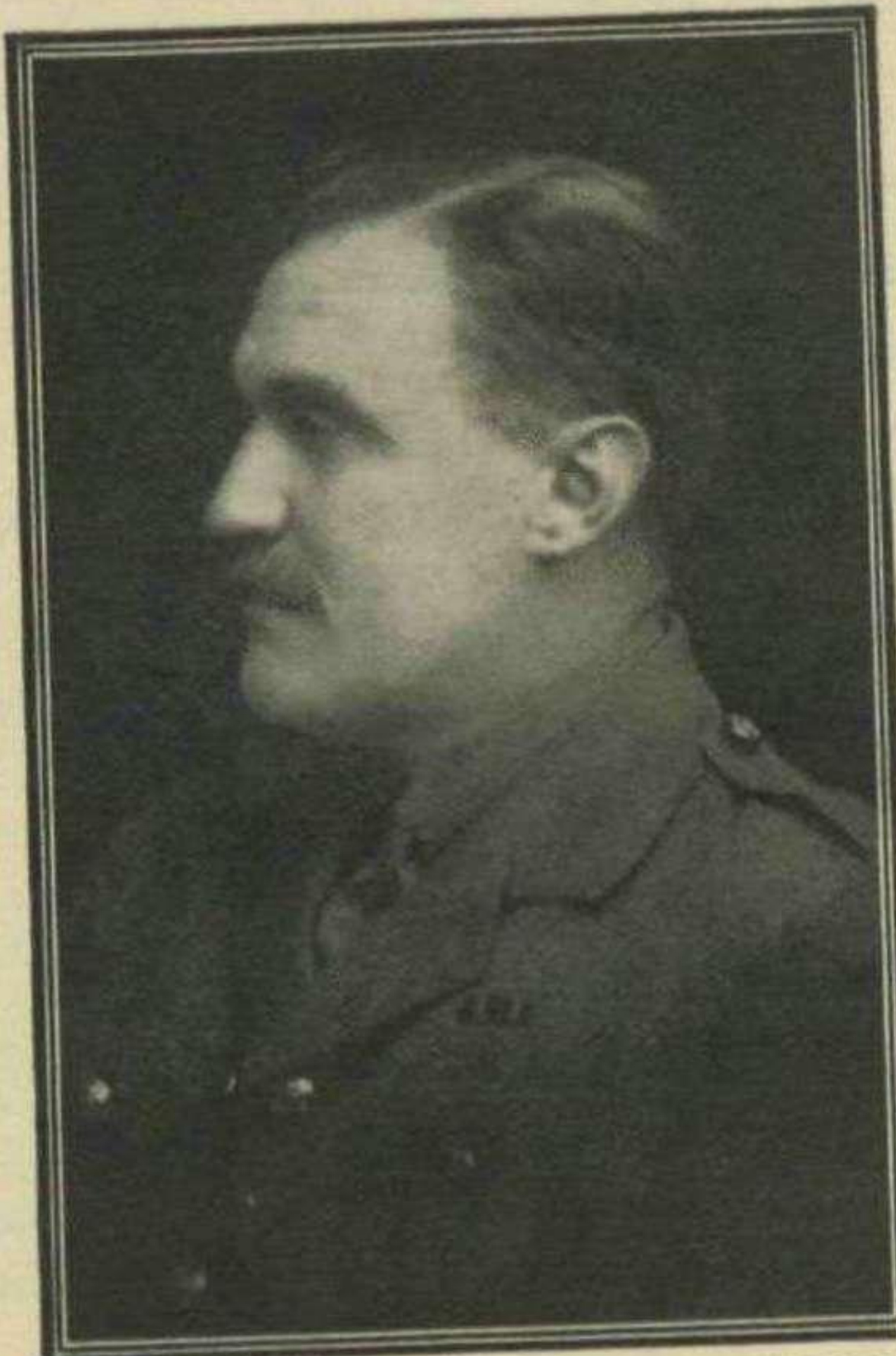
The vast majority of British car and motor cycle manufacturers are ready to admit that Brooklands has abundantly justified itself as the great testing ground and laboratory of the industry. Many of them freely attribute to the trials they have been able to carry out on the Track some of the most important developments which are to-day enjoyed by the ordinary purchasers and users of their vehicles. One has but to recall typical instances of this to be convinced of what the

track has made possible. Light pistons, durable valves, more efficient springing, cooling and lubrication improvements, and many other things which are nowadays taken for granted with any good car, are largely attributable to those searching tests which earlier models endured (or failed to endure) at Brooklands. Upon failure is often built success, and in nothing has this been more certainly the case than in the elimination of the unfit in the searching tests imposed on those miles of Brooklands concrete.

During 1912, 1913, and 1914 two prominent car manufacturing firms used the Track most consistently. We who were privileged to serve in the great war had full cause to be thankful for the efficiency that these makes showed in that greatest of all tests. One could, indeed, clearly see in their exacting service overseas the fruit of lessons learnt on Brooklands. And the war was, after all, but a supreme test of real touring qualities so far as cars were concerned!

Brooklands is not only a perfect testing ground; it is as well, a great sporting centre. I am quite ready to admit that in this respect the Track is not ideal. The very qualities of size and design which makes it so valuable as a testing ground, themselves somewhat detract from its virtues from purely spectacular considerations. But for all that, very fine sport is seen at the race meetings, which are held almost every Saturday from March to October. With the great speeds attained by the modern racing car and motor cycle, thrilling contests can be staged, and almost every meeting provides speed duels between well known vehicles and famous drivers, such as can be seen nowhere else in the world. Since the war a number of substantial improvements have been made at the Track, and these conduce to an increased interest in the racing and enhanced comfort and convenience for spectators.

In considering Brooklands as a sporting centre, it might be remembered, I think, a little more than it is, that the "gate" and other takings at the race meetings and record attempts, provide the revenue necessary for the maintenance of the track as the trade's testing ground. Thus the spectators, as well as the motorists who do not go to Brooklands, benefit in the ultimate by far more than an occasional afternoon's sport.



LIEUT.-COL. F. LINDSAY LLOYD, C.M.G.

## SOME PAGES FROM BROOKLANDS HISTORY—continued.



THE FINISHING STRAIGHT AND BYFLEET BANKING VIEWED FROM THE TEST HILL.

Having been asked my opinion of the relative efficiency of several methods of timekeeping, I may perhaps say that electrical timing on the Brooklands system, or one similar to it, that is to say, a system by means of which the competing car itself causes indications to be made on a strip of paper, on which time is also automatically being recorded, and so makes a permanent record of its performance upon the timing strip, is a system which is absolutely essential for short distance work, that is to say, for distances of two miles and less.

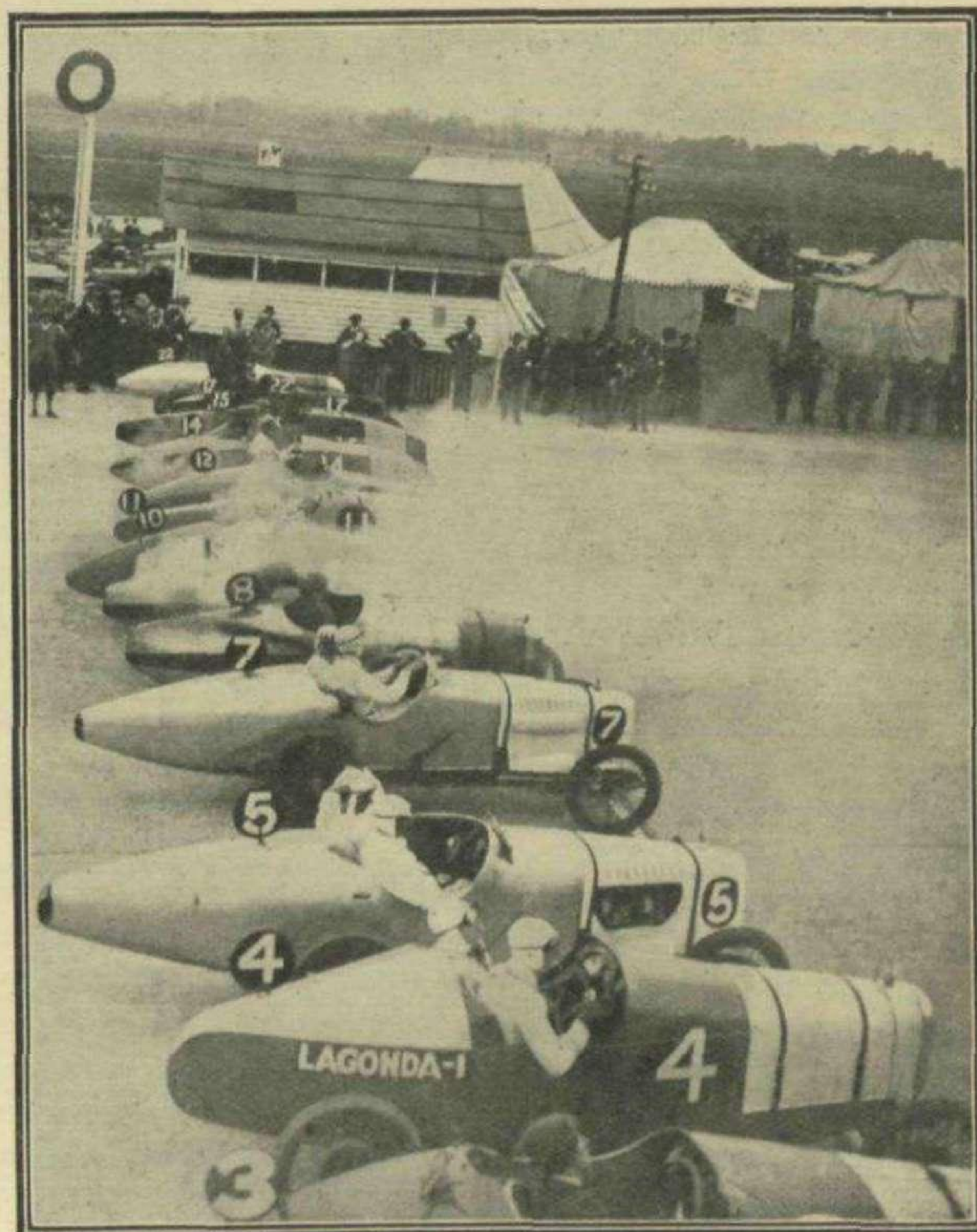
For greater distances, that is to say, distances considered in terms or multiples of laps, hand timing, so long as it is carried out by accurate watches in the hands of trained observers, trained not only in the handling of their watches, but also in accurate reading and recording, is, generally speaking, a perfectly satisfactory system and the degree of accuracy possible by such a system is sufficient for the necessities of the case.

Regarding the important question as to what kind of racing is most interesting to the general public, I am of the opinion that three laps is the maximum distance if the keen observation of the average spectator is to be maintained. The ideal would be sprint races pure and simple, but the speeds of present-day racing cars are not close enough to make this really interesting. There are, of course, several long distance races at Brooklands each year, of more than usual interest. Such struggles as the annual Two Hundred Miles Race of the Junior Car Club have their own appeal, and this is usually increased by an international flavour.

I am afraid I have somewhat wandered away from my "terms of reference" as stated in the heading of this article. I may, perhaps, be excused on the score that however interesting the past may be, it is the living

present and the pregnant future with which most motorists feel principally concerned. But I may still recall that the first Brooklands race meeting was held on July 6th, 1907. Many who were present on that historic occasion are still Brooklands enthusiasts. Writing in the programme of that event, about the opening of the Track, a month earlier, Lord Montagu said that a friend of his had recently offered M. Renault £5,000 for a car which would achieve the speed of three miles a minute, and added that "so far, this offer is still under consideration." For all I know, seventeen years later, the makers of the famous French cars may

still have such an offer "under consideration." But neither they nor any other manufacturer have yet produced a car that will achieve three miles a minute. Which all goes to show that Brooklands history is still being written.



THE IMPRESSIVE START OF A JUNIOR CAR CLUB EVENT.

# FOURTH LONDON RALLY OF MOTORISTS.

## A Unique Social and Sporting Event.



TENT PEGGING AT THE RALLY.

Motoring sport consists by no means only of motoring speed. There are many car owners and motor cyclists, even amongst the most strenuous race and reliability trial drivers, who might find interest in a social event associated with their favourite recreation. That a motoring social event can be made of interest, can be run successfully, and will attract a very large audience was abundantly proved at the fourth London Rally of Motor-

competitors, on solo motor cycles of all types, tore round in the grounds of the Palace in great glee. They encircled trees, they executed hair-raising skids on loose ground, they mounted grass banks that would put the Six Days' course in the shade. But, Mr. Alan W. Day, they did *not* wear crash helmets. So George Brown may breathe again and be assured that the T.T. has not been yet transferred to England after all.

Then there was another event, about which, despite a strong inclination, we restrain ourselves from saying much. It was the judging for the Most Suitably Attired Lady Motor Cyclist. Professor Low had something to do with it. But our readers will, we expect, be relieved to hear that it was really Mrs. "Billy" Pratt and Mrs. Geoffrey Smith who awarded the prize. (Speaking of G. S., why did he not enter his very elegant new Daimler, complete with Weyman saloon body, in the Most Ingenious Devices competition? We feel sure he would have carried off something.)

Things of interest happened continuously from 10 a.m. until 10 p.m., and ended up with many of the Rallyites joining in a non-stop carnival dance and enjoying a gorgeous firework display.

The removal of the venue to the Alexandra Palace proved an excellent step, and the entire event was, as we have said, an outstanding success.

ists held at the Alexandra Palace on Whit-Monday.

Having staged this event in the three previous years, the North London Motor Cycle Club had the benefit of much experience. This year, however, the Rally was on so much more ambitious a scale, that the Club is to be heartily congratulated on the success attained.

We would not like it thought that we found nothing of a sporting kind in the London Rally. The fact that the Wakefield and Merthyr Motor Cycle Clubs each attended in strong force, is surely a sporting thing in itself, and these hardy provincials—no offence to the gallant nation of Wales intended—do not usually go hundreds of miles to something that is not worth while. The Wakefield Club carried off the prize for the largest attendance from any one Club, a thing they also did last year. They also managed to hook the plaque presented by the governing body of motor cycling sport, for the Club displaying the greatest number of A.C.U. badges—and producing current and paid up membership cards to match, look you!

They really did all sorts of things at this Rally. They found faults purposely made in a motor cycle—at sixpence a time for a thirty seconds diagnosis. They had a bun-eating competition, a tent pegging competition, a balloon bursting competition, an apple-bobbing competition, an egg plucking competition, musical chairs, a slow race and a Blondin race—all, of course, on motor cycles, and/or cars, as befitted the occasion.

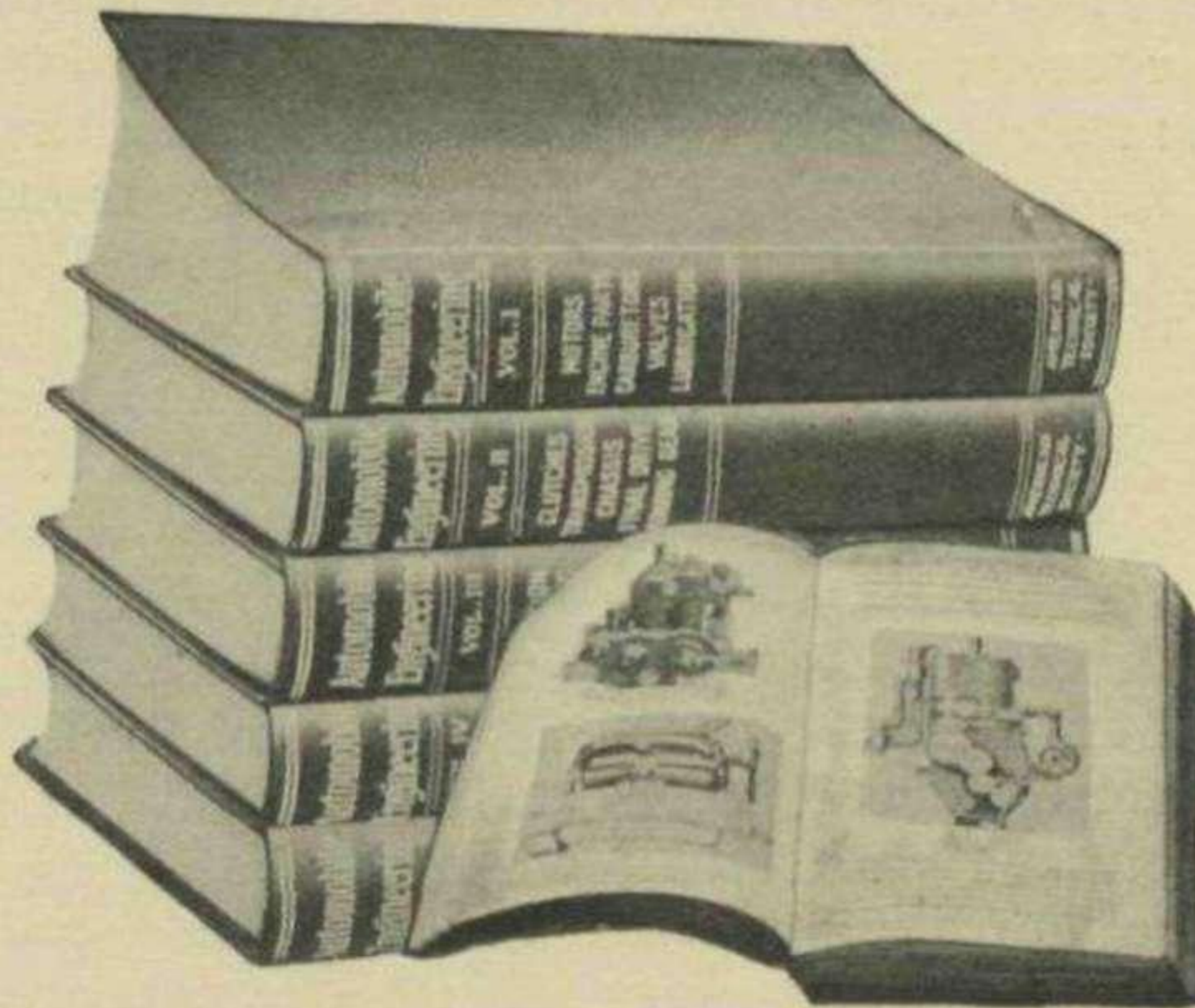
Then there was the Motor Cycle Steeplechase. Someone wanted to call it the London T.T., but the organising committee, remembering in time the susceptibility of the governing body and of George Brown, I.O.M., wisely sank to lesser aspirations. But the T.T. Steeplechase, or whatever it was, was really great fun. The

Here are the noble prize-winners:—

- FAULT FINDING: 1st, G. Robins (Merthyr M.C.C.); 2nd, H. M. Yeats (Canonbury).
- ATTENDANCE OF CLUBS: 1st, Wakefield M.C.C.; 2nd, Merthyr M.C.C.; 3rd, Connaught M.C.C.
- BUN EATING: 1st, W. H. Kennedy; 2nd, H. Bennett; 3rd, R. Baxter.
- BEST KEPT SOLO MOTOR CYCLE: G. R. Smith (Wakefield M.C.C.), 1921 4 h.p. Triumph.
- BEST KEPT SIDECAR COMBINATION: W. Scott, 1922 Harley-Davidson.
- BEST KEPT THREE-WHEELER: A. Brimicombe, 1924 Morgan.
- BEST KEPT CAR: J. Pollitzer, 1914 25 h.p. Mercedes.
- TENT PEGGING: 1st, J. Barton (North London M.C.C.), Ricardo-Triumph; 2nd, H. Gadsden (Kilburn M.C.C.), 5-6 h.p. Zenith.
- MOST SUITABLY ATTIRED LADY MOTOR CYCLIST: Miss Hawkins (North London M.C.C.), 1½ h.p. Carfield.
- BALLOON BURSTING: 1st, C. Salmon (Wakefield M.C.C.); 2nd, E. J. Fairbrother.
- MOST INGENIOUS DEVICE ON A SOLO MOTOR CYCLE: G. F. H. Muddiman, 3 h.p. Raleigh.
- MOST INGENIOUS DEVICE ON A SIDECAR COMBINATION: F. W. Bidford (Wakefield M.C.C.), A. J. S.
- MOST INGENIOUS DEVICE ON A THREE-WHEELER: —Yaxley, Morgan.
- MOST INGENIOUS DEVICE ON A CAR: J. Pollitzer, Mercedes.
- APPLE BOBBING: 1st, G. Bennett (Enfield M.C.C.); 2nd, J. Murphy.
- MOTOR CYCLE STEEPLCHASE: 1st, L. F. Francke (North London M.C.C.), 3½ h.p. Duzmo; 2nd, G. V. Smith, A. J. S.; 3rd, J. C. Lowe, Ricardo-Triumph.
- SLOW RACE: J. Pollitzer, Mercedes.
- MUSICAL CHAIRS: 1st, H. R. V. Waters (driver), Bush (passenger); 2nd, Keen (driver), Youngs (passenger).
- BLONDIN RACE: 1st, F. J. Bush, A.J.S.; 2nd, H. E. Ware, Triumph; 3rd, A. E. Bales, Ner-a-Car.
- EGG PLUCKING: 1st, F. J. Bush, A.J.S.; 2nd, H. J. Hislop, Scott; 3rd, A. Smith, Scott.

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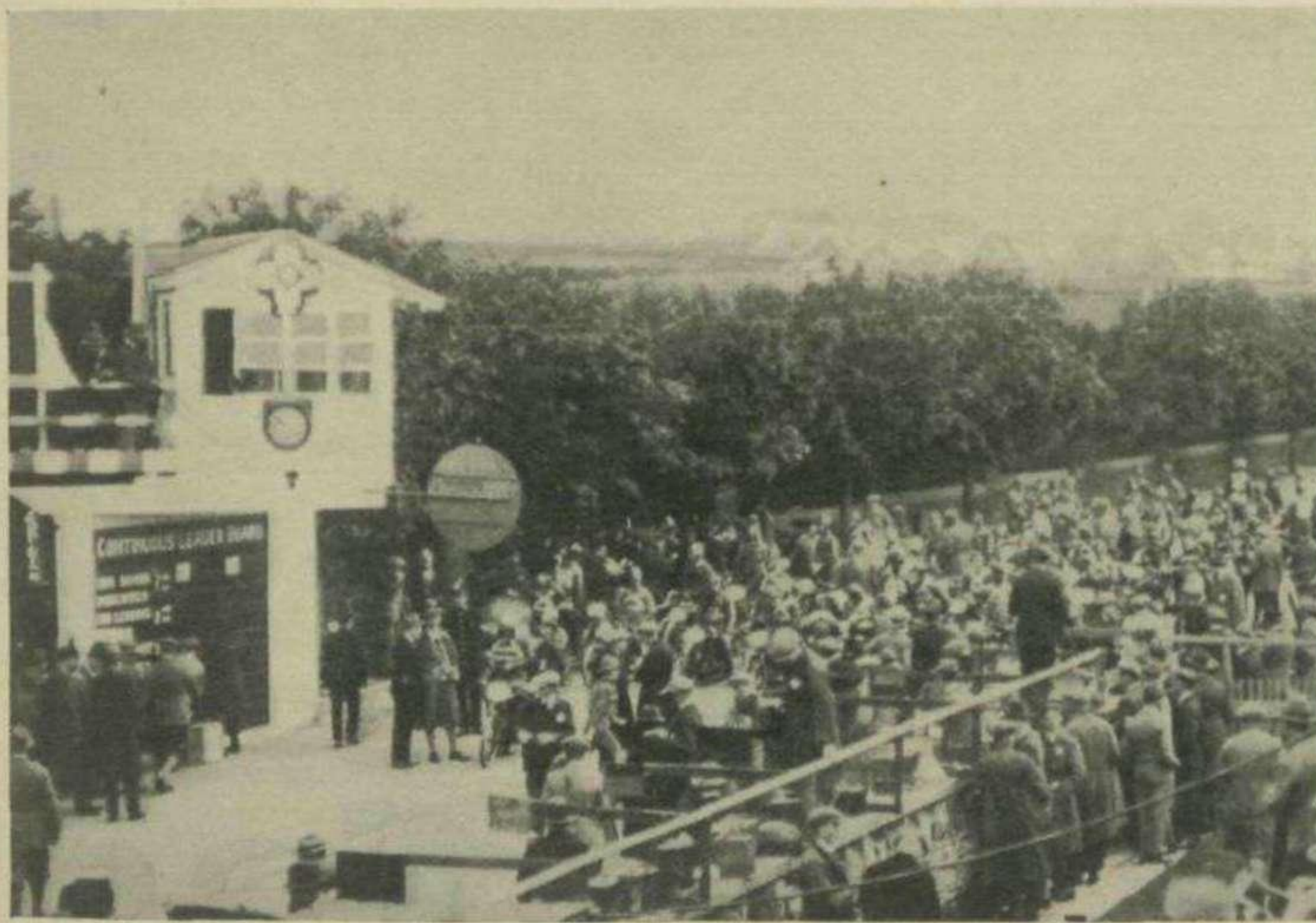
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# The Position of Motor Cycling Sport.

By T.W.Loughborough

A.M.I.A.E

*[As Secretary of the Auto-Cycle Union and Secretary-General of the International Federation of Motor Cycling Clubs, Mr. Loughborough has rendered much service to motor cycling sport. His views on the present status of competitive motor cycling are of special value].*

It is fairly obvious that, human nature being what it is, a League of Nations is in theory eminently desirable. Without some such control, squabbles must become conflicts, and their ultimate result suicidal to all but the top dog, who, having conquered every foe, ceases to sharpen his teeth, declines and falls. So dismal an ending is unthinkable in the realms of sport, the very nature of which demands healthy competition and a loyal submission to a governing body.

Indeed it may well be that the example set by those who, as did the ancient Grecians, recognise consciously or unconsciously the national value of sports and games, will prove a saving grace to a troubled world. The cricket bat may carry conviction where the pen—mightier, we are told, than the sword—invites suspicion.

In such an armoury the motor cycle is a valuable weapon. It is hardly recognised to what an extent the sport of motor cycling has gripped the world to-day. Finland has its national motor cycling association, motor cycling competitions vie with the older winter sports in Norway, Sweden and Switzerland. Germany, with an eye to business, has developed the baby motor cycle, and trials and races for these little machines are the order of the day. Italians are keen as garlic on motor cycle racing. In almost all our overseas dominions there is a flourishing association of motor cycling clubs, whilst at home, you cannot pick up a newspaper, whether printed in the Isle of Man, the North Riding of Yorkshire, or

even the Channel Islands, without finding some reference to this sport.

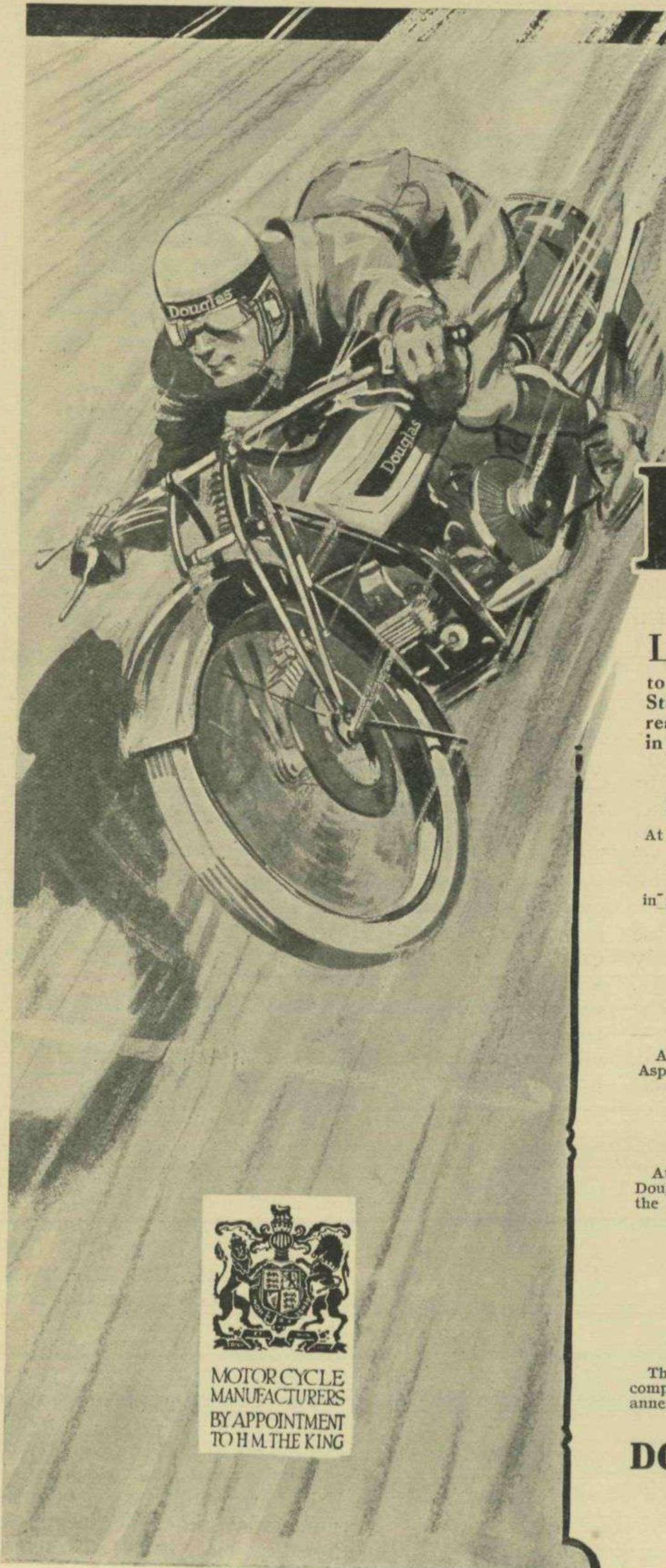
What is the reason for such universal popularity of the motor cycle? The cynic will reply that it is the result of clever and persistent propaganda on the part of the manufacturers of motor cycles. Like all cynics, he states but half the truth. The other half contains the real answer to our question, and it is that motor cycling is not merely a young man's hobby, but that it is the most invigorating form of transport—not excepting the aeroplane—that we have to-day. With a motor cycle one can get away, almost anywhere—one can suit the difficulties of the track or the charms of the road to one's liking. The fascination of a marvellously efficient mechanism may be enjoyed or ignored—speed or shelter—mountain or plain—fair weather or foul—all

are more intimately yours for one-tenth the cost of a car. Clearly we have in the motor cycle an incomparable weapon for sport or play, and little wonder is it that the youth of Scandinavia, the men of Germany, the Italians, the Swiss, even the stolid Dutchmen, have at last appreciated what for many years the Englishman has enjoyed.

The Council of the Olympic Games does not recognise motor cycling as a sport. Most sports require an inanimate adjunct—ball, bat, gun or boxing glove—some an animate, such as polo or horse racing. In the latter class the necessary adjunct is of equal, if not greater, importance than



THROUGH A WATER-SPLASH IN THIS YEAR'S SIX DAYS' TRIAL.



# The all Conquering Douglas

LAST year's amazing sequence of Douglas Competition Successes culminated in Tom Sheard's dramatic ride to victory in the Senior T.T.—the classic of the year. Starting the season in sensational style, Douglas has already proved that the 1923 campaign was no mere "flash in the pan," but the direct result of "improved breed."

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At Angel Hill Climb, Vic Anstice and his Douglas eclipsed all previous Championships of establishing a

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A cable just to hand from Melbourne, Australia, says that at the Aspendale Speed Carnival, Douglas cleared the Board.

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At the Queensland Speed Carnival, Clifton, Tommy Odea, on a Douglas, won every race for which the machine was eligible, capturing the

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(10 MILES. ALL POWERS).

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Tommy Odea on this occasion establishing a new

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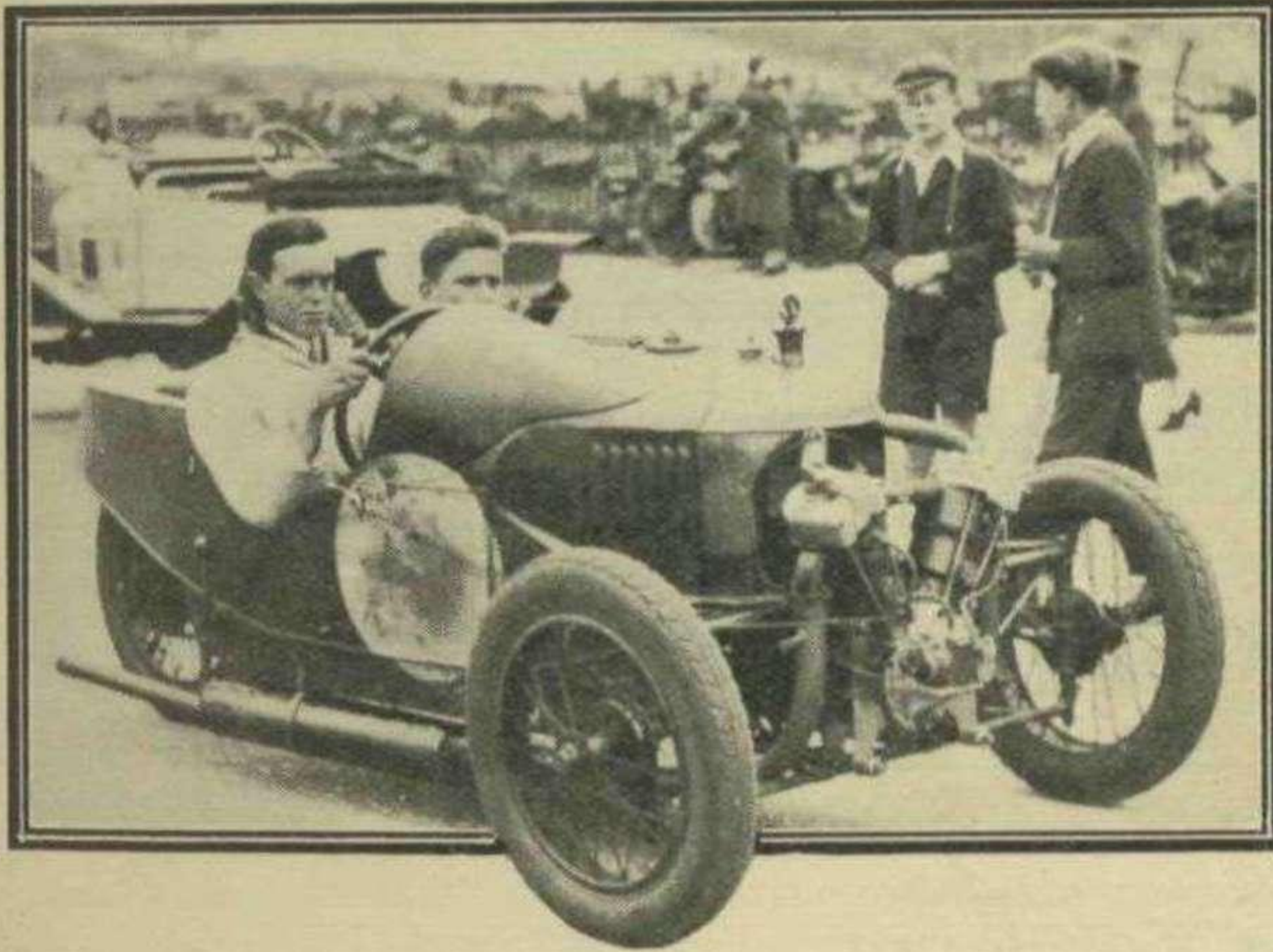
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MOTOR CYCLE  
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## THE POSITION OF MOTOR CYCLING SPORT—continued.

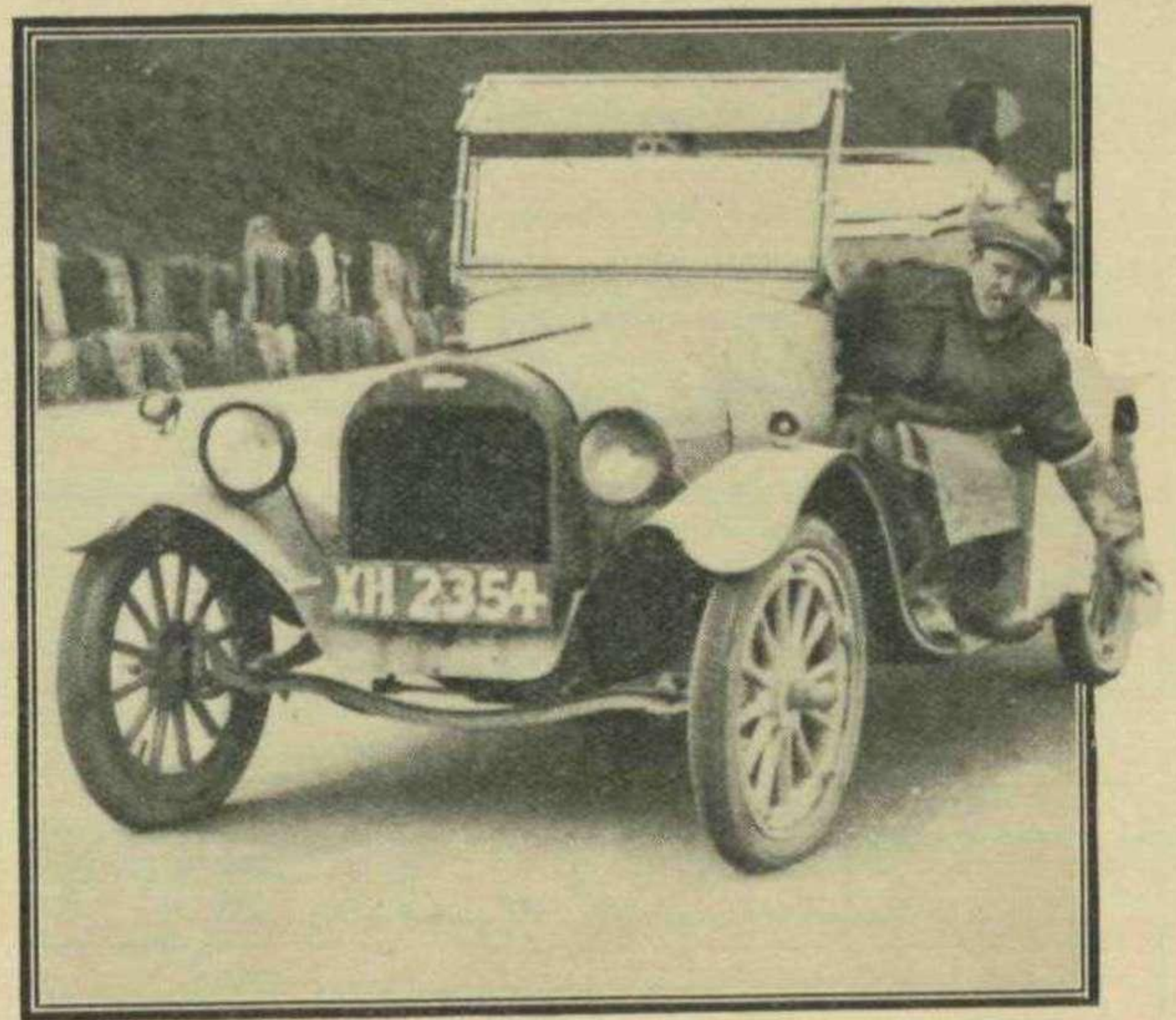
the human skill of the competitor. And so with motor cycling. Logically, motor cycling is as much a sport as skiing or shooting—more so, indeed, than yachting or coursing.



A MORGAN COMPETITOR IN AN A.C.U. EVENT.

Moreover, it has this advantage, that whereas skates and guns, polo ponies and tennis racquets are practically standardised, the motor cycle is still in process of evolution. No better encouragement can be given its maker than the opportunity of entering it in competition with other makes. Every improvement so demonstrated, not only makes it a more valuable advertisement for him but increases its popularity for general use.

