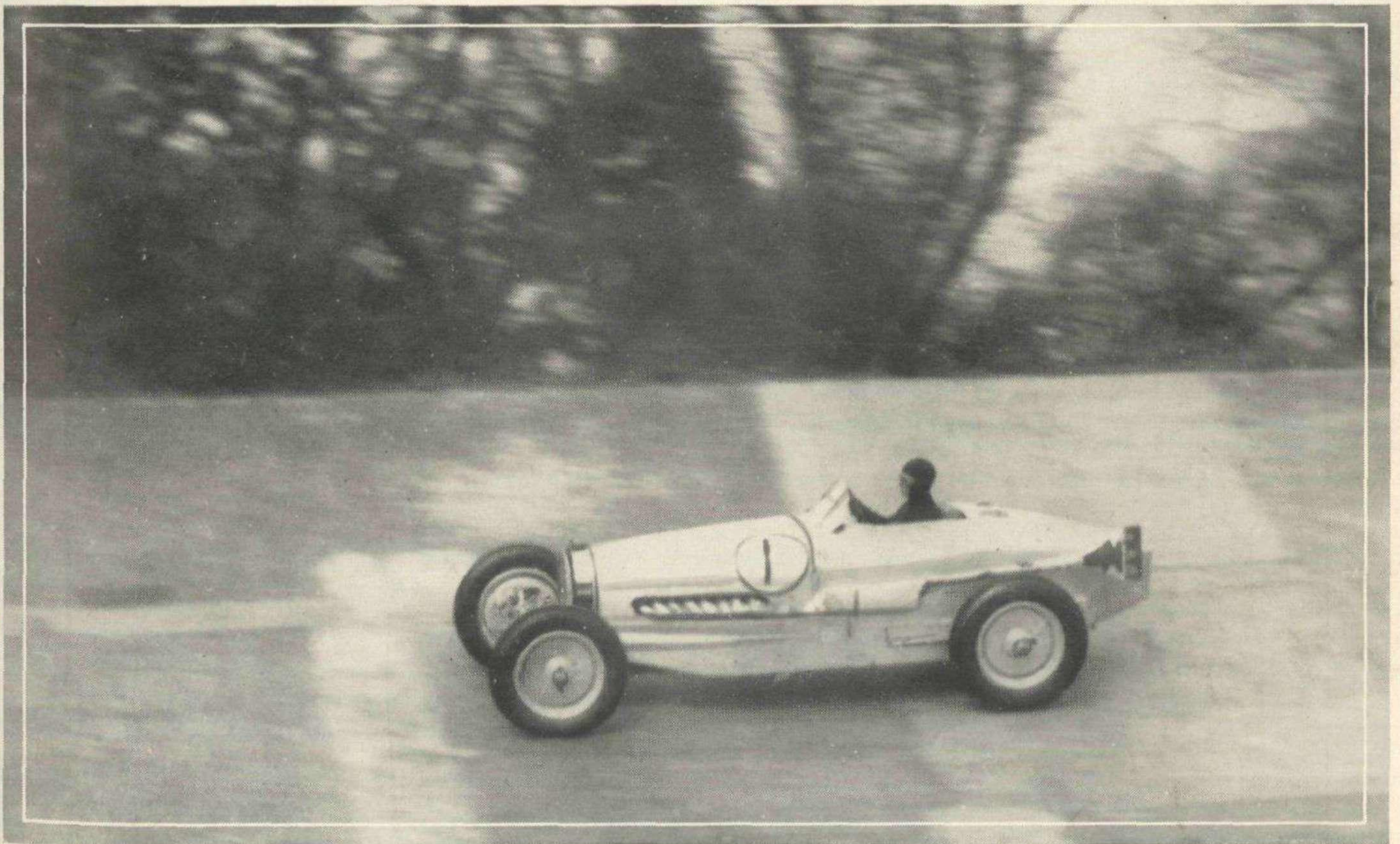


# MOTOR SPORT

LAND - AIR - WATER

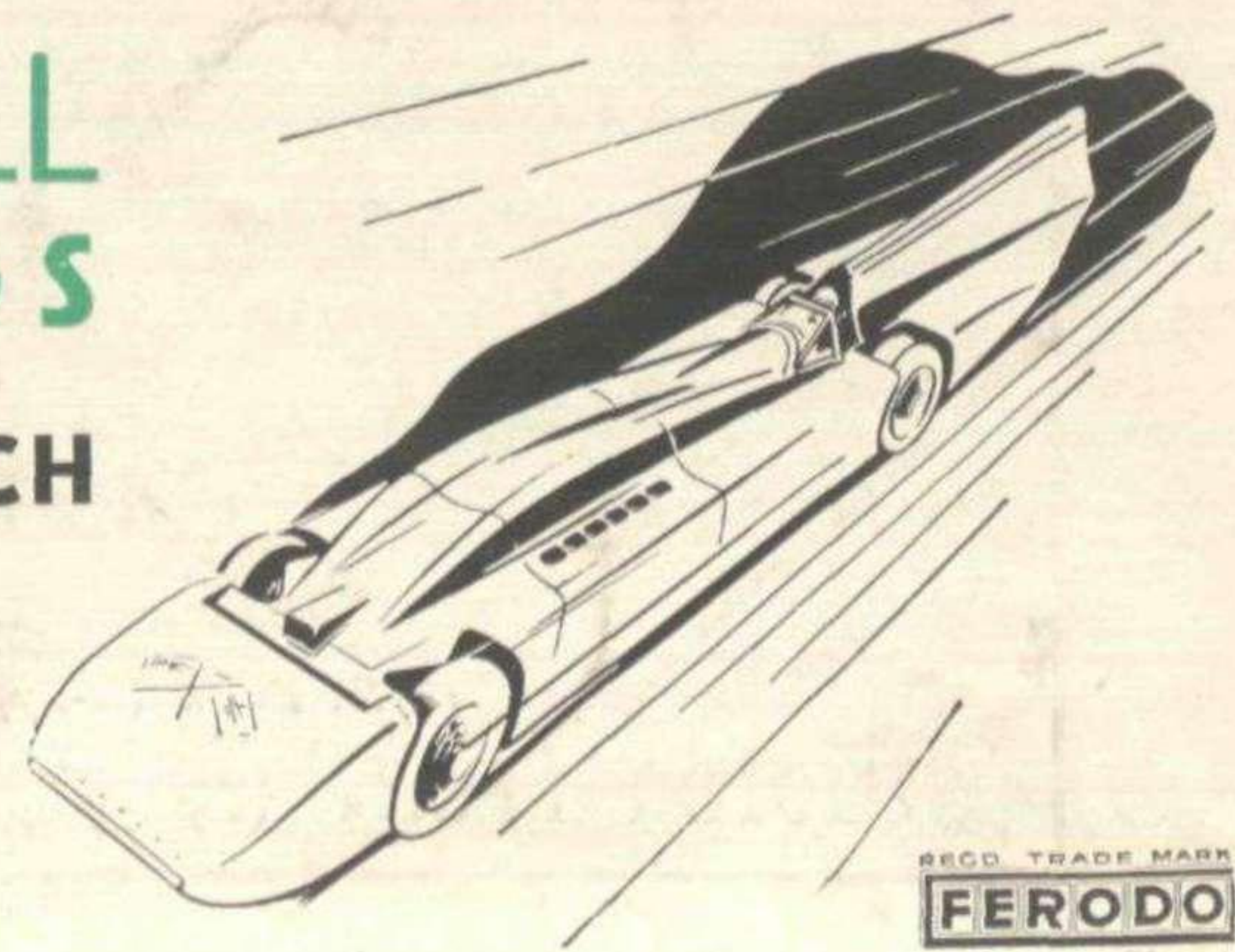
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[Motor Sport Photograph.]

*SPRING IS HERE! Dudley Froy takes his 4'9 Bugatti high up on the banking at the Brooklands Opening Meeting.*

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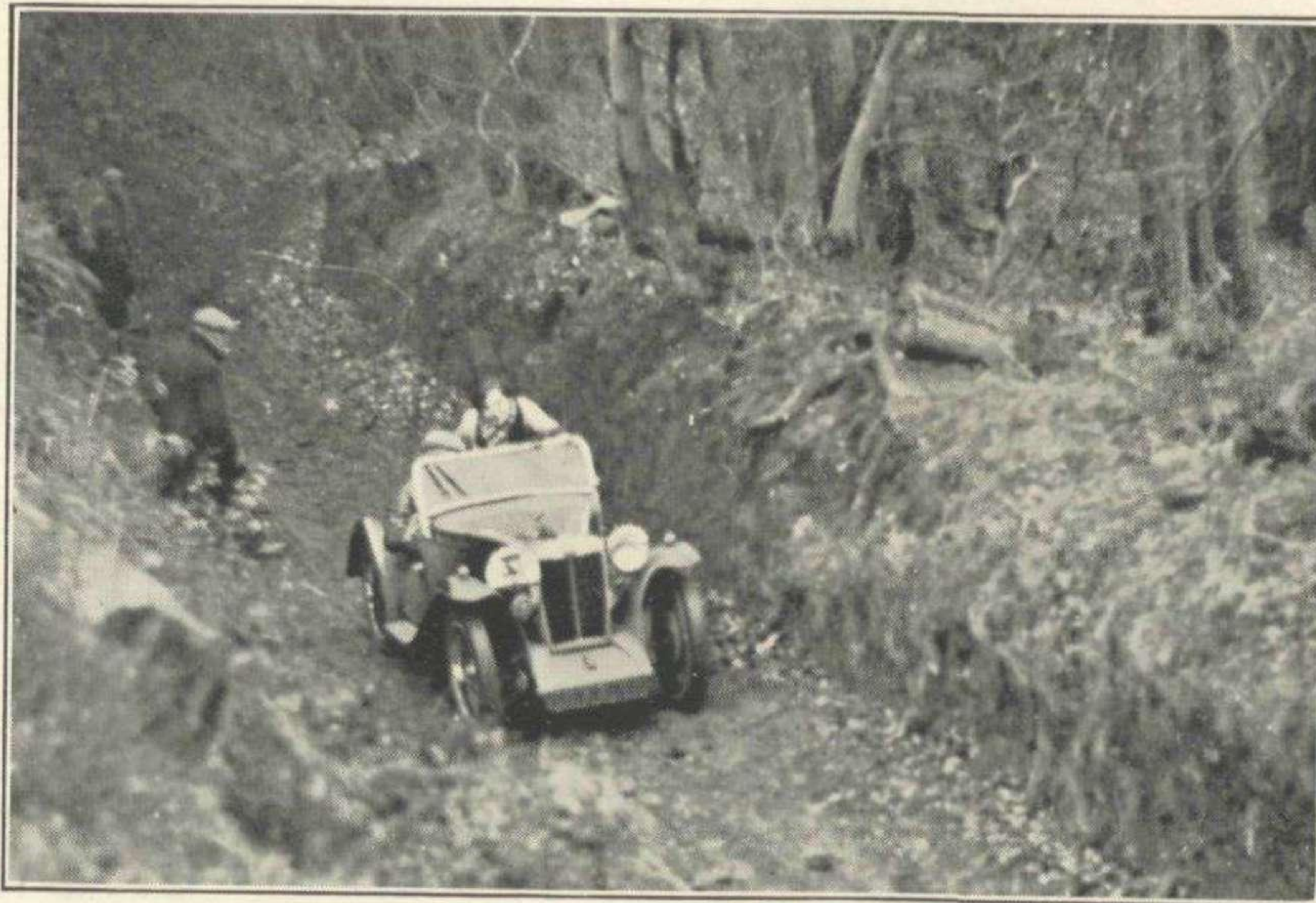
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INTER-VARSITY TRIAL, 1935.