From the above it will be understood that the proper encouragement and control of the sport of motor cycling is a somewhat more difficult problem than that presented to the Ping-pong Association—if there be such a body! Commercialism in motor cycling is like manure in a garden—unpleasant in itself, but valuable in its proper place. Without it the sport would languish; with too much of it the rank growth of professionalism



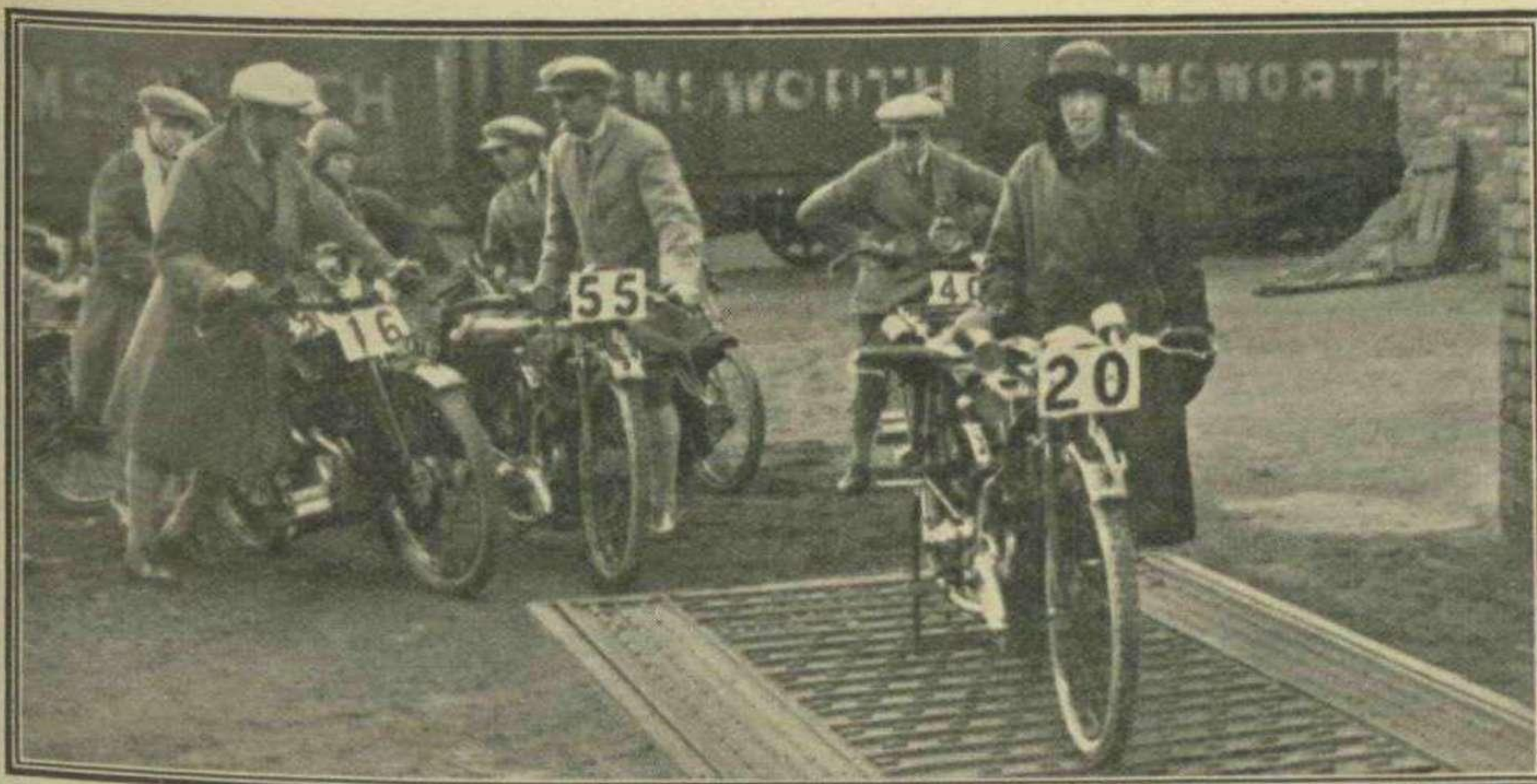
AN A.C.U. CAR MARKS THE COURSE OF A ROAD TRIAL.

would smother the genuine amateur, and we should soon sink to the level of the prize-ring and the billiard-saloon.

It is up to the Auto-Cycle Union—the controlling body of the sport in this country, and the moving spirit in the International Federation of Motor Cycling Clubs, to watch this danger. Never let it be said as is to-day said of certain kindred bodies, that the sport is run by the trade. The trade, both here and abroad, have loyally supported the national motor cycling organisation, it is to their vital interest to continue so to do. The day the industry attempts to control the sport will be a bad day for both.

In this short article I have attempted to make a very brief sketch of the position of the sport of motor cycling as it appears to me to-day. I rather fear the Editor will be disappointed, and would have preferred me to write of the inner workings of the Jockey Club of motor cycling. However much pride in its work would urge me to lay bare the activities of the Auto-Cycle Union, modesty dictates that such revelations should come from some other pen than mine.

I have thought it better to try and impress the reader with a sense of the importance of motor cycling. If he should be a motor cyclist well, he will take it for granted, but the man in the street—particularly if he drives a motor car—he does want educating!



COMPETITORS WEIGHING IN AT SCARBOROUGH FOR THIS YEAR'S SIX DAYS' TRIAL.

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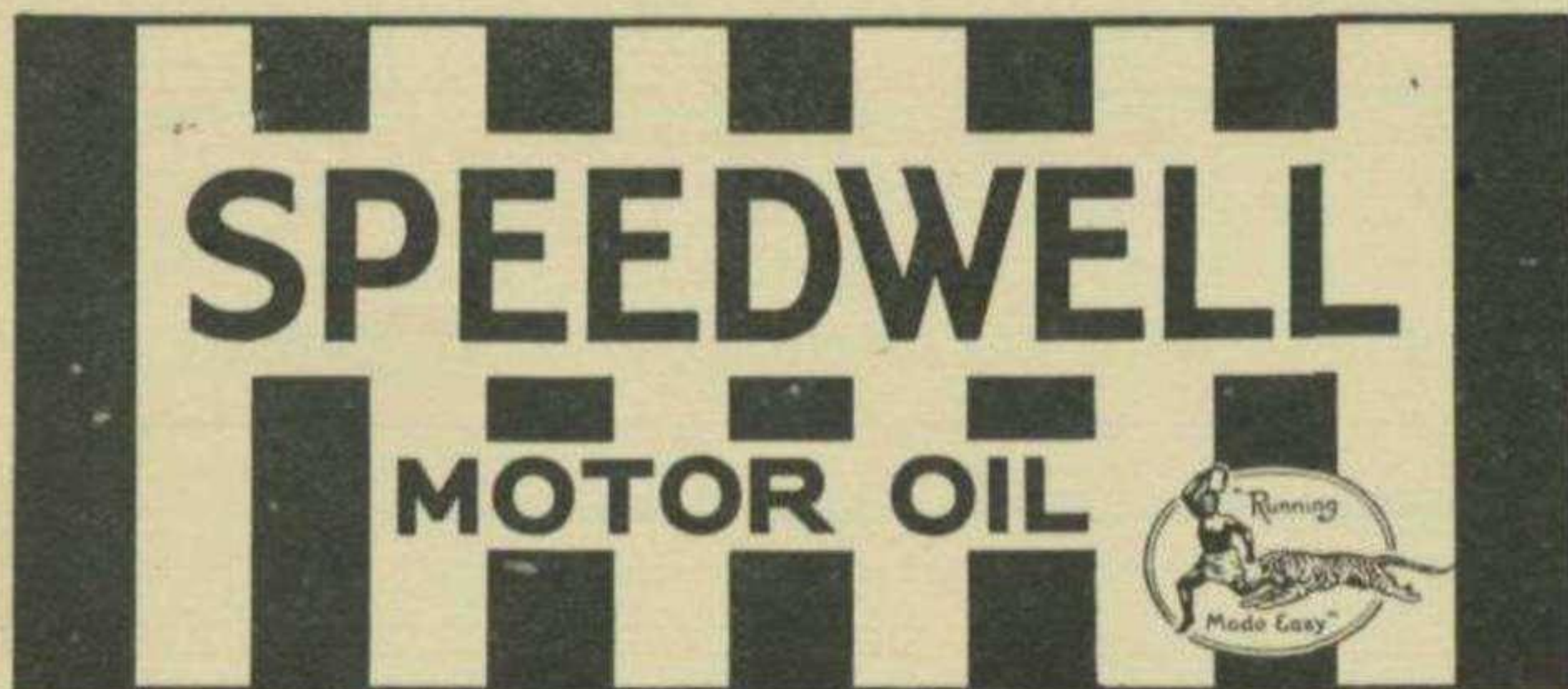
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### SOME MOTOR CYCLE SUCCESSES.

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50 Miles Welsh Championship.		
All Mr. C. F. Temple's wonderful Speed Records, including 5 miles Flying Start, 109.62 m.p.h.; 10 miles Standing Start, 104.47 m.p.h. (the highest speed that a Motor Cycle Race has ever been won at).		

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# IN THE PADDOCK

*Sporting Chat by 'The Lounger'*

The notable increase in the attendance of what may be termed the general public at recent Brooklands meetings is encouraging. There is no reason why the Track should not be made far more popular with the ordinary touring motorist than it is to-day. The keenness of the few is all very well; but it would be to everyone's good if the value and attractions of Brooklands were better recognised by the ordinary man at the wheel. I hope the powers that be will grasp any opportunities that may suggest themselves in the increased interest the public is showing at the moment.

\* \* \* \* \*

The recent order to restrict the noisiness of those noisy motor cycles has had the effect of producing some weird and wonderful silencers. Some of the "row pots" seen at the last B.M.C.R.C. meeting are likely, I am afraid, to prove more effective in theory than in practice. It was obvious, however, that much ingenuity had been exercised to tone down the voices of certain too strident engines. The contours of some of the silencers were indeed extraordinary, but all those I inspected conformed faithfully to the new and not too easy rule.

\* \* \* \* \*

Five shillings per head for lunch at a motor cycle meeting seems a ridiculously high charge. I hope that those responsible for the Brooklands catering arrangements do not think that all the reforms desired have yet been attained. There has certainly been a big improvement of late, but five shillings for lunch at an ordinary B.M.C.R.C. members' meeting, well—!

\* \* \* \* \*

The driver of Mr. T. B. Andre's "Marlborough-Anzani" is now almost visible to the spectators. I understand that the body-work has been considerably modified to enable him to get in and out without assistance from helpers armed with tyre levers. The new arrangement also enables the instruments to be read when under way—a decided advantage!

Although I should be the last to favour restrictions which emanate from mere officialdom, I am glad to observe that in these days fewer people are allowed on the track before the start of B.M.C.R.C. races. Beyond the riders and their legitimate helpers, the essential officials and accredited Press representatives are the only people who are really wanted. There is no need at all for esteemed representatives of certain motoring commodities to wander about in the vicinity of the starter, and that redoubtable marshal, Billy Cooper, summed up the situation very neatly one day last season when he politely requested: "Now then, all you *mechanics*, off the track!"

\* \* \* \* \*

The well-known "Softly-Catch-Monkey" has been greatly lightened this season, and from her extreme steadiness of demeanour at speed has descended to quite a juvenile skittishness. In virtue of this she actually did a violent skid on the Byfleet banking in practice the other day.

\* \* \* \* \*

I have often wondered why a well-known Brooklands habitué invariably leaves his car in a most obstructive spot adjacent to Richmond High Street, soon after each B.A.R.C. meeting. Can he tell me?

\* \* \* \* \*

Telephone accommodation at the Track is still very bad. There is no public telephone, and Pressmen with urgent "stories" to get off, do not always find the instrument on the wall of Mr. Rance's office the most convenient of possible transmitters. And as for telephoning from the Fork, where many races start and finish, well, it simply isn't done. When is that pukka Press box with real Fleet Street facilities coming along, Colonel Lloyd? The importance of Brooklands warranted a more generous consideration of the Fourth Estate long ago.

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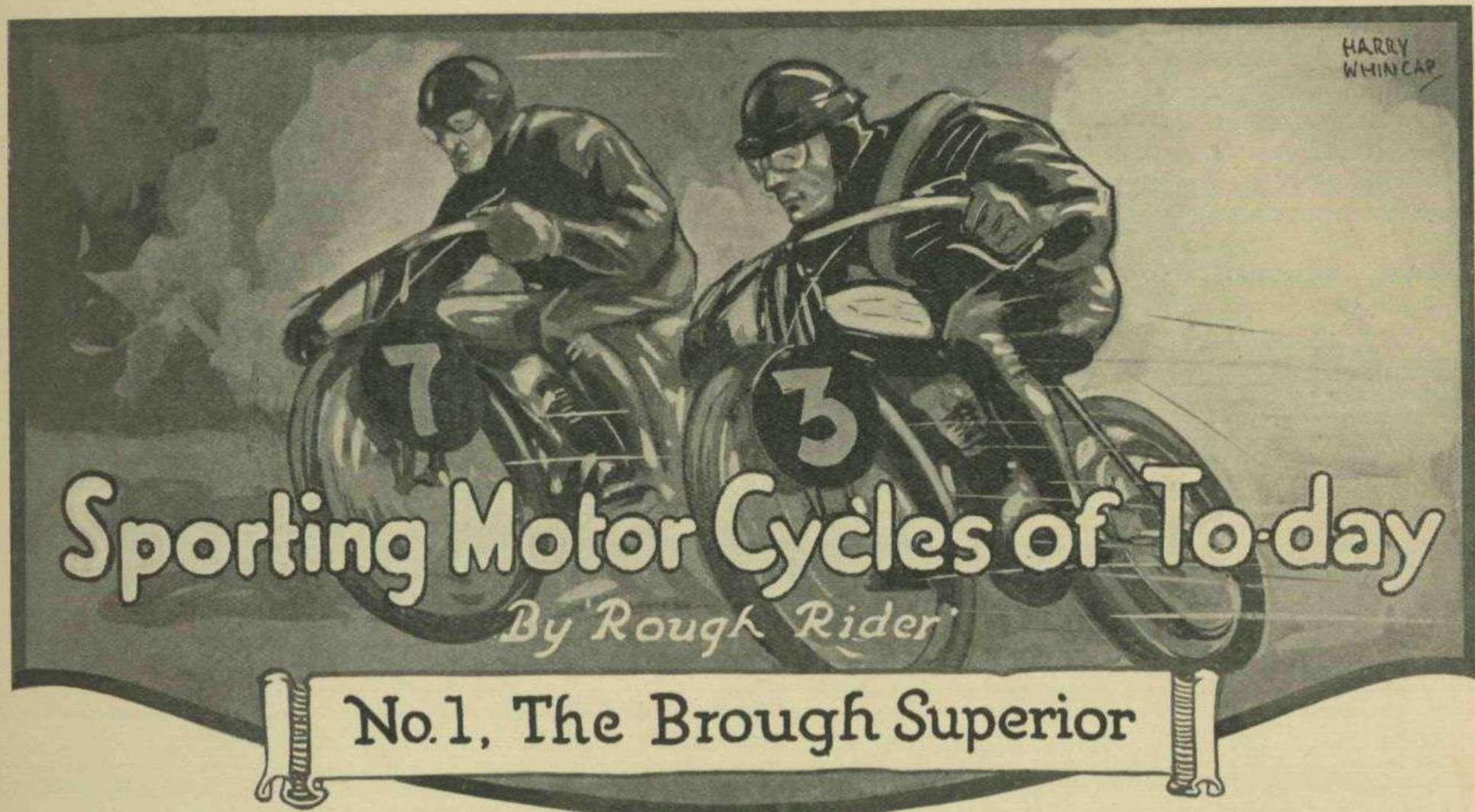
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SINCE its introduction some three years ago, the Brough Superior has won for itself a high esteem amongst sporting motor cyclists. Mr. George Brough, its designer, set himself a high ideal when he decided upon its production. He has always contended that amongst the ranks of motor cyclists there are enough fastidious connoisseurs to justify the marketing of something very special in the way of sporting mounts. Such a machine as he conceived three years ago must, he realised, be expensive, and the prices quoted in the 1924 Brough catalogue are certainly above the pockets of many riders. But Mr. Brough was absolutely right in thinking that there will always be a comparatively large number of enthusiasts who are able and willing to pay a high price for a mount produced on exceptionally luxurious and costly lines. These are the people for whom he particularly caters, and the popularity of the Brough Superior to-day must assure him that he did understand the psychology of the *species motorist*, when he set out upon his ambitious project. One can get along and enjoy the roads on many motor cycles not possessing the luxuries of the Brough Superior, but if one is able to pay for these delightful extras, they certainly represent good value in increased comfort and pleasure.

There are several models of the Brough Superior. The one which probably makes the strongest appeal to the sporting and competition rider is the model S.S.80. This machine, as many readers well know, attained remarkable success on Brooklands Track and in road competitions last year. It captured seven world's records, and won both the 200 mile solo race and the 200 mile sidecar race on the Track. The S.S.80 also holds Spanish and Portuguese speed records.

For the 1924 season, the design of the S.S.80 has been considerably improved. The frame is of an entirely new design, and various details have been

modified in the light of experience gained in very gruelling tests.

One of the most outstanding features of the Brough Superior is that extreme care has been bestowed upon it to make it not only a fast machine, but a comfortable machine. Every experienced sporting rider can name motor cycles which are fast, but seemingly have few other virtues. Mr. Brough set out to produce a machine which should be docile in control, well insulated from vibration, and comparable with any as to appearance and finish. He offers the Brough Superior model S.S.80 as fulfilling these ideals, with the additional attraction of very high speed.

We are putting a new model S.S.80 to a personal trial with a view to ascertaining for ourselves all its road qualities and determining the improvements lately effected. Until this test is completed, we shall not say anything about its road performance. The success and popularity it has already attained are sufficient criterion for those who desire, meanwhile, to investigate this machine for themselves.

At the moment a few technical details of the Brough model S.S. 80 may be of interest.

The engine is a V-twin J.A.P., specially manufactured for the Brough Superior. Its capacity is 988 c.c., which, on the A.C.U. rating, is nearly 10 h.p. The pistons are of aluminium alloy, and the main shaft and big ends run on roller bearings. The valves are of a special chrome-vanadium, and two return springs are fitted to each. Large aluminium heat dissipators are fitted in place of the usual heavy metal valve caps. The sparking plugs are fitted at an angle across the inlet valve, and it is claimed to be practically impossible to oil up a plug. The timing gear is of an entirely new type, embodying two cams instead of the single cam usual in J.A.P. practice. This new gear has been

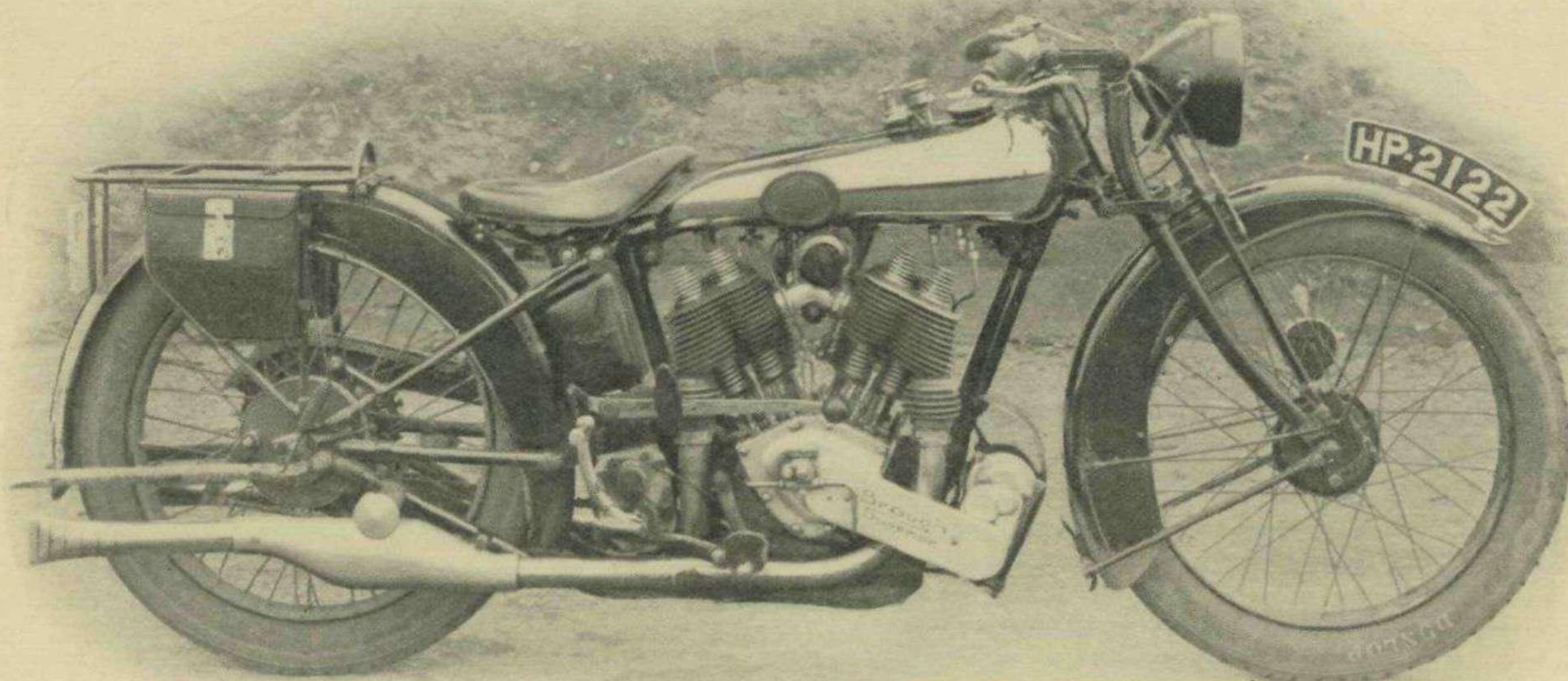
## SPORTING MOTOR CYCLES OF TO-DAY—continued.

evolved after a great deal of experimental work, and is particularly efficient and noiseless. Also forming part of the timing gear lay-out is a mechanical oil pump.

It will be seen from the foregoing that the engine alone has a number of special features, and in his confidence as to its efficiency, Mr. Brough guarantees each machine of the model S.S.80 series, to attain a speed of 80 m.p.h.

Second only in importance to the engine for such a speedy machine as the "S.S.80" is the frame. It is claimed that owing to its excellent balance and steering the "S.S.80" can be ridden "hands off" at 60 m.p.h.

It is interesting to note that the design of the frame allows not only for the cylinders being removed with engine *in situ*, but gives a  $4\frac{1}{4}$ " ground clearance, and saddle height of  $26\frac{5}{8}$ ". The frame is amply strong enough to stand up to hard sidecar work if required. As well as neatness of outline and ample strength, the riding position has been very closely studied. In the design of the frame two pairs of footrests are provided, one pair in the most normal riding position, and the second pair fitted on the rear chain stays. These rests are exceedingly useful when machine is used in speed events ;



THE BROUGH SUPERIOR S.S. 80 SPORTING MODEL.

A glance at the accompanying illustration will show that the frame is very neat, and houses its appurtenances in a compact manner. The design is a protected form of loop construction, and the complete power unit is secured in the loop by means of three bolts, thus allowing the unit to be dismantled from frame with the minimum of trouble. Special attention has been paid to triangulation of the rear portion of the frame.

also, they should be greatly appreciated by a passenger seated on the carrier.

The other parts of the Brough Superior also reveal the experience and care with which the machine has been produced, and in the aggregate constitute a sporting motor cycle worthy of the attention of the most fastidious rider.

We propose to refer to our road experiences with the latest model Brough Superior in an early number.

### The R.A.C.'s "Genial Meeting"—continued from page 29.

sandwiches (hot or cold) could be served "from 9 p.m." "D'Aeth where is thy sting?" inquired Mr. Ralston.

At this stage, numerous voices raised in interruption, led to the remark that the speaker was making good the mental deficiencies of the members. This remark was, of course, immediately withdrawn—and quite in due formality, the report was adopted.

Then Sir Bruce Bruce-Porter moved that the accounts be adopted.

Promptly Mr. Ralston again took his cue.

This time he objected, quoting the Companies Act of 1908 in support of his grievance that no details of the Club officials' salaries were given in the accounts, and that the balance-sheet was not in order and should be referred back. This was followed by a lunge at the House Committee, and the thrust that he regarded the work of the Committee as the play of "Faust," with Sir Thomas Berridge cast in the role of "Mephistopheles."

Nevertheless, the loquacious Mr. Ralston was unsuccessful in finding a seconder, and the accounts were passed.

Thus is there merriment, even within the marble halls of Pall Mall.

## WE ARE WONDERING ————— ?

How we managed all those years without a Bar at the Fork

?

IF the favourite motto of certain of the inhabitants of Weybridge must not be "Silence is Golden"

?

AND if racing enthusiasts do not prefer (Quick) Silver

?

WHETHER the Professor is not really a great leg-puller, after all

?

WHETHER, at some of the bigger Brooklands meetings, the sights to be seen at the top of the Test Hill do not more than adequately recompense one for the drag-up

?

AND if some of the ladies are aware of this

?

WHO was the originator of the Pull-over vogue at Brooklands

?

WAS it not a certain (S) 'andy man?

?

AND does he realise that everyone considers his sidecar was most appropriately named

Why did the Foul cross the Straight.

?

HAS it occurred to anybody to use all the five fuel-economy devices which each guarantee a saving of 25 per cent., and thus manufacture petrol whilst running

?

WHAT is all this about the Temple-belle's-ring.

?

IF the latest "glee" is not "Daddy, don't go up the Blue Mine"

?

WHETHER J. G. P. Thomas will not soon be soliloquising as follows:—"This is going to be a good lap, wasn't it"

?

Is there to be another Brooklands cricket match this year

?

IF so, when

?

WAS not Tom ever a bit longer than his odds

?

Is Mayo's concertina mended yet

## THE R.A.C.'s ANNUAL "GENIAL" MEETING.

**E**VEN that august body the R.A.C. has to unbend at times. The customary time for this "humanizing" to take place, it would seem, is at its Annual General Meeting. Indeed, so diverting have these assemblies become on recent occasions, that we have heard a rumour concerning Entertainment Tax.... At last year's meeting, which was called to pass the annual report and the balance-sheet, the chief topic of discussion turned out to be "cold apple tart on cold winter days."

Scarcely less irrelevant were many of the topics at this year's gathering, which had been convened with the same seemingly intentions as heretofore.

Mr. Gavin W. Ralston—who stated that he was a lawyer—first protested, to Sir Arthur Stanley, who presided over the meeting, that he had lodged his nomination for the Committee on a certain date and had subsequently been informed that he had failed to comply with the rule, requiring that 21 days' notice shall be given.

Sir Thomas Berridge thereupon quoted a dictum in the High Courts of Justice in 1893, that twenty-one clear days were required, and added that the nomination was therefore out of order.

Mr. Ralston retorted with alacrity that he was glad to see the Committee relying upon a High Court judgment, as, according to another rule, the Committee itself were constituted sole arbiters in the interpretation of the rules.

Sir Arthur Stanley drew the members' attention to the fact that the Club, for the first time for a number of years, had made a profit on the year's working, this amounting to £11,000. He stated that as a consequence, they had now been enabled to redecorate the Club-house, fit out additional premises for the Touring Department, an extra smoking-room, and a billiards-room; and that they were moving the library to the first floor.

Then was the voice of Mr. Ralston heard again. This time it was in complaint about the converting of the library into a card-room, on the grounds that members, other than "those of somnolent habits who used it as a dormitory," were thereby deprived of the use of the balcony.

At this point, Sir Bruce Bruce-Porter deemed it propitious to interrupt with a few observations. But the even flow of Mr. Ralston's eloquence was in no wise disturbed, and he proceeded to suggest, or rather to plead, that the grounds of the County Club be utilised for the purpose of growing vegetables.

Mr. Ralston then moved on to a highly indignant phase of his monologue, when he scourged the Club for its inability to provide hot bacon sandwiches in the smoking-room at a quarter-to-twelve at night. It appeared that he had been refused these delicacies on the authority of Captain d'Aeth, chairman of the card-room committee, although, according to the rules,

(Continued on page 28).



# Should the T.T. be

**Yes!** BY  
George Reynolds.

The question as to whether the Tourist Trophy Races should be run in England or remain in the Isle of Man is not, in my opinion, a matter for abstruse argument. Still less is it a question which should be referred to the appeal of sentimentality. Its solution depends upon a clear cut issue—that of the greatest good of the greatest number as regards the motor cycle industry and motor cycling sport.

Could the T.T. be run in England? This is the question that has exercised the minds of some people, and it is one which obviously must be adequately answered in the affirmative before the question of advisability can be entertained. I submit that the promotion and successful running in England of such a series of road races as are now annually held in the Isle of Man is quite practicable.

In the course of a short article on general principles, I cannot discuss the many details that would unquestionably be involved. I may, however, attempt to touch upon some of the essential points.

On the vital matter of a course, I suggest that suitable courses are available in several localities. There is, for instance, much to be said in favour of a circuit radiating from Scarborough and including much of this year's Six Days' route. Other possible courses I have in mind are in the West Country, in Yorkshire, in South Wales, and in the Salisbury Plain district. I am not speaking at random, for others besides myself have surveyed these circuits and pronounced them to be eminently suitable for the T.T. races, as they are now constituted. That the Manx course is an excellent one, no one who has ever been round it would attempt to deny. But to suggest that the length and breadth of England does not contain a similar one is, I think, far wide of the mark.

Addressing oneself to the general proposition, one may claim that as England is the centre of motor cycling sport, the classic event of the year should be held in England. One has only to think of the vast increase in public interest that these races would gain by transference to the mainland, to offer very practical reasons in favour of this.

What proportion of keen motor cyclists has so far seen the T.T.? Large as the audiences are on the Manx

course they constitute but a very small proportion of those riders who would greatly like to see the races. The crossing of the water to the Island and the cost, time and inconvenience involved in getting there have, it may be said, so far prevented the average motor cyclist from supporting the chief event on the motor cycling calendar. And if the bulk of motor cyclists could see the T.T.—what then? It is fairly clear that this would rapidly lead to a great increase and extension of motor cycling enthusiasm. The motor cyclist, as such, would soon become much more a power in the land than he is at present, and by his very status would enable the A.C.U. to become more influential in protecting and extending his interests.

To the trade, the transference of the races to England would be a veritable boon. When one reckons up how much of the cost of participating in the T.T. is attributable to the mere fact of having to take staff, machines and equipment to the Isle of Man, one sees that this is a very formidable proposition to the trade entrants. Remove it, and there would be an inducement for many more entries. The larger firms would be able to spend more money on experiment and development of their machines, and many smaller firms who may now have excellent productions, but are unable to risk the cost of a T.T. under present conditions, could probably be encouraged to compete. Thus, the "improvement of the breed"—one of the principal reasons for the existence of the T.T.—would be much enhanced, and the benefit to the ordinary touring rider, as well as to the sporting enthusiast, would be rapid and substantial.

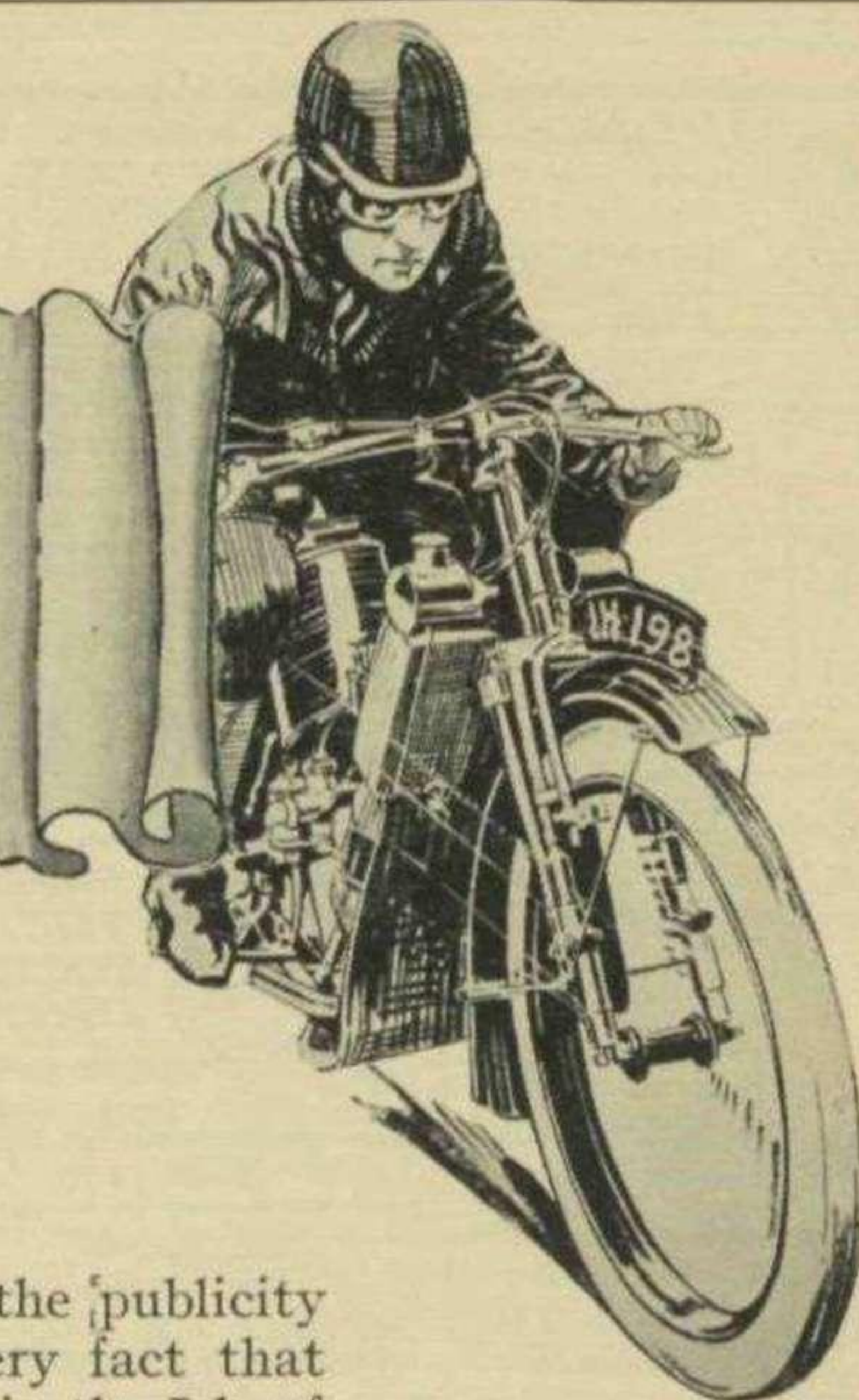
Motor cycling as a sport has never yet been accorded its right recognition in England, the country of its origin. The holding of the T.T. races here would do more than anything else could to show the man in the street how great our sport really is, how much he as a unit requiring constant transport has benefitted by it, what it offers him in the way of healthy excitement either as a rider or a spectator.

In my opinion the only bar against holding the T.T. races in England is the very practical one of legal objection. That motor racing of all kinds will eventually be legalised in England I firmly believe. Whether

(Continued on page 33).

# Run in England ?

**No!** BY George Brown.



Just as it would be impossible to imagine the Derby taking place on any other course but Epsom, or the Oxford and Cambridge Boatrace taking place on any other river but the Thames, so it would be impossible to imagine the Tourist Trophy Motor Cycle Races taking place on any other Course than the world famous circuit in Mona's Isle.

I think I am right in stating that some seventeen years ago, when it became necessary for England to produce a team (by competition) to represent that country in the Gordon-Bennett Races to be held in France, that the now Sir Julian Orde (then Secretary of the R.A.C.) came to the Island, and induced the Manx Legislature to pass the necessary legislation to enable the roads to be closed for the purposes of motor racing. Taking advantage of that legislation, the A.C.U. have, from that time to this, with the exception, of course, of the war years, held annually their races in the Island, and the result has been all for the good of the sport, of the trade, of the Union, and of the movement.

It would be difficult to find in any part of the world a motor cycle to equal the British product. The frame of the modern motor cycle, the forks, the steering, the flexibility of the engine, the "pick up," the gear box, and the high engine speed, have all been evolved from the lessons learnt on the Manx course. It might be possible to find an equal, it would be impossible to find a better, course. For a moment think of the Quarter Bridge, of Ballacraigne Corner, of the quick drop to Michael and Ramsey, including the famous Sulby Bridge, of the well known mountain climb, containing the Hairpin, and the Gooseneck, of that wonderful drop through the Kepple Gate, past Creg-naa-Baa, and then, perhaps the tit-bit of all, the famous Governor's Bridge. Every part of that course has stamped itself upon the British motor cycle.

Just as there is a goodwill attached to almost every successful business, so there is a goodwill attached to the Tourist Trophy Races and the Isle of Man. Divorce one from the other, and you destroy the goodwill. On the grounds alone of the excellence of the course, and its wonderful opportunities for the testing of acceleration and braking, etc., the T.T. Races, I submit, should not be taken away from the Island.

Then again from the publicity point of view, the very fact that the races take place in the Isle of Man, lends to the race an additional charm which would be absent if the races took place in England or elsewhere. The mind of the world couples up the Tourist Trophy races—Isle of Man, and everyone interested to-day in the sport of motor cycle racing looks back with pleasure upon that wonderful, if somewhat hectic time, called T.T. week.

There are two other points I should like to touch upon, and these two briefly. The first is that there is no place so situated as is the Island, with a course at its door, which provides such wonderful accommodation at such remarkably low rates. If the course were situated in England, it would have to be in some "out of the world" place to avoid the heavy commercial and pleasure traffic which is to-day such a characteristic of English country life. England is a commercial country, the Isle of Man is a pleasure country. We thrive and live on giving pleasure to thousands of people annually, and it is our chief source of income.

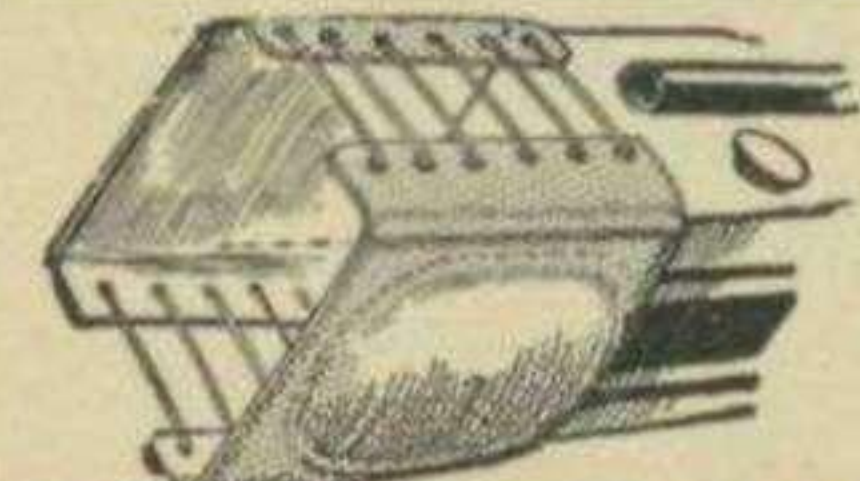
The T.T. Races are a business proposition. They are no longer only a sport. Everyone connected with the races is out for what he can get. The Island puts up with the disadvantages of the races—and the disadvantages are many—it puts up with the roar and rattle which goes on for some three weeks; it puts up with every law in the Island being set at defiance, because it pays it to do so; because the fame the races bring to the Island is so great, that it is worth all the annoyance.

I would refer, briefly, to the gratitude which ought to be felt (and which, I believe, is felt by many) by everyone connected with the T.T. Races to the Island for having provided such facilities for so many years. The Island has spent many thousands on road repairing—this year alone it has spent £33,000 on the Course. No other municipality, or urban council, or county council, could afford, or would afford, to spend such sums on the roads. It must be borne in mind too, that good roads are essential for the speeds which are put up to-day, and the Island can offer such roads. The race in the Island takes place on main roads; the races in England

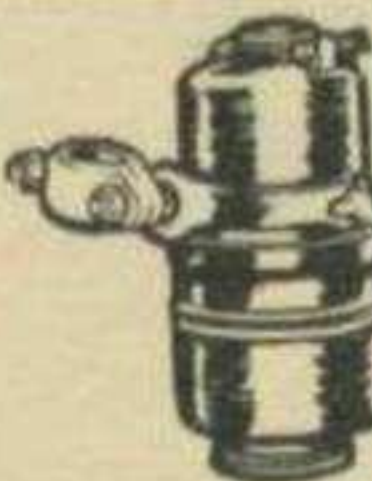
(Continued on page 33).