*P. R. Monkhouse (P-Type Midget), on Alester's Hollow.*

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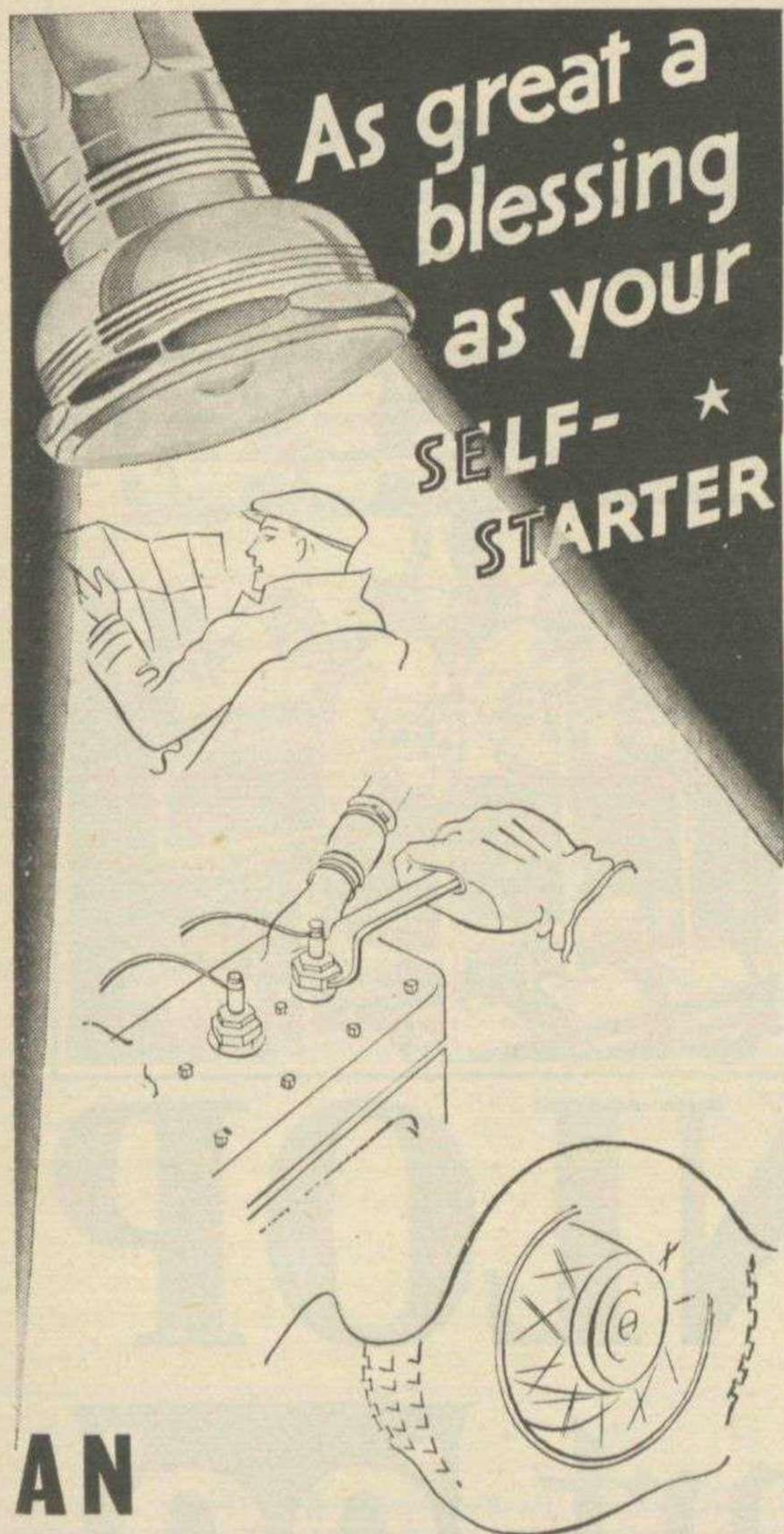
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*K. D. Evans (N-Type Magnette), on the steepest part of Blackhouse Hollow.*

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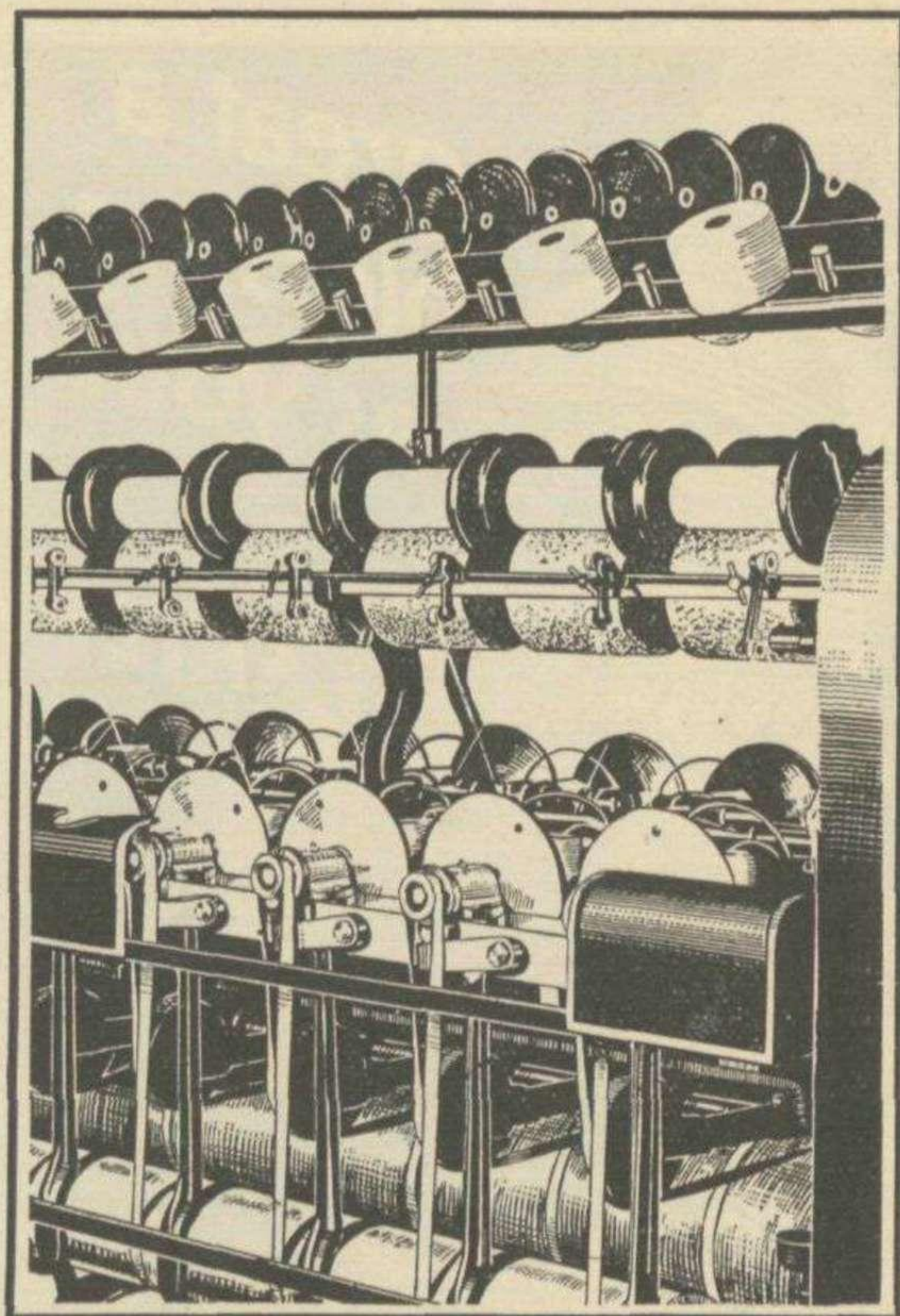
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## WHAT WE THINK OF THE SPEED LIMIT

SO much has already been written and said about the 30 m.p.h. speed limit in built-up areas, that it would be easy to declare that the subject has been thoroughly thrashed out. In our opinion, however, the vital point of the whole issue has scarcely received any attention at all.

In a sentence, there can be no set limit of safe speed. Conditions vary so widely that any attempt to secure uniformly safe driving by a single speed limit is bound to result in failure. Speed, in the alternative terms of above or below 30 m.p.h. is not and never will be an indication of danger or safety.

The present speed limit can only result in making drivers use their permitted 30 m.p.h. to the full, even in places where such a speed is highly dangerous. This is a natural consequence of limiting many roads along which a higher speed is perfectly safe. Moreover, the danger to pedestrians is greatly increased by the new speed limit, owing to drivers constantly being forced to glance at their speedometers to see whether the important 30 m.p.h. mark has been reached.

But it must not be thought that we are not alive to the existing state of affairs, nor to the heavy casualty list exacted by our road traffic to-day. Leaving aside the seldom-realised truth that there will always be a certain number of people killed on the road, people who are fundamentally incapable of taking care of themselves, it cannot be denied that there are plenty of accidents caused by culpable negligence and bad driving.

A minimum standard of driving ability will do much to reduce accidents, and in introducing the driving tests the present Minister of Transport has performed a

national service. The tests will not stop reckless driving, however, and by reckless driving we mean not only speed, whether it be 10 or 70 m.p.h., but driving to the danger of other road-users, along Chiswick High Road or the Kingston By Pass.

In our opinion there is only one way to curb this reckless driving, and that is by the American method of motor-cycle "speed-cops"; intelligent, skilful riders of high-speed machines. It would be useless having men who cannot distinguish good driving from bad, and it goes without saying that they must be able to handle motor-cycles capable of overhauling the fast American saloons, which are now selling in great numbers in this country.

The result would then be a sliding scale speed limit so to speak, and the fast sports car driver, who has his machine under perfect control and has a highly developed road sense, would not be hampered by arbitrary restrictions. At the same time those nervous, hesitant and unimaginative drivers who seldom exceed 30 m.p.h., and yet are a constant source of danger, would be subjected to continual correction and reprimanding by the "speed-cops." Under the present rule, as they do not exceed 30 m.p.h., they escape the attention of the police-car occupants, who are only interested in whether a motorist is doing 29 m.p.h. or 31 m.p.h.

Economically, the motor-cyclist system has everything in its favour. The police-cars have a crew of two and sometimes three. Taking the cheaper cost of motor-cycles as opposed to cars, it would be fair to say that three times as many patrols could be operated as there are to-day.

The result would be real road safety.