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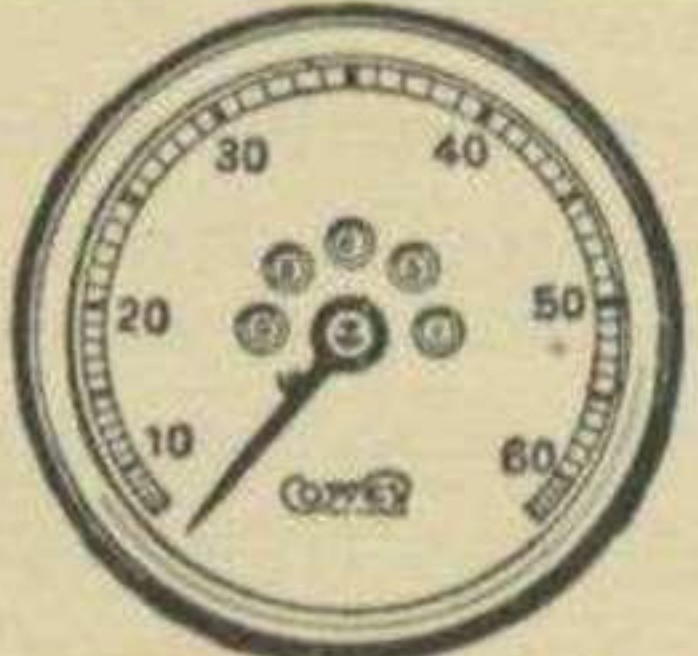


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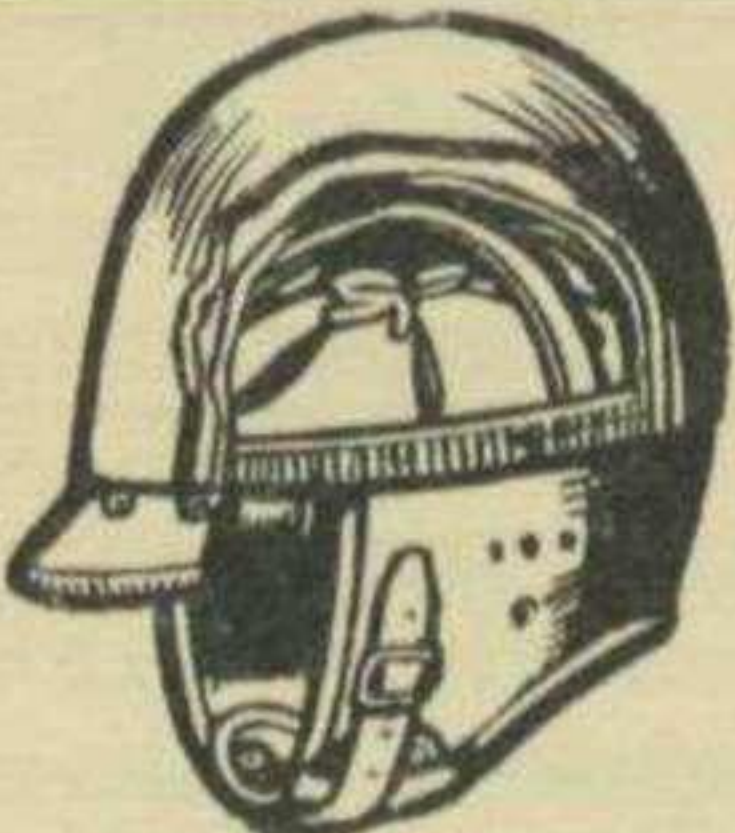
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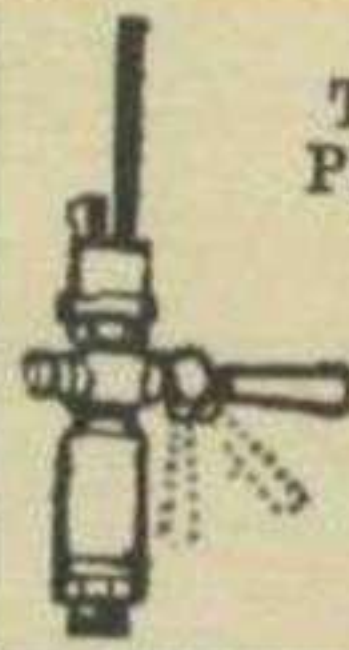


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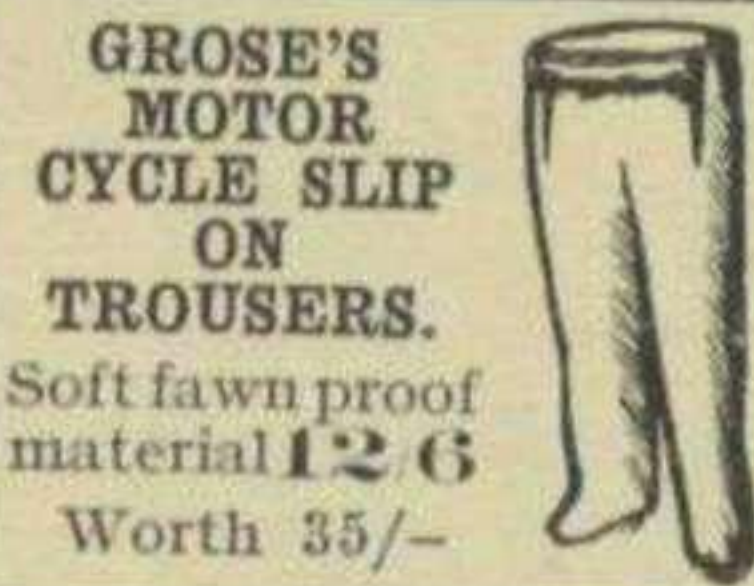


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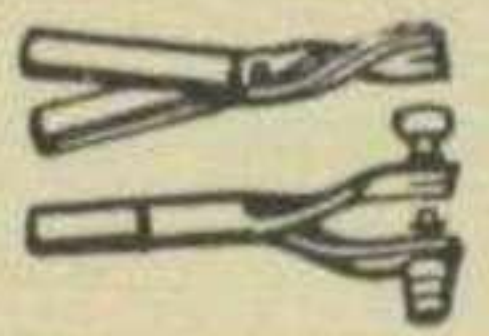
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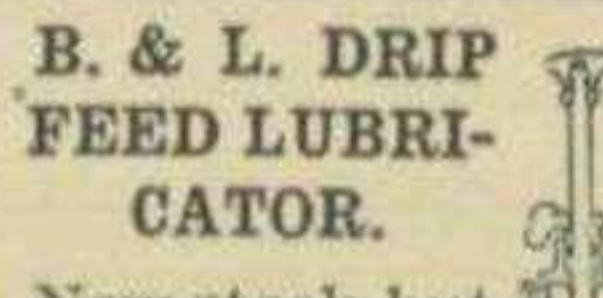
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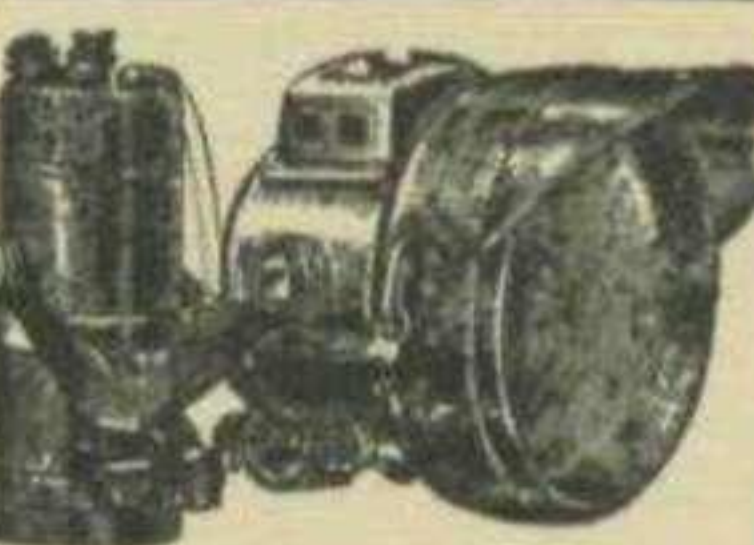
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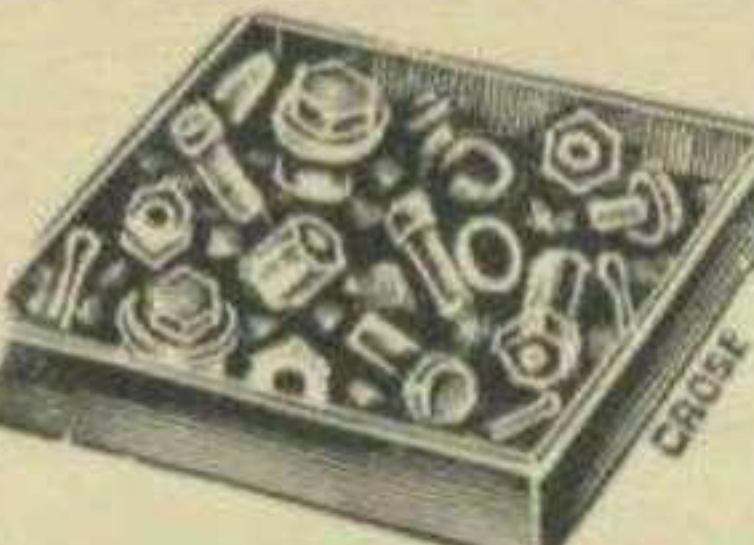
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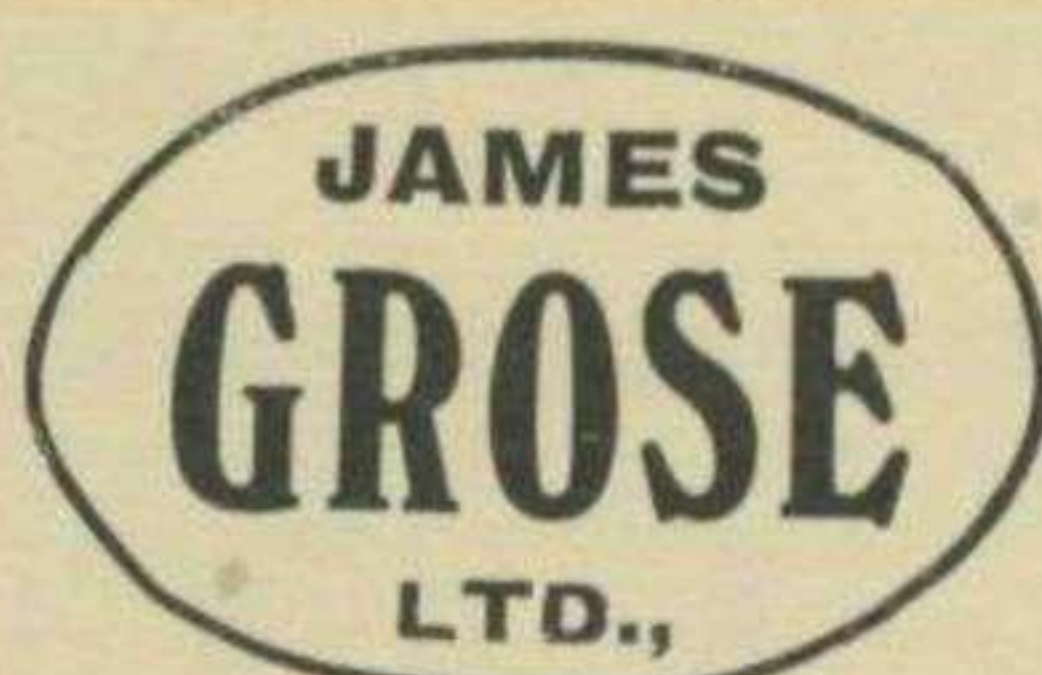
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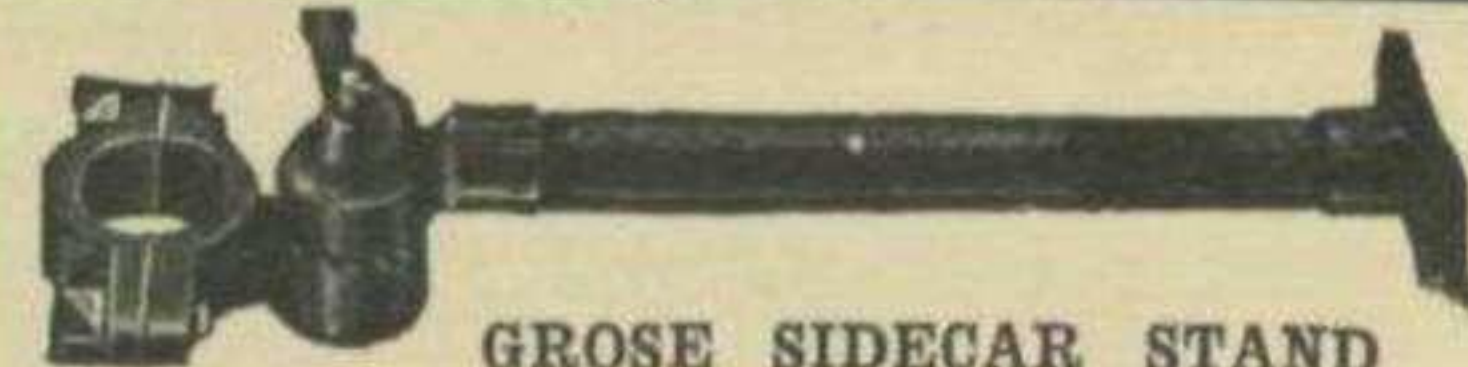


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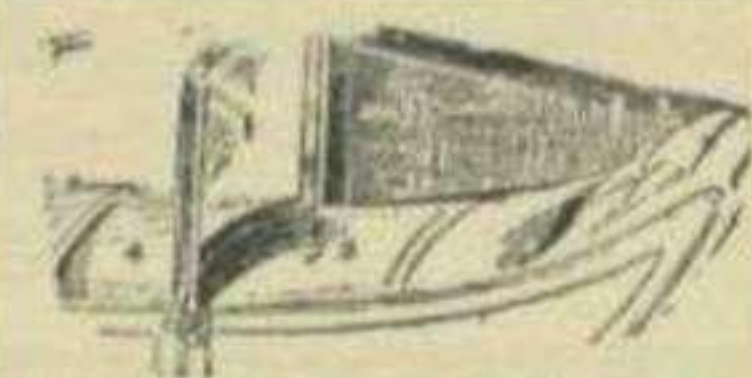
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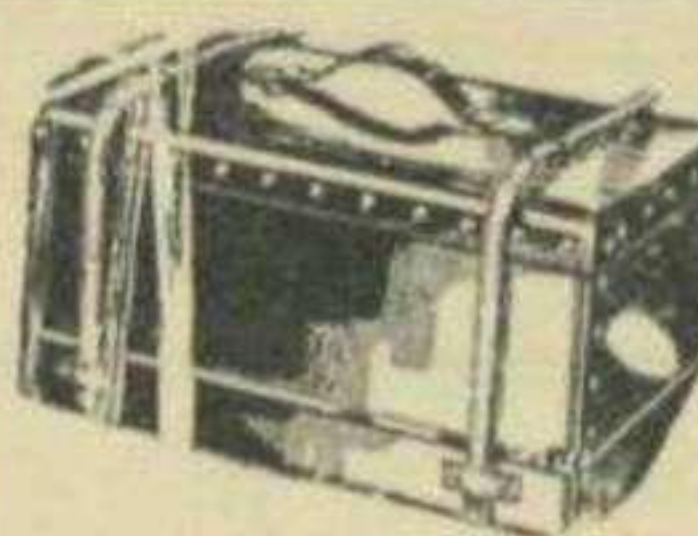
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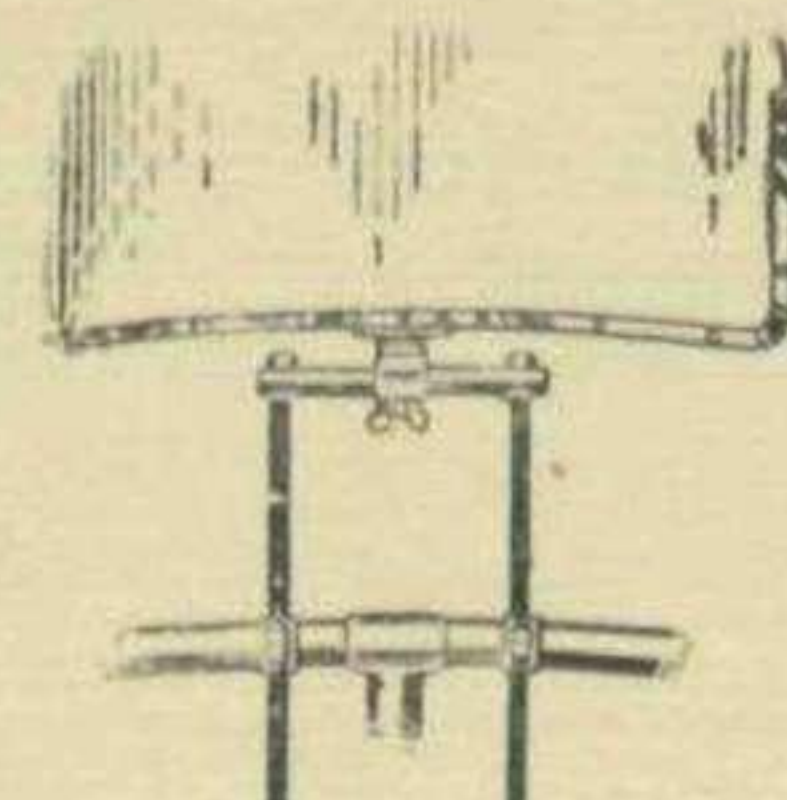
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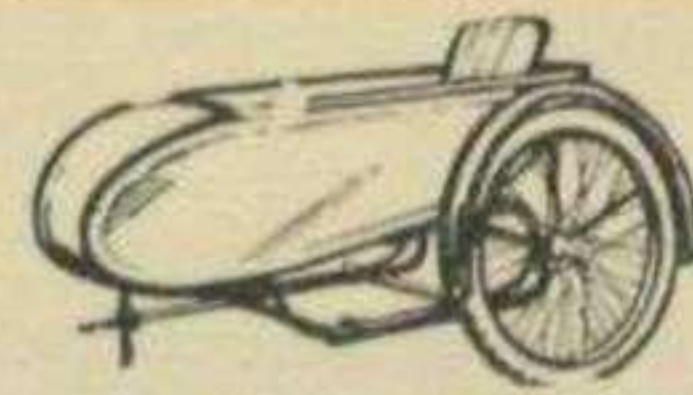
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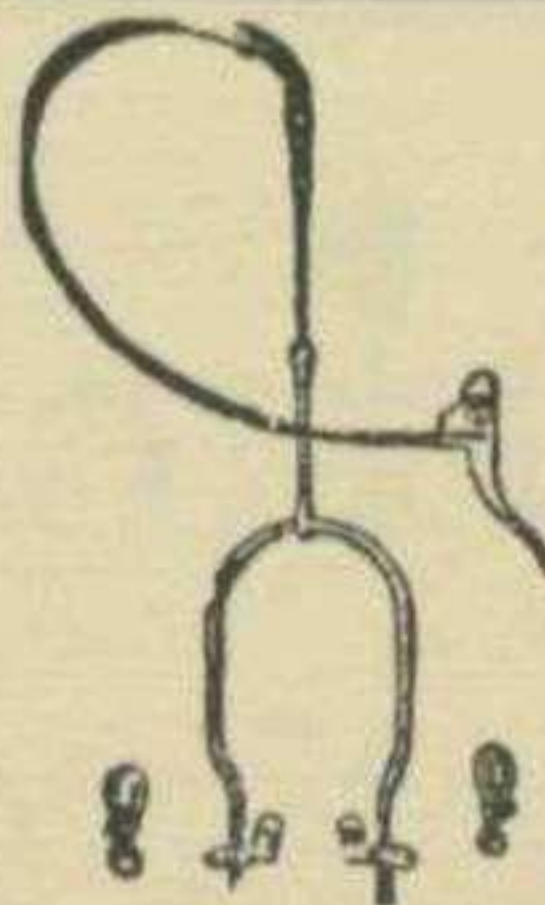
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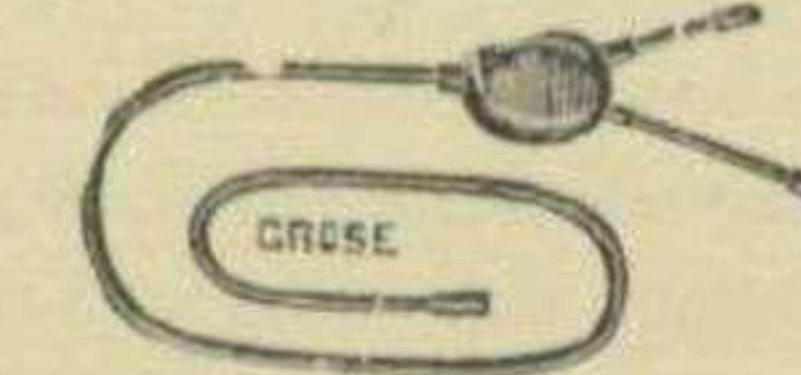


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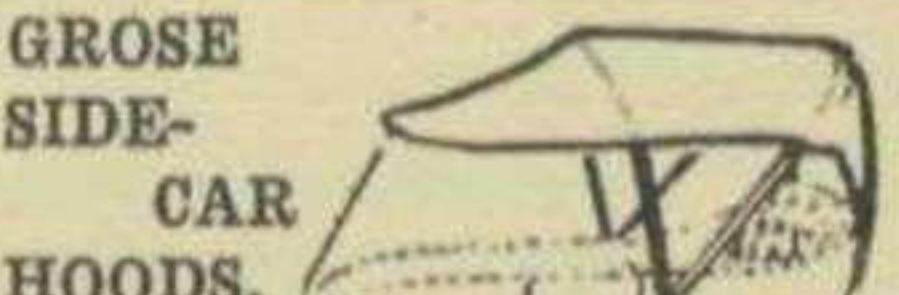
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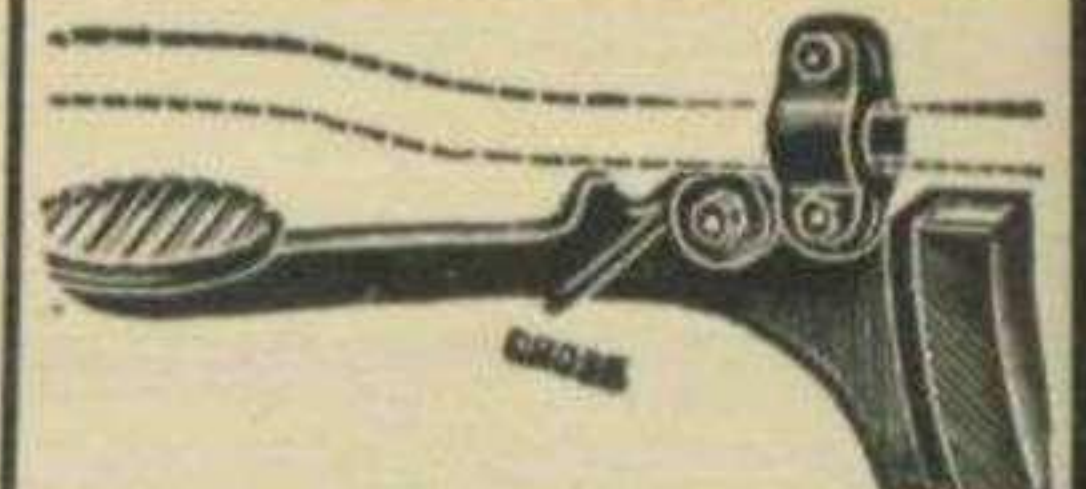
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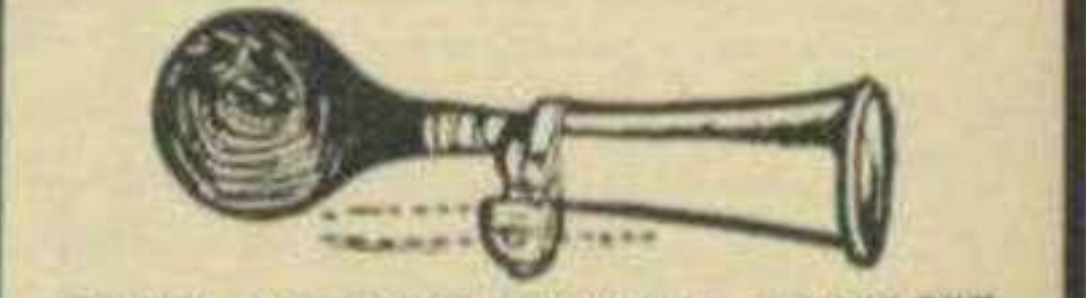
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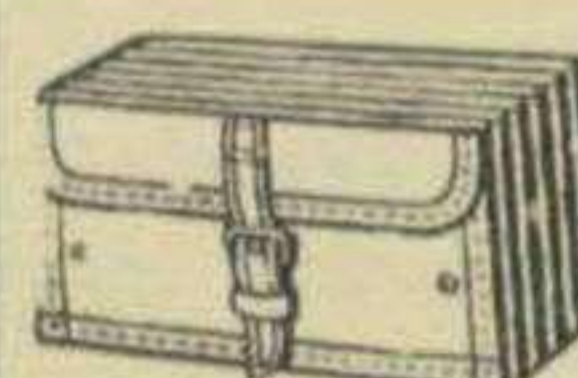
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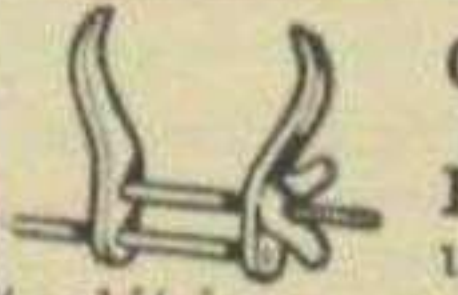
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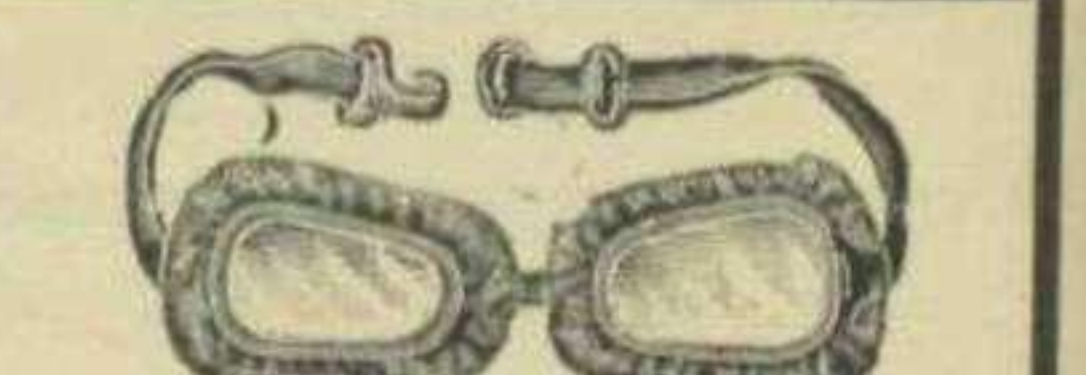
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## SHOULD THE T.T. BE RUN IN ENGLAND?—continued.

### YES!—continued.

the Bill at present before Parliament to permit the T.T. races to be held here will pass into law, is another matter. Political considerations will doubtless affect its fortunes one way or the other, and if I started to argue why, even from political and national aspects it should be granted a safe passage to the Statute Book, the Editor's blue pencil would doubtless drop heavily upon my well meant effusion. But the A.C.U. are to be heartily congratulated for promoting the present Bill, and I am sure thousands of motor cyclists would like to see it accorded the Royal Assent.

So, with all respect to my many good friends who want the T.T. to remain in Mona's Isle, I answer the Editor's question: "Should the T.T. be run in England" with a very decided: "YES!"

### THE LATE CAPTAIN TOOP.

Sportsmen in general will regret the loss of a good friend to motor racing by the death of Capt. J. M. Toop, who was killed whilst driving a Peugeot at the Whit-Monday Meeting at Brooklands. Those who have taken to the sport since the war will not have a very close acquaintance of his character and ability, for most of his competitive work was done in pre-war days, when he raced Sunbeam and Peugeot cars with a measure of success. Perhaps the best of his performances was the winning of the Benzol Cup in 1913. Soon after that he went on active service in the East, and it was only last year he returned and took up his residence at Byfleet. Naturally the fascination of the track was irresistible. He had been round once or twice in practice spins, but this was the first time in post-war days that he had competed in a race. He was extremely keen to win it, and it is probable that but for the accident would have succeeded, for he was about to pass the leader at the time of the disaster.

Mr. Brocklebank, the owner of the Peugeot which Capt. Toop was driving, had originally intended to take it through himself, but after handing over the driving wheel, Mr. Brocklebank took the passenger seat and actually rode to the starting point. To assist Capt. Toop in his effort to win the race, Mr. Brocklebank, however, vacated the seat so as to add to the speed of the car.

Capt. Toop was a bachelor of about middle age. He was a fine character, and was loved and respected by a large circle of motoring friends.

Mr. Herbert le Vack, riding his big J. A. P. engined Brough Superior, at Senart, in France, has succeeded in breaking the world's record set up by Mr. Temple's 113 m.p.h., having attained the truly wonderful speed of 114.84 m.p.h.

To attain such a speed on a motor cycle is, of itself, a remarkably fine achievement; but additional admiration is won by this intrepid rider, in this instance, for having so triumphed on a wet road across which there swept a 50 m.p.h. gale.

### NO!—continued.

would have to take place on third-class roads because of the traffic on the main roads, and third-class roads in England are not good enough for such a race.

In conclusion, I would reiterate the three points why the races should not be taken away from the Isle of Man: because an equal course offering such a wonderful testing ground could not be found—and to use an inferior course in England would tend to lower the present magnificent standard of machines attained through the lessons learnt on the Manx course; because of the goodwill that appertains to the motor cycle races by their being run elsewhere; and, thirdly, because of the great debt of gratitude due to the Island for providing facilities for motor racing when no other part of the British Isles was prepared to do so. If the T.T. Races are for the public, a spectacle only, then they might go to England, but if the Races are to improve the machines, then they must be left where they are—in that little Island in the Irish Sea.

### A SPORTING ENDEAVOUR.

Several English entries have been received for the speed trials which are being held by the Motor Cycle Club of France, at Arpajon, outside Paris, on 6th July. Mr. J. G. Parry Thomas with his Leyland Eight, and Mr. E. A. D. Eldridge with his big F.I.A.T., are leaving for France immediately after the B.A.R.C. meeting at Brooklands on 5th July, and will arrive in Paris in time to make attempts on records in the afternoon of 6th July. These famous British drivers will be up against René Thomas, the French Ace, with his 350 h.p. Delage, speed champion of France.

The arrangements that are being made to enable the two cars to compete at Arpajon are of interest. An advance guard will leave Brooklands a day before the Brooklands meeting, complete with a supply of tyres, petrol, oil, and all spares for the two racing cars and two mechanics. As soon as the Brooklands meeting is over, on the Saturday, the Leyland Eight and the big F.I.A.T. will be driven to the coast and shipped over to the other side, where they expect to arrive at Dieppe at 5 a.m. on the morning of the Speed Trial. The journey to Arpajon is expected to occupy five or six hours, and the cars should be on the course by mid-day. It will be seen that little time will be left for emergencies on the road, or for the quick look-over every racing car needs before the flag falls before the start.

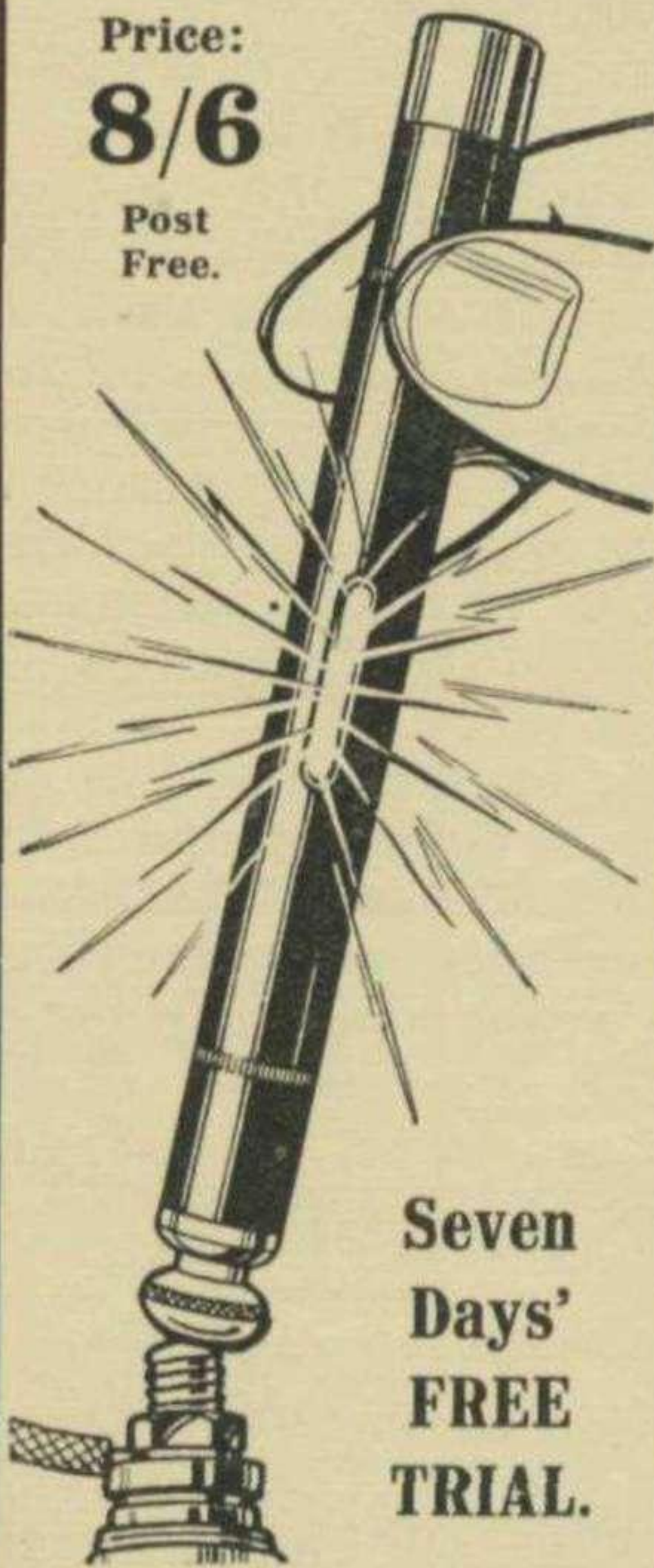
In connection with these events, entry forms may be obtained from Mr. Donald Gedge, c/o. Hann Partners, Engineers, Butts Lodge, Brooklands Track, Byfleet, Surrey.

The famous "Leyland-Thomas" in her 1924 form is, without doubt, one of the finest specimens of streamlining that have yet appeared at Brooklands. A saving of 40 per cent. head resistance is claimed for the new design. This is very considerable when the shape of the streamlining adopted last year is recalled.

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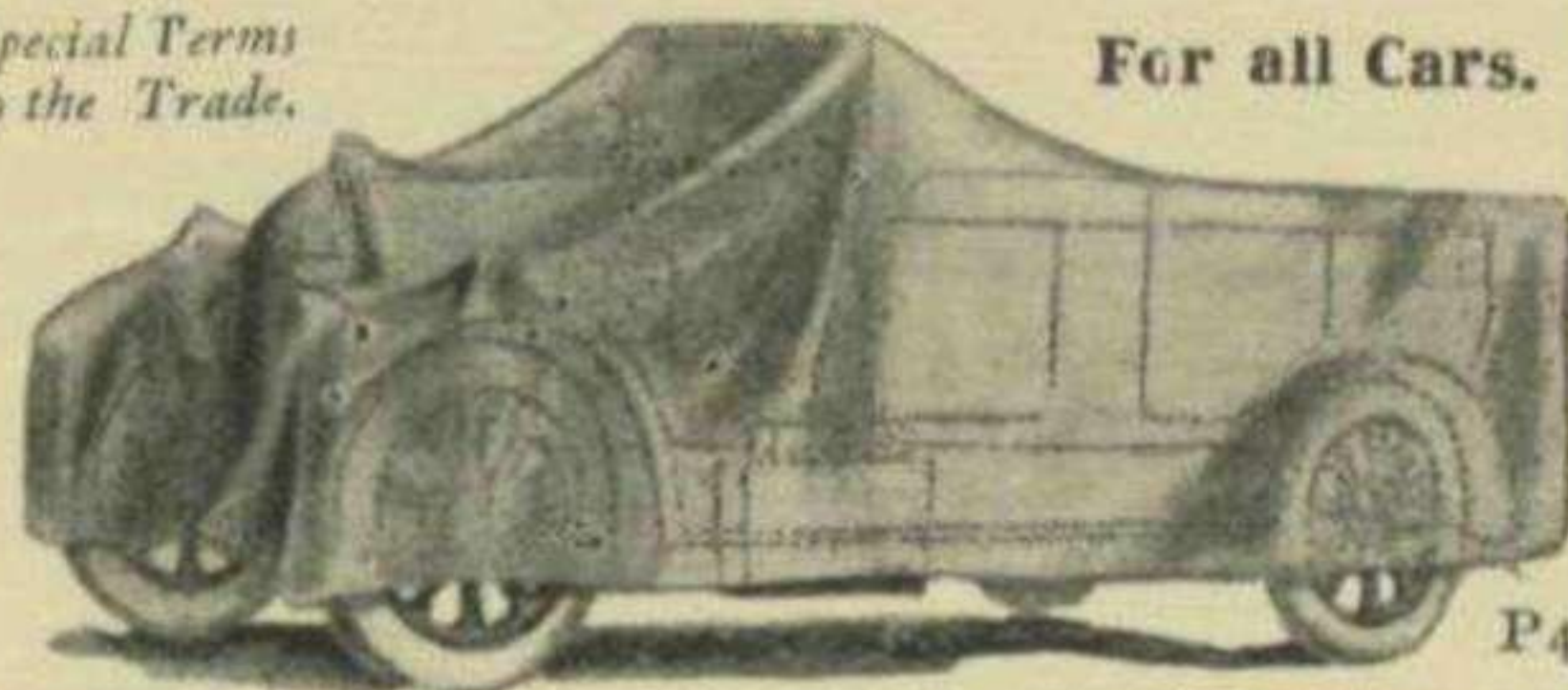
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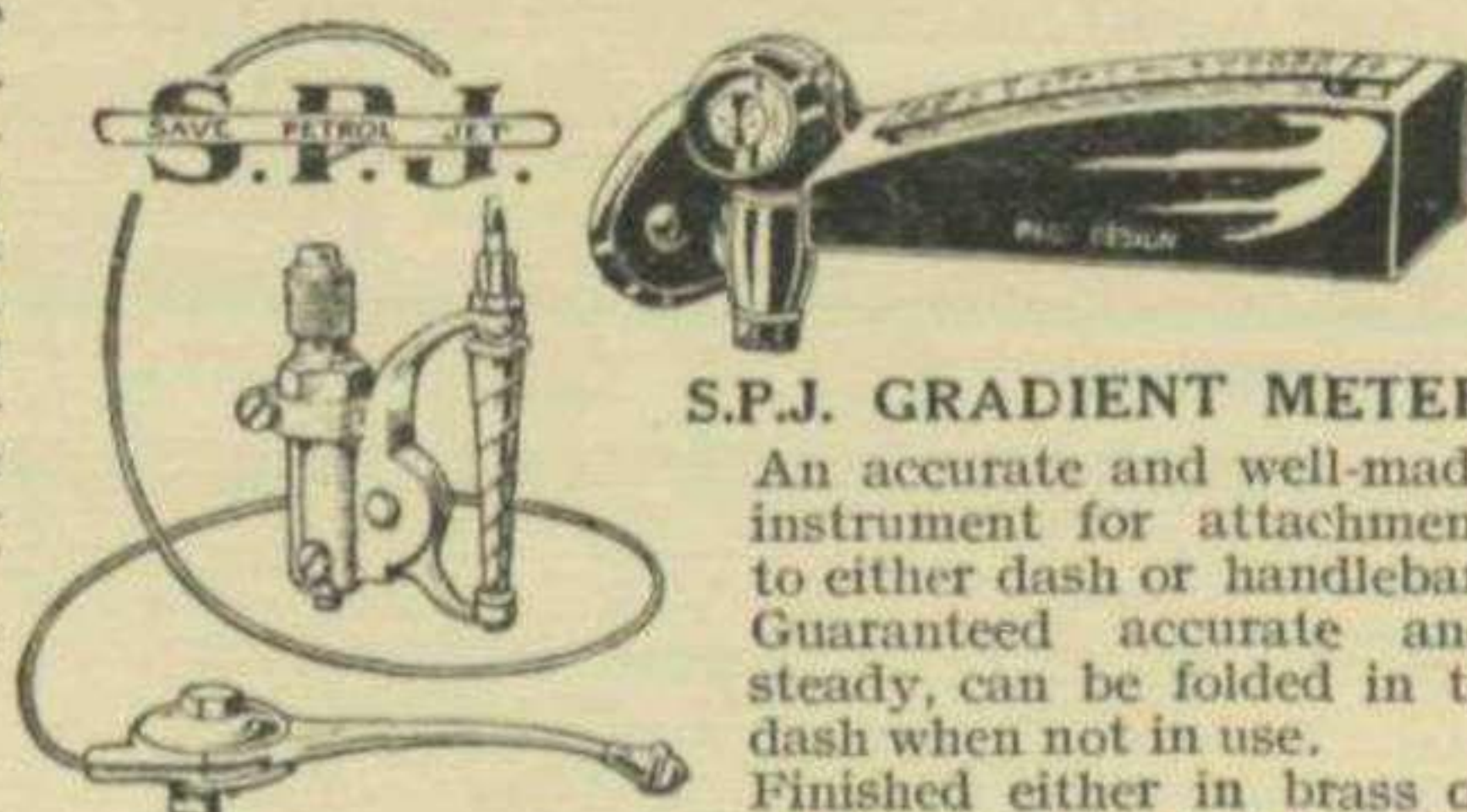
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# The Fascination of Motor Racing

By Ivy Cummings

[The well-known lady race driver gives her impressions of competition motoring for women, and records some interesting reminiscences of her outstanding successes].