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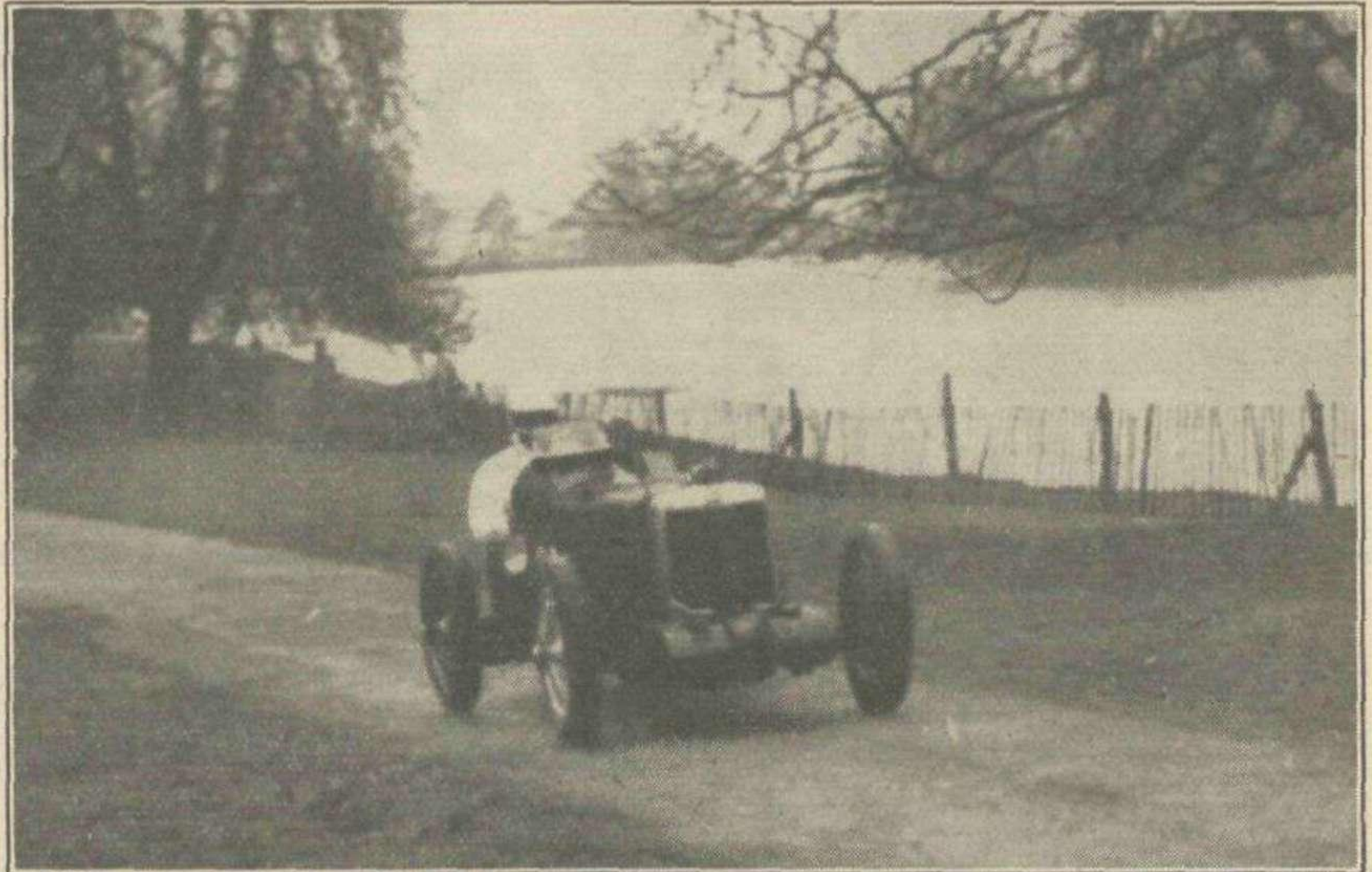
# THE VARSITIES AT SYSTON PARK

ENTHUSIASM UNDAMPED BY STEADY DOWNPOUR. OLIVER BERTRAM (DELAGE) MAKES FASTEST TIME. GOOD PERFORMANCES BY EVANS AND DAVIES ON Q-TYPE M.G. MIDGETS AND H. W. COOK (E.R.A.)

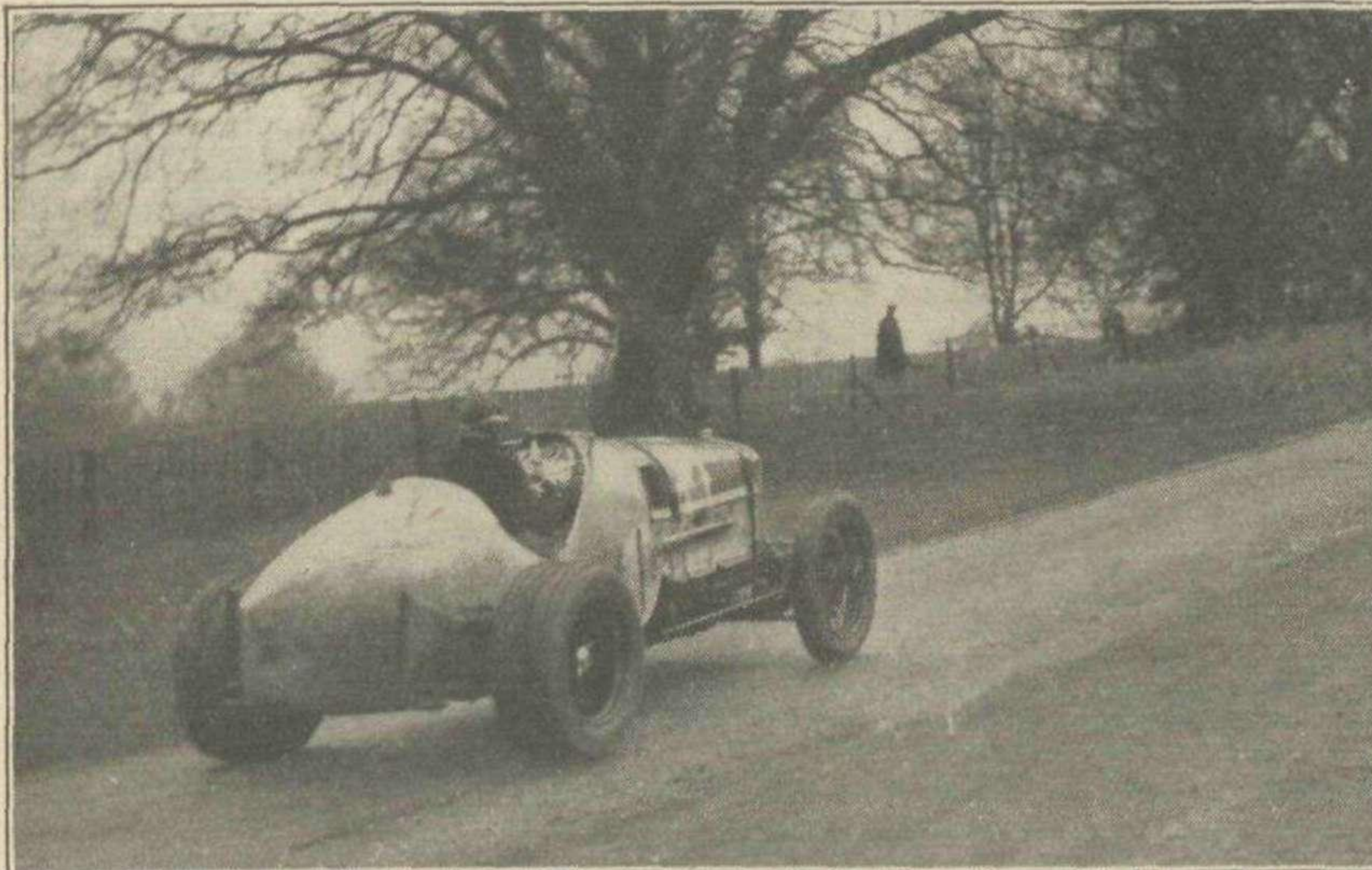
THE downpour which attended the inter-Varsity Speed Trials was all the more unfortunate in that it was the one blot on a prolonged spell of good weather. The day before and the day after were both really fine, so the fact that the weather should chose to break up on the very day of the "race" looked almost in the nature of a judgment!

It was decidedly draughty in the grounds of Syston Hall when we arrived on Saturday, the 23rd of last month. The "Paddock" was spread out on each side of the return road, and presented a wide contrast in the methods of preparing for the event, from the owner-driver-mechanic to the racing service-vans of the Bellevue Garage, R. R. Jackson, and the E.R.A. concern.

An exact half-mile was measured on the main-drive, starting at the foot of a slight rise. Rather more than half-way came a fast curve, beyond which a slight dip in the road caused a good deal of unsteadiness. The road was narrow, and paved with a crumbling macadam surface. The timing apparatus was kindly supplied by Mr. L. G. Bachelier, and recorded



R. E. Tongue speeds past the lake. His M.G. Magnette (previous owners Whitney Straight and R. J. B. Seaman) was in wonderful form and clocked 30.43 secs.

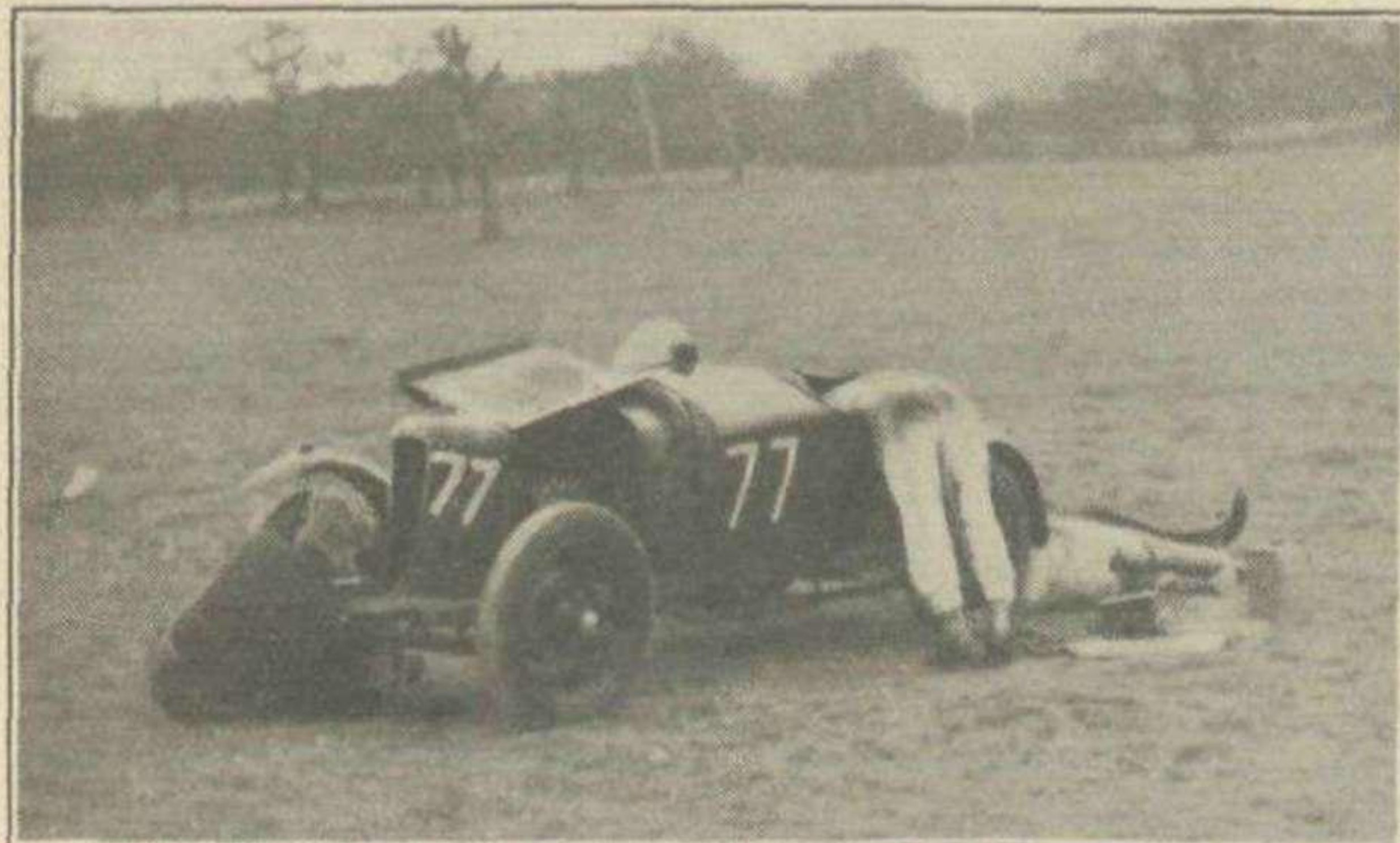


Fastest time of the day was made by Oliver Bertram with the 10 litre Delage, largely due to a careful getaway.