IN my estimation motor racing is at once the most fascinating, exhilarating, and absorbingly interesting sport in the whole world. Beside motor racing all other sports—even flying, I think—pale into insignificance. In flying, one misses the sensation of *speed*. Once one is up, the subsequent monotony is intensified by one's feeling of remoteness from the rest of humanity; whereas in motor racing there is never a dull moment, and the human element is always present, with the result that one is conscious all the time that one is a contestant.

Personally, I never "took-up" motoring. Motoring claimed me when I was still a child. In looking back, I think some of the happiest hours of my childhood were those spent in helping my father to tune up his racing cars. At one time, I suppose, I was the youngest lady motorist. I never learned to drive, it just happened—and it happened in this way: one day as long ago as 1912 (I was then eleven years of age) my father had taken me to Brooklands for a ride. Being interested in aeroplanes, he went to the flying-ground, leaving me in the Paddock to look after the car—a S.C.A.R.

This was my opportunity! I managed to start the car and having watched many times the method of starting off and gear changing, I took the car on to the track. Being so young I saw no danger, and soon had the car doing double the legal limit. On entering the Straight, I found the steering getting rather stiff, so I got into the Paddock, bumping to a sudden standstill by applying the brakes.

Then it started raining; but I did not dare to try and drive the car under one of the narrow shelters there, in case I should have an accident. On looking at the front wheels I noticed a flat tyre. As my father had not yet returned (I had got back in time!) I thought I would try and put on the Stepney.

The first thing to do was to endeavour to jack up the wheel; and eventually I succeeded—damaging my hand in doing so. I think this damaged hand saved me from being punished, as my father seemed very much concerned about it.

The fact that I had driven at speed got me going; and I determined that eventually I would be a real racer. But it was a very long time before my chance came.

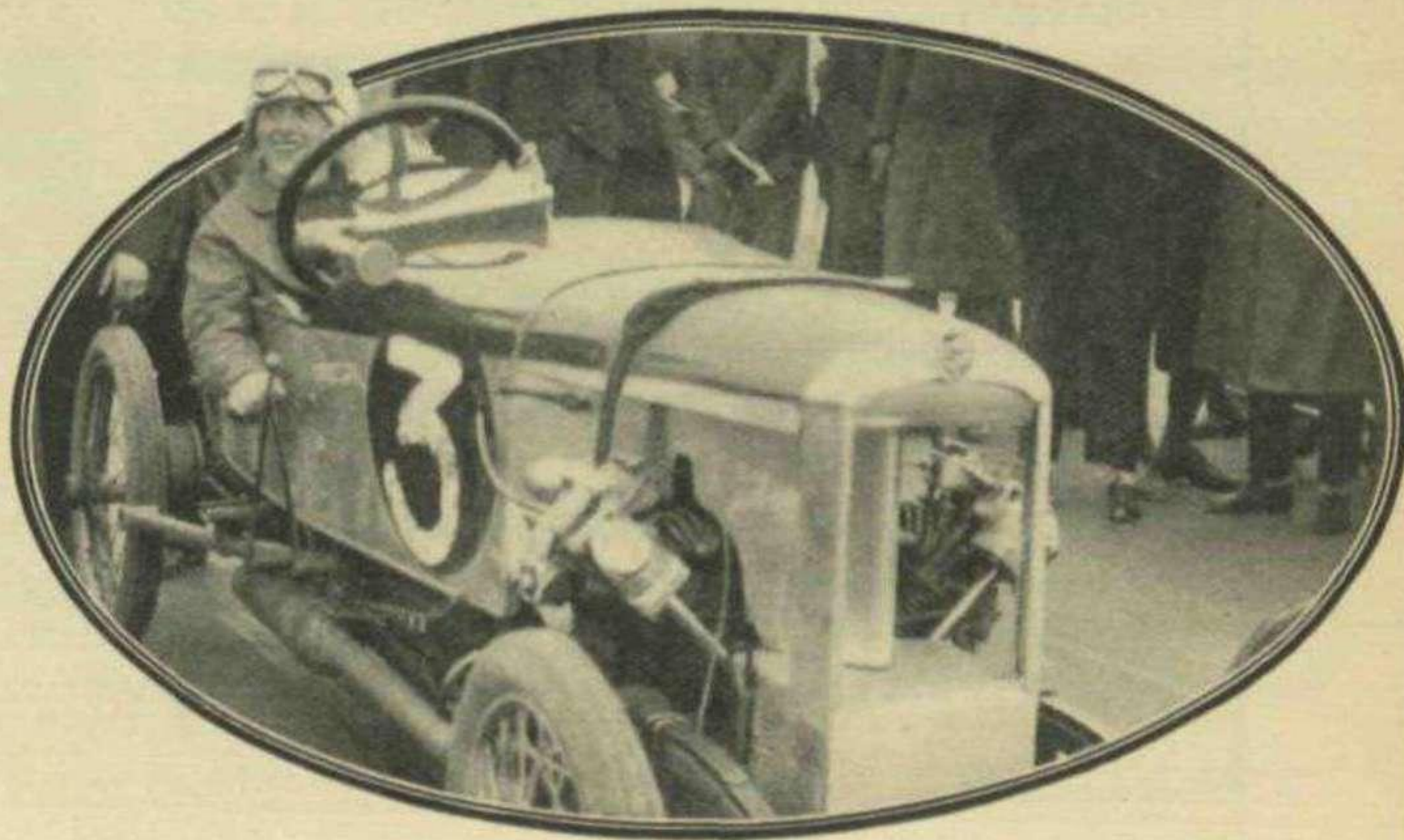
Meanwhile I spent innumerable happy days helping my father and George (our indispensable mechanic) to supertune many stunt and standard engines.

In default of being able to race, I searched for some other kind of motoring with a thrill in it. During the war, I found a more or less exciting substitute, as I used to drive the Police around on Air Raid nights to give the "Take Cover" and "All Clear" signals.

After the war, things began to get tame again, until at last my father gave me a car of my own. This was one of the three-litre Vauxhalls (a 1912 Coupe de l'Auto), and it was with this car that I entered for, and incidentally won, my first race—at the Westcliff Speed Trials in 1919. The Vauxhall was superseded a little later by an 11.9 h.p. Gregoire racing car which, in 1914, had been specially built for the well-known Brooklands racer, Captain Malcolm Campbell.

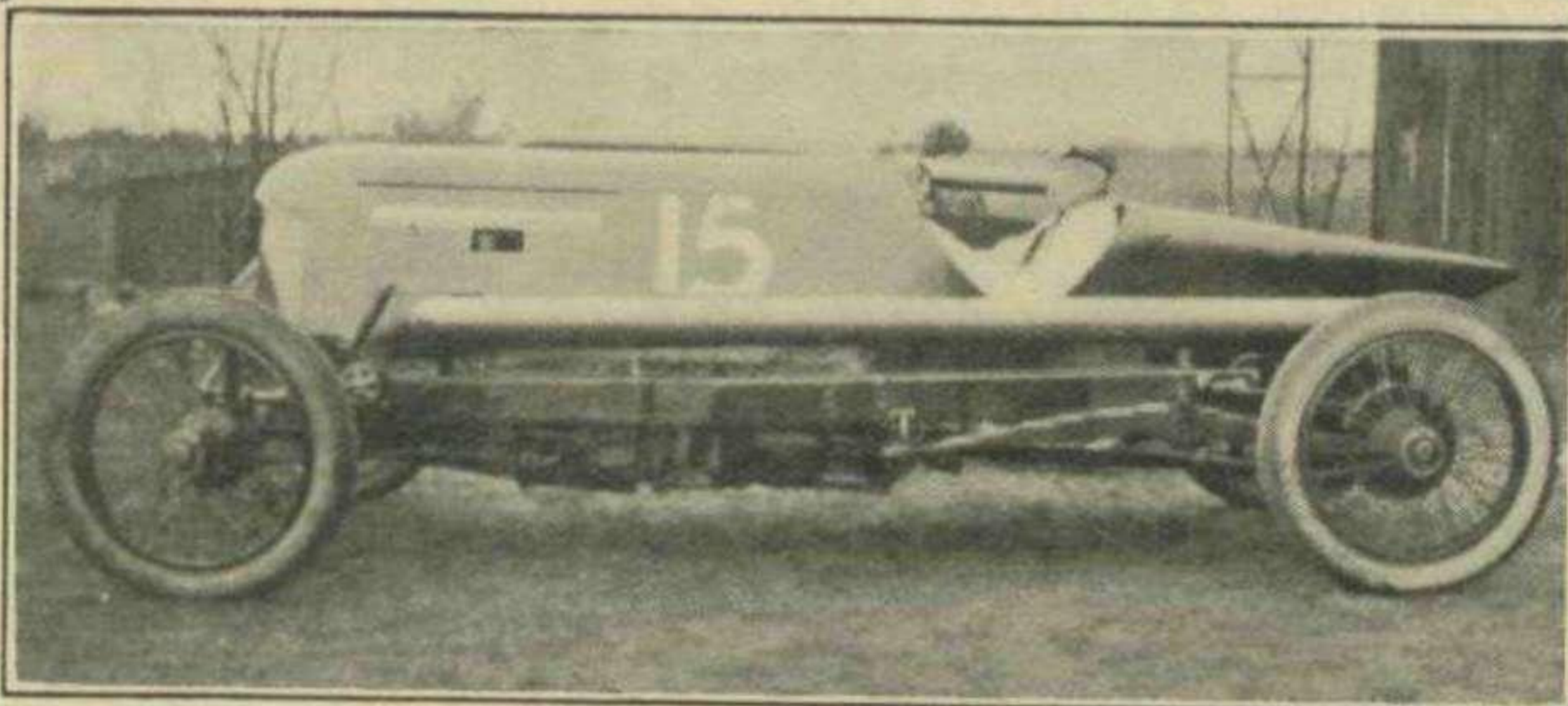
The next car was a three-litre Sunbeam, and with this I was fortunate enough to capture first place in the Duke of York's long race at the Brooklands Royal Meeting, on May 20th, 1922, at an average speed of 83½ m.p.h. The same car also won, amongst other distinctions, the sixth category for racing cars at Gaillon Hill in France, in October, 1922.

Next I had a little Bugatti; this was in early 1923. The Bugatti was successful in its class in each hill-climb or speed-trial for which it was entered. Encouraged



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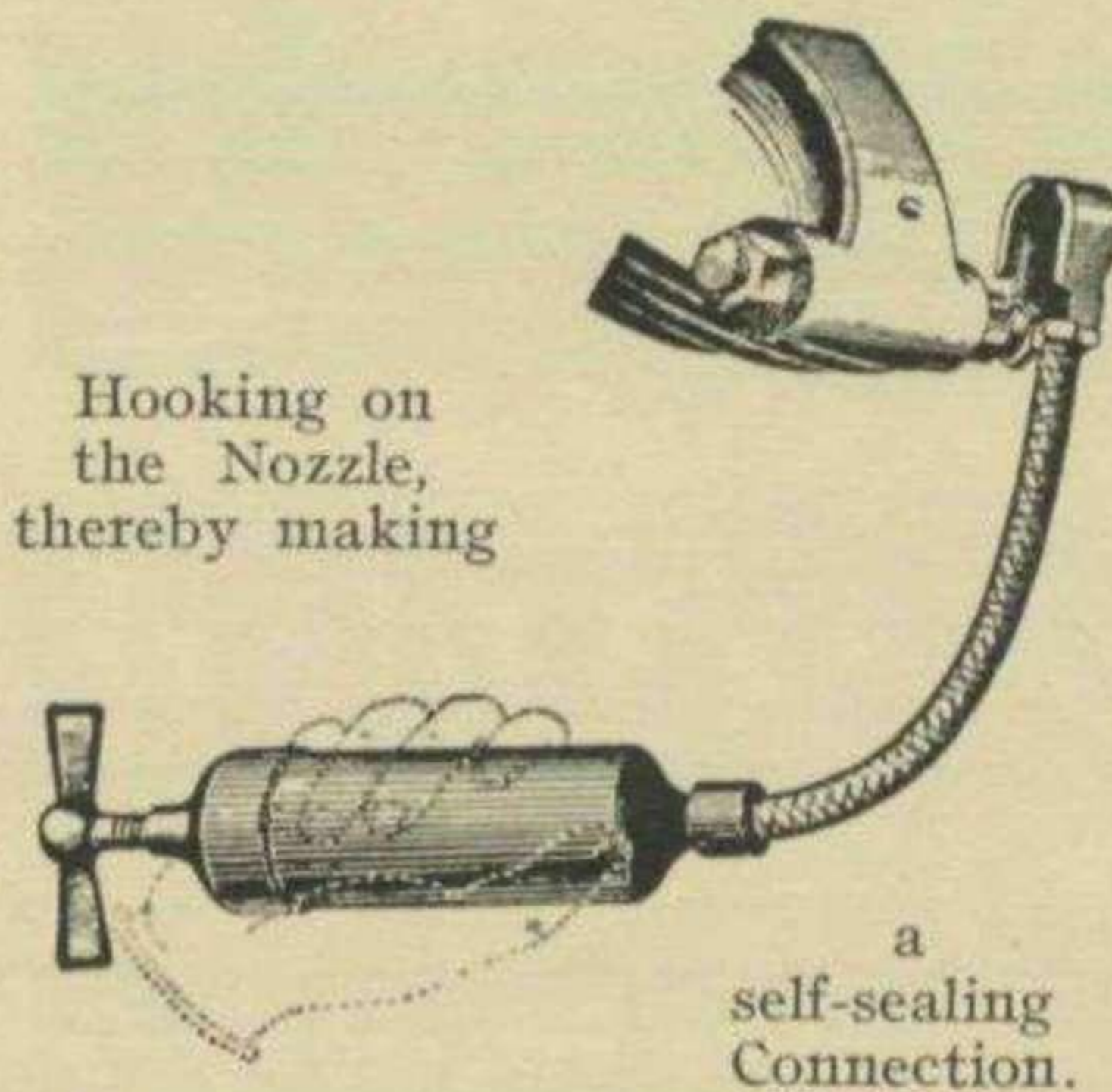
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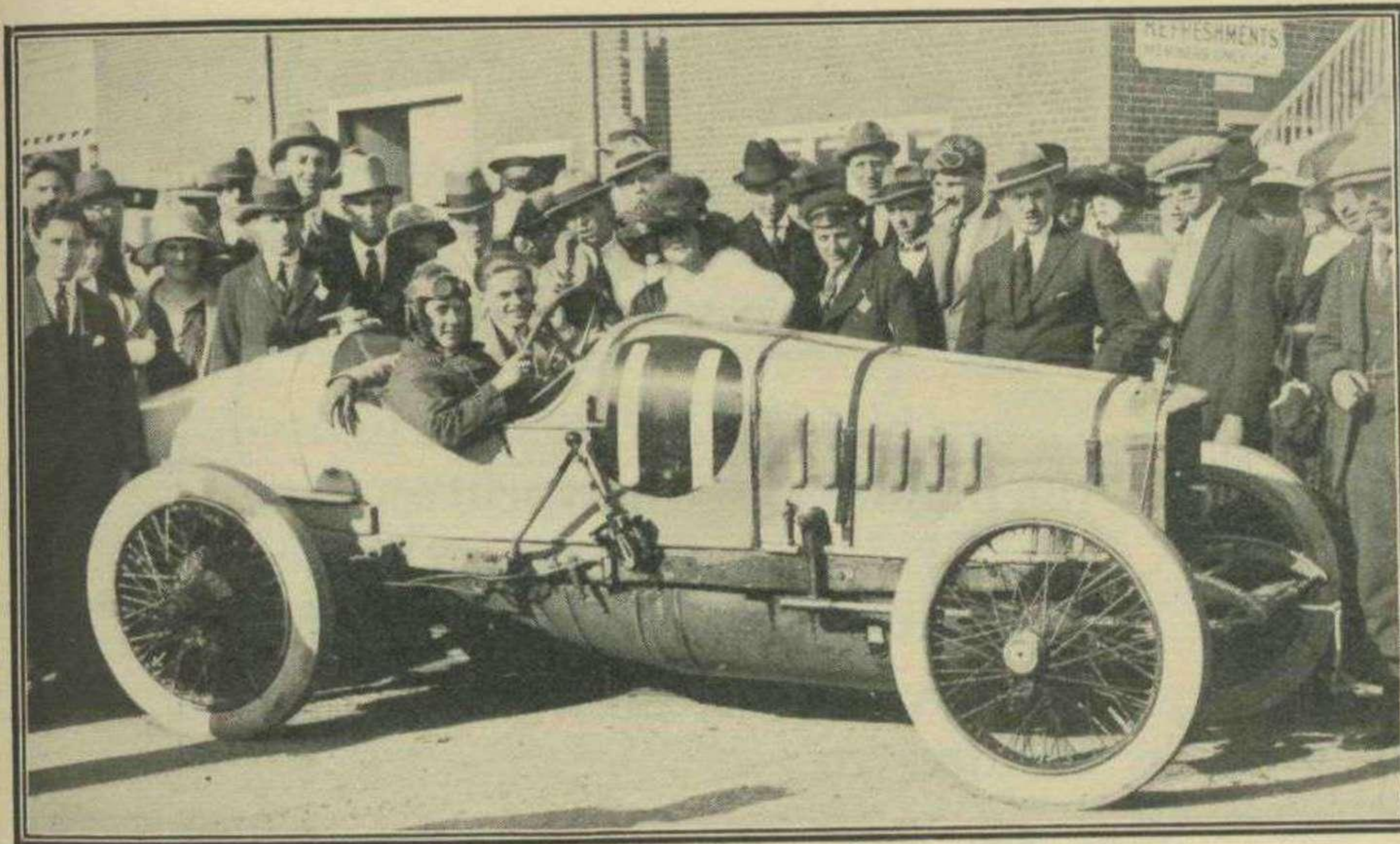


*A Corner of the Running Shed.*

A PERMANENT STAFF OF SKILLED MECHANICS IS ALWAYS ON THE SPOT TO REPAIR THOSE "LAST MINUTE" BREAKDOWNS THAT ENTAIL "SCRATCHING" SO MANY RACES. ALL SIZES OF TYRES STOCKED. FACILITIES ARE PROVIDED FOR COMPETITORS TO WORK ON THEIR OWN CARS SHOULD THEY WISH TO DO SO.

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MISS CUMMINGS AT THE WHEEL OF THE 3-LITRE SUNBEAM WHICH SHE HAS RACED WITH CONSPICUOUS SUCCESS.

by the consistent dependability of this car, I next purchased a 20 h.p. Bugatti which I named "Black Bess," and which now also has a useful record to its credit. The acceleration on this car was extraordinary, and this enabled her to make quite a name for herself for "fastest time of the day" performances at hill-climbs and in sprints.

The only other car I have owned, and infinitely my favourite up to now, is my 1923 Frazer Nash. This sturdy little car was possessed of a very useful turn of speed and quite exceptional acceleration—wherefore we immediately set about supertuning her. It was found that she was particularly successful at speed trials and short distance sprints up to one mile; and we therefore began to think of the possibility of breaking records with her. Since all the records were held by men up to that time, it will be appreciated that it was necessary for a woman to be the possessor of a very "super" little car to be inspired to any such ambition!

At Brooklands, on November 8th, 1923, the little Frazer Nash broke the following records in Class K from a standing start:—

½-mile	....	....	....	at 60.80 m.p.h.
Kilometre	....	....	....	at 61.79 m.p.h.
1 mile	....	....	....	at 68.58 m.p.h.

From the foregoing it will be seen that whatever success has attended me in motor-racing has just "happened" and therefore the last thing I should like to do would be to discourse formally upon motor racing for women.

However, I do think that, given the right temperament and a pedigree machine, any woman with the inclination so to do, may excel in motor competitions just as easily as in any other of the strenuous things which women now so readily undertake.

It is an absolute fact that I am never so completely happy as when I am seated at the wheel of my car, watching for the starter's flag to drop. To me there is something indefinitely glamorous in that moment,

something which cannot be defined, or even conveyed on paper.

If ever I am feeling at all out of sorts, a hill-climb or a speed trial invariably puts me right. I know this appears far-fetched, but it is a positive fact, that I have often been ill when I have started out to race; but I have always returned in great spirits and as fit as a fiddle.

I believe there is nothing more stimulating than the excitement of a road race. I love the uncertainty of it, and the feeling that it is all "up to oneself," and that for a time at least, one's destiny is very nearly one's

own. Then there is the fascination and the test of skill in fast cornering. I have been asked once or twice to describe the way in which I estimate my skids. Frankly, I cannot explain; but it is my belief that the best way of pulling out of a skid, provided the surface is not too greasy, is to turn into it and at the same time to press one's foot hard down on the accelerator.

I love Brooklands, but I think I like hill-climbs and speed trials even more, the reason for this is that it is so pleasant to get away for the week-end, and these trials are generally held at the seaside or in the country, where they may be followed by a "holiday week-end" with the family.

The time is coming, I feel sure, when there will be a large number of women motor racers in this country; and I am equally certain that they will surprise and disarm those who are a little critical and sceptical of women racers at the moment.

One thing which is badly needed and which would surely tend to bring out the women motor-racers, is a Woman Motor-Enthusiasts' Club. I, for one, would welcome such an institution which, I am convinced, would thrive.

There is one factor which, to my mind, suggests that women ought to be able well to hold their own against men in motor-racing—namely: Intuition. Intuition plays a superlatively important part in good driving, and it is universally acknowledged that woman possesses this faculty in a far more highly-developed degree than does imaginative man.

We are informed that Mr. Eldridge is building two ultra-streamlined two-seater racers for the J.C.C.'s 200 mile race at Brooklands. They are said to be exceptionally low, being underslung, and much is expected of them. One he intends to drive himself, the other he will probably sell, to be driven in the races. This looks like an exceptional opportunity for some keen sportsman!



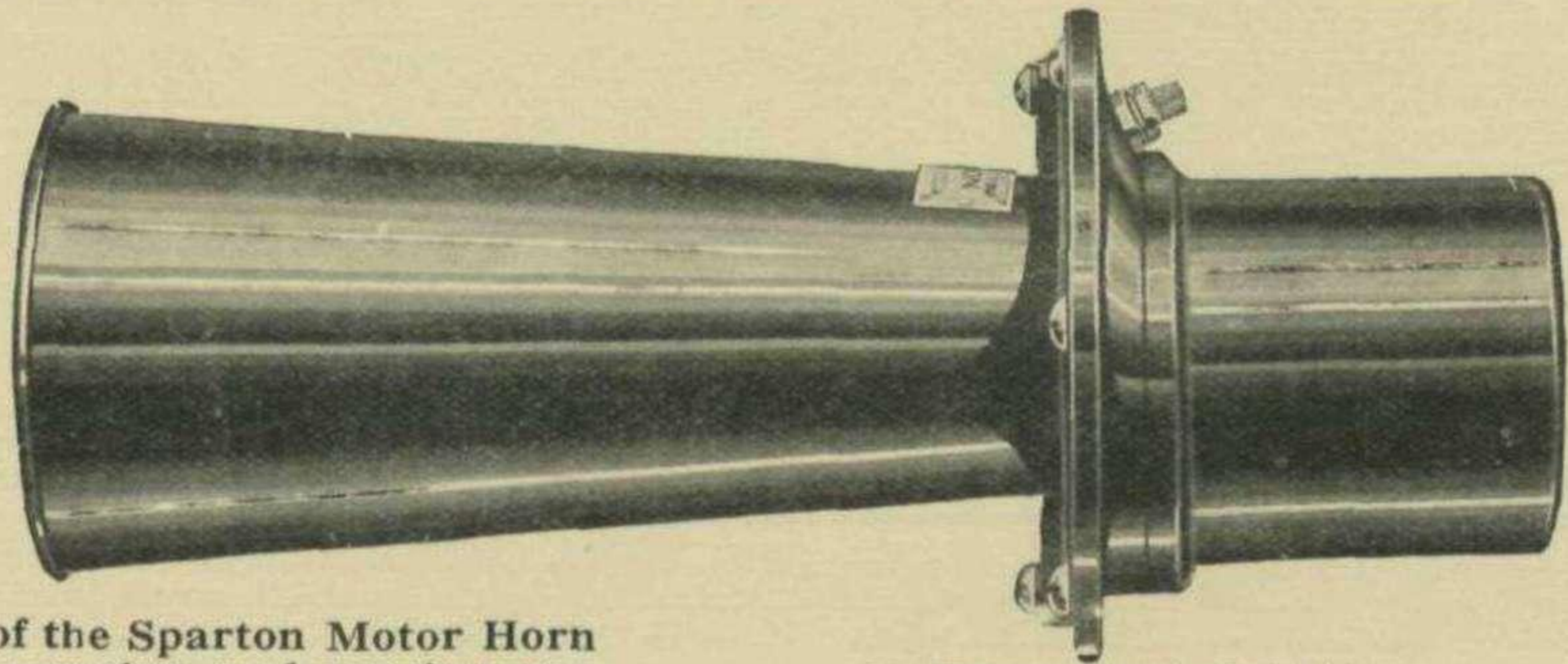
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Mica Insulated, detachable, rustless body, for "hot" engines for normal work ... 7/6  
For racing use F12, or ask our Brooklands representative for advice.

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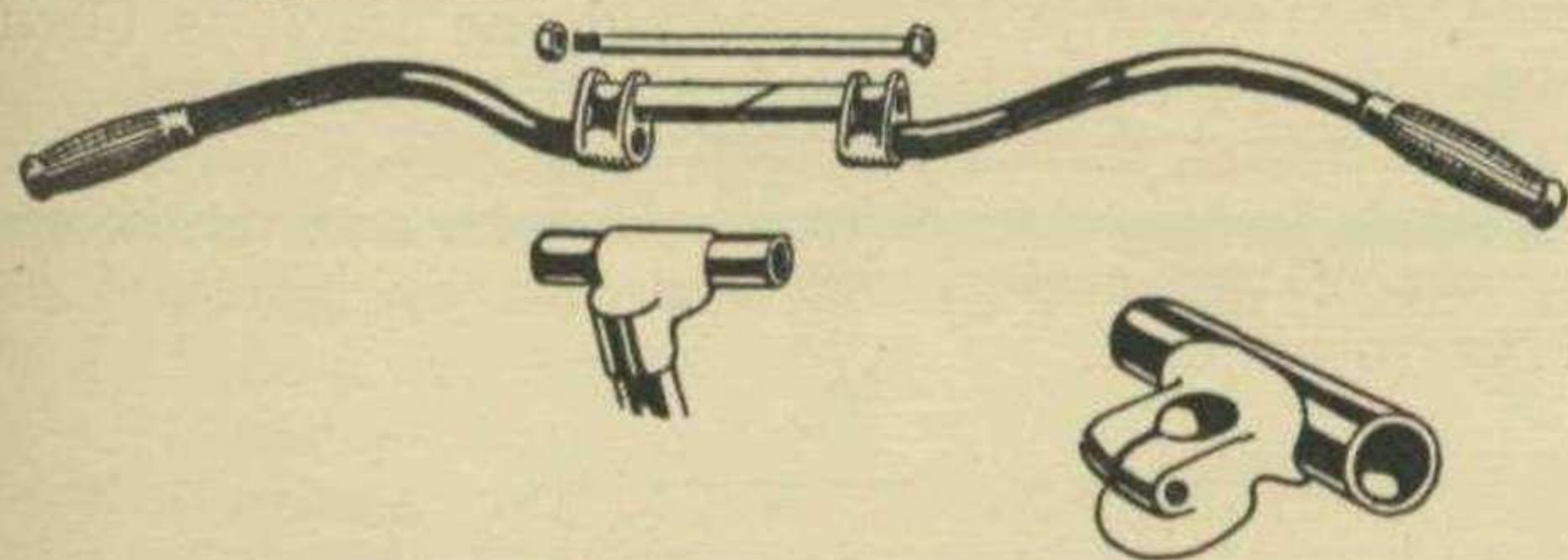
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# New Equipment for Sporting Cars & Motor Cycles

## An Ingenious Adjustable Handlebar.

Messrs. Meadows & Walkden, of the Park Gate Garage, St. Thomas Road, Preston, Lancs., are marketing a moderately-priced refinement which should appeal to every motor cyclist who values comfort, control, appearance, or the joy of an occasional change. The product in question is the "Mador" patent adjustable handlebars. The accompanying illustration shows the "Mador" handlebars in their component parts, and from it the simple nature of this ingenious production will be appreciated.



THE "MADOR" HANDLEBAR DISSEMBLED.

These bars are now standard on the Matador-Bradshaw motor cycle, and Mr. Watson-Bourne used them on the machine on which he finished fourth in last year's Junior T.T. Race. Another racing man who uses them is Mr. Jack Emerson.

The "Mador" bars can be fitted either to clip on to the fork-stem direct or to slide into the fork-stem, as in standard practice. Either pattern can be fitted fore or aft of the fork-stem, thus providing a suitable reach for any rider. The bars can be supplied with sports or touring bends, according to taste, and cost only 22/6 a set.

## Some Useful H.F. Specialities.

The very large number of cars now fitted with straight-sided tyres mounted on split rims makes desirable some effective tool for manipulating these. The H.F. improved split rim tool is essentially a motorist's tool in size and weight, although it is used largely in trade garages. The tool weighs only just over 4 lbs., and takes up no more room in the tool box than a spare tube. It fits split rims like a key fits its lock. A single pull of the lever and the old tyre slips off and the new one on. A reverse movement of the lever locks the

tyre in place. The H.F. tool does the whole job in a couple of minutes, without, moreover, distorting the rim.

Another interesting H. F. device is the "Jiffy" vulcanizer. This little outfit does in a minute all that is required in the preparation of the damage for vulcanization and speedily effects a heal in the tube. The "Jiffy" is automatic and makes a flush repair. No patches are used.

An auxiliary of the "Jiffy" for the preservation of covers is the H. F. "Tredkure." This is a self-vulcanizing material for filling cuts. The preservation of the foundation of the tyre is a vitally important matter that this preparation takes care of. "Tredkure" is sold as a complete outfit, with a petrol syringe for cleaning the cut and an ingenious tool for opening it, so that the material penetrates right to the bottom.

## Useful Grips.

Excepting when it is abused by the indolent, comfort may be said to make for safety on a motor cycle. However, the Leicester Rubber Co., of Evington Valley Mills, Leicester, has set out to go one better and to enable safety in turn to make for comfort. In the "George Dance" model Knee Grips (designed under the "John Bull" patents in collaboration with Mr. George Dance), this firm has a line which, while greatly improving the appearance of a sporting machine and adding ease and comfort to fast riding, also gives the rider greater control, particularly in acceleration and over rough roads at speed.

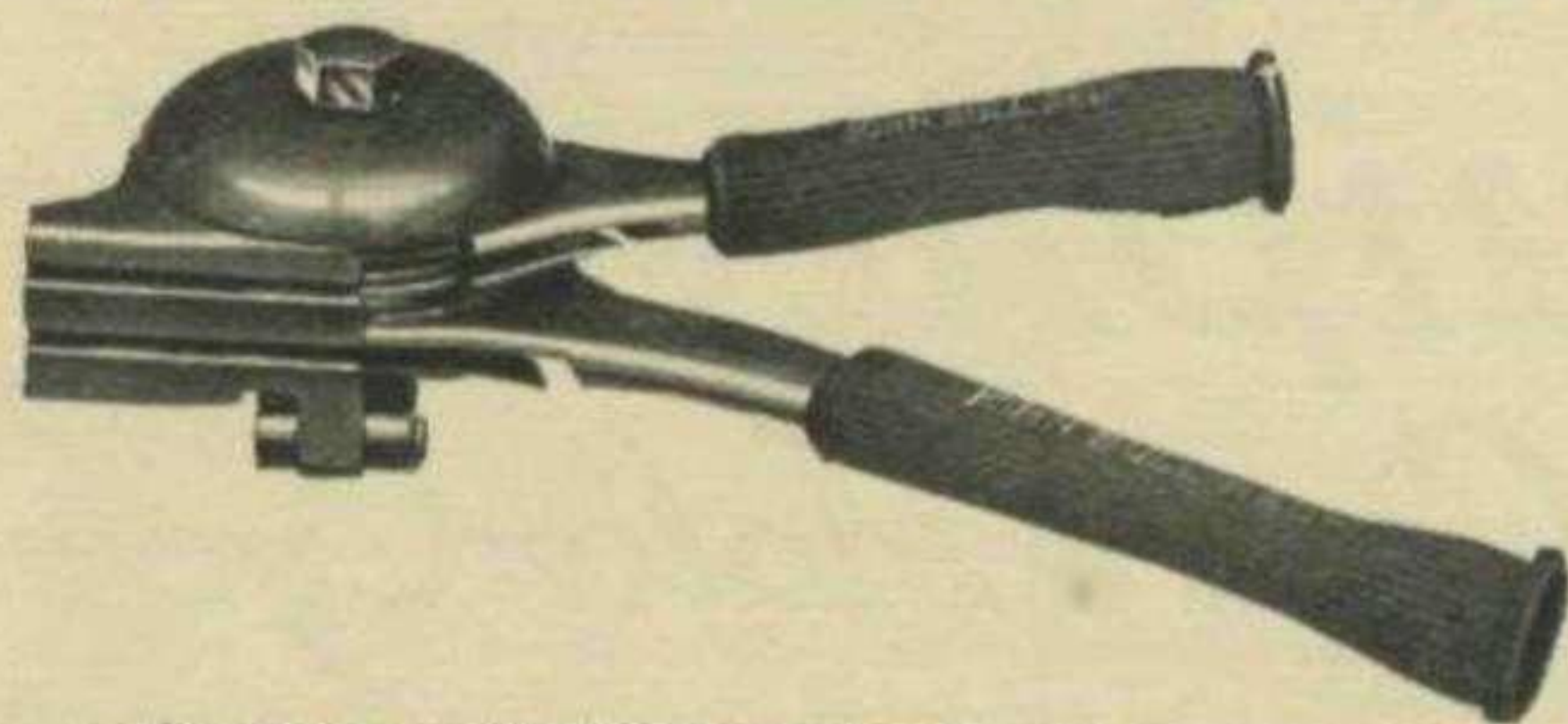


"JOHN BULL" SPORTS HANDLE GRIP.

Another of their lines which combines the factors of comfort and of safety is the "John Bull" sports pattern rubber handlebar grip. This is an extra long grip which gives the racing man considerable latitude as to where actually he holds his bar. As with the other "John Bull" handlebar grips, the sports grip is moulded with internal air chambers to absorb vibration.

## NEW EQUIPMENT—continued.

The Leicester Rubber Co. also market another device which enhances at once comfort and efficient performance in motor cycling. This is their "John Bull" control lever rubbers. Like the "George Dance" knee grips, these were first used in last year's T.T. and immediately



"JOHN BULL" CONTROL LEVER RUBBERS.

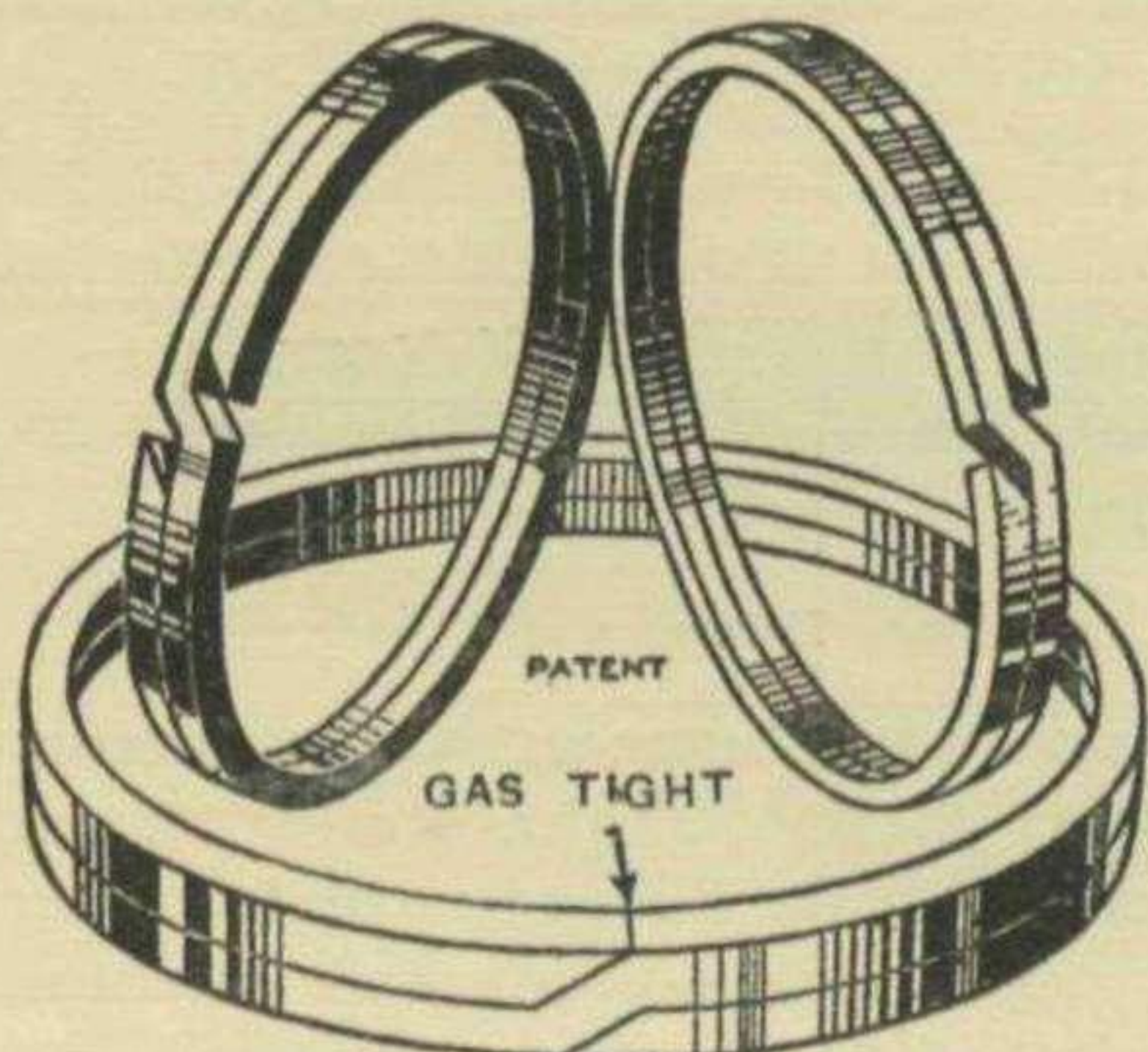
there was a great demand for them. They are made to fit carburetter and magneto controls, and also exhaust, clutch, and brake levers. The competition rider will find these levers particularly valuable as they prevent soreness and blistering, and at the same time afford a positive control under all conditions.

### "——Next to Godliness."

The private owner no less than the garage proprietor will lift up his voice in loud rejoicing at the prospect of being able thoroughly to clean and polish a medium-sized car in 15 minutes at a cost of 2d. And this without the use of water and its attendant inconveniences. One merely sprays the car with Atomist, a preparation manufactured by Messrs. T. F. Steele & Co., Ltd., 14, Harp Lane, London, E.C.4, and the mud and dust are thereupon converted into a soft matter which can be easily removed. The car is then left not only clean, but polished, and to a large extent protected against rust, finger-marks, scratches, rain and mudspots. Where the car is not in use Atomist preserves the varnish and renders it impervious to fog and damp. It seems a lot to claim, but the manufacturers cannot do more than say: "Ask your dealer to demonstrate."

### The Clupet Piston Ring.

Messrs. Clews Petersen & Co., Ltd., of West Heath Works, Mill Lane, West Hampstead, N.W.6, have to their credit a remarkable record of success. Their product, the Clupet Piston Ring is fitted as standard on all Rhode cars, amongst whose recent triumphs are the R. A. C. Six Days' Trial, Vesey Cup Trial, Trevors Trophy Trial, Victory Cup Trial and London to Land's End, in each of which they obtained awards. These rings have also been used with great success by Miss Ivy Cummings on her Bugatti and Frazer Nash cars.



WHEN IN CYLINDER  
THE CLUPET PISTON RING.

The Clupet rings are made from cen-

trifugal castings of the best quality cast iron and are in one piece—not welded—and are perfectly round, as in the final operation of grinding them on the periphery, they are closed right up on a spindle, just as if they were fitted to a cylinder, and ground perfectly round in that position.

It is claimed that the rings when fitted to the pistons and cylinders are as perfectly gas and oil tight as it is possible to attain with piston rings, and even when wear takes place, which must inevitably happen with any piston ring, they are said to stand up to the work much better than the ordinary single ring, because of the bridge at the end points.

It is also claimed for the Clupet ring that when nicely run in it is bound to show improved results over the old single type of ring, because whereas the latter type of ring will open out and thus allow gas and oil to get through, the Clupet ring maintains its original formation, with the result that any wear which takes place will be perfectly regular.

Many car owners have adopted the Clupet ring for use in old engines after considerable wear has taken place on the cylinder walls, and they have found that it accommodates itself to the worn condition of the cylinder in a remarkable manner. In such cases engineers frequently try the expedient of utilising an ordinary single ring, but eccentric in shape, and the result is often unsatisfactory, as the trouble is only accentuated. It is stated that there have been cases where the Clupet ring has been fitted to worn cylinders, and the horsepower of the engine has been thereby increased at least 30 per cent.

### The Ceal Petrol Tap.

Motor cyclists will be grateful to the company calling itself Ceal, 5, The Parade, High Road, Kilburn, London, N.W.6, for marketing at so reasonable a sum as 7/6 a device which reduces to a minimum the chance of having one's machine stolen and ridden away.

The Ceal is a petrol pipe-tap on the letter-lock principle, being operated by means of a figured dial. Any figure up to 9 may be chosen when setting the lock, preparatory to leaving the machine, and no fuel will flow from the tank past the tap until it has been re-set to that number. It would appear that an additional safeguard would be to run the engine for a moment or two after setting the tap to ensure that no fuel is left in the carburetter.

The price of the "Ceal," 7/6, which is only about one shilling in excess of the price of many good quality petrol taps of ordinary type, certainly has much to recommend it at this reasonable cost.



AN INGENIOUS  
PETROL TAP.

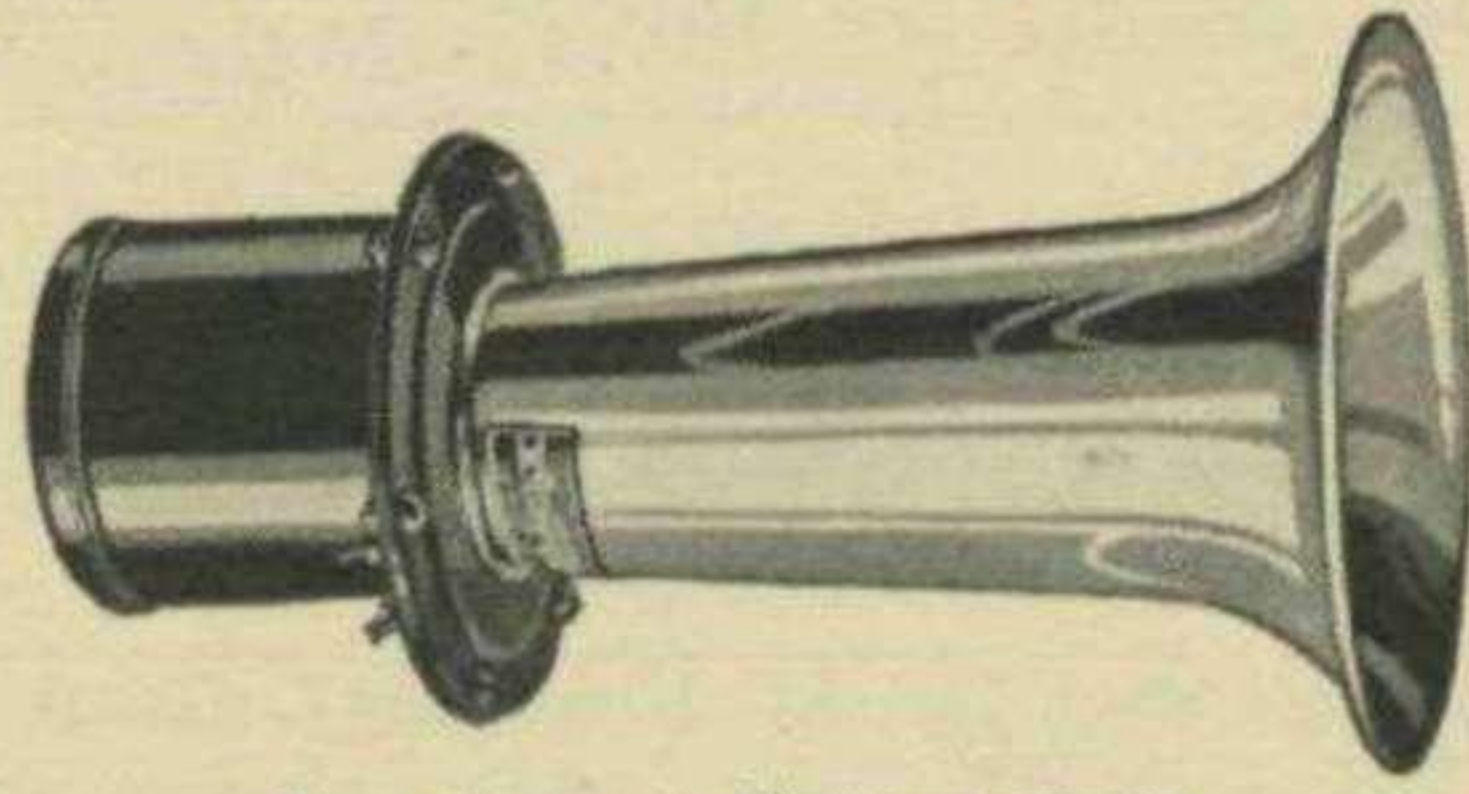


## NEW EQUIPMENT—continued.

### Two Good Electric Horns.

The "Sparton" electric horn is motor-driven, and consequently it does its job in a very thorough manner. It is the outcome of 15 years' experience in the manufacture of horns for motor vehicles, and combining as it does lightness, accessibility for oiling, and that much desired

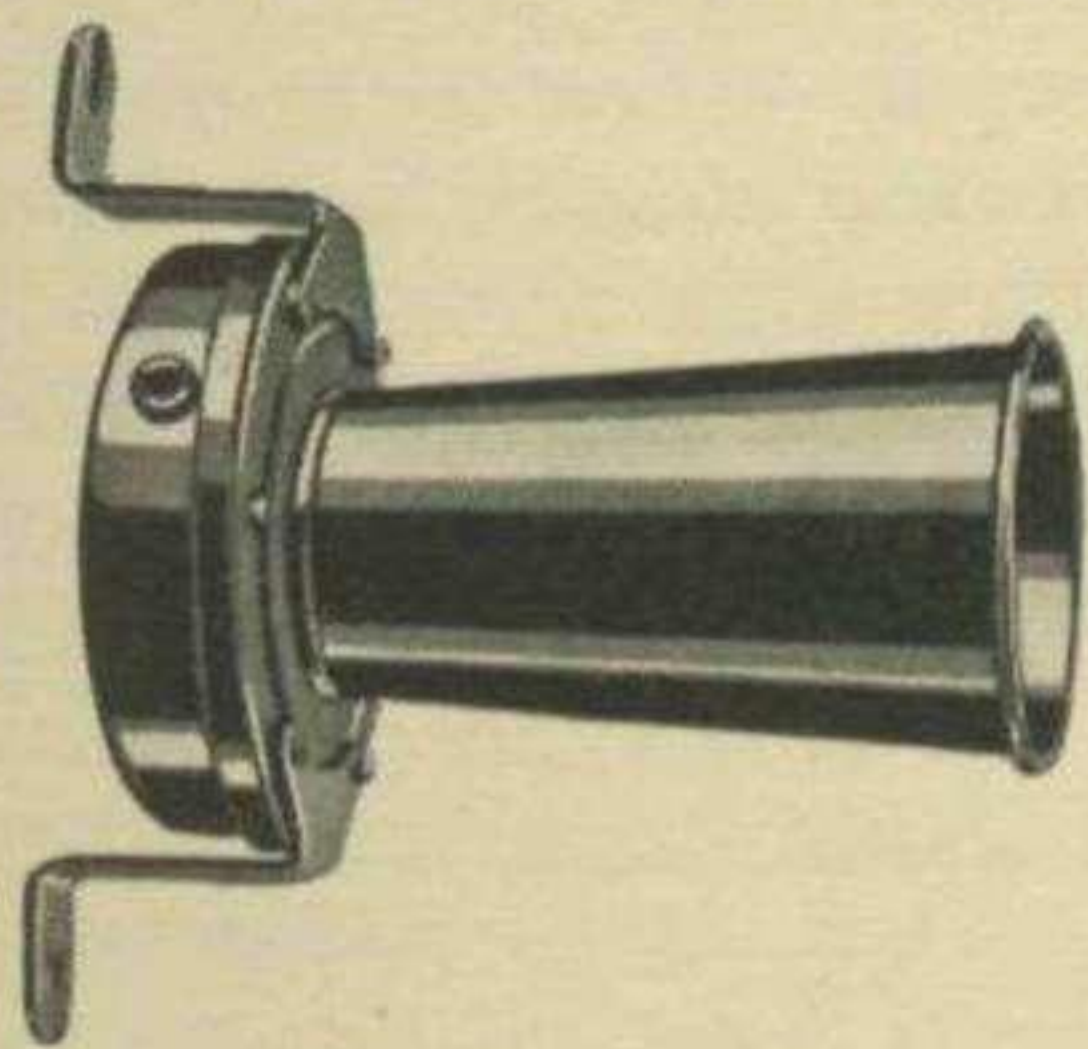
(and, with some other horns, oft-lamented) clearness and intensity of tone, it has met with a considerable demand



THE GRAHAM ELECTROHORN.

from public and manufacturers alike. On many well-known cars the "Sparton" is fitted as part of their standard equipment.

This horn is manufactured for the British market by Messrs. Alfred Graham & Co.; St. Andrew's Works, Crofton Park, London, S.E. 4, under an agreement with the Sparko Withington Company of

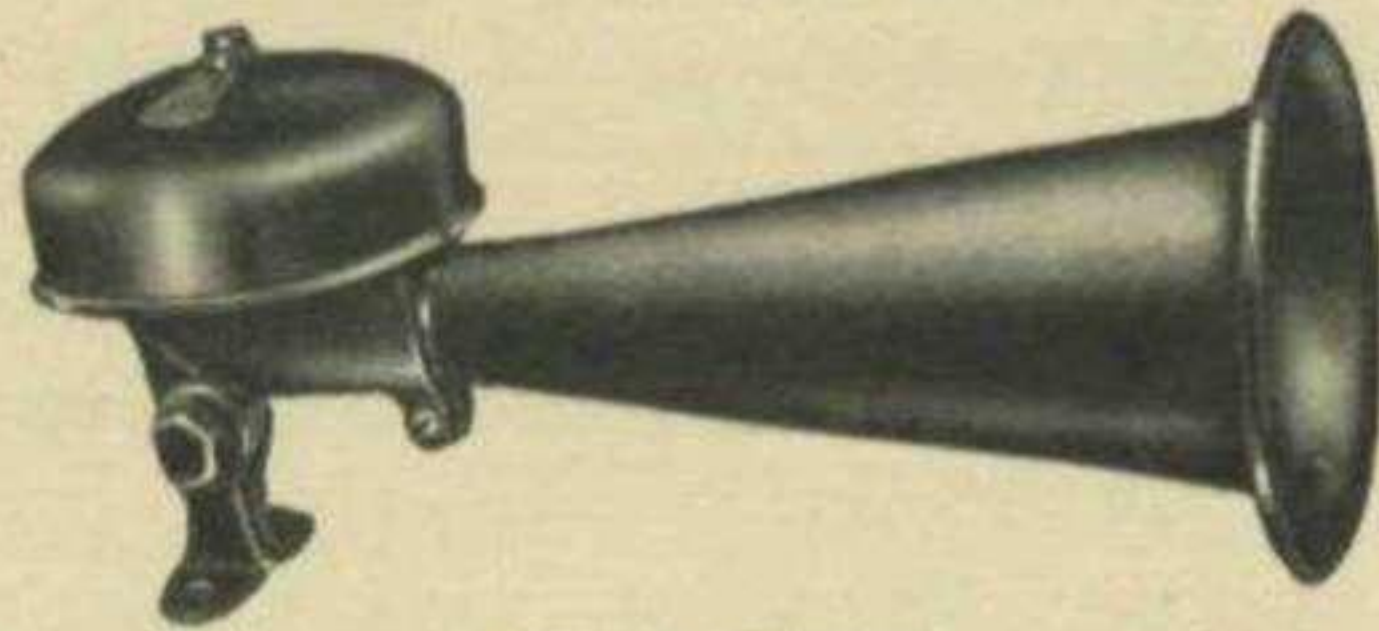


THE SPARTON HORN.

America, and the total daily output exceeds 5,000 complete units, which is, we should imagine, well in excess of any other warning device.

Another "audible warner" manufactured by Messrs. Alfred Graham & Co. is the Graham electrical autohorn. Of

reliable construction and possessing clarity of tone and a particularly pleasing appearance, the Graham electrical autohorn has been standardised on over thirty different makes of British cars.



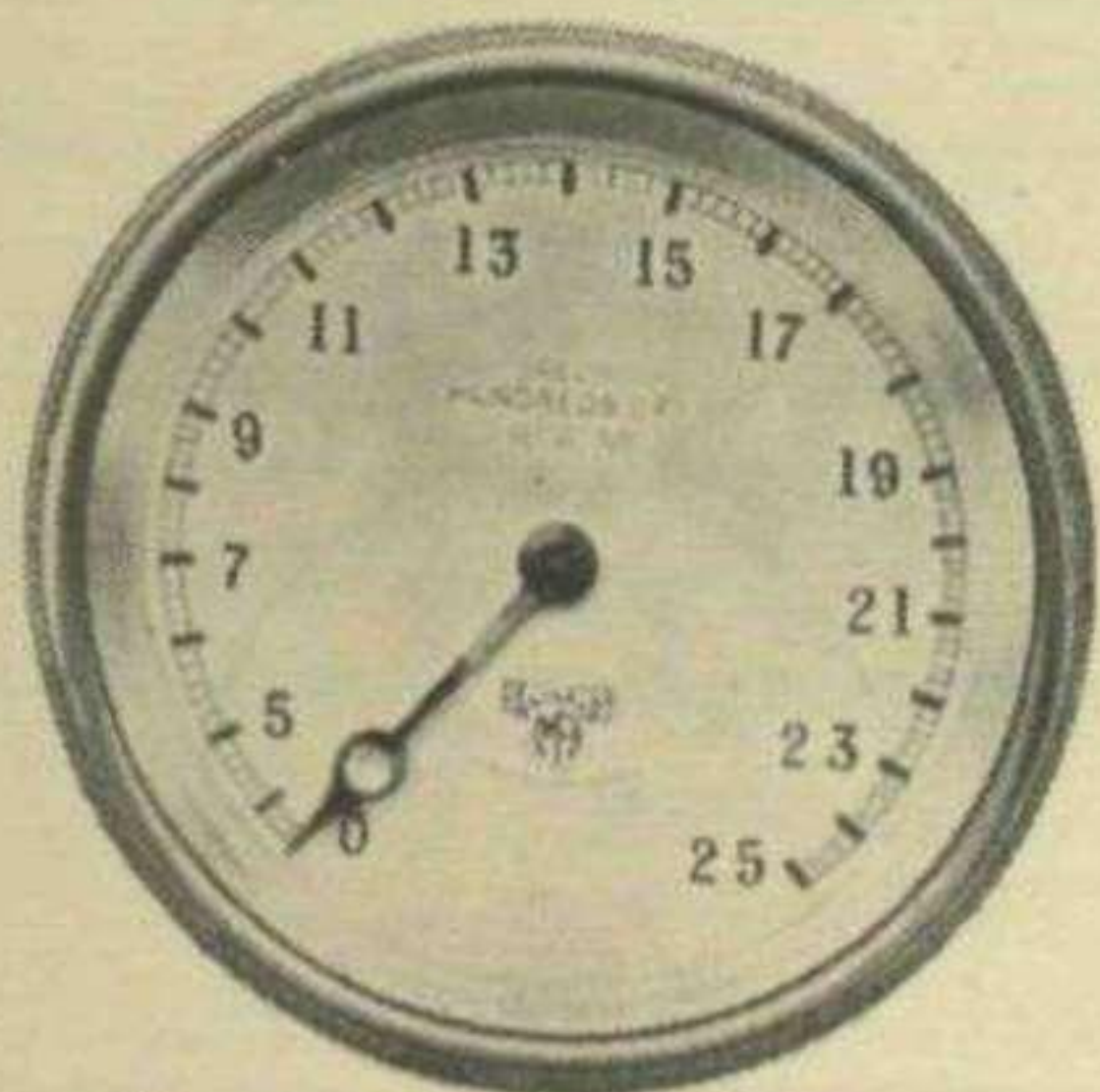
A NEAT MODEL.

### A Versatile Instrument.

A revolution indicator is an instrument of many varied uses. Not only does it fulfil its primary object, that of enlightening one as to the number of revolutions one's engine is developing, but also, in showing the speed of the engine, it shows the experienced driver the exact moment to change gear, and, used in conjunction with a foreknowledge of one's gear ratios and with that kind

of slide-rule mentality so commonly found amongst fast drivers, it shows also the actual speed of the car.

The type of indicator shown in the accompanying illustration is made and marketed by Messrs. S. Smith and Sons, of Great Portland Street, London, W. 1, who are universally commended upon the high efficiency of their instru-



SMITH REVOLUTION COUNTER.

ments. Incidentally, Messrs. S. Smith and Sons pride themselves on having mastered the frequently difficult task of fitting revolution indicators, and they ask us to announce that they are willing to assist anyone who may experience difficulty in this connection.

### TONING DOWN OBJECTIONABLE EXHAUSTS.

"The standard of silence is still totally unsatisfactory," said the Judge's Report on the A.C.U. 1,000 mile trial for standard stock motor cycles. And, we think, the public will agree with him. Not the sporty boy, perhaps, estimable though he is. He likes an engine with a big kick and a healthy bark. We hope, however, that he will soon realise that the latter is not essential to the former. The future popularity of the motor cycle and its general adoption as a cheap, safe, comfortable and reliable means of transport, is undoubtedly largely dependent upon the good opinion of the general public. There is no room for question that public opinion is prejudiced when a flock of motor cyclists streak along on machines that cackle like a dozen Lewis guns in full blast.

Noise in connection with the motor cycle should not be spoken of without qualification. There are exhaust notes which greatly offend, and others which are almost as noisy, but practically inoffensive. There comes to mind, in this connection, the characteristic note of a famous two-stroke. This machine is a very long way from being silent, but its noise is like the drone of an aeroplane, and, except to the very fastidious or nervy hearer, is more agreeable than otherwise. It is the sharp barking type of noise that brings out the policeman's notebook and rouses the ire of the public. That this noise is not essential to speed has been shown by the performances of certain comparatively quiet racing machines.

Amongst the several noise-reducing devices now claiming a good deal of attention is the "Carb-jector" silencer—or to be more strictly accurate, tonaliser—made by Bridgehead, Ltd., Bankhey Works, Blackpool. The fact that the Blackpool Police motor cycle patrol have fitted their machines with this silencer, should certainly be evidence of its efficiency. The function of the "Carb-jector" is to reduce the sound of the exhaust to a healthy and pleasant drone. A motor cycle that glided along with the silence of a Rolls-Royce would, perhaps, be dangerous to be comfortable in the hands of certain riders. But it is unquestionably desirable to extract the aggressiveness from the exhaust bang, and this is the job of the "Carb-jector."

What the sporting rider, or the rider of a lightweight sidecar outfit, each of whom wants to use every ounce of power his engine can give, has yet to be convinced about, is that there is a silencer which allows an engine to rev. as fast as with an open exhaust. This is where the "Carb-jector" claims to shine. In fact its claim is even more ambitious. By hurrying up the clearance of exhaust gasses, it is said that this scientifically-constructed silencer, or exhaust scavenger, actually increases the revs. and multiplies the power output.

# The Rival Big Noises at Weybridge.

[Will the new silencing regulations restrict motor cycling sport or development?  
The following article analyses the salient points of the "Six-to-One" order.]

The few jaded inhabitants of Weybridge who are endeavouring to jeopardise the most exhilarating and useful of sports, have placed the Brooklands track authorities in an awkward predicament. Embarrassed by the "lightning strike" of competitors on May 10th, and finding themselves faced with the alternatives either of going back on the temporary promise given to these clamorous inhabitants, or of having the British Motor Cycle Racing Club cancel the remainder of its 1924 programme, the B.A.R.C. sought to hit upon a happy medium by subjoining to its previous Supplementary Regulation (No. 21) a further statement of inhibition. The entire clause as governing the silencing of machines using the track now reads as follows:—

## SUPPLEMENTARY REGULATION NO. 21.

"EXHAUSTS.—All motor cycles competing in any race shall be fitted either with a first receiver close to the engine and an exhaust pipe therefrom reaching as far as the back axle, or with an exhaust pipe and efficient silencer.\* The first receiver mentioned above must be of a capacity not less than six times the volume swept by the piston of one cylinder of the engine, and if cylindrical, shall not be of greater length than six times its maximum diameter, and if of irregular shape, of equivalent proportions. The pipe leading therefrom to the back axle must extend into this first receiver not less than two inches, and shall not be of a greater area than the exhaust pipe from any one cylinder at its outlet from the engine. It shall not be opposite the inlet pipe to the first receiver in order to prevent a straight through flow. Baffle plates may be added if desired."

\*The clause as it was originally conceived stopped short at this point.

The above regulation in its present form came into force immediately upon its being proclaimed. It will be observed upon careful perusal of this regulation as a whole that it can be invested with myriad interpretations of widely divergent natures. Taken literally, all one is required to fit is "an exhaust pipe and an efficient silencer." There is no stipulation as to dimensions. However, the first receiver clause is the one on which the greater number of competitors are now basing their structural embellishments, albeit they are not taking into consideration the fact that it is instructed that "the first receiver" shall be "close to the engine."

Read in this way, the new regulation necessitates a silencer of 1,500 c.c. for 250 c.c. power-units, of 2,100 c.c. for 350 c.c. cylinders, and of 3,000 c.c. for machines of 500 c.c. In almost every case representatives of these classes on Brooklands have a single-cylinder engine. However, according to this regulation, a 500 c.c. twin would need only one silencer (of 1,500 c.c.) and is thus no more handicapped than a 250 c.c. single, whereas a 500 c.c. single would require a silencer of double this capacity (3,000 c.c.). A significant feature of this

additional proviso is that the bore of the pipe leading from the engine's exhaust port decides the diameter of the ultimate outlet of the silencer. A few 350 c.c. single-cylinder machines have each a primary exhaust pipe of greater diameter than those of many of the 500 c.c. or 1,000 c.c. engines and should therefore be less handicapped in the matter of maximum speed, by fitting the required regulation silencer, than any other class of machines.

It is almost certain that the smallest *efficient* silencer will be employed in every case, in order to minimise the effects of back pressure, extra weight, and wind resistance, and in this connection it is interesting to note that a 500 c.c. single must not use a silencer smaller than 3,000 c.c., whereas a 500 c.c. twin need not employ one of greater capacity than 1,500 c.c. And this, notwithstanding the fact that the two types of engine discharge the same amount of exhaust gas every two revolutions.

From this it will be seen that the single has a silencer which allows twice the expansion permitted the twin. Unless the bore of its primary exhaust pipes be as large as that of a 500 c.c. single, the 500 c.c. twin will be at a slight disadvantage since the outlet from the silencer of the twin must be smaller if its primary port is smaller.

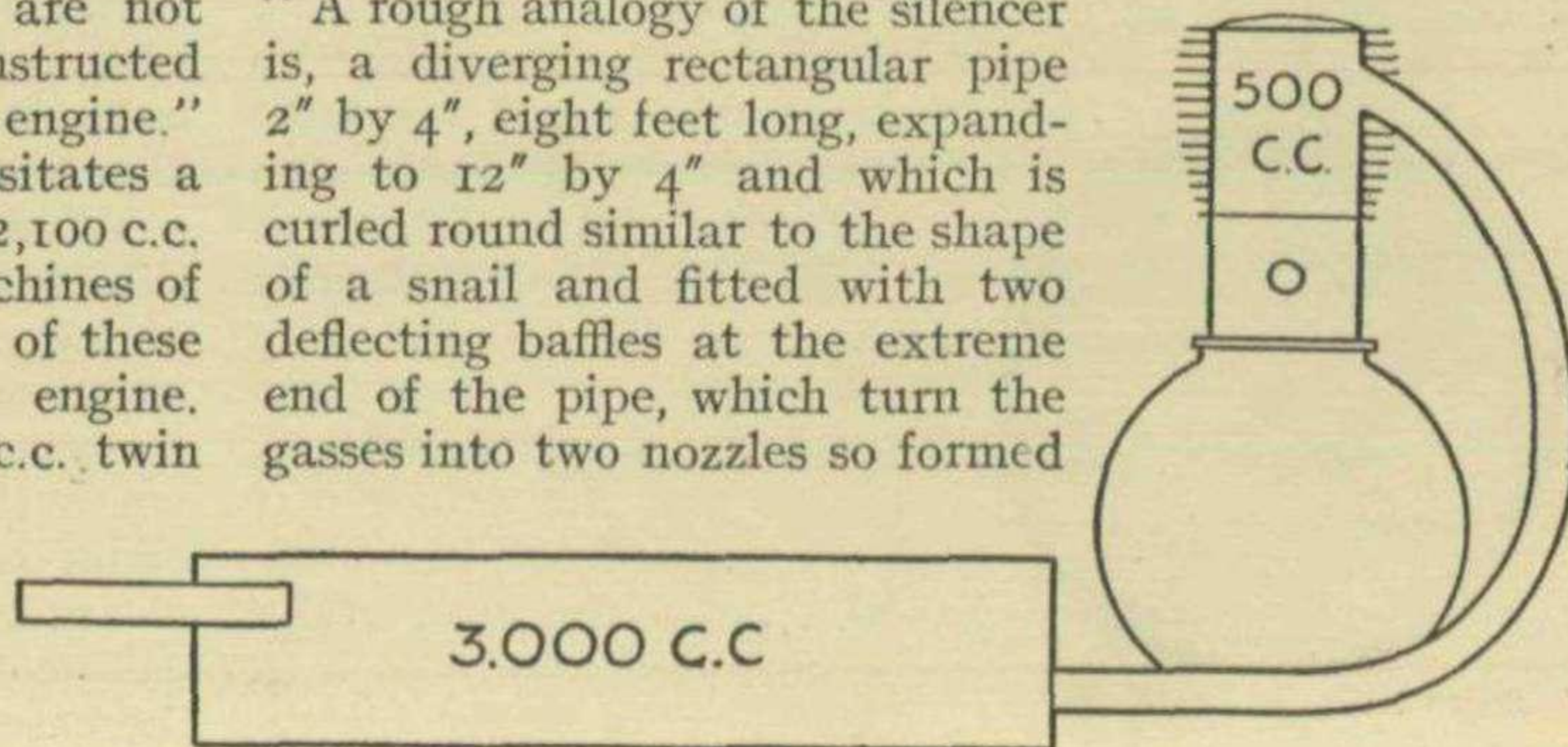
Probably such machines as the 588 c.c. Norton will feel the effect of this regulation as seriously as any, since they will have to be fitted with enormous silencers of 3,528 c.c. Another martyr, it seems, will be the 600 c.c. Triumph, which will have to carry a silencer of no less than 3,600 c.c.

Recently the well known Douglas exponent, Cyril Pullin, has been experimenting on Douglases with various silencers built to meet B.M.C.R.C. requirements, and he has proved that these regulations detract 3 m.p.h. from the maximum speed of the 746 c.c. machine and 4 m.p.h. from the 494 c.c. engine.

Subsequent experiments have modified these results so that with the improved silencer the engine is much quieter and a loss of speed of only 1 per cent. is suffered. Also, the silencer occasions only such a rise in the temperature of the valves as can be adequately dealt with.

In Mr. Pullin's own words:

"A rough analogy of the silencer is, a diverging rectangular pipe 2" by 4", eight feet long, expanding to 12" by 4" and which is curled round similar to the shape of a snail and fitted with two deflecting baffles at the extreme end of the pipe, which turn the gasses into two nozzles so formed

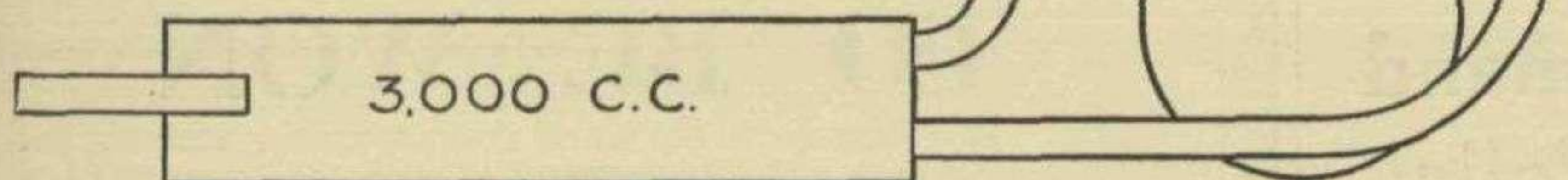


THE 500 C.C. SINGLE CYLINDER MUST HAVE A SILENCER OF AT LEAST 3,000 C.C.

## THE RIVAL BIG NOISES AT WEYBRIDGE—continued.

as to discharge into the 'slip-stream' of the silencer when passing through the air. It will thus be realised that the gasses are, firstly, given a rotary motion, and secondly, gradually expanded and cooled during the process."

We understand that further improvements



THE 1,000 C.C. TWIN NEED ONLY HAVE A SILENCER OF 3,000 C.C.

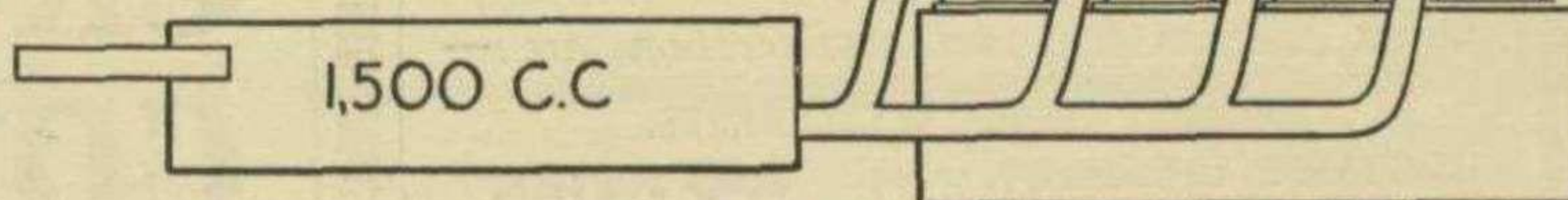
are now in hand which it is hoped will result in even greater efficiency.

Nevertheless, these experiments must of necessity take time, meanwhile, the regulation is bound to have its effect upon record-breaking by British machines.

From the foregoing it may be inferred that the British manufacturers who succeeded in breaking British records just before these new regulations came into force were fortunate, for these are likely to stand until there has been time for certain research work to mature, whereas world's records will probably be captured by foreign-built machines during the next few months. It may confidently be anticipated, however, that these foreign triumphs, if they are secured,

would have been closed to motor cycles—that's all." But these people evidently have not regarded the matter from its broader aspects.

It is said that the majority of the Weybridge and district agitators have taken



THE 1,000 C.C. FOUR-CYLINDER ESCAPES WITH A SILENCER OF 1,500 C.C.

up their abode there since the track was opened in 1907. In this case *locus standi*, one may say, would not appear too secure.

### MR. PULLIN'S VIEWS.

Mr. Cyril G. Pullin, the famous racing motor cyclist, and Douglas exponent, sends us his views of the present situation in respect of silencing at Brooklands as follows:—

If all competing machines are fitted with a silencer made to conform to the terms of the new regulation, they are apparently allowed to use the Track quite apart from their relative degree of silence, which, of course, eliminates the human element in deciding whether a special silencer of patented design is sufficiently quiet or not, and as the regulation is worded, it appears to put all competitors on an equal footing.

The regulation silencer can be made in a large variety of forms, and motor cyclists have apparently gone bald-headed for one particular type of silencer, which in my opinion is the most undesirable. This form of silencer is certainly not very effective from a silence point of view, when fitted to engines of very small swept volume, as for instance on a 175 c.c. having an exhaust pipe of 1½" diameter, the outlet pipe in this container in this instance would have to be the same size as the inlet thereto, the container itself being little more than an exhaust pipe of slightly increased diameter, having only to be 1,050 c.c. The relative silence of a 175 c.c. single cylinder machine and a 1,000 c.c. two-cylinder machine is distinctly marked, and big machines suffer considerably more from the silencing effect than the smaller one.

A point one must bear in mind when dealing with the question of silencing racing machines is, when the gasses are being exhausted through straight pipes of suitable length and diameter, they are discharged into what we may practically term a negative pressure, and the inertia of the gasses in the pipes set up an extractor action which, with suitable valve timing, can be taken advantage of, but with the regulation silencer which I first mentioned, the gasses are being discharged into a container which is working at a positive pressure and calls for an entirely different valve timing (and its dependents).

The Brooklands competitors feel very keenly the unfair disadvantage we are working at in competition with European and American competitors, but we are certainly on the right road to produce quiet fast motor vehicles so much in demand by the press and public in general.

### POLICE AND TRIALS, &c.

The Commissioner of Police wishes to bring to the notice of club secretaries, etc., that they must obtain official sanction before holding any event upon a public highway, since the use of a thoroughfare for any purpose other than *bona-fide* travelling, is in contravention of the law.



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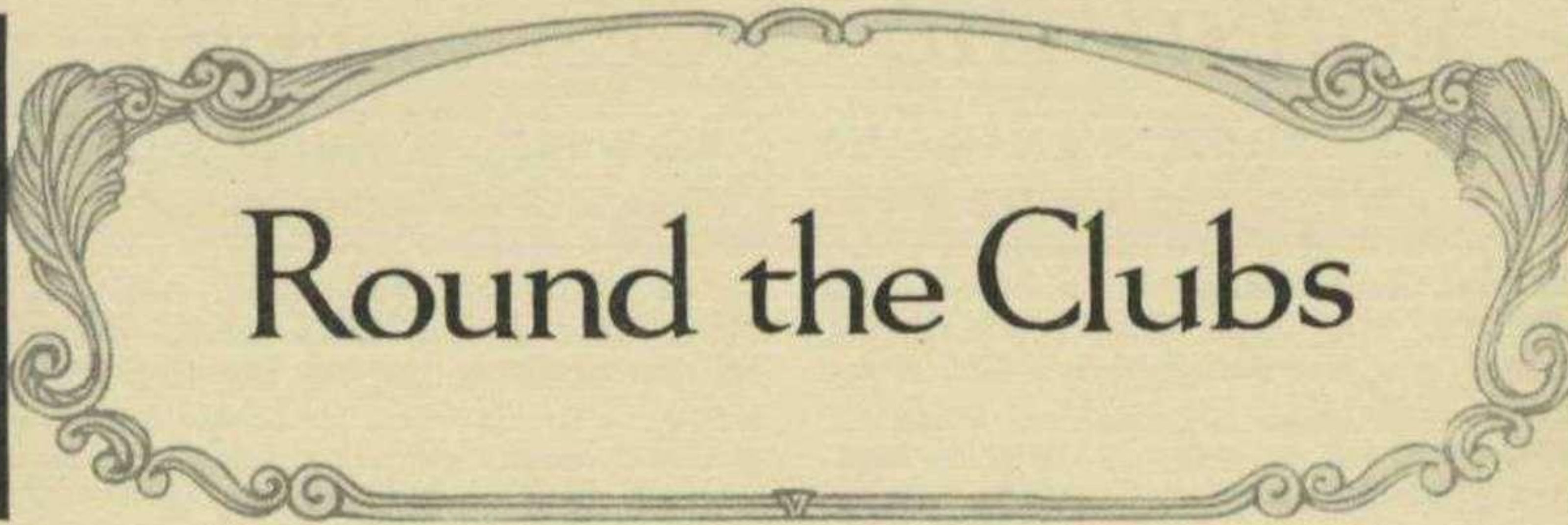
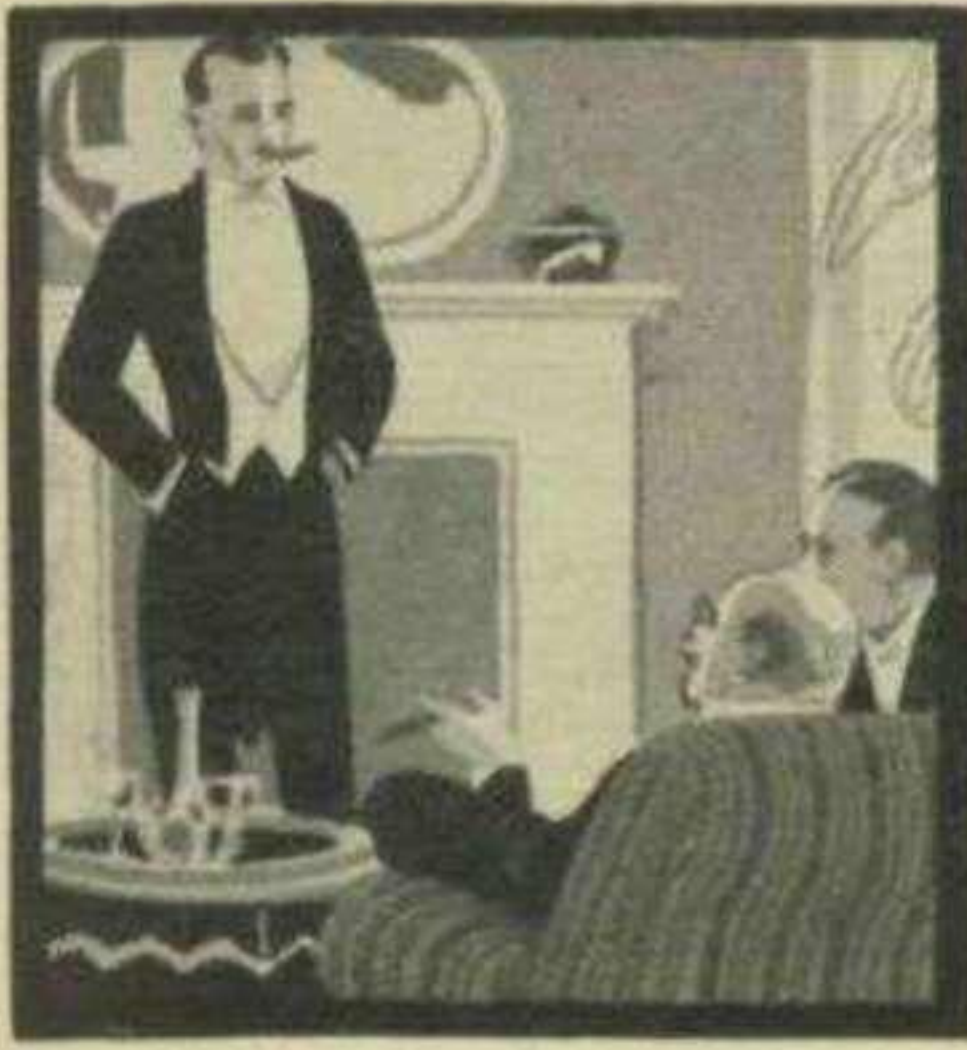
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## Round the Clubs

### THE SURBITON MOTOR CLUB.

The Surbiton Motor Club came into existence four years ago, and its membership numbers round about 200 each year. Many well known personalities in the motor world are connected with the Surbiton Club, Professor Low, as President, being supported by a strong body of officials comprised of some of the most experienced men in competition organisation.