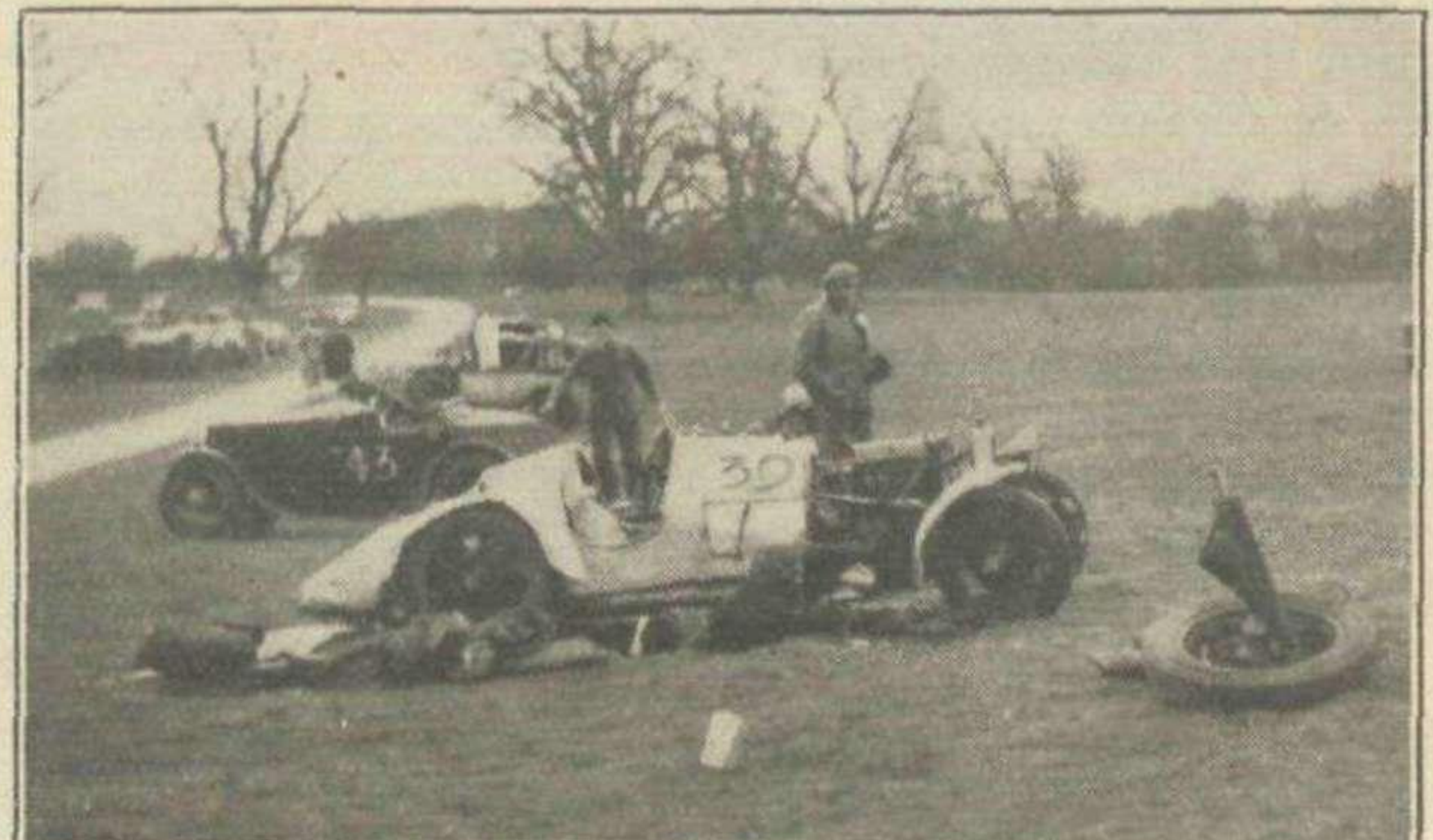
one-hundredths of a second. An ingenious method was employed to start the apparatus. A 6-in. section of rubber timing-strip was attached to the end of a long handle, and this was placed in front of the off-side front wheel of the competing car. Neat, quickly reset, and positive.

The bikes opened the proceedings at 11 o'clock, and almost immediately a few spots of rain began to fall. The paucity of motor-cycle entries was in marked contrast to these events a few years ago. R. Laird (Brough) 31.8 secs., A. B. Westmacott (Velocette) 31.14 secs., and Eric Fernihough (Brough) 31.28 secs. made the fastest first runs in the sports, racing and side-car classes respectively.

E. G. Brettell made the first sports car run, but his Austin faded away on the line and barely managed to climb the initial gradient. Another sufferer was A. I. S. Debenham (Hillman Aero Minx), and someone murmured "Is my face red?" I. F. Connell (Austin blown) was the fastest in the first two classes, clocking 39.34 secs. P. R. Monkhouse



The "Scuderia Joysticks" literally get down to it. The old Amilcar driven by Guy Campbell was a credit to the Scuderia, and was in beautiful condition.



G. Lind Walker's Brescia Bugatti looked as though it had been dropped from a great height. The grim objects in the foreground are not bodies, but merely the natural imedimenta necessary for a speed trial. Note new use for spare-wheel.





"Liveliness an essential feature of performance. In order that we may travel from point to point with safety . . . it is imperative that our cars should be built for rapid acceleration and effective braking. The motoring public is beginning to realise that a capacity for acceleration is becoming more important than almost any other aspect of performance."

Extracts from the leading article, "The Motor," November 6th, 1934, by the Technical Editor.

"In future car performance will be judged more on acceleration than on maximum speed."

Montague Tombs in "The Autocar," January 11th, 1935.

"Acceleration I stress rather than maximum speed because in this country what counts is the ability to pass, and to get away after being slowed."

H. S. Linfield in "The Autocar" — "Road Tests of 1934 Cars" — December 14th, 1934.

" . . . the modern fast car needs good acceleration, brakes and road-holding more than a high maximum speed . . ." A. G. Douglas Cleese, B.Sc., in "Technical Topics," "The Autocar," December 14th, 1934.

**10 to 30 m.p.h. 3 1/5 seconds**  
**30 to 50 m.p.h. 5 4/5 seconds**  
**0 to 50 m.p.h. 10 seconds**  
**0 to 60 m.p.h. 14 seconds**

Numerous racing successes and unbiassed road-test reports have proved beyond doubt the speed capabilities of the Frazer Nash, but speed is not the only egg in the Frazer Nash basket. We have consistently refrained from placing undue stress on this one point alone, preferring rather to stress its vivid acceleration, stability and road holding. The Frazer Nash with which "The Autocar" obtained the above acceleration figures was a standard 6-cylinder touring 3/4 seater model, and was actually loaned for test by a private owner. The following extracts are taken from the road-test report on this particular car,

"Whichever model one may take, the 'feel' is similar as regards rock-steadiness on the road, extraordinary cornering capabilities, and instant response to all the controls.

"It is doubtful if a safer car exists as regards control and stability. The 300-mile run was made chiefly in the wet, but one has complete confidence in the car under such conditions. The average possible over short distances, as well as on a long, naturally fast journey, is amazing.

"The brakes are pre-eminently of the type that can be put on hard, irrespective of whether the road is wet or dry. 25 feet from 30 m.p.h.

"A faster point-to-point car would be difficult to find." From "The Autocar," December 14th, 1934.

Frazer Nash literature, reprints of road-test reports and any other information gladly sent on request. Demonstration runs at any time, anywhere.





## THE VARSITIES AT SYSTON PARK—continued.

(M.G.) won the 850 c.c. in 41.41 secs. The 1½-litre class, which included the blown 1,100 c.c. cars, was well filled. L. J. Turner, on a very smart blue K.3 Magnette, made the best time to date with 35.31 secs., but he soon lost it to E. G. Hughes (Frazer Nash) 33.67 secs. Then P. N. Whitehead appeared on the line with his supercharged Alta, with Wilson gearbox. He streaked away in fine style to clock 32.06 secs. and win the class. G. Lind Walker's decrepit old Brescia Bugatti was some 20 secs. slower. R. G. Percival's Frazer Nash, with compression ratio of 12 to 1, was fancied to win the class, but it was not in good form and took 36.73 secs.

T. S. Fotheringham pulled off the 2-litre class, driving A. C. Fairtlough's A.C., while M. W. B. May did the same in the 3-litre division, his Silver Eagle Alvis beating Bass's Speed Twenty.

Some big stuff came out for the unlimited class. R. C. V. Bolster's old 30/98 Vauxhall set the pace with 33.39 secs. D. Scott Moncrieff's 38/250 Mercédès-Benz was in poor condition and rumbled along without its blower being used. Time 46.99 secs. Then we heard the one and only sound of the "Merc" blower, and with a shrill whine J. F. Cardno tore along in 32.86 secs. His slide on the curve was most impressive. Woolf Barnato's entry on the programme turned out to be the 8-litre Bentley in which Clive Dunfee met his death. The car now has a beautiful dark red coachbuilt saloon body, and was driven by Oliver Bertram. It was not too



This view of the start shows the ingenious timing-strip used by Mr. Bachelier. The event was marked by really good organisation, thanks to Mr. H. G. Conway, the Cambridge Secretary.

Railton recorded 33.7 secs., and Tim Davis rounded off the class with a run in 38.77 secs. on his 4½-litre Lagonda saloon.

Everyone was disappointed that Whitney Straight did not turn up with his Maserati in this class. He has fitted one of the 3-litre Maseratis with a 2-seater sports body. What a car!

grand form in the 1,100 c.c. class, getting down to 31.68 secs., fastest time so far. The 1,100 c.c. Bolster, by the way, nor has a Darracq radiator, set farther back in the chassis than any other car in history.

The bigger Bolster, "Bloody Mary," looked very neat with its little aluminium body, in which the driving seat is as low as it is high in the 1,100 c.c. car! It was terrifyingly unsteady, except when accelerating, and clocked 33.86 secs. Dr. Benjafield made an inauspicious start with the 2.6-litre Alfa-Romeo lately acquired from Penn Hughes, and the car misfired the whole way. Bertram, in spite of a little trouble with his gearbox at the end, made fastest time of the morning in 29.93 secs. The Delage benefited greatly by having twin rear wheels. Then, just as everyone was turning away to have lunch, the loudspeakers announced that Humphrey Cook was on the line with the 1,500 c.c. E.R.A. By now the surface was quite slippery, and the astonishing power of the engine could not be given full rein. Even so a time of 31.99 secs. was recorded.