Many valuable trophies are offered each year for trials. Amongst these are the Sopwith 200 Guinea Cup, presented by Mr. T. O. M. Sopwith for a One Day Reliability Trial; the Mellano 100 Guinea Cup, presented by Mr. A. V. Mellano for a Reliability Trial; the Low Cup, presented by Professor A. M. Low for the fastest member rider at the Annual Race Meeting; and the Spikins Cup, presented by Mr. R. G. Spikins for a half-day Sporting Solo Trial, which is always a real "Colonial Blind."

Annually the Surbiton Club organise the only open amateur team trial for the Maude's Challenge Shield, presented by Mr. George Pettyt. This event is a most popular one, and is invariably well supported. The present holders are the Epsom and District M.C.

The annual race meeting is booked for Saturday, July 19th, at Brooklands, and is open to both cars and motor cycles. A night trial is to be held on August 2nd and 3rd, this being the annual London—Barnstaple reliability test.

The social events are always well supported. As an instance, the dinner and dance held last December at the Hotel Cecil may be mentioned. At this function, 200 members and friends were present.

The Hon. Secretary of the Surbiton Motor Club is Mr. H. Lambert, 47, Church Road, Richmond, Surrey.

### ESSEX MOTOR CLUB.

As befits one of the longest-established, most influential and most sporting of clubs, the Essex Motor Club has provided its members with an interesting programme for the present season.

This includes a Brooklands Meeting on July 23rd. There are also to be picnics at Withyham, Tunbridge Wells, on July 6th, and on Dunstable Downs on July 20th; the Eastern Centre Speed Trials are to be held at Harling Road on July 24th, and on August 10th there will be an all-day run to Castle Hedingham. Another picnic is fixed for August 24th at Walton-on-the-Naze; a hill climb at Kop on September 6th, and, finally, a concluding Brooklands Meeting on October 4th.

Full particulars of these and other events may be obtained from the Hon. Secretary, Mr. Ernest J. Bass, 40, Chancery Lane, London, W.C. 2.

### BRITISH MOTOR BOAT CLUB.

The sport of motor boating, in common with other forms of yachting, suffered severely from the after effects of the war. It was only natural that the motor boat clubs should in 1919 emerge with sadly depleted membership lists, and it rested with the old hands who were left, to set about the task of building up their clubs to regain the position in the world of sport held by them in pre-war days. In 1919 the British Motor Boat Club set about the task of reconstruction with the same thoroughness which in 1904 characterised its foundation as the pioneer of motor boating clubs in this country. Race meetings were again held, and every effort was made to recruit new members. In 1922 the headquarters of the Club were moved to the Hotel Cecil, which, situated as it is in the heart of London, has proved an ideal centre from which to control the activities of the B.M.B.C. These activities embrace not only the organisation

of race meetings in many ports round the coast, but assistance for the cruising man, both at home and abroad, expert advice on all technical matters, free legal advice, special B.M.B.C. motor boat insurance policy at reduced terms, a free weekly copy of one of the leading motor boating journals, the use of the Clubroom and other facilities at the Hotel Cecil; and various other considerations for the advantage of the amateur motor boat owner. The B.M.B.C. has Honorary Local Representatives in many British and foreign ports, whose services are at the disposal of members of the Club. When cruising, particularly if going abroad, owners find it a great advantage to avail themselves of the privilege granted to members of the British Motor Boat Club, of flying the Blue Ensign.

The B.M.B.C. season for 1924 opened with the annual meeting on the Chelsea Reach of the Thames, held on Saturday, 21st June. This event is of unusual interest, taking place as it does right in the heart of London, and giving to a public which might not otherwise realise the attraction of motor boating an opportunity of watching the sport near home. It may here be mentioned that it was not until 1922 that the B.M.B.C. was able to overcome the prejudice of the authorities against holding a motor boat meeting on the Thames, though for many years previously, permission had been sought for the organisation of such an event.

Following upon the Thames meeting comes that at Southend-on-Sea, on the 11th and 12th of July. This is always a popular meeting, and one receiving keen local support. On the 12th July, also, the 14th annual London-to-Cowes Race is to be run. This race for sea-going motor yachts is looked upon as the classic event of the season. Next comes the B.M.B.C. Meeting at Torquay, which promises to be one of the most popular on the programme. This is down for the 19th and 21st July, and will be preceded by a motor cruiser race from Hythe to Torquay under the auspices of the Royal Motor Yacht Club. On the 29th July the races for the Duke of York's International Trophy commence at Torquay, under the management of the Marine Motoring Association. H.R.H. the Duke of York has stated his intention of being present on the opening day, which fact will undoubtedly greatly enhance the popularity of the event.

Further items on the B.M.B.C. Race Programme for this season are as follows:

August 2nd ... ..	Torquay to Hythe Race.
August 3rd ... ..	Hythe to Poole Race.
August 9th and 11th ...	Poole Meeting.
August 28th to Sept. 1st ...	Lowestoft Meeting.
Sept. 18th to 20th ... ..	Burnham-on-Crouch Meeting.
Sept. 25th to 27th ... ..	Medway Meeting.

Further information or particulars with regard to membership of the British Motor Boat Club will gladly be supplied upon application to the Secretary, B.M.B.C., Hotel Cecil, Strand, London, W.C. 2.

### OXFORD MOTOR CLUB.

A very influential organisation is the Oxford Motor Club, of which Mr. W. R. Morris is the President.

The Club's fixtures for this season include a timed Hill Climb at Alms Hill, near Henley; a social evening at Aylesbury on Tuesday, July 8th; and on Saturday, September 20th, a social run to Brooklands to see the Junior Car Club's 200 mile Race; finishing up on Saturday, October 4th, with an End of Season Reliability Trial.

The Hon. Secretary of the Oxford Club is Mr. Wilfred A. Matthews, 6, St. Aldate's, Oxford.

## ROUND THE CLUBS—continued.

### SHEFFIELD & HALLAMSHIRE MOTOR CYCLE & CAR CLUB

This Club has organised no less than 38 events for its members for this Summer. That very popular North Midland speed event organised by the Sheffield and Hallamshire M.C. & C.C., on behalf of the Yorkshire Centre, will again take place during August. It is generally agreed that the Ringinglow Road is one of the best speed-ways in the Midlands. The road is perfectly straight for well over a mile with a splendid tarmac surface. Slightly undulating, it has a gradient of approximately 1 in 25. A small dip at the start greatly assists in getting off the mark, and as flying starts are usually adopted some very good times are made. This event will be held on Saturday, August 16th, all classes of motor vehicles being catered for.

The address of the Secretary is: Mr. S. C. Ashby, 36, Horninglow Road, Sheffield.

### HAMPSHIRE AUTOMOBILE CLUB (Southern Division).

On Saturday, June 28th, the Hampshire Automobile Club held its Annual Open and Closed Hill Climb at Spread Eagle Hill, Melbury, which is about one-and-a-half miles from Shaftesbury.

This Hill Climb has become a very important sporting event and always attracts an interesting entry. This year the closed classes once more were sub-divided into (A) a class for genuine standard touring cars, and (B) a class for sports models. In each of the four classes there were one open and two closed events, making twelve events in all. The Hill Climb was held under R.A.C. Competition Rules and valuable prizes of handsome silver cups were awarded for the best results on time and formula.

The Hon. Secretary of the Southern Division of the H.A.C. is Mr. W. O. Talbot, Westover Chambers, Bournemouth.

### THE LIVERPOOL MOTOR CLUB.

This Club has headquarters at the following addresses: Liverpool.—The Angel Hotel, Birkenhead.—The Woodside Hotel, Wallasey.—The Hotel Victoria, Country quarters: The Blue Cap Hotel, Sandiway, Northwich. Some very entertaining items are promised on their present season's fixtures list, including: July 2nd.—Speed judging and distance Trial at Wirral. July 5th.—Colwyn Bay Speed Trials. Reliance Challenge Cup; Baxter Memorial Cup; Marston Cup and Braid Challenge Cup. On July 12th and 13th, there is to be a Two Days' Reliability Trial and visit to Screw Hill, Carnarvonshire. For August 16th a gymkhana has been arranged.

Mr. L. N. Lunby, 10, Seaton Road, Wallasey, is the Hon. Secretary of the Club.

### ENFIELD MOTOR CYCLE CLUB.

The July fixtures for this Club are as follows: July 6th.—Balloon Hunt (start at 2.30 p.m.). July 13th.—Langdon Hills Run (start at 10.30 a.m.). July 20th.—Run to Brighton (start 10.30 a.m.). July 27th.—Vice Captain's Event (start 10.30 a.m.).

All the social runs of the Club start from the Market Place, Enfield Town, at the Club Headquarters; and all sporting events start from the country Headquarters, The Robin Hood, Botany Bay, Enfield.

The Enfield Motor Cycle Club's Secretary is Mr. S. W. Maybrook, Enfield Highway, Middlesex, who will give full particulars to those interested.

### HONITON MOTOR CYCLE & LIGHT CAR CLUB.

The Honiton Motor Cycle and Light Car Club held a very well-supported Riding and Driving Test recently, which resulted as follows: Best performance, irrespective of class—J. Eddy (7 Austin Car). Best performance, solo machines over 350 c.c.—W. Stuart (3½ Sunbeam). Best performance, solo machines under 350 c.c.—W. Hooper (Raleigh). Best performance, sidecar machines—W. Baker (New Hudson).

The Hill Climb arranged for June 19th has been postponed until July 17th, owing to the present unfavourable condition of the hill selected. Full particulars will be published next month.

The Hon. Secretary of the Club is Mr. A. C. Roberts, c/o The Honiton Garage, Honiton.

### THE WORCESTERSHIRE MOTOR CLUB.

This well-run Club has long been in the front rank of Midlands clubs.

On Thursday, July 10th, it holds its Open Speed Trials at Gloucester Drive, Madresfield Court, Malvern. These Trials will incorporate events for the Worcester and District Motor Cycle Club. In all, there are to be won at this event, 4 cups, a shield, and 2 gold, 3 silver and 1 bronze medals, in addition to certain cash awards.

Further particulars are obtainable from the Hon. Secretary, Mr. J. C. Gibbs, 25, Albany Terrace, Britannia Square, Worcester.

### THE SLOUGH & DISTRICT MOTOR CYCLE & CAR CLUB.

This Club is favoured with beautiful surrounding country and Kop and Alms Hills are within easy reach.

On Saturday, June 28th, the Club held a Hill Climb at Bretwell Hill, near Henley-on-Thames; and on Saturday, July 12th, the Club promotes a Reliability Trial for E. W. Finch's Cup.

The Hon. Secretary is Capt. H. W. Dyke, "Hartford," Upton Road, Slough, Bucks.

### MIDDLESEX COUNTY AUTOMOBILE CLUB.

Every year this Club organises a cohort of its members and friends who take out the crippled children of the Fairlight Hall Branch of the Shaftesbury Society. After taking them for a drive independently—not in an institution-like procession—they deliver them at the house of some pre-ordained benefactor, who gives them tea. The Club then provides an entertainment for the kiddies and afterwards drives them home. (A laudable work, surely!—E.D.) This year the outing was on June 21st, and the objective, a house at Nutfield, Surrey.

The Club also organises various Hill Climbs and Speed Trials.

The Hon. Secretary is Capt. W. J. Lendrum, 10, Leaside Avenue, Muswell Hill, N. 10.

### FERRY HILL & DISTRICT MOTOR CLUB.

On June 29th, this Club organised for its members a run to Knaresborough. An extensive program has been mapped out for the remainder of the season.

The Hon. Secretary is Mr. J. P. Whelan, 1, Haig Street, Ferry Hill, Durham.

### CUMBERLAND COUNTY MOTOR CYCLING CLUB.

The chief event of the season organised by this Club is the Reliability Trial which they hold for the "Alan" Trophy. This year this event is to be held on August 9th, when, it is confidently anticipated, there will be a record turn-out.

In addition to this there is an extensive fixtures list prepared for members by the Hon. Secretary, Mr. Fred. Rowlands, 37, English Street, Carlisle.

### THE SOUTHAMPTON & DISTRICT MOTOR CYCLE & LIGHT CAR CLUB.

The above Club is holding its Annual Hill Climb at Spread Eagle Hill, near Shaftesbury, on July 12th.

Spread Eagle is a hill which makes for spectacular ascents, and some good sport is anticipated.

The Hon. Secretary of the Club is Mr. D. Robertson, "The Bungalow," Redbridge, Hants.

### THE SPEN VALLEY MOTOR CYCLE & LIGHT CAR CLUB.

The keenness shown amongst North-country motor cyclists compares very favourably with the enthusiasm of their brothers in the Southern counties. The North-country clubs are more numerous, and as a consequence, a greater number of competitions are held.

The Spen Valley Motor Cycle and Light Car Club is one of the most progressive of Northern clubs, and it has prepared for its members an interesting fixtures list which includes a Spen Valley—London—Spen Valley Trial, run in conjunction with other Yorkshire Clubs, on July 12th, and a Motor Cycle Football Match with Bradford, on July 19th, at the Spenborough Charity Carnival.

The Hon. Secretary is Mr. F. A. Brown, "Hill Crest," Whitcliffe, Cleckheaton, Yorks.

## ROUND THE CLUBS—continued.

### THE MIDDLESBROUGH & DISTRICT MOTOR CLUB.

This Club would always be famous had it never achieved anything else besides giving the motor cycling world "Freddie" Dixon; but in addition to this, it was a Motor Cycle Football pioneer.

This season it has a particularly lengthy list of fixtures. These include: Saturday, July 5th, and Sunday, July 6th.—Two Days' Reliability Trial for the Gjers Cup. Wednesday, July 9th.—Surprise Run. Sunday, July 13th.—Church Parade. Saturday, July 19th.—Fuel Consumption Test for Sadler Bowl. Saturday, July 26th.—Saltburn Speed Trials.

The latter Open event which has become one of the classics of the year, has always attracted large entries. It is organised by this Club.

The Hon. Secretary of this Club is Mr. A. V. Buttress, 18, Ayresome Park Road, Middlesbrough.

### KILBURN & DISTRICT MOTOR CYCLE CLUB.

This Club was formed for the benefit of motor cyclists in and around the Kilburn district. It caters for novices, amateurs, and, in fact, *all* riders. The main features are Thursday afternoon and Sunday events, which include runs, tours, competitions, and social gatherings. Friends of members are invited, lady riders being specially welcomed. Mr. Harcourt Johnstone, M.P., is the patron, Major J. Chater-Lea is the president; the two vice-presidents are Mr. E. J. Pittock and Mrs. L. Uhde, the chairman is Mr. F. J. Youngs, and the country headquarters are at the Bull Inn, Wheathampstead, Herts. A weekly circular is distributed to each member, setting forth the proposed programme for the ensuing week.

The Hon. Secretary is Mr. G. W. Langford, of 13, Regent's Park Road, N.W. 1.

### THE STALYBRIDGE & DISTRICT MOTOR CLUB.

Owing to the bad weather it unfortunately was impossible to run off the flying start solo classes in the recent Speed Trials held by this Club, and also some riders were unable to compete in the standing start classes.

E. Spencer, with his 494 c.c. Douglas, put up fastest time of the day in the standing start classes and also was successful in putting up a new time (standing start) for the course in 19 7/16 secs. The best previous time was exactly one minute more, which was put up last year by A. Greenwood on his 8 h.p. Brough Superior. E. Searle with a 348 c.c. Sheffield Henderson was successful in the 350 c.c. class, also putting up a new standing start time (21 7/16 secs.), the best previous being 22 secs., which was put up by B. Watts in 1922 on a 342 c.c. D.O.T.-J.A.P. Norton machines accounted for all the sidecar races.

The next Speed Trials to be held by this Club will be on July 12th. A series of Yorkshire Centre Speed Trials will be held on the same course in August, and will be organised by the Stalybridge and District Club.

Enquiries should be addressed to Mr. A. B. Cliffe, the Hon. Secretary, The Stalybridge and District Motor Club, Trinity Works, Trinity Street, Stalybridge.

### THE IPSWICH & DISTRICT M.C.C.

This Club, which is affiliated to the Eastern Centre A.C.U., has some interesting events on its fixtures list. To name only a few: July 5th.—Hill Climb. July 6th.—Social Rally. July 19th.—Paviour Challenge Reliability Trial. August (date provisional).—Carnival at Felixstowe.

All enquiries should be addressed to the Hon. Secretary, Mr. H. D. Murphy, 33, Stradbroke Road, Ipswich.

### YORK & DISTRICT MOTOR CLUB.

The York and District Club, in addition to a full list of events, is organising a York—Edinburgh—York Run, to be held on August 3rd and 4th. The competitors will start from York Minster (first man away at midnight) on Saturday, 2nd August, and will return from Edinburgh at 9.0 a.m. on Monday (Bank Holiday), 4th August. This allows for a stay in Edinburgh of approximately 20 hours. The outward and return routes are to be different.

The motor cycle classes are open to members of any club affiliated to the Yorkshire Centre of the A.C.U.; the car classes open only to Members of the York and District Motor Club.

Other fixtures of this Club include the following: July 2nd.—Garrowby Hill Climb. July 16th.—Point to Point Trial. September 3rd.—Hill Climb.

All communications should be addressed to the Hon. Secretary, Mr. F. T. Cleveland, Kiosk, Lendel, York.

### THE REDDITCH MOTOR CYCLE & CAR CLUB.

On June 14th this Club held a closed Speed Trial, which was well attended. The Redditch Club has been well to the fore in such events ever since 1910, and it has an intriguing program for the remainder of the season.

It has been found necessary to postpone from July 5th until July 12th, the Half-Day Reliability Trial, for which a trophy has been presented by Commander G. Herbert, D.S.O. This Trial, also, is a closed event.

The Hon. Secretary of the Redditch Club is Mr. Chas. E. Spooner, Littleworth, Redditch.

### NEWCASTLE & DISTRICT MOTOR CLUB.

The official results of this Club's Open Trial held on May 10th, were held up for a long time, pending confirmation by the A.C.U., but may now be given as follows: Travers Trophy and Cheque for £50.—F. W. Giles, 2½ h.p. A.J.S. and sidecar. N.U.T. Trophy (best performance by solo over 500 c.c. or sidecar).—F. W. Giles, 2½ h.p. A.J.S. and sidecar. Alan Robson Shield (fastest time on Hill Climb).—P. Hart, 2½ h.p. Sunbeam. Bradford Bowl (best performance by car).—G. Denley, Rhode car. 1st Team Prize.—A.J.S. (F. W. Giles, A. W. Byers, F. Thatcher).

The All-Night and 24-hour Trial run on May 24/25, was a great success, and attracted 102 entries. The chief winners were: Baker Trophy (best performance in All-Night Section).—F. Fieldhouse (Velocette) and H. Shaw (Ford), tie. Bainbridge Trophy (best solo performance in All-Night Section).—F. Fieldhouse (Velocette). Douglas Bowl (best performance by car in All-Night Section).—H. Shaw (Ford). Ovoline Beaker (best performance by Sidecar in All-Night Section).—W. C. Thompson (N.U.T. and sidecar). Eshott Gold Cup (best performance in 24-hour Trials).—N. Welsh (N.U.T.).

The Newcastle and District Motor Club is one of the most progressive clubs in the North of England. It is now over 250 strong, and trials are run to suit all types of members, from the raw novice to the hardened sporting rider.

Some forthcoming events on this Club's fixtures list are: July 6th.—President's and Hunter Trial. July 20th.—Reid Speed Trial. July 27th.—Johnson Trial. August 10th.—Social Run.

The Hon. Secretary is Mr. George G. Heath, care of W. Gillespy and Son, Ltd., 100, High Street, Gateshead.

### THE ILKLEY & DISTRICT MOTOR CLUB.

This Club, whose officers include no fewer than fifty-eight vice-presidents alone, has arranged an imposing program. Two of the items are as follows: On Sunday, July 6th, there is to be a closed Speed Trial for awarding the Trade Trophy; followed on 20th by a Hill Climb for the Dixon and Dawson Trophy.

Some of the other Club Trial trophies are the Waite Rose Bowl; Founders Trophy (for Novice trial); Hemingway Trophy (for Team trial); English Trophy; Maugham & Moore Trophy (for despatch riding trial); Dixon Trophy (for speed hill climbs); Brooks Trophy; Fattorini Trophy (for car Novice trial); Hargrave Cup (three-wheeler trial); Secretary's Trophy (for Colonial trial); The above, and several others, are competed for annually; while there are four valuable cups to be won outright during the present year.

Mr. J. H. Holmes, The Grange, Station Road, Otley, is the Hon. Secretary.

### THE NEWCASTLE & NORTHERN MOTOR CLUB.

On July 6th, this Club will hold a non-stop Reliability Trial around Jedburgh, Hawick, Longtown and Brampton for a Bronze Trophy. For Wednesdays 9th and 16th, somewhat divergent attractions are offered, while there is to be a Social at Fowberry Park on the 20th, followed by a Speed Judging Team Trial, a week later.

The Hon. Secretary is Mr. E. Willan, Kenton Road, Gosforth.

### ROUND THE CLUBS—continued.

#### LINCOLN & DISTRICT MOTOR CYCLE CLUB.

The Club is now firmly established, and during the present season has organised several sporting events with every success, although the poor attendances at social events have disappointed the Committee, who hope that this side of club life will be patronised to a greater extent in the future.

The following two events are imminent: July 6th.—Reliability Trial. July 12th.—Hill Climb at Scamblesley.

The name of the Hon. Secretary is Mr. R. Lucas, John-o'-Gaunt's, Lincoln.

#### BOSTON & DISTRICT MOTOR CYCLE CLUB.

This Club has already held several successful fixtures this year, including a reliability trial in the Lincoln Wolds. Members competed in the recent Lincoln Section Hill Climb at Stanmore Hill, the local awards being made as follows: Silver medal for winner in each class.—Class 5 (under 350 c.c.), Section B.—1. B. Parkes (349 A.J.S.) 19 4/5th secs.; 2. G. Cooper (347 Rudge) 24 secs. Class 6 (under 550 c.c.), Section C.—1. J. Killingworth (490 Norton) 22 3/5th secs.; 2. S. Grant (492 Sunbeam) 22 4/5th secs. Class 7 (under 750 c.c.), Section C.—1. J. Killingworth (490 Norton) 21 secs.; 2. R. Reynolds (Matchless) 22 1/5th secs.

Class 8 (unlimited), Section C.—1. J. Killingworth (490 Norton) 21 secs.; 2. R. Reynolds (Matchless) 23 secs.

J. Killingworth also takes following Lincs. section awards.—Gold medal for fastest time in Section C (57 m.p.h.), 2 silver medal class awards.

Inquiries should be addressed to Mr. J. A. Killingworth, Hon. Secretary, 7, Market Place, Boston.

#### SURREY MOTOR CYCLE CLUB.

The following events will be held by this Club during the present season: July 2nd (Wednesday).—Reliability Trial. July 18th (Friday midnight).—Guildford-Exeter Trial. August 23rd (Saturday).—Lightweight Trial. September 13th (Saturday).—Heath and Wiltshire and Bateman Cup Trials. October 4th (Saturday).—Hill Climb.

All particulars as to Club activities can be obtained from the Hon. Secretary, Mr. A. C. Brooks, Lyngarth, Upper St. Michael's Road, Aldershot.

#### REPAIRERS.

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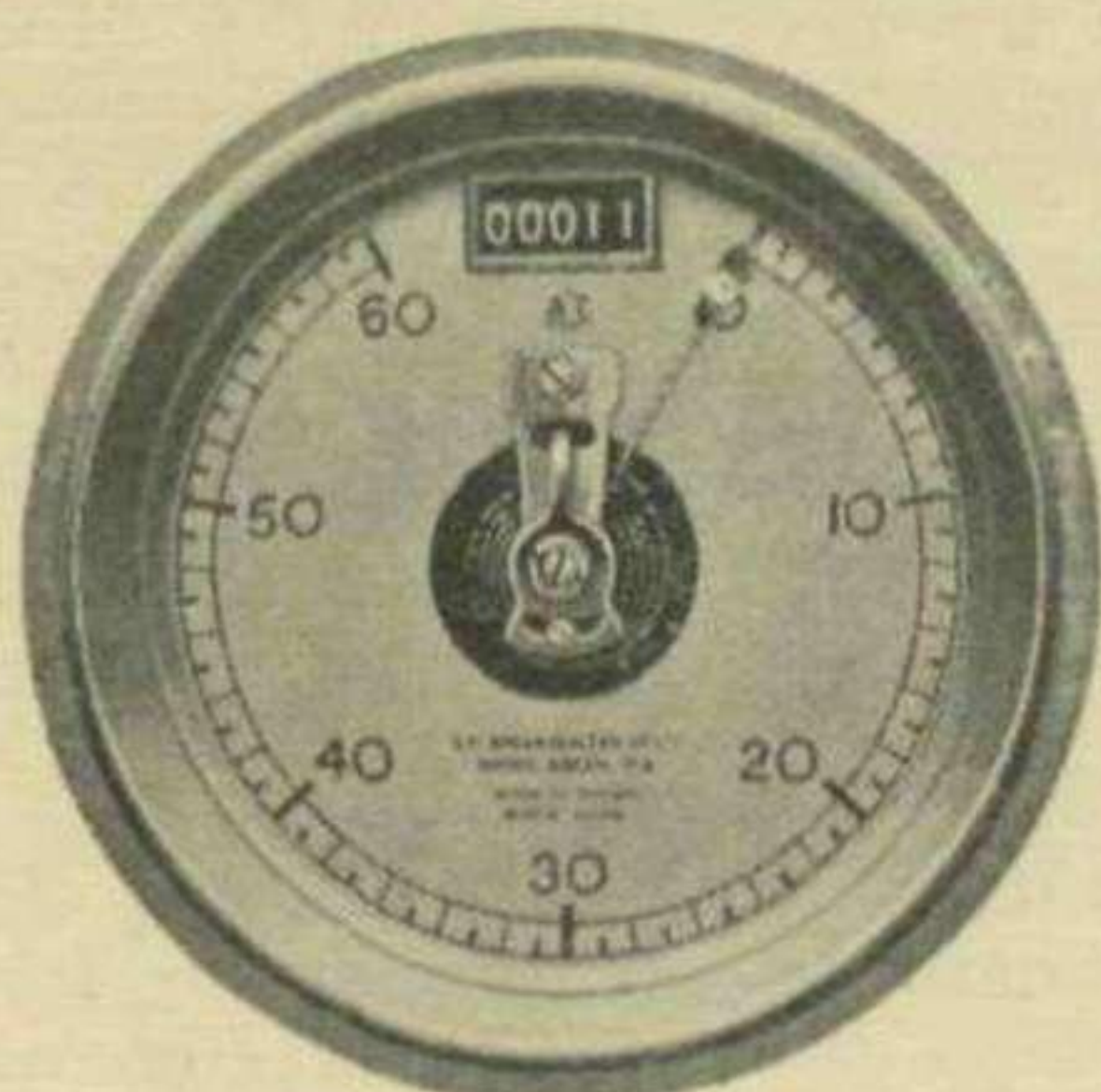
### Important July Fixtures.

- |                     |  |
|---------------------|--|
| Saturday, 5th.      | B.A.R.C. Open Meeting.   |
| Saturday, 5th.      | A.C.U. Open Speed Trials at Doncaster.                                 |
| Tues. 8th to 11th.  | M.C.C. Land's End—John O'Groats Trial.                                 |
| Thursday, 10th.     | Worcestershire Motor Club Open Speed Trials.                           |
| Fri., 11th to 12th. | M.C. and A.C. Open 24-hour Trial (Birmingham - Holyhead - Birmingham). |
| Saturday, 12th.     | Leinster "Hundred" Road Race.  |
| Saturday, 12th.     | B.M.C.R.C. Brooklands Long-Distance Race.                              |
| Saturday, 12th.     | South Midland Centre Reliability Championship Trial.                   |
| Sun. 13th-14th.     | Belgian Grand Prix.  |
| Saturday, 19th.     | Brooklands S.E.C. A.C.U. and Surbiton Club Meeting.                    |
| Saturday, 19th.     | Southampton and District Southern Centre Open Hill Climb.              |
| Saturday, 19th.     | Spenn Valley Motor Cycle and Light Car Club's Charity Carnival.        |
| Mon., 21st to 26th. | Scottish Six Days' Trials.   |
| Wednesday, 23rd.    | Essex Motor Club Brooklands Meeting.                                   |
| Thursday, 24th.     | Eastern Centre Speed Trials, Harling Road.                             |
| Fri., 25th to 31st. | Circuit des Vosges, Belgium.   |
| Saturday, 26th.     | M.C.C. Brooklands Meeting.   |
| Saturday, 26th.     | Y.C.A.C.U. Speed Trials at Saltburn.                                   |
| Saturday, 26th.     | J.C.C. South Harting Hill Climb.                                       |
| Saturday, 26th.     | N. Wales Centre A.C.U. Open Reliability Trial.                         |
| Saturday, 26th.     | Essex M.C. Open Hill Climb at Kop.                                     |
| Wednesday, 30th.    | French Grand Prix.   |

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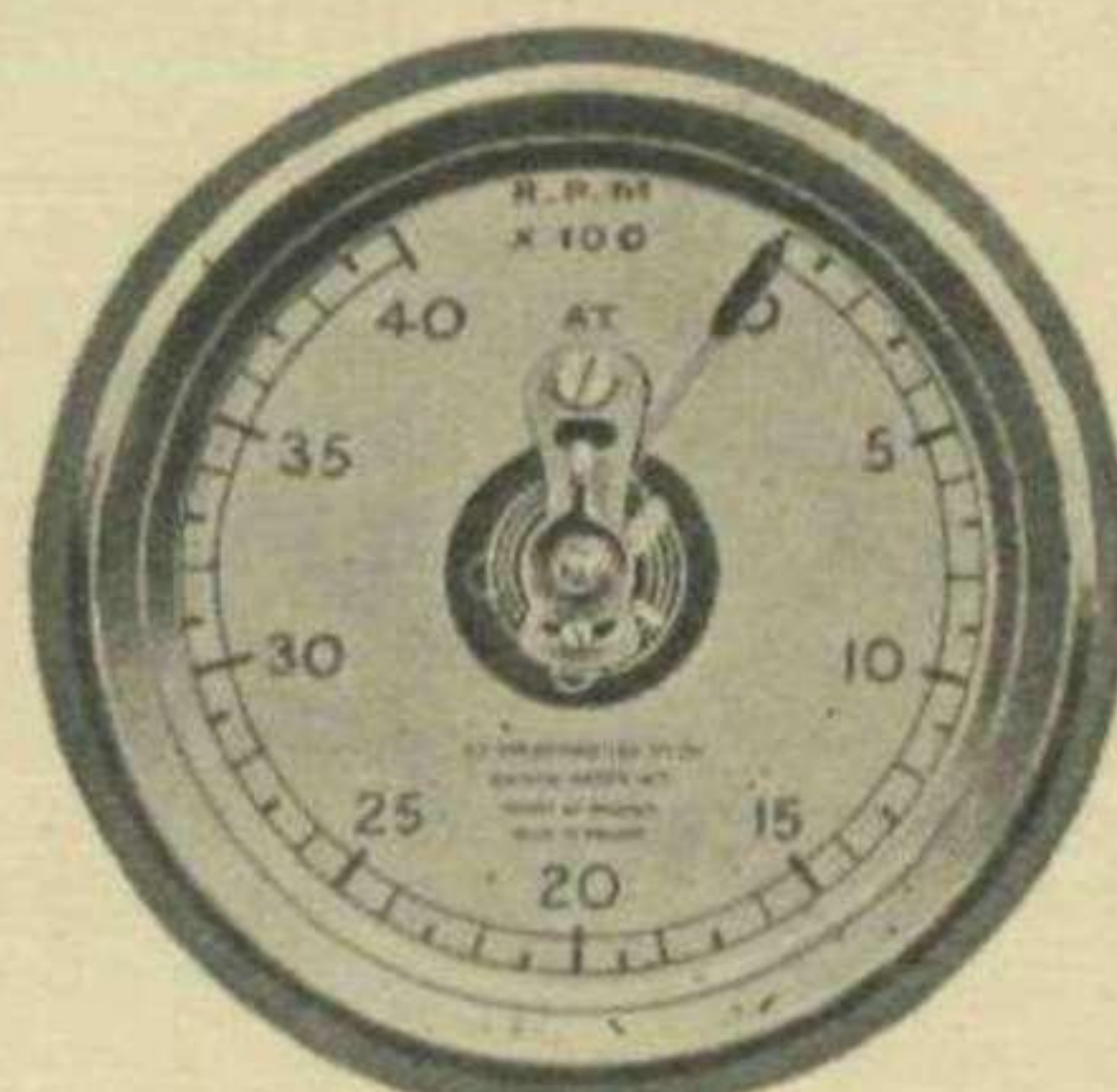
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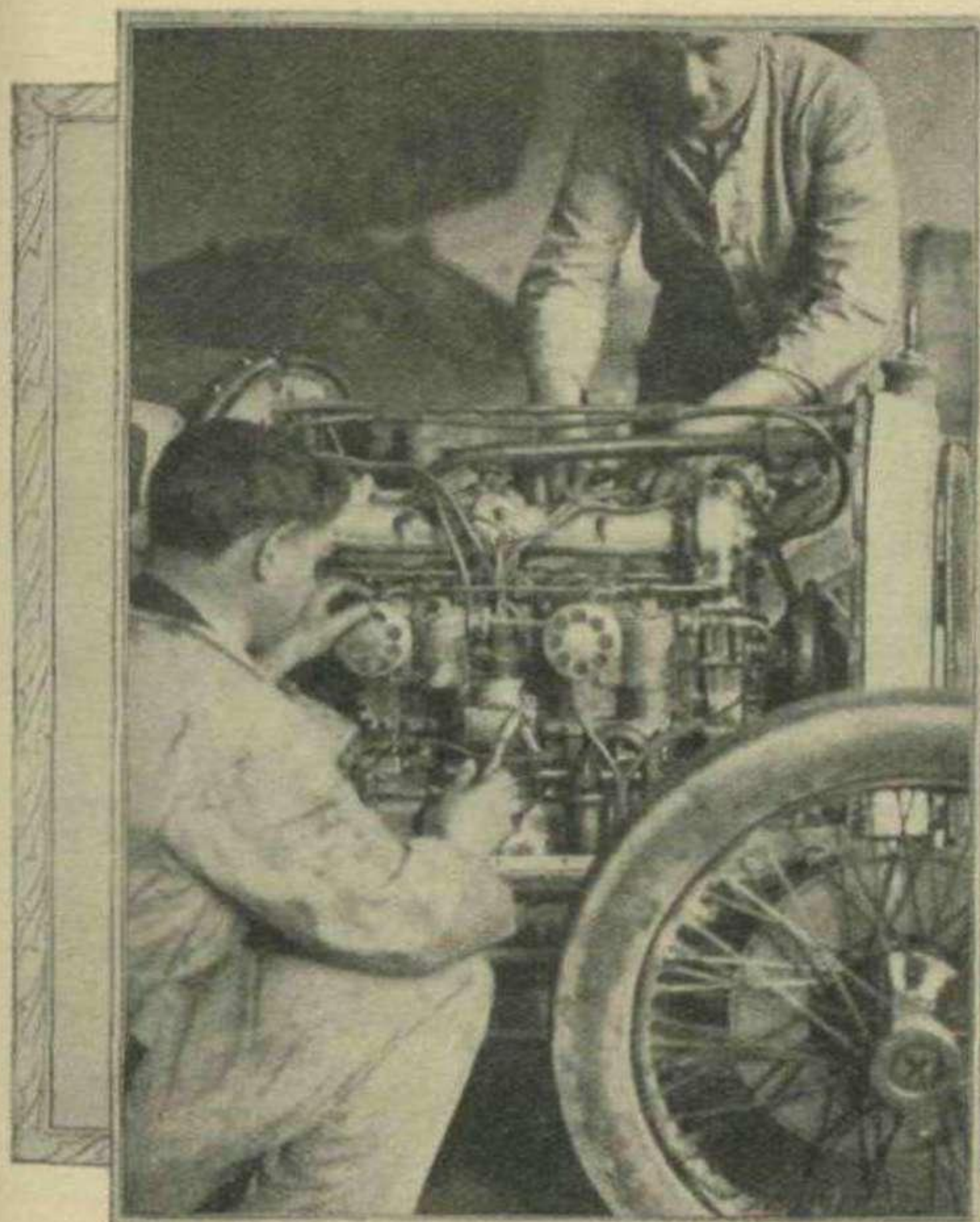
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# The Evolution of the High Efficiency Engine

*By Capt. W.G. Aston*

TO the student of automobilism there has been nothing more interesting during the past twenty years than to watch the march of progress as expressed by the increasing efficiency of engines. For many years experimenters did a vast amount of work without seeming, as the phrase goes, "to get much forrader." All of a sudden, or so it appeared, about 1911 or 1912, they struck the right path, and from that time forward, development has taken place at an amazing rate. We have, in fact, almost got to the point of being able to say that the dimensions of an engine have little or no influence upon the power it can develop, for this is rather a function of the weight of fuel that it can contrive usefully to burn in a given time.

A mental picture of what has been accomplished in respect of engine efficiency, which, of course, one must measure in terms of bore and stroke, may be had on comparing the sort of engines with which Mr. Edge raced against Nazzaro in 1908, when the latter broke the world's record for speed, and the sort of engine which the Sunbeam drivers will sit behind in this year's Grand Prix. The one was an enormous four-cylinder of goodness knows how many litres capacity, the other is a super-charger six-cylinder of only two litres, and the probability is, that in point of brake horse power, the latter, tiny little plant though it be, gives the greater output.

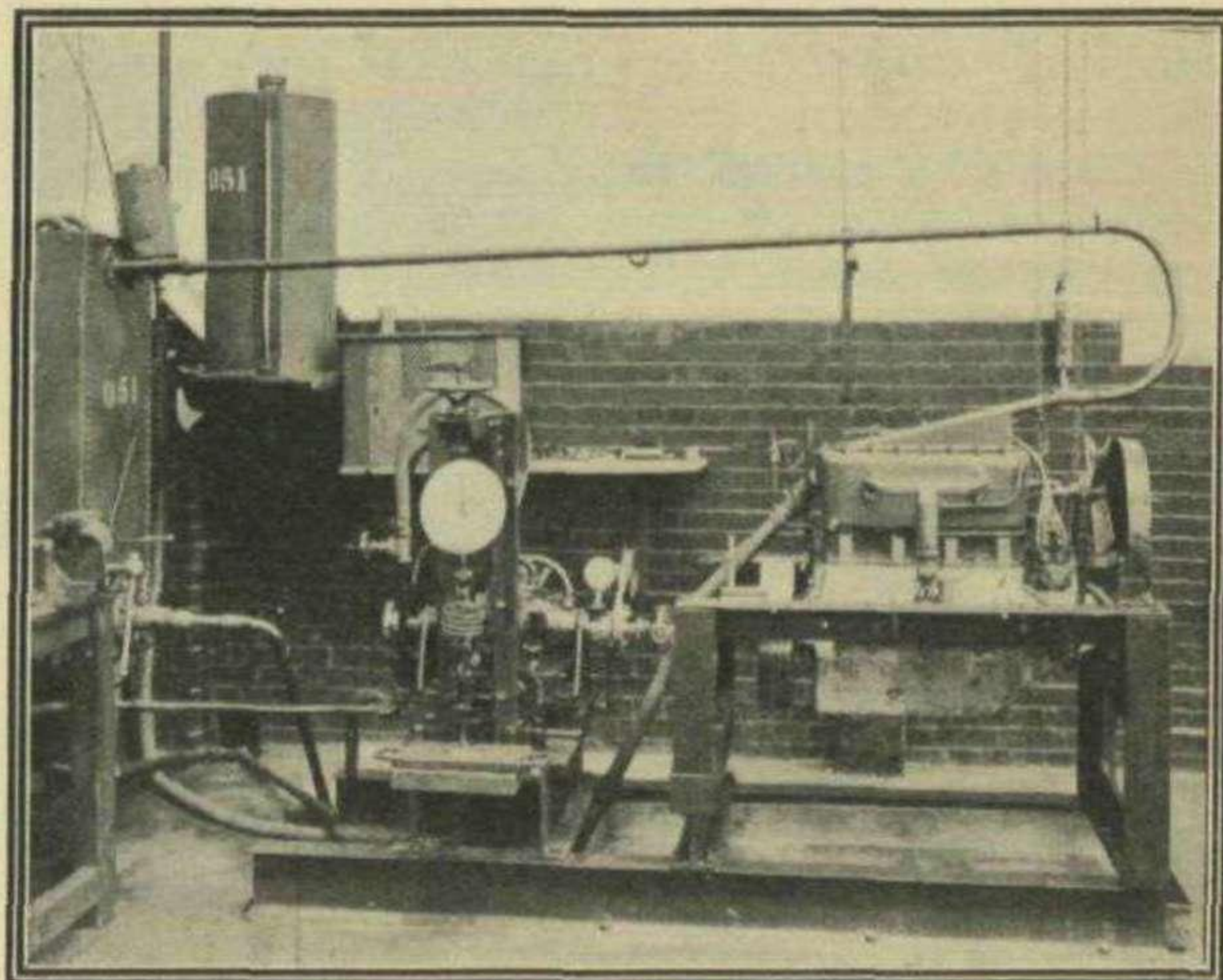
In hunting higher efficiency, several basic problems have to be solved. The obvious way to get increased power in an internal combustion engine is to work the motor at higher effective revolutions. Now as crank shaft speeds are put up, so there is a great increase in the power absorbed, by the fact that the reciprocating parts have to change their direction of travel and come to a dead stop twice in every revolution. Therefore, the first thing the designer has to do is to reduce these in weight. Formerly, pistons and connecting rods were copiously drilled, but more scientific methods have now supervened, and they are made of aluminium

alloys, whereby amazing lightness is secured, whilst their strength is not impaired.

Another advantage of aluminium for these parts is that it helps very considerably to conduct the heat away from the piston. Recently a new kind of magnesium alloy has been exploited for pistons, whereby they can be made lighter than ever before, and by this factor alone, it is quite feasible that the revolutions of many engines will be put up by as much as fifteen or twenty per cent.

## Getting Productive "Revs."

Now, it is no use making an engine turn at a higher speed unless it gives an adequate output of horse power at such speeds. The ordinary output curve of an explosion engine rises quickly, remains horizontal for a short distance and then descends again. This drop is due first of all to the power absorbed in overcoming

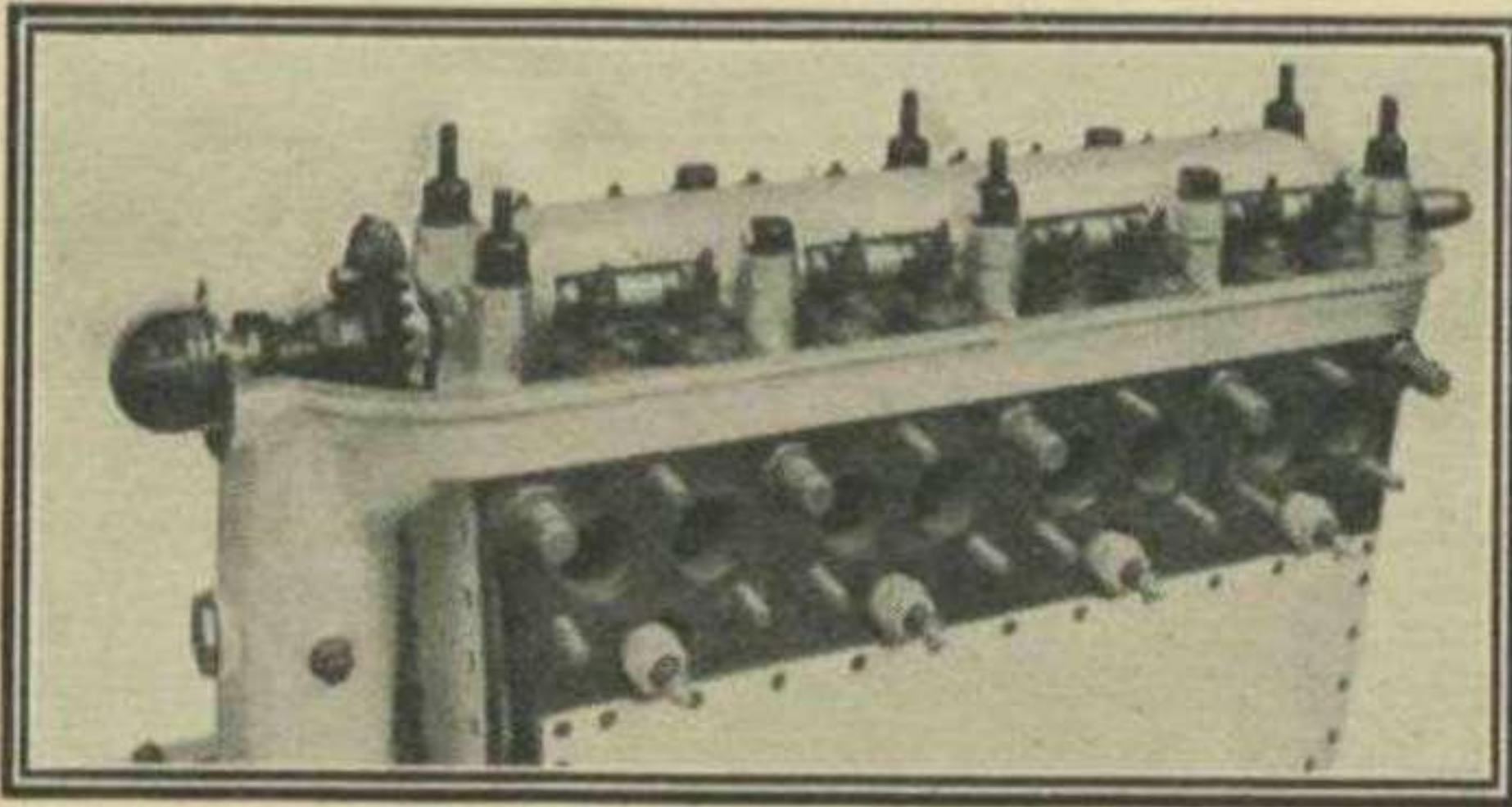


A SUNBEAM ENGINE UNDERGOING A BRAKE-HORSE-POWER TEST.

## THE EVOLUTION OF THE HIGH EFFICIENCY ENGINE— continued.

the inertia of the reciprocating parts, but is principally attributable to the fact that the cylinder at very high speeds, fails to fill itself with a reasonable weight of gas.

A brief mental calculation will show that in an engine running even at the reasonable speed of 4,000 r.p.m., the inlet gas has very little time indeed to get into the



4-CYLINDER BENTLEY ENGINE.

cylinder, in addition to which it has to pass through twisty ports and through the narrow opening afforded by the lift of the valve. In order to overcome this objection, designers of racing cars were at one time unanimous in exploiting the multiple valve principle, which gave them proportionately bigger valve openings with a reduction in the weight of the valves themselves. More recently the tendency has been to use a single pair of valves per cylinder, and to mount them symmetrically in a hemispherical combustion head, in which the sparking plug is situated in the centre of turbulence. This is not because the principle of multiple valves is incorrect, for four valves so arranged would certainly be better than two, but with the progress that has been made in engine efficiency, the organisers of the big races have brought down their dimension limits to such an extent that the cylinder of the modern racing car is really not big enough for the four-valve scheme.

The mere word "efficiency," in conjunction with any mechanism, implies the elimination to the greatest possible measure of friction, and this is a direction in which the designer of the racing car has done much valuable work, more, in fact, than is often appreciated by those who concern themselves only with touring vehicles. First of all there was the question of lubrication to be solved. Whereas the old engine relied upon a clumsy splash system, in which luck played a great part, the modern engine receives a supply of oil forced under pressure to every working part. Moreover, special steels for such components as the crank shaft have been devised, which are not only rigid enough to stand the huge stresses imposed upon them by the transmission of power, but are of a nature which will run comfortably in bearings under the highest loads.

### Some Recent Advances.

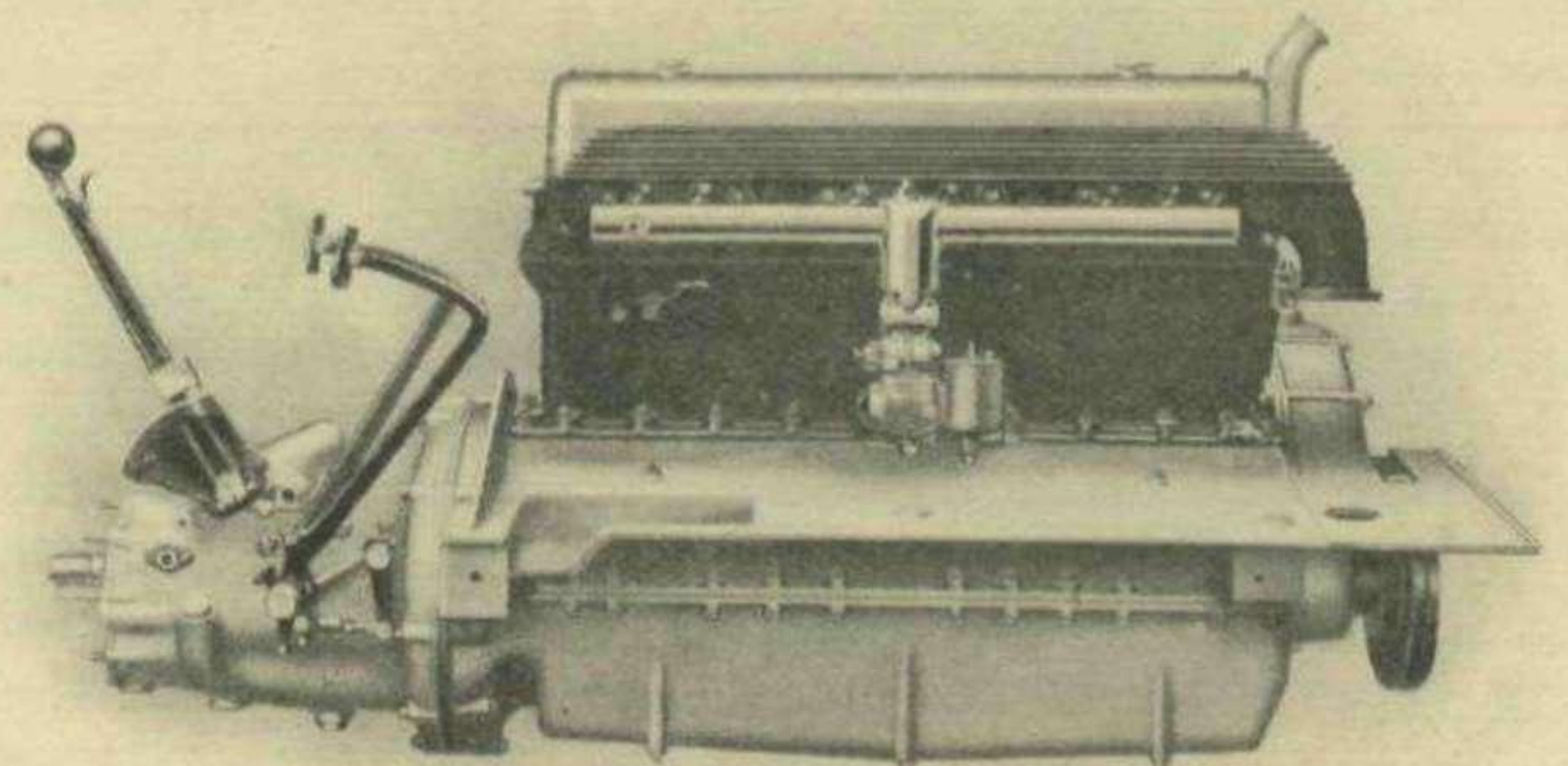
In many racing engines plain bearings have largely disappeared in favour of roller bearings, the frictionless working of which has enabled the most violent accelerations to be secured. This is a point of importance,

because in the modern racing car which has to participate in road events, quick "getaway" after a stop, or instant adaptability on the part of the engine to a change of gear is absolutely essential.

In the search after higher efficiency careful attention has had to be paid to cooling principles, for a higher output of power from given cylinder dimensions means that the mean effective pressure above the piston must be proportionately increased, and with this is implied an increase in temperature. In earlier days much trouble was experienced in engines designed for high output by reason of the fact that the expansion of such things as valve seats was uneven. At other points, too, there would be an insufficient flow of water, so that the metal became incandescent, and gave rise to violent pre-ignition. The modern engine designer has learnt a good deal from these lessons, and now knows how to design engines in which no such trouble is ever likely to occur.

The final step in the development of the high efficiency motor which may lead to far bigger things than are at present apparent, is the introduction of the super-charger principle. This is of enormous value, not only because it increases the effective weight of gas pumped into the cylinder at high speeds, thereby increasing the effective revolutions, but also because it greatly enhances the power at low speeds, and consequently promotes an unusual ability in acceleration. The reason for this is because the large valves and big valve lifts that are requisite for high revolutions tend to destroy the beneficent influence of turbulence at the lower end of the scale. Whereas the 1923 engine without the super-charger gave an immense amount of power once it had achieved about 3,000 r.p.m., but little or no power below this figure, its 1924 counterpart, fitted with the super-charger mechanism, gives an excellent output of horse power, *i.e.*, about 25 per cent. more at the least, all along the scale.

In concluding this brief review of an absorbing subject, it is not too much to say from the data which at present are available that the one litre capacity engine, capable of giving its 100 b.h.p. with an almost complete absence of vibration and fuss, will be within the bounds of practical possibility inside the next year or two.



6-CYLINDER 20/60 H.P. SUNBEAM ENGINE.

# A COMPETITOR'S IMPRESSIONS OF THE LONDON—EDINBURGH RUN.

By Captain Richard Twelvetrees, A.M.I.Mech.E.



THE UBIQUITOUS MORGAN.

Of all the events of the year, perhaps the London—Edinburgh Run, organised by the Motor Cycling Club, is the most popular, especially by reason of its being perfectly practicable to owners of standard types of motor cycles and cars. One can take an ordinary standard machine, in good condition, and be fairly certain of putting up a good show in the Edinburgh run, which accounts to a large extent for the numerous entries to be found each year. Seasoned motorists who gathered at Wrotham Park on the historic Friday before Whitsun, were asking themselves why, after having had their fill of motoring, they should stay up all night to have the pleasure of a twenty-four hour run to Edinburgh. The reason is not far to seek, for in this event one meets old friends, enjoys a delightful disregard for conventional meal times, and escapes for a space from the humdrum of business, to enjoy an outdoor picnic on a very big scale.

It is said that the "looker on sees most of the game," and this is indeed true with regard to such an event as the one I am about to describe. Felix, that's my 11.9 Bean, Cecil, my observer, and myself, were out to get a coveted "gold" and, in consequence, could not travel far up and down the line of other competitors to see what was happening. Nevertheless, there was a great deal of interest to be found during the trip at different stages of the route.

## A Little Music.

Arriving at Barnet in good time for the evening start, we found a large gathering of cars already assembled, and, anticipating a wait of some hours, we decided to while away the time by collecting some music out of the atmosphere. The latest addition to Felix is a three-valve reflex wireless set, and by fixing a small frame aerial on the corner of the wind screen, it was possible to tune in to 2 L.O. at loud speaker strength. The running of the engines of the cars and motor cycles made the music crackle a bit, but on the whole the results were quite successful, until a shower of rain put an end to our experiment.

Everybody, except the Earl of Strafford's head gardener, was interested in the arrival of a covey of Trojans, for mistaking the sound of a highly-tuned motor cycle engine for an air raid, they proceeded to dig themselves into the grass. Somehow the solid tyres do not seem to agree with nicely kept turf!

At 9.15 p.m. we were given the signal to get ready, and in company with a Palladium, a new 14 h.p. Bean and an 18 h.p. Essex, we drew up to the starting point. It was curious to notice the way some of the competition drivers got off the mark, just as if tenths of seconds counted, but one supposes that these lightning starts come as the result of timed hill climbs and speed events.

At 9.20 we were away, and from the first we were interested to see how the ancient Bean would acquit itself as a companion to the new 14 h.p. of the same make. On leaving the park it became obvious that the Edinburgh Run has a great interest for the general public, for from the time of the start until far on into the night people were found at the roadside waiting for the cars to pass.

By the time the cars had got away, all the motor cycles were far ahead, and it speaks well of the enthusiasm of the riders, that one only caught sight of them when in the long stops at controls. The men on the solo machines seemed to be undergoing the severest test of endurance, and must have had difficulty in keeping awake. As a matter of fact the only casualty recorded in the run was a motor cyclist who fell asleep in Scotland and crashed his machine, fortunately without suffering any serious injuries himself.

## Petrol, Coffee and Sandwiches.

According to the route card one had to make the first stop at Biggleswade, and check in at the Swan Hotel. Here one was instructed to have petrol, coffee and sandwiches, but as the mixture seemed to be inferior to that with which we had provided ourselves, we fell back on Thermos flasks filled with more conventional (or convivial?—Ed.) refreshment.

On leaving this first control, we lost sight of the 14 h.p. Bean, and as we had arranged to keep it in sight all the time, we streaked on ahead to try to catch it up. After car upon car had been passed and we were right up with the lower numbers, it became evident that unless we slowed up there would be a risk of spoiling our



ROUNDING A DIFFICULT HAIRPIN.

## A COMPETITOR'S IMPRESSIONS OF THE LONDON— EDINBURGH RUN—continued.

chances through being too early at some secret control. Eventually the 14 h.p. Bean turned up unexpectedly from the rear, after which we resumed our proper station, which was kept regularly from that point onwards, until Edinburgh was reached. We made it a matter of principle to be just one half minute behind the larger car at every control, and throughout the entire run numbers 279 and 280 could have been seen in close attendance upon each other.

Quite early on in the trip, we noticed a white Morris-Cowley two-seater having some tyre trouble. The driver and his companion would stop to mend a puncture, then rush ahead to soon "enjoy" again the same experience, and without losing time between the controls too!

We stopped taking count of the number of punctures they suffered, and later on found them apparently buying up all the available stocks of tyres and tubes at wayside garages. There must have been something wrong with the rims, but if ever any people deserved gold medals, it was the occupants of that car. Bad luck dogged them to the last, for when travelling well up the non-stop section of Kirkstone Pass a tyre came off completely, and to avoid smashing up a back axle it

was necessary to stop the car, just where it should have been kept going. Very hard lines!

### Moonlight Effects.

Until Stamford was reached, there was nothing of outstanding interest as far as scenery was concerned, but the quaint architecture of the old world town showed up to remarkable effect in the moonlight, together with the bright light from the procession of cars. Though later than 1.0 a.m., a number of spectators were to be seen in the main street.

Our time at Grantham was 2.25 a.m., and after signing the time sheet at the George there was a stop of just over one hour for early breakfast, though I must say that chronologically it savoured more of last night's supper. But the charming inconsequence as to meal times is one of the attractions of this all-night picnic, and we enjoyed the pause after the 98 miles run. Never were supplies of petrol and oil more plentiful, for at

every stop one was surrounded by eager petrol purveyors, some of whom were offering a bonus to successful competitors using their particular brand. Soon after leaving Grantham, some of the drivers of the sports cars appeared to be getting rather bored at having to keep down to a low speed; and, whilst careful not to overstep the mark at the controls, indulged in spasmodic bursts of speed, probably with the idea of keeping themselves awake. There is nothing more conducive to slumber than the droning of a well-tuned engine driving a smooth running car along a good road at night. A useful suggestion to specialists in insomnia cases!

At about five o'clock in the morning we put out the electric torch used for lighting the clock and speedometer,

for it was found less trying for the eyes to use a separate torch than to have a continual glare on the instrument board, and at 6.12 a.m. we ran into Doncaster, where another time check was made. No further checks took place between Doncaster and Ilkley, at 201 miles from London. Here all the cars were parked, whilst a halt was made for a second breakfast at the Middleton Hotel. By this time nearly everybody was feeling a little tired, and a wash was very re-



A SEARCHING STRETCH ON THE LONDON-EDINBURGH RUN.

freshing. I believe some of the competitors went to the length of shaving, but the majority preferred to defy convention and be hanged for the consequences.

The picturesque town of Kendal was reached at 12.30 on Saturday morning, and mindful of the non-stop run over Kirkstone, many of the competitors began to look to their lubrication and cooling. It always happens that after a long run of this kind, one imagines that things are going wrong immediately before the critical test takes place. Several of the cars were seen to stop for a final look round, and I imagined that the oil pressure indicator of the Bean was showing low. To be quite on the safe side, we stopped to increase the pressure on the regulator valve and give the engine a good old souse with fresh oil. I think most of the drivers were too interested in the impending hill climb to pay much attention to the lakes, and personally the bleak track over the mountain intrigued me far more than the shimmering water of Windermere.

## A COMPETITOR'S IMPRESSIONS OF THE LONDON— EDINBURGH RUN—continued.

### Over the Pass.

The famous climb commences suddenly out of Amble-side, and before one can say knife, the bonnet of the car rises and the engine calls for relief in the shape of a lower gear. On very steep gradients it is no use waiting to see if the engine will pick up to its work, but immediately the "revs." drop, one must set into a lower gear, to avoid the risk of "konking out." Aided by a little artificial respiration provided by a Bowden extra air inlet, the 11.9 Bean engine "revved up" to a high pitched scream, and made no adverse comments, even on the steepest portions of the pass. Just at one of the narrowest and steepest parts of the climb, a Klaxon from behind us growled persistently, and making a little room at the risk of touching the stone wall, we let a big car go by. The driver explained later that he was sorry to have troubled us, but it was a case of getting past or konking out, owing to lack of revs., so he wisely chose the former course.

It was our first experience of Kirkstone and when it seemed the worst was over, and we had got into third speed again, a crowd was sighted on the mountain far ahead. Evidently these people had not tramped over the moor to congratulate the drivers for having got through. They were out to see the worst spot of the climb, and from what one can imagine, their station was well chosen. Before coming to the hairpin, where the gradient is 1 in 5, we snapped into first speed, trod on the gas, and hoped there would be no wheel spin. Up we went, without a falter, though the thin red line on the Boyce motor meter indicated "Danger: Steam." But after travelling for 270 miles it would need much stronger comments to make one stop in the middle of the one and only real test of the whole run. The descent from the summit of the pass makes a very good test for brake efficiency, and one could smell a faint burning as of brake linings wafting up the pass from the cars in front. Anyhow, we pulled up at the Patterdale check with a minute to the good, and a feeling of satisfaction that the worst of the business was over.



MOTOR CYCLE COMPETITORS INTEREST LOCAL ENTHUSIASTS.

### Nearly into Trouble.

Noticing that the motor meter line remained quite high, we kept going, thinking that a strong draught of air through the radiator would reduce the temperature of the cooling water, but after going a few miles, no improvement was to be seen. Fortunately we had a supply of water aboard and the radiator swallowed quite a lot. The incident completely converted me as to the value of the motor meter, which I had previously regarded as an improved form of radiator mascot.

No incidents worthy of comment happened until Carlisle was reached at 3.15, and here there was some congestion at the garage, where all competitors filled up their petrol tanks. Parking in the open space outside the County Hotel was none too easy, on account of the crush, but the hour's stop for lunch was most welcome. After subsisting in the main on picnic fare, until one dared not look upon a ham sandwich without a shudder, a good square meal was a godsend. From a chat with the chief marshal at Carlisle, it appeared that there had been a good deal of trouble during the day from local taxi drivers, who resented being turned off their stand to make room for the competitors, and furthermore, the activities of some territorials, complete with artillery, added to the congestion.

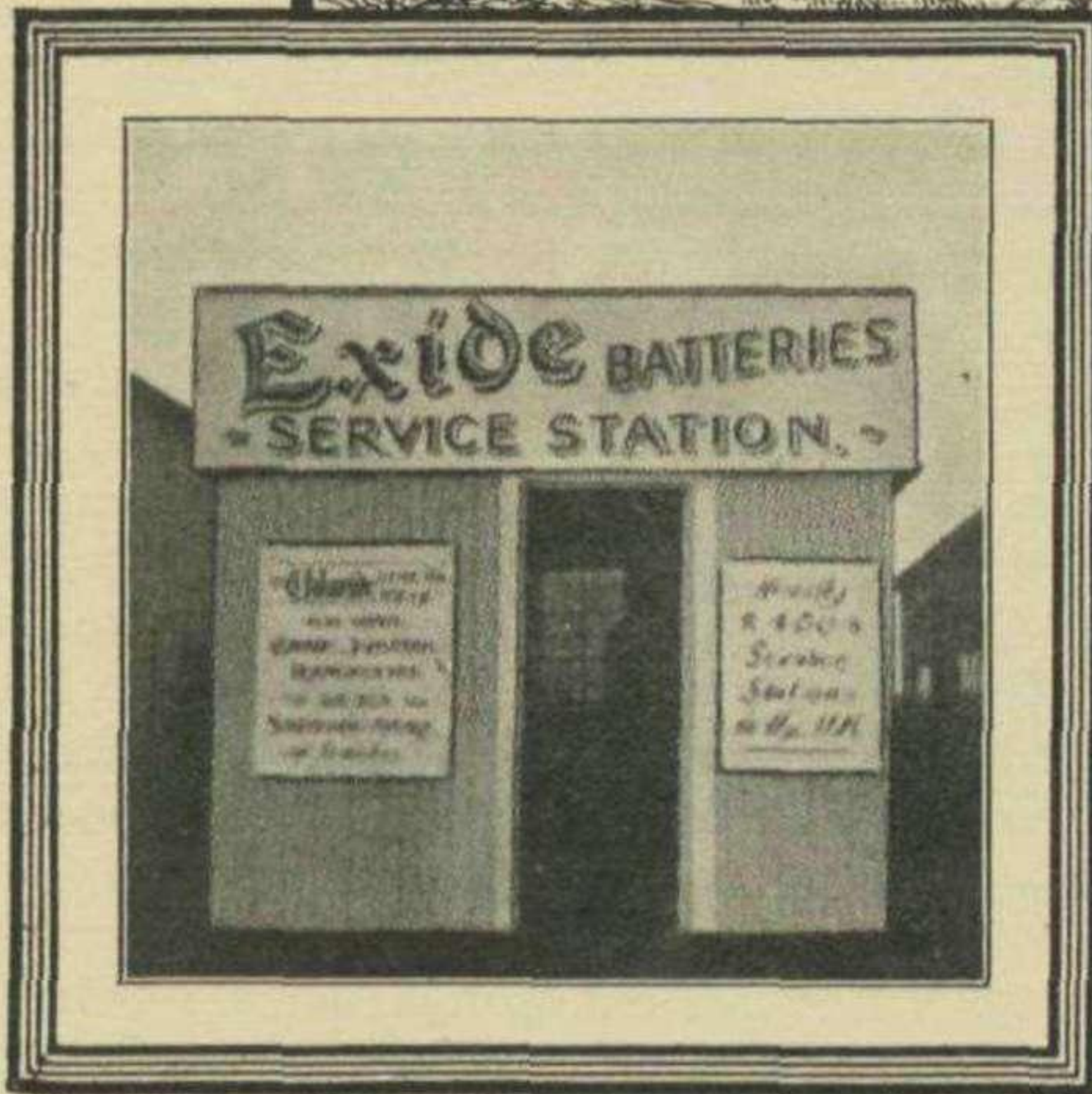
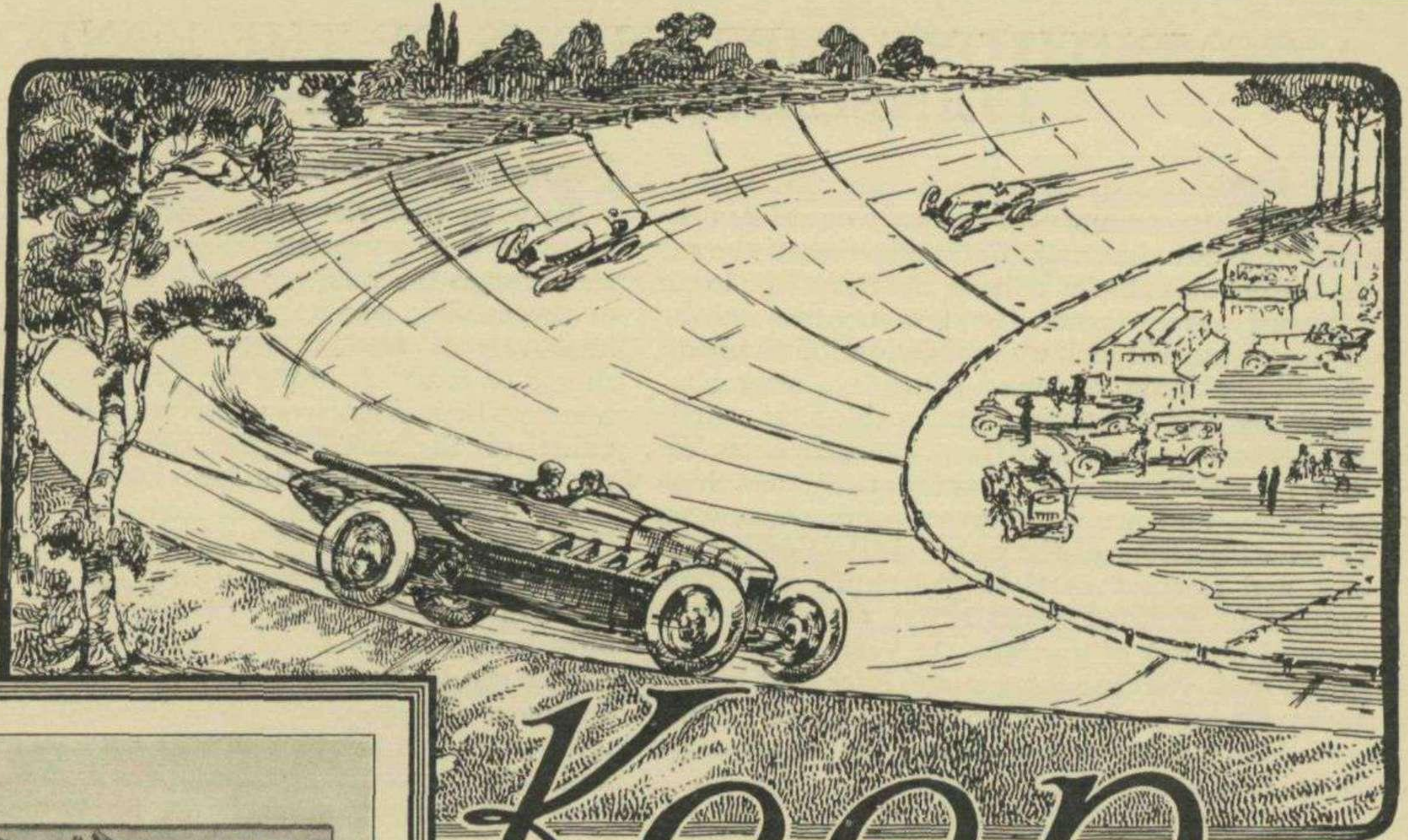
When passing through Gretna Green, the famous Blacksmith's Shop was visible, as well as the huge munition factories, now fallen into disuse. There is also here a very fine example of reinforced concrete bridge construction, crossing the river at this spot, which is, I believe, one of the longest in the country.

The last control but one was at Moffat, where one had a chance to take a cup of tea, and discuss the problem of keeping awake for the final stage of the journey. It was curious to notice the different plans adopted by some of the competitors, one favourite method being that of doing a stretch of the journey fairly fast so as to have time for a nap of ten minutes or so. We passed several cars with all the passengers and the drivers fast asleep, some going to the extent of sleeping full length on the stone walls at the roadside.

### The Last Lap.

Had one not been so sleepy, the run from Moffat to Edinburgh would have been as interesting as any other part of the route, but by this time all one's time was occupied by keeping awake. Cecil, my observer, abandoned the attempt entirely and fell asleep in a troubled way, mumbling something about wireless circuits. At last I discovered that by travelling fairly fast, the cool wind had a refreshing effect, and by keeping up the pace, we got into the Waverley Market dead on time, filled up the time sheet, unpacked our bags and put in an indent for a perfectly good gold medal!

Apart from the pleasure one gets out of a run like the London-Edinburgh, there is always a lot to be learned, at least for those who have never taken part in such an event before. In the first place, one's car must be tuned up to a nice degree of efficiency, which means more than having the engine developing its full power. There are



EXIDE SERVICE STATION AT BROOKLANDS.

# Keep Track

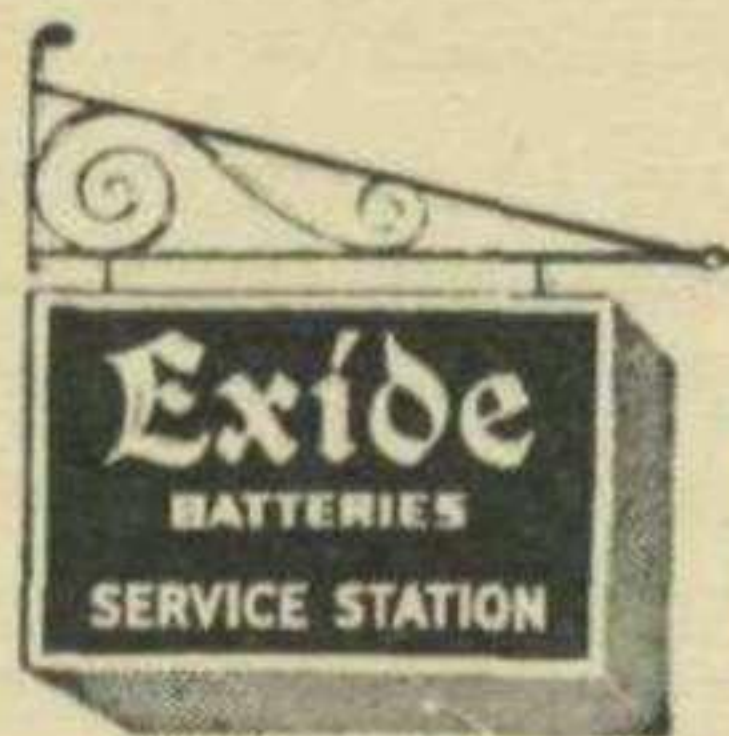
of Brooklands results and note how frequently

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## A COMPETITOR'S IMPRESSIONS OF THE LONDON— EDINBURGH RUN—continued.

so many little things that might happen to take up the margin of time that one is allowed at the controls. It is very desirable too, to study the matter of driving comfort well in advance. I had foreseen that there would be some difficulty in keeping awake, so had taken all precautions to eliminate any factors tending to create fatigue. One experiment consisted of fitting the 30 by 3½ rims with Rapson balloon tyres, which, while being very comfortable, appear to be remarkably thin in the walls. One cannot expect to have comfort, however, without paying for it in some form or another, and we were prepared to risk a few punctures in order to gain driving comfort. As it turned out these tyres stood up extremely well, though many people predicted no end of trouble from punctures. At corners no rolling was experienced, neither was there the slightest suspicion of side slip even on the most treacherous of roads, and when racing up the steepest parts of the test hill, no sign of wheel slip could be detected. Another thing that added greatly to the comfort of the Bean was the addition of Hartford shock absorbers, which made the running delightfully smooth.

Another fitment added for the journey consisted of a Tapley gradient meter, which considerably adds to the interest of driving and is exceptionally useful as an indicator when to change speed, especially at night, when the gradients are apt to be very deceptive. This little instrument also serves as a useful guide as to what the car should do in the way of acceleration, and thus is convenient when tuning up.

On the return journey a good deal of fun was got out of the wireless set, and in some parts of the country the inhabitants were greatly astonished to hear music coming from the loud speaker which for their benefit was concealed beneath the tonneau cover. At Newcastle on Sunday we gave an impromptu concert in the station square, but attempts to get reception on the Great North Road were not so successful, owing to the screening effect of the telegraph wires.

### TESTS WITH "CARB-JECTOR" SILENCERS.

In a series of tests with a Matador motor cycle, on a trial hill near Garstang, ten miles north of Preston, with open exhaust and with and without "Carb-jector" fitted, the two fastest times were made with the "Carb-jector." A curious feature was that the rider each time thought his open-exhaust runs the faster—until the stop watch convinced him. The fact that many winning times, including world's records, have been put up by such riders as C. G. Pullin, R. N. Judd, J. Emerson, J. Watson Bourne, W. Barr, J. W. Shaw, Graham W. Walker and amateur riders of the o.h.v. Norton, using the "Carb-jector," is enough to discount any idea of effective back pressure from this device. We are now putting the "Carb-jector" to a test on several different types of motor cycles, and propose to report upon these in due course.

## CYCLECAR RECORDS TO DATE.

(See pages 56 and 57 for further Motor and Motor Cycle Records.)

#### CLASS J2.—For Two-Seater Cyclecars of which the cylinder capacity does not exceed 750 cubic centimetres.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) kilometre	9/ 9/23	R. Sénéchal	Sénéchal	748.6	76.16	122.57
(f.s.) mile	2/ 8/22	A. E. Taylor	A. V.	697	71.43	114.95
(f.s.) kilometre	9/ 9/23	R. Sénéchal	Sénéchal	748.6	75.88	122.11
(f.s.) mile	2/ 8/22	A. E. Taylor	A. V.	697	70.89	114.08
(f.s.) 5 miles	6/ 9/23	E. Gordon	Austin	748	79.62	128.13
(s.s.) 10 miles	13/10/23	E. Gordon	Austin	748	70.74	113.84
(s.s.) 50 miles	6/ 9/23	E. Gordon	Austin	748	76.51	123.13
(s.s.) 100 miles	13/10/23	E. Gordon	Austin	748	75.65	121.74
(s.s.) 1 hour	13/10/23	E. Gordon	Austin	748	73	1,589

#### CLASS H1.—For Cyclecars of which the cylinder capacity does not exceed 1100 cubic centimetres.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) kilometre	9/ 9/23	R. Benoist	Salmson	1097	99.82	160.64
(f.s.) mile	11/ 9/23	W. D. Hawkes	Morgan Anzani	1078	90.38	145.45
(f.s.) kilometre	9/ 9/23	R. Benoist	Salmson	1097	99.55	160.21
(f.s.) mile	11/ 9/23	W. D. Hawkes	Morgan Anzani	1078	89.54	144.09
(f.s.) 5 miles	13/ 9/23	W. D. Hawkes	Morgan Anzani	1078	88.99	143.21

#### Class H1.—Continued.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
10 miles	13/ 9/23	W. D. Hawkes	Morgan Anzani	1078	86.52	139.42
50 miles	28/10/21	Frazer Nash	G. N.	1087	76.85	123.68
100 miles	28/10/21	Frazer Nash	G. N.	1087	77.24	124.35
1 hour	28/10/21	Frazer Nash	G. N.	1087	76	1,655

#### CLASS H2.—For Two-Seater Cyclecars of which the cylinder capacity does not exceed 1100 cubic centimetres.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) kilometre	6/11/23	G. N. Norris	Morgan Blackburne	1096	91.94	147.96
(f.s.) mile	6/11/23	G. N. Norris	Morgan Blackburne	1096	90.86	146.22
(f.s.) kilometre	6/11/23	G. N. Norris	Morgan Blackburne	1096	90.82	146.16
(f.s.) mile	6/11/23	G. N. Norris	Morgan Blackburne	1096	89.82	144.55
(f.s.) 5 miles	20/10/23	G. N. Norris	Morgan Blackburne	1096	89.36	143.81
(s.s.) 10 miles	20/10/23	G. N. Norris	Morgan Blackburne	1096	85.78	138.05
50 miles	13/10/23	R. Beuno	Salmson	1087	87.85	141.38
100 miles	13/10/23	R. Beuno	Salmson	1087	88.30	142.10
1 hour	13/10/23	R. Beuno	Salmson	1087	88	727



The following are the principal Records as they stand at present. A full statement of all Car and Motor Cycle Records is contained respectively in The Brooklands Year Book for 1924 and in the B.M.C.R.C. Handbook.