The refreshment arrangements were well carried out, and duly fortified, the competitors returned to the attack. Although it was originally intended that two runs should be held, it was found possible to allow three. Fastest bike time was made by R. Laird (Brough) in 30.97 secs. Conditions were all against the two-wheelers, a bumpy surface and rain.

The afternoon programme was chiefly notable for a keen struggle for "fastest time of the day." At the luncheon interval Oliver Bertram was leading with 29.93 secs., being the only competitor to get below 30 secs. Then Kenneth Evans had a better run on his single-seater Midget, and brought it down to 29.69 secs. Jubilation in the Evans camp! Tim Davies was determined to do his stuff, however, for he had clocked 28 secs. dead



Wheelspin all the way! Humphrey Cook's E.R.A. was a handful on the slippery surface, not even twin wheels being sufficient to transmit the amazing power of the 1½-litre engine.

quick off the mark, but had gained speed at the curve, where it was really fast and amazingly steady. His time was 33.78 secs. Cholmondeley-Tapper had to work hard with the steering wheel of a Lagonda Rapide to record 35.86 secs. R. E. Tongue, on an early Ford V8 coupe, was surprisingly quick in 34.56 secs.; Dr. J. D. Benjafield's blue Railton saloon did 36.71 secs.; R. R. K. Marker's open

The racing classes began with a fast run by Tim Davies on a Q type Midget. After a slow getaway he took the curve flat out in magnificent style, but his time of 33.68 secs. was beaten by K. D. Evan's single-seater "Q" (31.89 secs.) and P. R. Monkhouse on a special Austin in 32.84 secs. The latter car, in spite of its diminutive size, was very steady.

R. E. Tongue's M.G. Magnette was in



# THE DE RAM SHOCK ABSORBER

## FULL DETAILS OF AN ACCESSORY WHICH HAS ALTERED PREVIOUS THEORIES ON SPORTS AND RACING CAR SPRINGING

WITH the first appearance of the new 750 Kg formula racing cars, 1934 will always remain a red-letter year for the followers of motor-racing, and particularly a year of triumph for the German racing cars with their independant suspension, which undoubtedly has given them a great part of their superiority over the orthodox Monoposto Alfas. Bugatti however stuck to the rigid axle lay-out, and much to the surprise of the critics these cars proved themselves in road-holding little if at all inferior to those built according to the new ideas. The familiar Bugatti suspension system, half elliptics in front and reversed quarter elliptics at the rear was still retained. How then had it been adapted to deal with speeds in the neighbourhood of 170 m.p.h.? Simply by changing over to De Ram shock-absorbers, the merits of which have come to be appreciated fairly generally on the Continent and which have several times been referred to in these pages.

Monsieur De Ram has been for many years engaged in research in connection with springing, and after exhaustive tests on touring cars and a close study of racing conditions, a state of affairs made easier through his personal friendship with Monsieur Bugatti, came to the conclusion that the only satisfactory type of shock absorber, especially on a car intended for high speeds, was the friction type. Unfortunately as is well known, with these adjusted to make the car hold the road at high speeds, riding at low speeds is harsh,

as the shocks are not sufficient to "unstick" the friction surfaces and allow the springs to flex. A partial solution of this difficulty is found in those types controlled from the dashboard, where the friction can be reduced for slow speed travel and increased when the car is being driven fast. Unfortunately it is the speed at which the axle moves, and not the speed of the car which determines the shock transmitted to the car, and also the way in which the car wheels are displaced, and this can be the same whether a car hits a pot-hole at 30 m.p.h. or a minor ripple in the road surface at 100 m.p.h.

The problem which confronted the inventor was to produce an appliance which would check the axle according to the shock received, and this has been achieved by having a friction damper in which the power of the mechanical brake is controlled by a hydraulic arrangement acting as a servomotor. The suspension thus remains comparatively free when dealing with slight movements, but hardens up to racing stiffness when severe shocks are met with. How this object has been attained will be appreciated from sectional drawings and from the description which follows.

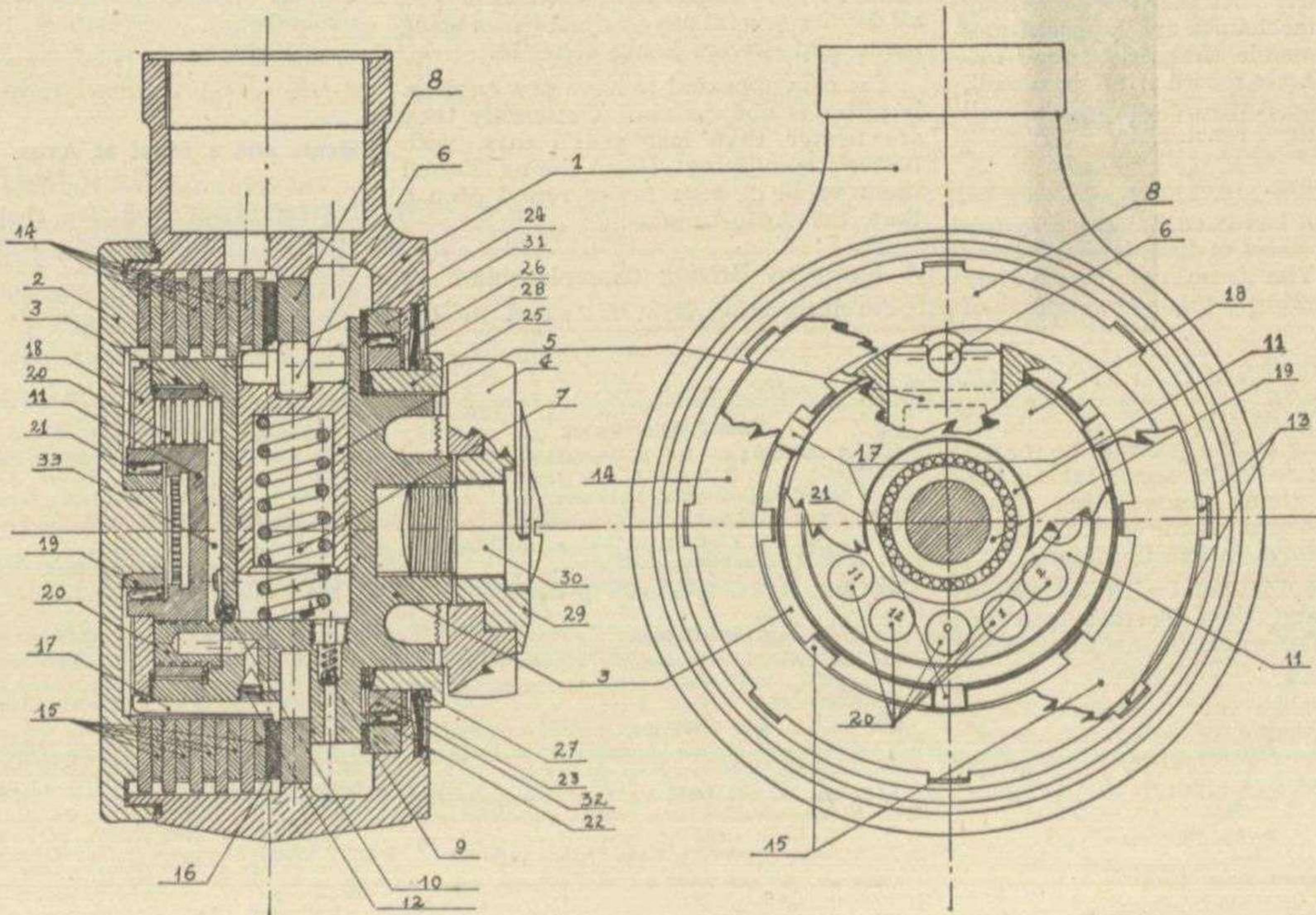
Various patterns of De Ram shock-absorber have been made, one of which had two arms of round section and an enlargement at their junction which contains the mechanism, making the whole interchangeable with the Hartford

pattern. The most ingenious type is that used on the 3.3-litre racing Bugattis in which a circular casing is bolted on to the chassis. From this a straight arm projects and this is connected to the axle through the usual type of link, the joints working on silentbloc bushes.

Referring to the diagrams, the device consists of a casing (1) filled with special liquid. In this casing a shaft (3) is mounted and on this is keyed the operating lever (4). This shaft is supported at its two extremities on needle bearings (21) and (31).

A piston (5) carried in the shaft (4) is maintained in contact with the cam (8) by means of the roller (7). The cam controls the movement of the piston in accordance with the movement of the lever, and the liquid displaced by the former is forced into the chamber (33). This latter is closed by a plate (11) in which are fitted a series of little pistons (20), and these act in turn through a system of links on the friction discs (14) and (15), which constitute the mechanical brake.

The friction of the mechanical brake thus depends on the pressure existing in the chamber (33), which is in turn proportional to the speed of displacement of the piston (5). The movement of the shaft being decided directly by the speed of the axle movement, the movement of the piston is also proportional, though some modification is possible by altering the shape of the cam (8). The pressure



These two sectional drawings of the De Ram Shock-absorber, studied in conjunction with the detailed description on this page, illustrate the principle on which this remarkable device operates.



## THE DE RAM SHOCK ABSORBER—continued.

existing in the chamber (33) is however proportional to the square of the movement of the piston (5), so that the braking effect rises as the square of the axle speed.

In order that the shock-absorbers shall act at full efficiency it is necessary to prevent friction between the spring leaves, and when fitting them to existing cars, the inventor interposes strips of aluminium or in the case of touring cars, brass leaves with holes filled with graphite. Another essential factor is that the chassis of the car should be stiff, and that is one reason why the De Ram is so successful on the racing Bugattis. Other racing manufacturers such as Auto-Union have also become aware of the advantages of the device. Unfortunately the chassis of this car is not stiff enough to allow it to be used, but Monsieur De Ram is submitting an amended design of his own which would provide the necessary rigidity. He is nothing if not enthusiastic and accompanied Caracciola, presumably in a car fitted with a two-seater body, round the Montlhéry road circuit a short time ago, but considers that owing to the excessive flexing which took place at high speeds his shock-absorber were not likely in this case to bring about any substantial improvement in road-holding.