**WORLD'S CAR RECORDS.**  
(Established at Brooklands.)

Record.	Date.	Entrant.	Car.	Cubic Capacity.	Speed : m.p.h.	
(s.s.) 1/4 mile	31/10/23	E. A. D. Eldridge	Fiat (6)	21,714	77.86	
(f.s.) 1/4 mile	17/ 5/22	L. Coatalen	Sunbeam (12)	18,322	136.05	
(s.s.) 1 km.	17/ 5/22	L. Coatalen	Sunbeam (12)	18,322	83.67	
(f.s.) 1 km.	17/ 5/22	L. Coatalen	Sunbeam (12)	18,322	133.75	
(s.s.) 1 mile	17/ 5/22	L. Coatalen	Sunbeam (12)	18,322	96.63	
(f.s.) 1 mile	17/ 5/22	L. Coatalen	Sunbeam (12)	18,322	129.17	
(f.s.) 5 miles	22/ 5/24	J. G. P. Thomas	Leyland (8)	7,266	122.86	
(f.s.) 10 miles	22/ 5/24	J. G. P. Thomas	Leyland (8)	7,266	120.46	
(s.s.) 50 miles	27/10/13	Lord Shrewsbury	Talbot (4)	4,754	110.96	
(s.s.) 100 miles	10/10/13	L. Coatalen	Sunbeam (12)	9,048	107.93	
				Mls.	Yds.	
(s.s.) 1 hour	10/10/13	L. Coatalen	Sunbeam (12)	9,048c.c.	107	1,672
(s.s.) 2 hours	1/10/23	L. Coatalen	Sunbeam (6)	4,524c.c.	195	189

**BRITISH RECORD. (Irrespective of size of Car.)**

**DOUBLE 12 HOURS RECORD.** Two periods each of 12 Hours, separated by a period of 12 Hours, during which the car was in the hands of the R.A.C.

Record.	Date.	Entrant.	Car.	Cubic Capacity.	Miles.	Yds.
Double 12 hours	27-28/9/22	J. F. Duff	Bentley (4)	2,996c.c.	2,082	1,726

**BROOKLANDS STANDARD CLASS RECORDS.**

**CUBIC CAPACITY CLASSES (Instituted 1912).**

**LIGHT CAR CLASS.—Capacity not exceeding 1,500 cubic centimetres.**

Record.	Date.	Entrant.	Car.	Cubic Capacity.	Speed : m.p.h.	
(s.s.) 1/4 mile	14/ 8/23	L. Martin	Aston-Martin(4)	1,487	62.76	
(s.s.) 1 km.	14/ 8/23	L. Martin	Aston-Martin(4)	1,487	66.54	
(s.s.) 1 mile	14/ 8/23	L. Martin	Aston-Martin(4)	1,487	74.12	
(f.s.) 1/4 mile	24/11/22	S. F. Edge	A. C. (4)	1,496	108.04	
(f.s.) 1 km.	24/11/22	S. F. Edge	A. C. (4)	1,496	104.86	
(f.s.) 1 mile	24/11/22	S. F. Edge	A. C. (4)	1,496	104.86	
(f.s.) 2 miles	24/11/22	S. F. Edge	A. C. (4)	1,496	104.86	
(f.s.) 5 miles	24/11/22	S. F. Edge	A. C. (4)	1,496	104.16	
(f.s.) 10 miles	24/11/22	S. F. Edge	A. C. (4)	1,496	103.79	
(s.s.) 10 laps	3/10/22	S. F. Edge	A. C. (4)	1,496	100.33	
(s.s.) 50 miles	3/10/22	S. F. Edge	A. C. (4)	1,496	100.77	
(s.s.) 100 miles	24/11/22	S. F. Edge	A. C. (4)	1,496	101.35	
(s.s.) 500 miles	13/ 7/22	A. J. McCormack	Wolseley (4)	1,260	82.22	
(s.s.) 1,000 miles	24/ 5/22	L. Martin	Aston-Martin(4)	1,487	75.61	
				Mls.	Yds.	
(s.s.) 1 hour	24/11/22	S. F. Edge	A. C. (4)	1,496	101	696
(s.s.) 12 hours	24/ 5/22	L. Martin	Aston-Martin(4)	1,487	910	144
(s.s.) Double 12 hrs.	24-25/5/22	S. F. Edge	A. C. (4)	1,496	1,709	1,234

**CLASS "K."—Capacity not exceeding 1,100 cubic centimetres.**

Record.	Date.	Entrant.	Car.	Cubic Capacity.	Speed : m.p.h.
(s.s.) 1/4 mile	8/11/23	Miss I. Cummings	Frazer-Nash (2)	1,086	60.84
(s.s.) 1 km.	6/11/23	Miss I. Cummings	Frazer-Nash(2)	1,086	61.79
(s.s.) 1 mile	6/11/23	Miss I. Cummings	Frazer-Nash(2)	1,086	68.58
(f.s.) 1/4 mile	7/10/20	Capt. Frazer-Nash	G. N. (2)	1,086	86.29
(f.s.) 1 km.	17/ 8/22	R. Bovier	Salmson (4)	1,097	91.31
(f.s.) 1 mile	17/ 8/22	R. Bovier	Salmson (4)	1,097	88.97
(f.s.) 5 miles	17/ 8/22	R. Bovier	Salmson (4)	1,097	87.12
(s.s.) 10 miles	17/ 8/22	R. Bovier	Salmson (4)	1,087	82.99

**Class K.—continued**

Record.	Date.	Entrant.	Car.	Cubic Capacity.	Speed : m.p.h.	
(s.s.) 50 miles	13/10/23	R. Bovier	Salmson (4)	1,087	87.85	
(s.s.) 100 miles	13/10/23	R. Bovier	Salmson (4)	1,087	88.30	
				Mls.	Yds.	
(s.s.) 1 hour	13/10/23	R. Bovier	Salmson (4)	1,087	88	727

**CLASS "L."—Capacity not exceeding 750 cubic centimetres.**

Record.	Date.	Entrant.	Car.	Cubic Capacity.	Speed : m.p.h.	
(f.s.) 5 miles	6/ 9/23	E. C. G. England	Austin (4)	746	79.62	
(f.s.) 10 miles	6/ 9/23	E. C. G. England	Austin (4)	746	78.57	
(s.s.) 50 miles	6/ 9/23	E. C. G. England	Austin (4)	746	76.51	
(s.s.) 100 miles	13/10/23	E. C. G. England	Austin (4)	746	75.65	
(s.s.) 200 miles	13/10/23	E. C. G. England	Austin (4)	746	76.84	
				Mls.	Yds.	
(s.s.) 1 hour	13/10/23	E. C. G. England	Austin (4)	746	73	15.89

**BROOKLANDS TEST HILL RECORDS.**

Record.	Date.	Entrant.	Car.	Cubic Capacity.	Speed : m.p.h.
Motor Car	7/11/13	S. F. Edge	A.C. (4)	1,496	29.01
Light Car	8/11/23	Capt. Frazer-Nash	Frazer-Nash(2)	1,086	28.39
Motor Cycle	15/10/23	Capt. Bashall	Sunbeam (1)	—	28.49

**MOTOR CYCLE RECORDS.**

☐ Denotes average mean speed records taken both ways of course—Average speed of the two runs normal and reverse.

**CLASS 6.—For Motor Bicycles of which the cylinder capacity does not exceed 175 cubic centimetres.**

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) kilometre	29/ 5/24	W.D. Marchant	Ariel Blackburne	173	74.09	119.23
(f.s.) mile	29/ 5/24	W.D. Marchant	Ariel Blackburne	173	72.42	116.54
(f.s.) ☐ kilometre	29/ 5/24	W.D. Marchant	Ariel Blackburne	173	73.22	117.83
(f.s.) ☐ mile	29/ 5/24	W.D. Marchant	Ariel Blackburne	173	72.38	116.48
(f.s.) 5 miles	26/ 5/24	W.D. Marchant	Ariel Blackburne	173	54.75	88.11
(s.s.) 10 miles	26/ 5/24	W.D. Marchant	Ariel Blackburne	173	54.37	87.50
(s.s.) 50 miles	28/ 5/24	W.D. Marchant	Ariel Blackburne	173	51.48	82.85
(s.s.) 100 miles	28/ 5/24	W.D. Marchant	Ariel Blackburne	173	51.73	83.25
				Miles.	Yds.	
1 hour	28/ 5/24	W.D. Marchant	Ariel Blackburne	173	51	1,033

**CLASS A.—For Motor Bicycles of which the cylinder capacity does not exceed 250 cubic centimetres.**

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) kilometre	27/ 5/24	H. Le Vack	New Imperial J.A.P.	249	91.01	146.46
(f.s.) mile	27/ 5/24	H. Le Vack	New Imperial J.A.P.	249	89.19	143.53



## MOTORING RECORDS TO DATE—continued.

### CLASS A.—continued.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) $\square$ kilometre	27/ 5/24	H. Le Vack	New Imperial	249	85.48	137.56
(f.s.) $\square$ mile	27/ 5/24	H. Le Vack	New Imperial	249	84.70	136.31
(f.s.) 5 miles	24/ 4/24	W.D.Marchant	Zenith Blackburne	248	85.20	137.12
(s.s.) 10 miles	24/ 4/24	W.D.Marchant	Zenith Blackburne	248	83.03	133.62
50 miles	6/11/23	W.D.Marchant	Rex-Acme Blackburne	248	73.91	118.94
100 miles	7/11/23	W.D.Marchant	Rex-Acme Blackburne	248	73.21	117.82
1 hour	7/11/23	W.D.Marchant	Rex-Acme Blackburne	248	73	960
12 hours	19/ 7/22	Mrs. R. N. Stewart	Trump J.A.P.	249	556	57
Double 12 hours	19/ 7/22	Mrs. R. N. Stewart	Trump J.A.P.	249	1,071	1,180

### CLASS B.—For Motor Bicycles of which the cylinder capacity does not exceed 350 cubic centimetres.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) kilometre	1/ 4/24	W.D.Marchant	Chater-Lea Blackburne	348	100.81	162.23
(f.s.) mile	1/ 4/24	W.D.Marchant	Chater-Lea Blackburne	348	98.87	159.11
(f.s.) $\square$ kilometre	9/ 9/23	H. Le Vack	New Imperial J.A.P.	346	96.50	155.30
(f.s.) $\square$ mile	27/ 5/24	H. Le Vack	New Imperial J.A.P.	346	89.11	143.41
(f.s.) 5 miles	26/ 5/24	H. Le Vack	New Imperial J.A.P.	346	91.05	146.53
(s.s.) 10 miles	26/ 5/24	H. Le Vack	New Imperial J.A.P.	346	89.13	143.44
50 miles	2/11/23	H. Le Vack	New Imperial J.A.P.	346	85.09	136.93
100 miles	2/11/23	W.D.Marchant	Chater-Lea Blackburne	348	80.03	128.79
1 hour	17/10/23	G. Dance	Sunbeam	348	80	421
12 hours	20/ 9/20	J. S. Holroyd	Blackburne	348	602	658

### CLASS C.—For Motor Bicycles of which the cylinder capacity does not exceed 500 cubic centimetres.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) kilometre	1/ 4/24	W.D.Marchant	Chater-Lea Blackburne	348	100.81	162.23
(f.s.) mile	23/ 3/22	C. G. Pullin	Douglas	499	99.58	160.25
(f.s.) $\square$ kilometre	22/ 5/24	R. N. Judd	Douglas	499	93.91	151.13
(f.s.) $\square$ mile	22/ 5/24	R. N. Judd	Douglas	499	92.86	149.44
(f.s.) 5 miles	20/10/23	V. Horsman	Triumph	498	92.20	148.38
(s.s.) 10 miles	20/10/23	V. Horsman	Triumph	498	89.40	143.87
(s.s.) 50 miles	10/11/23	V. Horsman	Triumph	498	86.83	139.73
100 miles	2/10/23	A. Denly	Norton	490	85.23	137.16
1 hour	10/11/23	V. Horsman	Triumph	498	86	918
12 hours	13/ 9/23	{ D.R.O'Donovan A. Denly R. M. N. Spring }	Norton	490	769	270
Double 12 hours	4-5/9/22	{ D.R.O'Donovan V. E. Horsman R. N. Judd }	Norton	490	1,447	839

### CLASS D.—For Motor Bicycles of which the cylinder capacity does not exceed 750 cubic centimetres.

Excepting the undermentioned, the whole records in the above Class C also apply to Class D.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) kilometre	7/11/23	R. N. Judd	Douglas	736	102.37	164.74
(f.s.) mile	7/11/23	R. N. Judd	Douglas	736	101.32	163.08
(f.s.) $\square$ kilometre	7/11/23	R. N. Judd	Douglas	736	98.67	158.79
(f.s.) $\square$ mile	7/11/23	R. N. Judd	Douglas	736	98.06	157.80
(f.s.) 5 miles	16/ 5/23	R. N. Judd	Douglas	736	93.85	151.04

### CLASS E.—For Motor Bicycles of which the cylinder capacity does not exceed 1000 cubic centimetres.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) kilometre	27/ 4/24	H. Le Vack	Brough Superior J.A.P.	998	114.47	184.23

### CLASS E.—continued.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) mile	6/11/23	C. F. Temple	British Anzani	996	112.53	181.10
(f.s.) $\square$ kilometre	27/ 4/24	H. Le Vack	Brough Superior J.A.P.	998	113.60	182.83
(f.s.) $\square$ mile	6/11/23	C. F. Temple	British Anzani	996	105.26	169.40
(f.s.) 5 miles	14/ 7/23	C. F. Temple	British Anzani	996	104.31	167.87
(s.s.) 10 miles	14/ 7/23	C. F. Temple	British Anzani	996	101.39	163.17
50 miles	21/11/22	H. Le Vack	Zenith J.A.P.	998	91.71	147.60
100 miles	17/11/22	H. Le Vack	Zenith J.A.P.	998	89.92	144.71
1 hour	17/11/22	H. Le Vack	Zenith J.A.P.	998	89	1,591
12 hours	4/ 9/22	{ D.R.O'Donovan V. Horsman R. N. Judd }	Norton	490	741	431
24 hours	5-6/5/09	H. A. Collier	Matchless	862	775	1,340

### CLASS B/s. For Motor Bicycles with Side-car of which the cylinder capacity does not exceed 350 cubic centimetres.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) kilometre	9/ 9/23	H. Le Vack	New Imperial J.A.P.	346	77.94	125.43
(f.s.) mile	24/ 7/23	W.D.Marchant	Chater-Lea Blackburne	348	70.25	113.07
(f.s.) $\square$ kilometre	9/ 9/23	H. Le Vack	New Imperial J.A.P.	346	77.40	124.56
(f.s.) $\square$ mile	2/ 8/22	C. G. Pullin	Douglas	346	63.58	102.32
(f.s.) 5 miles	24/ 7/23	W.D.Marchant	Chater-Lea Blackburne	348	70.25	113.07
(s.s.) 10 miles	24/ 7/23	W.D.Marchant	Chater-Lea Blackburne	348	68.50	110.24
50 miles	8/ 8/23	W.D.Marchant	Chater-Lea Blackburne	348	66.77	107.40
100 miles	25/ 8/23	W.D.Marchant	Chater-Lea Blackburne	348	61.99	99.76
1 hour	8/ 8/23	W.D.Marchant	Chater-Lea Blackburne	348	67	384
12 hours	31/ 8/22	{ C. G. Pullin J. D. Marvin }	Douglas	346	510	1,623
Double 12 hours	31/ 8/22	{ C. G. Pullin J. D. Marvin }	Douglas	346	1,002	343

### CLASS F.—For Motor-Bicycles with Side-car of which the cylinder capacity does not exceed 600 cubic centimetres.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) kilometre	20/11/22	V. Horsman	Norton	490	81.19	130.67
(f.s.) mile	20/11/22	V. Horsman	Norton	490	80.81	130.05
(f.s.) $\square$ kilometre	20/11/22	V. Horsman	Norton	490	80.24	129.15
(f.s.) $\square$ mile	20/11/22	V. Horsman	Norton	490	79.91	128.60
(f.s.) 5 miles	18/ 8/23	V. Horsman	Triumph	498	77.30	124.40
(s.s.) 10 miles	18/ 8/23	V. Horsman	Triumph	498	74.91	120.55
50 miles	7/11/23	V. Horsman	Triumph	599	68.59	110.38
100 miles	5/ 7/23	D.R.O'Donovan	Norton	490	63.15	101.63
1 hour	7/11/23	V. Horsman	Triumph	599	69	31
12 hours	23/ 9/22	H. H. Beach	Norton	588	631	1,396

### CLASS G.—For Motor-Bicycles with Side-car of which the cylinder capacity does not exceed 1000 cubic centimetres.

Distance.	Date.	Holder.	Machine.	c.c.	m.p.h.	km.p.h.
(f.s.) kilometre	1/ 4/24	I. P. Riddoch	Zenith Blackburne	998	97.68	157.19
(f.s.) mile	1/ 4/24	I. P. Riddoch	Zenith-Blackburne	998	95.97	154.44
(f.s.) $\square$ kilometre	27/ 4/24	H. Le Vack	Brough Superior J.A.P.	998	94.98	152.86
(f.s.) $\square$ mile	31/10/23	H. Le Vack	Zenith J.A.P.	996	90.91	146.30
(f.s.) 5 miles	31/10/23	H. Le Vack	Zenith J.A.P.	996	88.27	142.05
(s.s.) 10 miles	31/10/23	H. Le Vack	Zenith J.A.P.	996	86.14	138.62
50 miles	25/ 8/23	H. Le Vack	Brough Superior J.A.P.	996	79.37	127.73
100 miles	25/ 8/23	H. Le Vack	Brough Superior J.A.P.	996	77.82	125.24
1 hour	25/ 8/23	H. Le Vack	Brough Superior J.A.P.	996	77	1,303
12 hours	23/ 9/22	H. H. Beach	Norton	588	631	1,396

# MOTOR RACING AT BROOKLANDS.

## The Whitsuntide Meeting.

Naturally the disaster which befell Captain Toop during the Brooklands Automobile Racing Club's Meeting at Brooklands on Whit Monday, cast a gloom over everybody, not only at the classic racing centre, but amongst the wide circle of the driver's friends. The story of how Captain Toop, on Mr. C. G. Brocklebank's Peugeot, unaccountably swerved over the Byfleet banking when travelling at a speed estimated at 110 miles an hour, and thus met his death, has already been told. Those who have competed in motor races will know something of how it all came about. He was overtaking Captain R. C. Gallop, on Count Zborowski's Ballot, and was near enough to the latter machine to get into its windage, when the swerve began, and although it is conjecture, it may be assumed that this alone had some bearing upon the disaster. There was, of course, no more racing that day. Seven events had been decided, but after the fatal seventh, nobody, not even the competitors themselves, had heart enough to continue the sport.

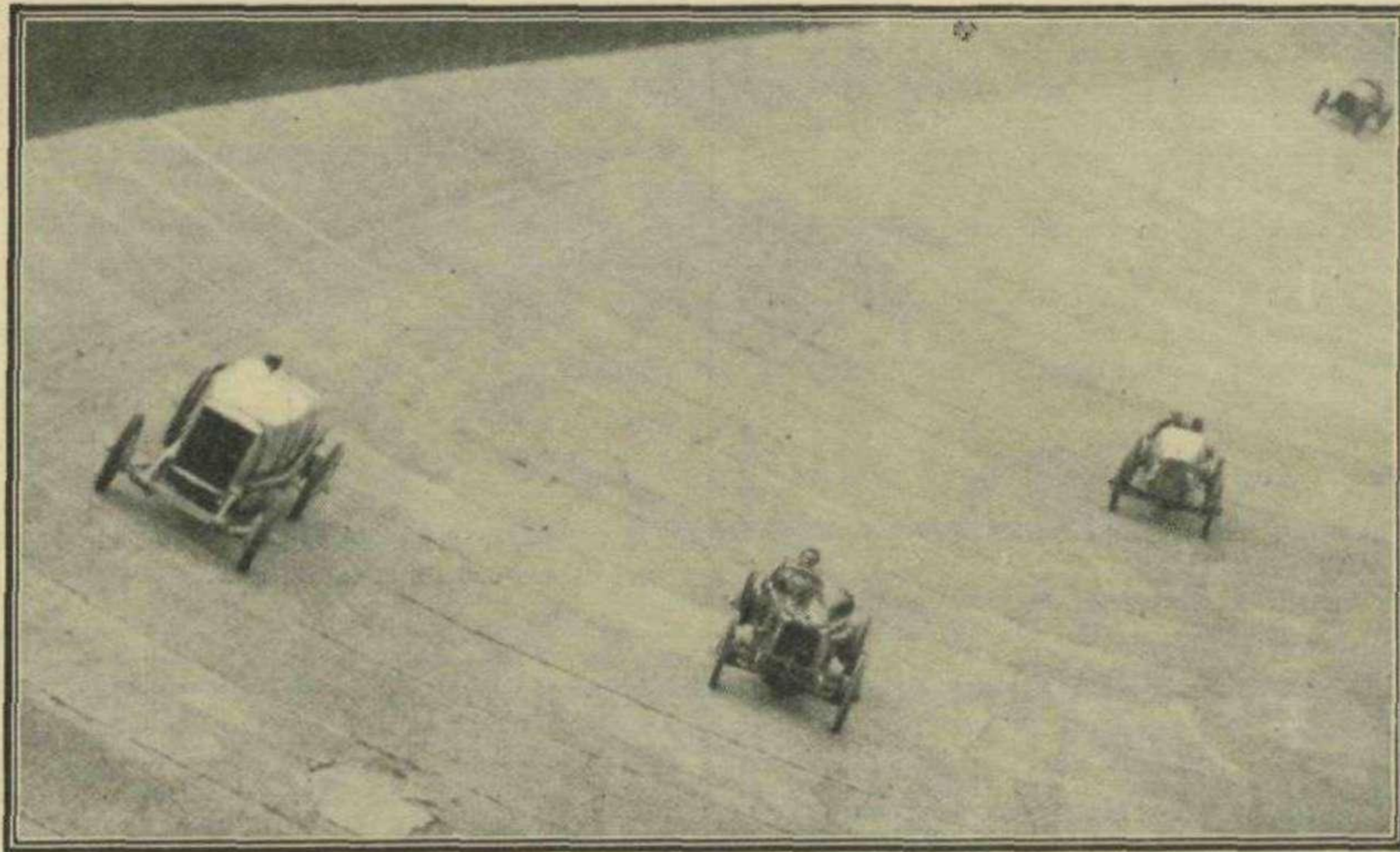
Spectators and competitors collected in little knots in the paddock and discussed the disaster, which, fortunately, is only the second fatal occurrence since the war. The competitors had a particularly trying time for a while, although Brooklands enthusiasts are usually thorough sportsmen and sportswomen. On this occasion some members of the crowd, with what looked like a foolish curiosity, seemed bent upon gathering details of the accident at all costs, and regardless of the feelings of the racing men, they worried them for details which they were not able or inclined to discuss. It is to be hoped that the particularly foolish woman who seemed more intent upon her monetary gain as a result of the race than the seriousness of the sad fatality, has realised by this time that J. G. P. Thomas, one of the bravest and most courteous drivers of racing cars, was extremely patient with her. He was pestered for some time by a lady who wished to know whether the result of the race would stand, or whether she would lose her money, and it says much for his self-control that Mr. Thomas contented himself with, in the end, walking away from her.

Apart from the accident which marred the meeting, it was an extremely interesting and a successful day's

racing. There was an even larger crowd than usual, though Brooklands is fast becoming a popular rendezvous of the holiday maker. When the Whitsun Private Competitors' Handicap opened the proceedings at one o'clock there must have been over ten thousand people present, and this number was added to as the afternoon went on, until something like fifteen thousand were enjoying the sport when it was brought to its unhappy end.

There were twenty-one entrants for the first race on the programme, but no more than fifteen were allowed to start, the remainder being put in as reserves. Dr. J. D. Benjafield (Bentley) who received 35 seconds start, drove magnificently, to win by nearly a quarter of a mile, though the scratch man, Capt. J. E. P. Howey (Leyland), overhauled the rest of the field, to finish a comfortable second. J. G. Goodenough, driving H. S. Eaton's G. N., did well to get into third place, though he had nearly a minute-and-half start.

V. Gillow was rather fortunately handicapped with his Riley in the second race. He was on the limit mark, and from the time he was sent away, there never seemed to be the slightest danger of his being caught. George Duller, the well-known steeplechase jockey, driving a Thomas-Special and receiving 21 seconds start, made a great effort to get into



J. G. P. THOMAS (LEYLAND) PASSES THE FIELD NEAR THE TOP OF THE BANKING IN A HANDICAP RACE.

the running, but he was not able to pick up at all, and finished nearly three-quarters of a mile behind the winner. J. A. Joyce, on F. S. Edge's A. C., was the scratch man, but had more handicap than he could comfortably carry, though he did well enough to fight his way into third position.

In the 100 m.p.h. Long Handicap, which was won by Captain Gallop, the fastest time of the day was reached, the eight-and-a-half miles course being covered at an average of nearly 107 m.p.h.

With four seconds start, Count Zborowski's car, driven by Captain Gallop, was never challenged until toward the end, when Captain J. Toop looked like rushing past him at more than 110 m.p.h.; while J. G. P. Thomas, on F. L. Rapson's Lanchester, and A. Ellison, on the most powerful car in the race, a 15.095 c.c. Lorraine-Dietrich ("Vieux Charles III.") starting from the same mark, had a great tussle for

## MOTOR RACING AT BROOKLANDS—continued.

second place. Thomas managed to secure this position in the end, only a few yards behind the winner.

C. G. Brocklebank, with 22 secs. start, put up a magnificent performance in the Twenty-fourth Lightning Short Handicap, winning this with his Peugeot, which later met with such a sorry fate, at an average of 103 m.p.h., the second fastest time of the day. It was a thrilling spectacle to see Brocklebank dashing away from the field at such an enormous speed, but it was one of the best finishes of the day. As he flashed over the line, E. A. D. Eldridge, driving the scratch Fiat, and Captain J. E. P. Howey on the Leyland, were both within a few yards of him. This was one of the best finishes seen at Brooklands for some time.

There was, however, no truly greater finish than that in the Twenty-eighth 75 m.p.h. Short Handicap. It was a great tribute to the genius of the handicappers that E. C. Gordon England, with 30 seconds start for his baby Austin, Captain A. G. Miller, driving C. Bloch's Bianchi off the four seconds mark, and G. J. Allday, on another baby Austin, entered by J. P. Dingle, and also on the 30 seconds mark, all finished within a matter of twenty yards. Gordon England won by only a few feet at 75½ m.p.h.

The backmarkers had a thin time in the 90 m.p.h. Short Handicap, and soon after the start it was nothing more than a contest between G. Blackstock, driving J. O'Day's Bugatti, and J. G. P. Thomas on Duller's Thomas-Special. They started from the 30 seconds mark and at once shot ahead of the field, and though pressed, had no great difficulty in alone fighting for first and second places. Captain Miller, on C. Bloch's Bianchi, had an advantage of four seconds in the start, but could not hold his place.

Count Zborowski won the Brooklands Gold Vase on his Mercédès, with George Duller (Bugatti) with 33 secs., second, and A. Ellison (Lorraine-Dietrich), from the same mark, third.

Zborowski had a start of 37 seconds, in fact, he was only giving a lead to C. M. Harvey, driving T. G. John's Alvis, who went off four seconds ahead of him. Before a lap was over Zborowski had overhauled him, and from that point seemed content to drive with something in hand, for he always looked to be the winner. When he finished a somewhat disappointing race at an average speed of 98½ m.p.h., he was almost a quarter of a mile ahead.

A new finishing line was brought into use at this meeting, and it afforded a great deal of satisfaction so far as the competitors were concerned, though it detracted something from the spectators' interest as

regards the spectacular. Starting on the railway straight the fast events had a finishing line half-way down the railway straight, and for this reason comparatively few of those present at the meeting saw the magnificent finishes when, in one or two races, the cars flashed across the line quite close together, and "all out." The results were:

THE WHITSUN PRIVATE COMPETITORS' HANDICAP (Distance about 5¼ Miles).

1. Dr. J. D. Benjafield (Bentley) ... .. 35 secs.
2. Capt. J. E. P. Howey (Leyland) ... .. Scratch
3. J. G. Goodenough (G.N.) (Entrant: H. S. Eaton) ... .. 1 min. 20 secs.

Won at 90 m.p.h.

THE WHITSUN LIGHT CAR HANDICAP (Distance about 5¼ Miles).

1. V. Gillow (Riley) ... .. 52 secs.
2. G. Duller (Thomas-Special) ... .. 21 secs.
3. J. A. Joyce (A.C.) (Entrant: S. F. Edge) ... .. Scratch

Won at 77½ m.p.h.

THE 39TH 100 M.P.H. SHORT HANDICAP FOR THE BROOKLANDS GOLD VASE (Distance about 5¼ Miles).

1. Count L. Zborowski (Mercédès) ... .. 37 secs.
2. G. Duller (Bugatti) ... .. 33 secs.
3. A. Ellison (Lorraine-Dietrich) ... .. 33 secs.

Won at 98½ m.p.h.

THE 28TH 75 M.P.H. SHORT HANDICAP (Distance about 5¼ Miles).

1. E. C. G. England (Austin) ... .. 30 secs.
2. Capt. A. G. Miller (Bianchi) (Entrant: C. Bloch) ... .. 4 secs.
3. G. J. Allday (Austin) (Entrant: J. P. Dingle) ... .. 30 secs.

Won at 75½ m.p.h.

THE TWENTY-FOURTH LIGHTNING SHORT HANDICAP (Distance about 5¼ Miles).

1. C. G. Brocklebank (Peugeot) ... .. 22 secs.
2. E. A. D. Eldridge (Fiat) ... .. Scratch.
3. Capt J. E. P. Howey (Leyland) ... .. 12 secs.

Won at 103 m.p.h.

THE FOURTEENTH 90 M.P.H. SHORT HANDICAP (Distance about 5¼ Miles).

1. G. Blackstock (Bugatti) (Entrant: J. O'Day) ... .. 30 secs.
2. J. G. P. Thomas (Thomas-Special) (Entrant: G. Duller) ... .. 30 secs.
3. Capt. A. G. Miller (Bianchi) (Entrant: C. Bloch) ... .. 34 secs.

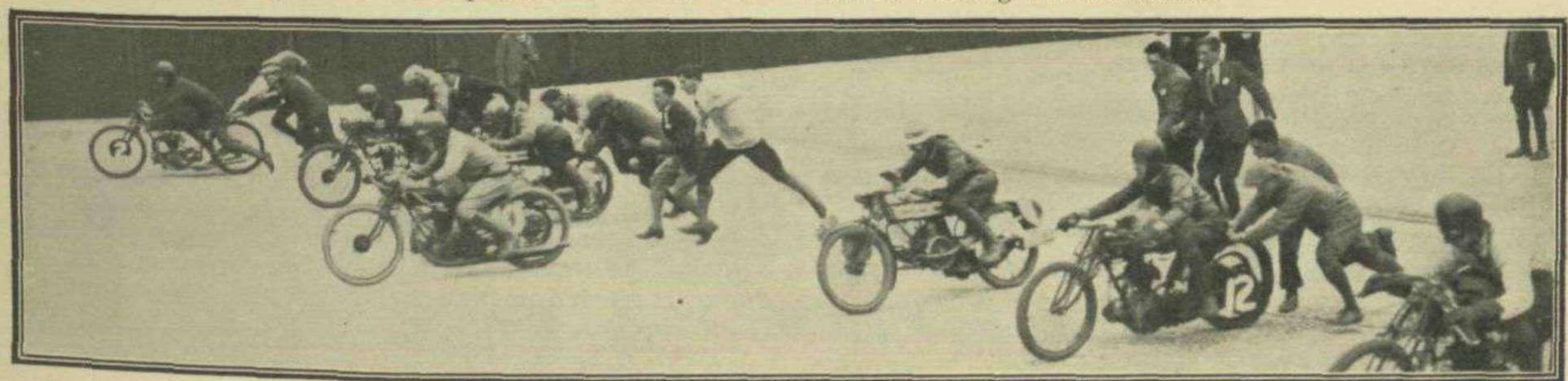
Won at 86 m.p.h.

THE THIRTY-EIGHTH 100 M.P.H. LONG HANDICAP (Distance about 8½ Miles).

1. Capt. R. C. Gallop (Ballot) (Entrant: Count Zborowski) ... .. 4 secs.
2. J. G. P. Thomas (Lanchester) (Entrant: F. L. Rapson) ... .. 27 secs.
3. A. Ellison (Lorraine-Dietrich) ... .. 27 secs.

Won at 106.58 m.p.h.

It was in this race that Capt. Toop met with his fatal accident, and the meeting was abandoned.



# RECORD MOTOR CYCLE RACING AT BROOKLANDS.

## Wonderful Speeds at Whitsuntide Meeting.

There has never been faster motor cycle racing than that provided at the meeting of the British Motor Cycle Racing Club on Whit Saturday.

It produced many thrills. C. F. Temple, on his British Anzani engined Montgomery, accomplished one of the best performances of his track career, by winning the five lap scratch race for unlimited machines in record time. He was officially timed to lap at over 109 miles an hour during the race, and he beat two world's records, the five miles flying start and the ten miles standing start. Temple's machine was equipped with thigh grips, which "hug" his legs and afford him a secure hold. Getting away to a good start, he went right away from the field and won very easily at 105.52 miles per hour.

It was rather disappointing that Le Vack and Temple should not have been seen together in one of the big machine races. Le Vack travelled almost as fast as Temple in the Sprint 1,000 c.c. Race, which he won, and this despite the fact that he was not pressed. Le Vack won no fewer than five races, and took three of the one lap sprint races, which constituted an interesting innovation, consecutively.

F. W. Dixon, the third member of the "lightning triumvirate," did not compete, but it is to be assumed that there will be some terrific racing between these three "cracks" later in the season. The customary duel between Denly and Horsman was not forthcoming, the latter being an absentee.

Superficially it would seem that the new silencing arrangements, which operate more severely than those demanded by the police authorities, do not seriously affect speed, but it is the fact that Denly's engine "cracked up" because of, and in spite of, the large expansion chamber enforced, and Temple's engine was also "hors de combat," after his record breaking race.

As indicating the insistent restriction on silencing, one of the entrants, who went to the paddock with an absolutely standard machine, was not allowed to start.

### RESULTS.

#### SCRATCH RACES.

##### 8½ MILES 250 C.C. RACE.

1. H. Le Vack (New Imperial).
2. W. D. Marchant (Zenith Blackburne).
3. E. S. Prestwich (Zenith J.A.P.).

Le Vack won by ten yards at 82.18 miles an hour.

##### 8½ MILES RACE FOR 500 C.C. MACHINES.

1. A. Denly (Norton).
2. R. N. Judd (Douglas).
3. C. Staniland (Norton).

Denly led throughout, thanks to a fine start, and won by 30 yards at 85.37 m.p.h.

##### 8½ MILES RACE FOR 250 C.C. MACHINES.

1. H. Le Vack (New Imperial).
2. W. D. Marchant (Chater-Lea).
3. R. G. Spikins (Zenith).

Won by fifteen yards at 80.98 m.p.h.

##### 14 MILES RACE FOR 1,000 C.C. MACHINES.

1. C. F. Temple (Montgomery-Anzani).
2. T. R. Allchin (Zenith).
3. A. T. Koehler (Zenith).

The fastest motor cycle race in history. Temple beat world's speed records for five and ten miles. He took an early lead and won very easily at 105.42 m.p.h.

##### SPRINT RACE FOR 250 C.C. MACHINES.

1. W. D. Marchant (Zenith).
2. H. Le Vack (New Imperial).
3. C. R. Godwin (J.E.S.).

Won by hundred yards. Poor Third. Speed 77.69 m.p.h.

##### SPRINT RACE FOR 350 C.C. MACHINES.

1. H. Le Vack (New Imperial).
2. J. S. Worters (Toronda).
3. W. D. Marchant (Chater Lea).

Won easily at 81.37 m.p.h.

##### SPRINT RACE FOR 500 C.C. MACHINES.

1. H. Le Vack (New Imperial).
2. A. Denly (Norton).
3. R. O. Lowe (Norton).

Won by 200 yards at 84.13 m.p.h.

##### SPRINT RACE FOR 1,000 C.C. MACHINES.

1. H. Le Vack (Brough Superior).
2. T. R. Allchin (Zenith).
3. O. M. Baldwin (Matchless).

Won by 250 yards at 94.5 m.p.h.

#### HANDICAP RACES.

##### 8½ MILES HANDICAP FOR 350 C.C. MACHINES.

- |                                |                 |     |                 |
|--------------------------------|-----------------|-----|-----------------|
| 1. J. Wright (Zenith)          | ...             | ... | 1 min.          |
| 2. C. R. Godwin (J.E.S.)       | ...             | ... | 1 min. 30 secs. |
| 3. C. Aylott (Francis Barnett) | 4 min. 33 secs. |     |                 |

A fine race in which the limit man was caught just before the finishing line. Won at 71.66 m.p.h.

##### 8½ MILES HANDICAP FOR 500 C.C. MACHINES.

- |                          |     |     |          |
|--------------------------|-----|-----|----------|
| 1. C. Staniland (Norton) | ... | ... | 54 secs. |
| 2. R. O. Lowe (Norton)   | ... | ... | 36 secs. |
| 3. L. Parker (Douglas)   | ... | ... | 36 secs. |

Staniland made the best of a good start to win by 100 yards at 76.27 m.p.h.

##### 8½ MILES HANDICAP FOR 1,000 C.C. MACHINES.

- |                              |     |     |          |
|------------------------------|-----|-----|----------|
| 1. T. R. Allchin (Zenith)    | ... | ... | 18 secs. |
| 2. O. M. Baldwin (Matchless) | ... | ... | 27 secs. |
| 3. A. T. Koehler (Zenith)    | ... | ... | 42 secs. |

Allchin, the backmarker, ran right through the field and lapping at over one hundred m.p.h., won by nearly a quarter of a mile at 97.27 m.p.h.

##### 8½ MILES PRIVATE OWNERS' HANDICAP.

- |                                    |     |                |
|------------------------------------|-----|----------------|
| 1. H. Beart (Morgan Cyclecar)      | ... | Scratch.       |
| 2. M. A. McEvoy (McEvoy)           | ... | 3 secs.        |
| 3. E. V. Manners-Smith (Matchless) | ... | 1 min. 6 secs. |

A splendid race in which Beart took the lead a few hundred yards before the finish, to win by 100 yards at 84.7 m.p.h.

##### 14 MILES HANDICAP FOR PASSENGER MACHINES UP TO 1,100 C.C.

- |                           |     |                 |
|---------------------------|-----|-----------------|
| 1. V. Baxter (Rex-Acme)   | ... | 4 min. 10 secs. |
| 2. R. Newitt (Douglas)    | ... | 2 min. 55 secs. |
| 3. T. R. Allchin (Zenith) | ... | 30 secs.        |

Baxter, the limit man, rode in fine style and never appeared to be in much danger of losing his position. He won quite easily at 65.01 m.p.h.