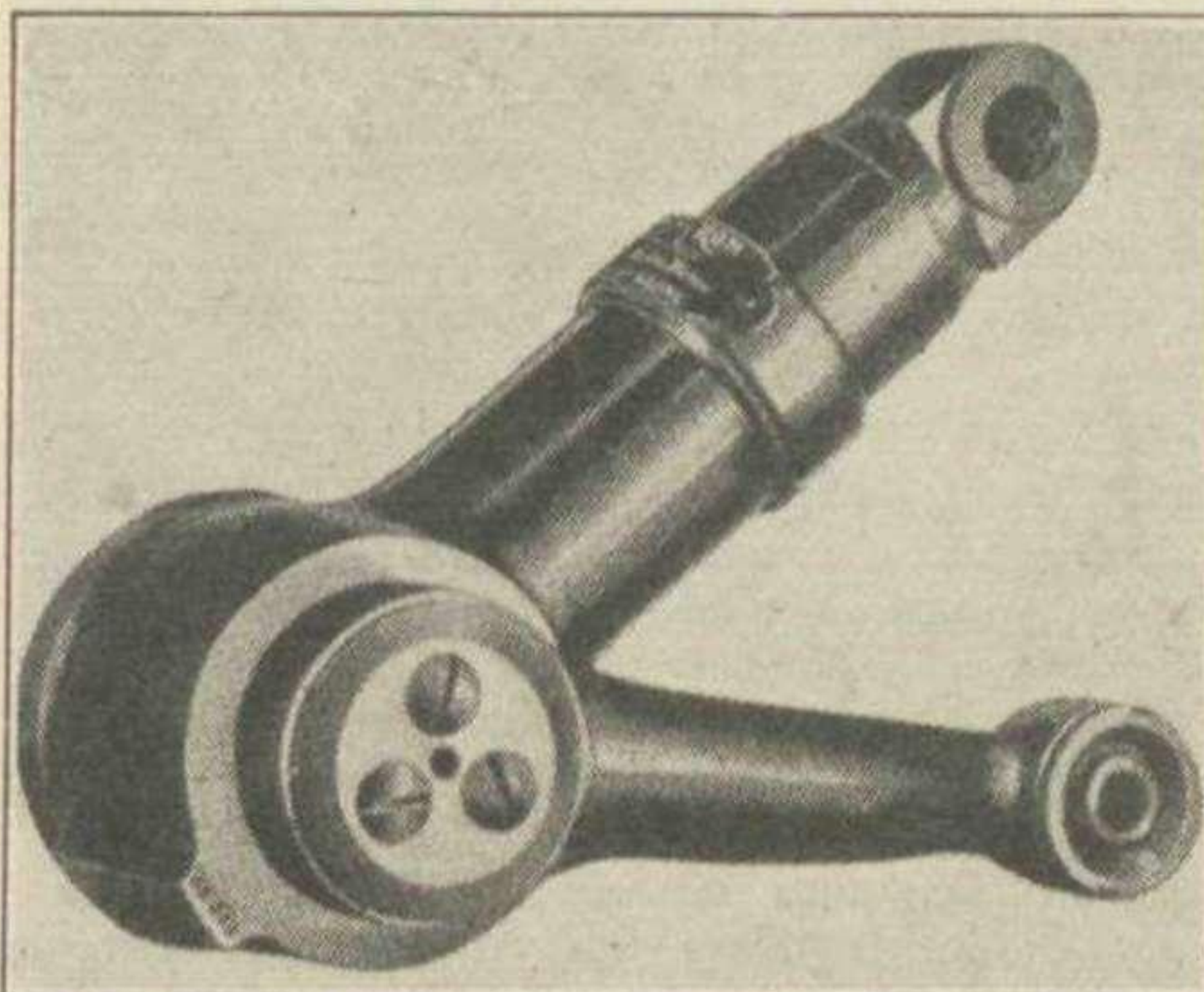
The first set of these shock-absorbers to be used in England are fitted to a 3.3-litre Bugatti saloon belonging to Mr. Noel Rees, to whom we are indebted for much of the foregoing information. He tells

us that good as was the suspension before the De Rams were fitted, it is now improved out of all recognition. Roads like that pavé section leading out of Paris via Beaumont, on which the average car does well to exceed 25 m.p.h., can be taken at 70, and the same applies to wavy sections, pot holes or any other form of road surface, and purely as an experiment, the hands may be removed from the wheel when traversing the roughest of them, at 50 to 60 m.p.h., without the car tending to deviate from the straight. "When you corner on an adverse camber," Mr. Rees told us, "the car is just as steady as if

a fifth wheel were put out to support it." He has just returned from a visit to Paris to get the shock absorbers adjusted to suit English roads which differ from those encountered on the continent by containing many more wavy sections. This alteration is carried out by changing the control cams (8) for others of a different shape. Another important matter is to run the tyres at a pre-determined pressure.

Once the correct setting is found, the devices may be left without further attention for two or three years, according to the inventor. Those used last year on the racing Bugattis were found to be in perfect condition after a season's work.

There is usually a drawback to the most successful piece of apparatus, and in the case of the De Ram shock-absorbers this is found in the price. Every part is made by hand, and a set costs £170, with an extra £30 for fitting. Produced in limited quantities in a factory they could be made for about £90, and proportionally less in accordance with the output. An attempt is being made to get the French railway companies to fit them, and a number of engines and carriages so equipped have given good results. If they should be adopted as standard equipment on trains, of course, the price of automobile dampers will be much reduced. Meanwhile we shall await with interest their first appearance on the racing cars other than the Bugatti. In these days of £100 motor cars there use is not likely to become general for some time yet.



The miracle-worker. The De Ram Shock-absorber, with which ultra-high speeds are made possible with orthodox suspension.

## CONTINENTAL NOTES—continued from page 258.

## Auto-Unions at Montlhéry.

The Auto-Union tuning is to be carried out at Montlhéry. At the time of writing the cars and mechanics are expected any day. It is possible that Stuck may improve on his hour record if all goes well. In any case the Auto-Unions will be well prepared for the French G.P.

## Mercs. at Monza.

Monza track has been the scene of the final *mise au point* of the Mercedes-Benz G.P. cars. The team comprised Herr Neubauer, racing manager, lots of

mechanics, and drivers Carracciola, Kohlrausch, Langer and Geyer. Two cars came by lorry from Stuttgart, and lapped all day for several days, adjustments being made and drivers being changed.

The cars appeared to have new engines, but this is not certain. Outwardly they are neater than last year's cars, with better streamlining. Hand timing showed them to be 2 secs. faster round Monza than the Auto-Unions!

## A European Driving Championship?

An interesting item discussed by the

Sporting Commission of the R.A.C.I., was that of reviving the European Championship for drivers. The last holder, it will be remembered, was Robert Benoist.

The scheme is being forwarded to the A.I.A.C.R. for consideration.

## Heats and a Final at Avus.

The Avus race will be different this year. Instead of one long race, there will be two heats of 100 kilometres each, and a final of 200 kilometres. Half way through the final all cars will have to stop at the pits for a change of tyres.

## THE VARSITIES AT SYSTON PARK—continued from page 234.

in practice the day before. In spite of a little misfiring on the getaway he roared up the course in 29.09 secs., taking the curve faster than anyone else. Cook managed 29.14 secs. on the E.R.A., which slithered sideways in accelerating.

Evans shot his bolt with a run in 29.32 secs., and then Bertram put an end to the discussion by an impressive and masterly run in 28.86 secs.

And so ended a very interesting day's sport, with plenty of real enthusiasm, some first-class performances, and a win for Cambridge by 9 points to 2.

## RESULTS.

## Sports Motor Cycles.

1. R. W. Jones (Scott) 33.15 secs.
  2. B. T. Hardy (A.J.S.) 34.61 secs.
  3. G. A. Burfield (Velocette) 39.85 secs.
- Unlimited.—1, R. Laird (Brough), 30.97 secs.

## Racing Motor Cycles.

250 c.c. and 350 c.c.—1, I. B. Westmacott (Velocette) 34.14 secs.; 2, J. P. Smith (J.P.S. Jap) 35.55 secs.; 3, G. A. Burfield (Velocette) 38.19 secs.

500 c.c. and Unlimited.—1, Eric Fernihough (Brough) 30.6 secs.; 2, I. B. Westmacott (Velocette) 33.74 secs.; 3, B. T. Hardy (Sunbeam) 35.27 secs.

Side Cars.—1, Eric Fernihough (Brough), 31.26 secs.

## Sports Cars.

850 c.c. (non-supercharged).—1, P. R. Monkhouse, 847 c.c. M.G., 41.41 secs.; 2, G. F. Stooks, 847 c.c. M.G., 42.88 secs.

850 c.c. (S) and 1,100 c.c. (non-supercharged).—1, I. F. Connell, 747 c.c. Austin (S), 39.24 secs.; 2, P. M. Rambaut, 1,098 c.c. M.G., 40.52 secs.

1,100 c.c. (S) and 1,500 c.c. (non-supercharged).—1, P. N. Whitehead, 1,100 c.c. Alta (S), 32.06 secs.; 2, A. F. P. Fane, 1,496 c.c. Frazer Nash, 33.23 secs.; 3, A. A. Millard, 1,496 c.c. Frazer Nash, 35.26 secs.

1,500 c.c. (S) and 2,000 c.c. (non-supercharged).—1, T. Fotheringham, 1,991 c.c. A.C., 37.69 secs.; 2, R. de Y Bateson, 1,991 c.c. A.C., 38.90 secs.

3,000 c.c.—1, M. W. B. May, 2,148 c.c. Alvis, 36.97 secs.; 2, E. W. Bass, 2,511 c.c. Alvis, 37.22 secs.

Unlimited.—1, J. F. Cardno 7,000 c.c. Mercedes (S) 32.56 secs.; 2, O. H. J. Bertram, 8,000 c.c. Bentley, 33.24 secs.; 3, R. R. K. Marker, 4,200 c.c. Railton, and R. V. C. Bolster, 4,234 c.c. Vauxhall, 33.39 secs.

All Comers.—1, P. N. Whitehead; 2, J. F. Cardno; 3, O. H. J. Bertram.

## Racing Cars.

850 c.c.—1, Tim Davies, 746 c.c. M.G. (S), 29.09 secs.; 2, K. D. Evans, 746 c.c. M.G. (S), 29.32 secs.; P. R. Monkhouse, 747 c.c. Austin (S), 32.43 secs.

1,100 c.c.—1, R. E. Tongue, 1,087 c.c. M.G. (S), 30.22 secs.; 2, P. N. Whitehead, 1,100 c.c. Alta (S), 32.76 secs.; 3, R. C. V. Bolster, 1,087 c.c. Bolster (S), 33.87 secs.

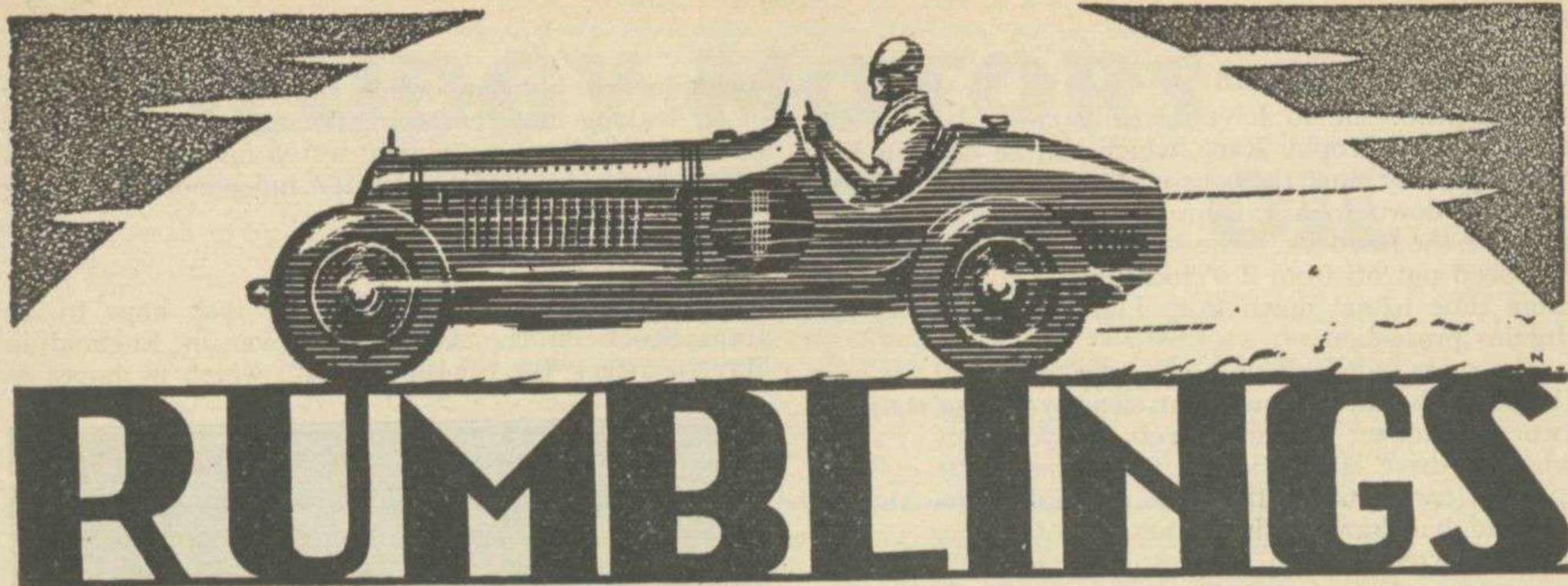
1,500 c.c.—1, H. W. Cook, 1,488 c.c. E.R.A. (S), 29.14 secs.; 2, Hon. P. Mitchell-Thomson, 1,496 c.c. Frazer Nash, 33.07 secs.; 3, R. G. Percival, 1,496 c.c. Frazer Nash, 35.20 secs.

2,000 c.c. to 3,000 c.c.—1, R. V. C. Bolster, 1,962 c.c. Bolster, 31.21 secs.; 2, A. C. Fairtlough, 1,991 c.c. A.C., 37.69 secs.; 3, M. W. B. May, 2,148 c.c. Alvis, 38.15 secs.

Unlimited.—1, O. H. J. Bertram, 10,688 c.c. Delage, 28.86 secs.

All Comers.—1, O. H. J. Bertram; 2, Tim Davies; 3, K. D. Evans.





### Ferrari approves the 1½-litre limit.

CONSIDERING how closely the success of the Ferrari Stable has been associated with the 2.3, 2.6 and 3-litre Alfa-Romeos, it was interesting to read a letter written the other day by Signor Enzo Ferrari, the head of the famous Scuderia, in which he favoured a 1,500 c.c. limit for Grand Prix cars. He fixes it at this point not specially on the grounds of safety but because 80 per cent. of the cars at present in use in Europe have a capacity in the neighbourhood of 1½ litres. Another proposal which should be valuable from the utilitarian point of view is that two-seaters should be compulsory, though a mechanic would naturally not be carried.

He considers that superchargers should be retained, since otherwise compression ratios will soar to fantastic levels, as they do in America. In spite of the restriction of engine capacity a horsepower in the neighbourhood of 200 may be expected, and this with carefully streamlined coachwork should give a top speed of 150 m.p.h.

### What are Alfas doing ?

That is always the question at this time of the year. I understand that neither the reversed quarter-elliptic rear springing, nor the independent Porsche transverse half-elliptic spring has been a great success, and that the factory is at present exploring a variety of avenues, and dallying with pneumatic and torsion rod systems.

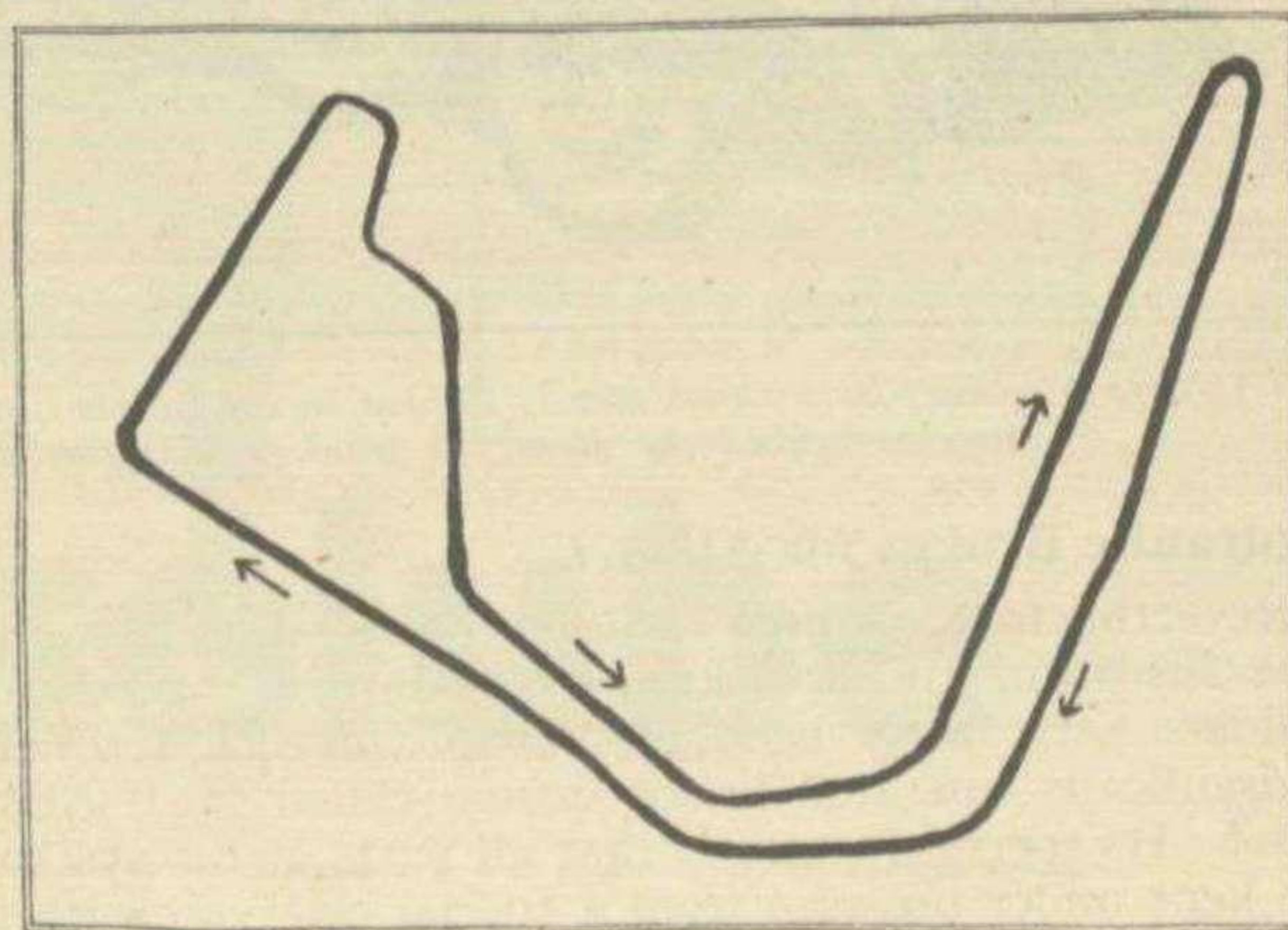
In this connection I am informed in confidence that an order for an independently sprung car has already been placed by an English racing enthusiast, while there is a chance of a three-litre Monoposto similar to the one already acquired by Shuttleworth being added to the quota of British-owned Alfas. The purchaser is a man whose name has not hitherto been associated with Grand Prix cars. For the present the racing Alfas, whether fitted with normal or independent suspension will continue to have the three-litre eight-cylinder engine, which may be bored out to 3.2 litres if you like a turn of real speed. The twelve-cylinder engines are not likely to appear until after Tripoli. Lord Howe tried to secure a Le Mans car fitted with the Monoposto engine, but I understand that the factory have decided to do nothing more about this for the present, confining their new lines to the racing cars and the twin-engined job which Nuvolari will drive at Tripoli.

### Bugattisti in England.

Lord Howe and Mr. Noel Rees have now completed their plans for the coming season, and their Bugattis are being got ready at Molsheim. Lord Howe starts the season with the Monaco Grand Prix, then he and Brian Lewis will be driving in the International Trophy on May 6th. Lord Howe then departs for the continent to take part in the Grand Prix of Picardie, Montreux and possibly the Tripoli Grand Prix as well, driving his single-seater Maserati in the last two races, while Lewis attempts to bring off the hat-trick on the Bugatti in the Mannin Moar race.

Howe and Lewis meet again at Le Mans, where they are driving an Alfa-Romeo, then the two Bugattis at the Marne and at Dieppe. The Alfa will be entered for the Targa Abruzzo, and one of the drivers will handle a Bugatti at Coppa Acerbo a few days later, and the Bug. and the Maserati in the Nice Grand Prix just afterwards, Lord Howe is taking the Maserati to Switzerland for the Grand Prix at the end of August, then there is quite a possibility that two 3.3-litre Bugattis will be entered for the Tourist Trophy, while the hard-worked pair will probably end the season by driving at Donington.

Charles Martin is daily expecting his car from Molsheim, has been doing so from the beginning of the year in fact, while Eccles' car is also reputed to be on the way.



Another Round the Town circuit, the Circuito di Trieste, which measures 2.5 kms. per lap.



RUMBLINGS—continued.

### An International Touch.

The J.C.C. should have a really good show at the International Trophy Race, which will be held on May 6th, especially since the course has been altered to bring the cars down to a hairpin in the Finishing Straight opposite the Paddock. The start of the race incidentally has been put off from 2 o'clock until 3 to allow people more time to get down from London after seeing the Jubilee procession.

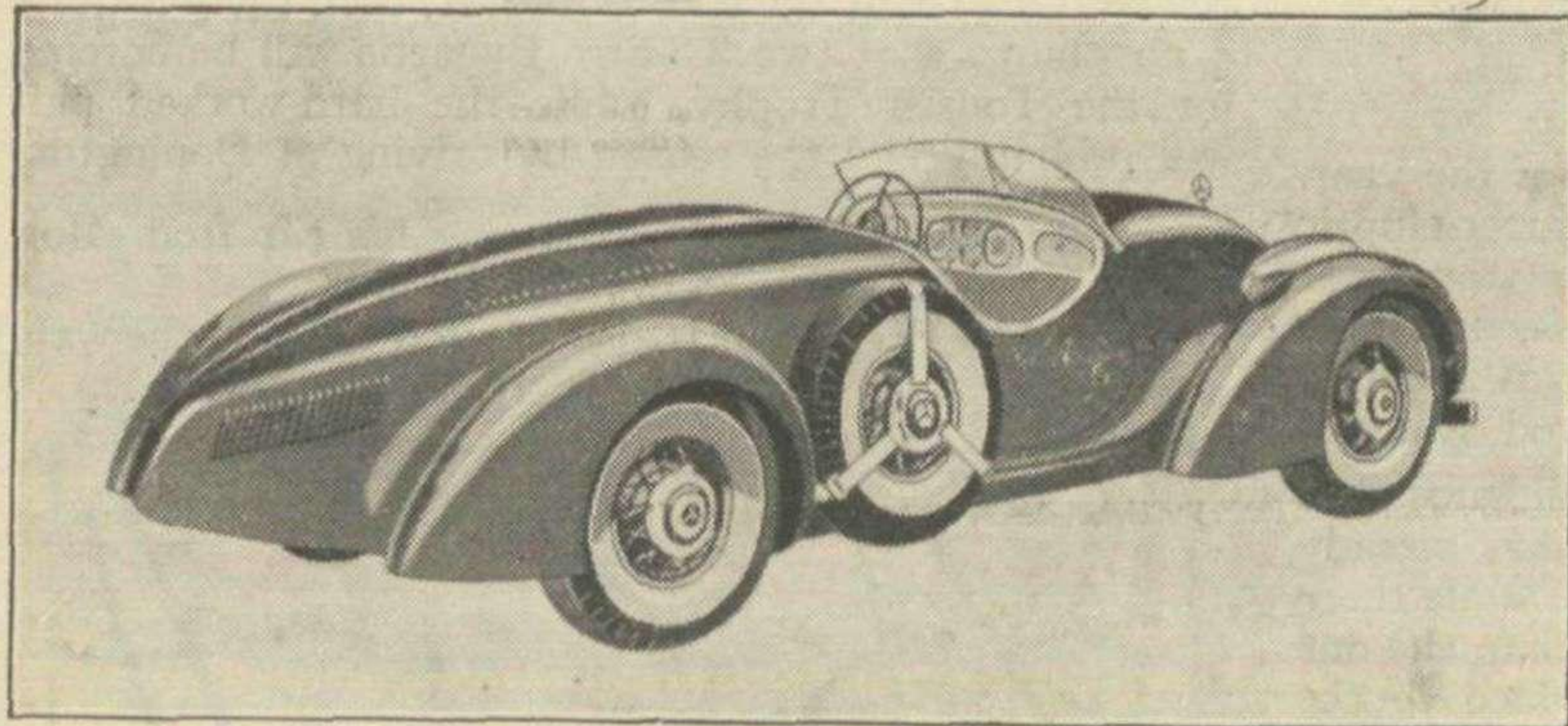
The prize money is on a generous scale and for once there will be an international element in the shape of two well-known Italian drivers, Rovere and Farina, who will drive Maseratis, the first-named a six-cylinder 2.4-litre car, while Farina will probably drive the 1½-litre he has handled in a number of Italian events. They were over in England last month and attended the opening meeting at Brooklands.

I am particularly interested to hear that Donkin has acquired an 1,100 c.c. Maserati and that this will also be running. It will be the first chance we have had over here to compare its performance with that of the M.G. Magnettes.

### Freddy comes back.

Reports from the well-known Yorkshire spa of Middlesbrough show that Freddy Dixon is making good progress, has been out of hospital some time, was merely suffering from shock, and should be fit in time for the International Trophy. So much the better.

Last year the race was the signal for quite a number of old two-litre Bugattis to come out of their retirement, and I hear that Esson Scott is putting in some useful work on his, which of course is a two-camshaft model and was once the property of Count Czaikowski. He has removed the blower and has fitted four S.U. carburetters, and is engaged in the by-no-means easy task of making them all play together.



The 1½-litre Mercedes-Benz two-seater is unique in the Sports Car world in having its engine behind the driver in front of the rear axle.

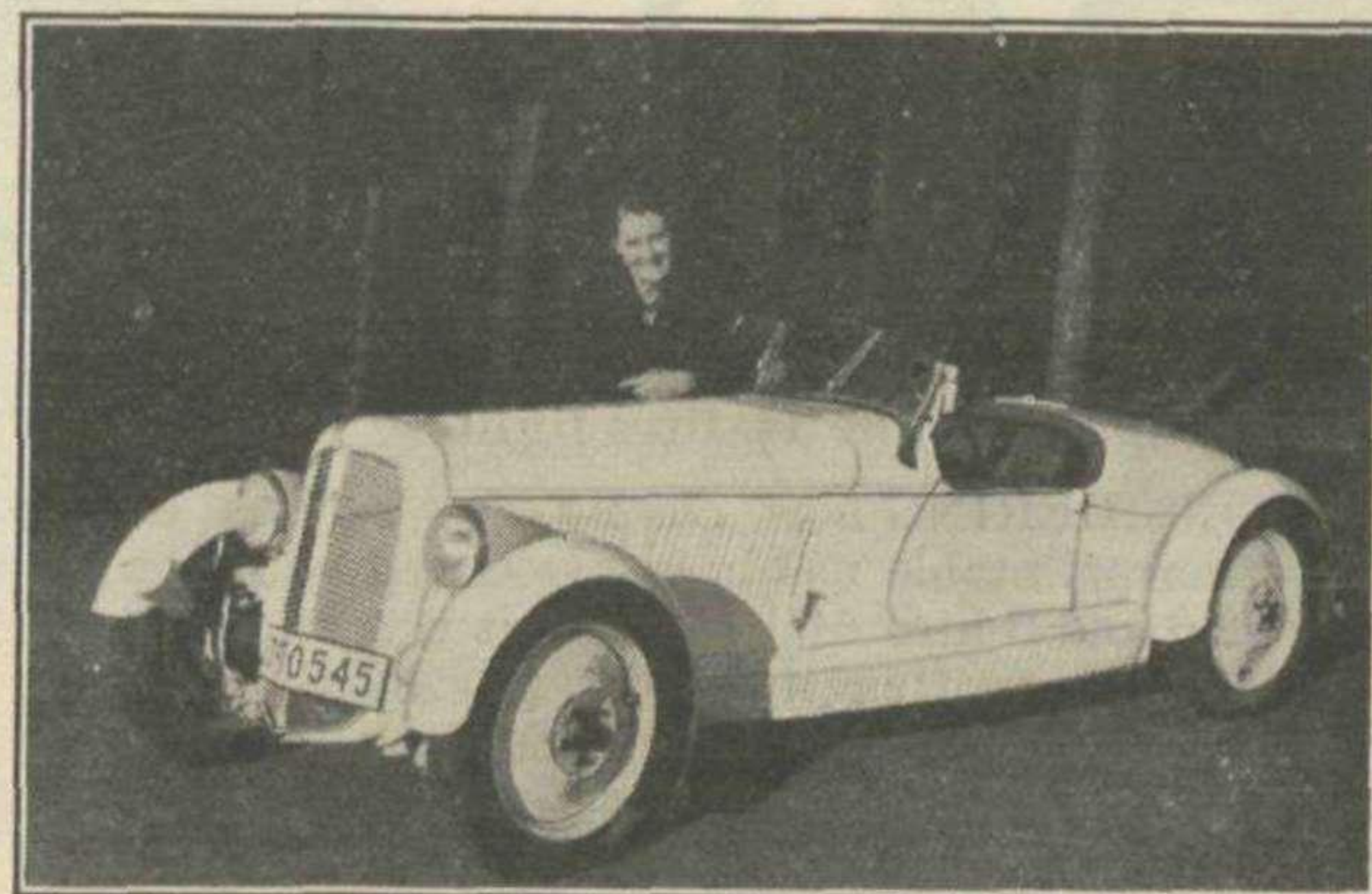
### Hydraulic Brakes for Alfas ?

Reverting for a moment to Signor Farina, I understand that his firm, the well-known Milan firm of coach-builders have lately been producing a special form of hydraulically operated brake system called the "Ariston." Its special feature is that all parts of the system are kept under pressure from a special reservoir with a

spring-loaded plunger, which prevents the possibility of air leaking into the piping when the brake pedal is released. It has been widely tested for some time and will probably be used on the new independently sprung Alfas.

### Foreign Drivers for Shelsley.

As reported on another page, we may hope to see Hans Stuck on the Auto-Union over in England in May to attack the Shelsley record, which he hopes to



An interesting entry in the R.A.C. Rally was Miss Fay Taylour's Adler-Triumph, and extremely neat German two-seater which she will use in many competitions this year.

bring down to 38 seconds, while Mr. Wilson also expects that Kohlrausch, the German driver will take part driving the Austin with which Driscoll broke the Mountain Record the other day.

Meanwhile our home Shelsley specialists have not been idle. Harker has fitted special short throw-cranks to his eight-cylinder Special thus reducing the swept volume to 1,100 c.c. It is now fitted with an outside in Zoller blowers, runs up to 8,000 r.p.m. and gives more horsepower than it did in its 1½-litre form. With a rebuilt and strengthened chassis and new brakes the car will hardly know itself.

### Straight's activities.

Though Whitney Straight has practically given up racing this year, he intends to defend his title with one of his 3-litre Maseratis. The other has been converted into a two-seater sports car, with Mille Miglia body. The greatest difficulty of course was to change over the steering from a central position, but it should be an amazing car when it is finished. The 13-litre Hispano, which is to be run at Le Mans is also expected in England soon.

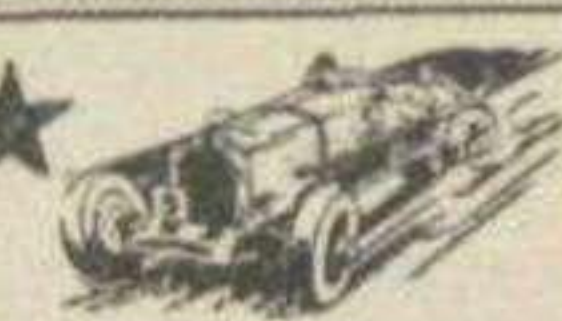
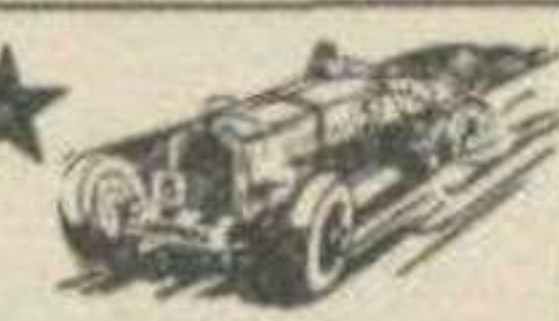
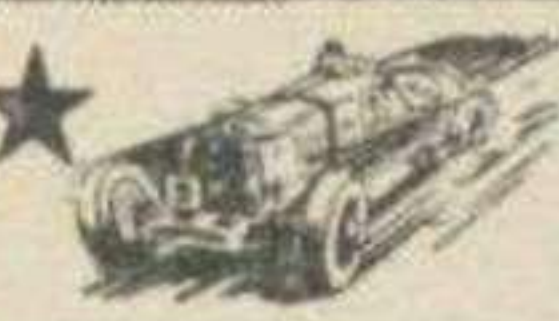






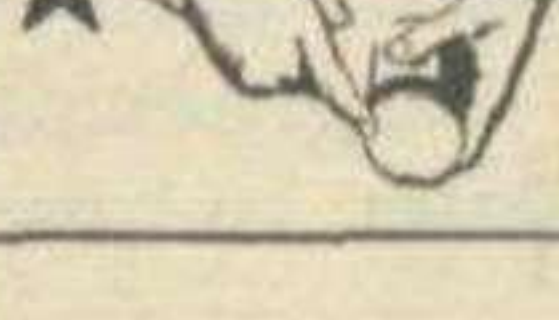


Unable to get the Auto-Union which he wanted Straight has gone in wholeheartedly for aviation, and is now interested in the Monospar, the machine which won last year's King's Cup.



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LOW CONSUMPTION	★ 	★ 		★ 
LOW CARBON	★ 		★ 	
LONG LIFE	★ 	★ 		



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RUMBLINGS—continued.

### Racing round Italy.

Lord Howe will not be taking a team of M.G.'s to the Mille Miglia, but the marque will be represented by Cecchini who had a number of successes on his M.G. last year, and Pellegrini, who drove a 2.3 Alfa in last year's race.

The only other British car at present entered is the 4½-litre Lagonda Rapide to be driven by Cholmondeley Tapper and Miss Ellison. Apart from the Talbot driven by Brian Lewis some years ago it will be the only British entry of over 1½-litres which has taken part.

### All the best Sports Car Races.

This particular car will also be run in the Belgian 10-Hour Race, at the Targa Abruzzo, and possibly in one or more of the sports car races held in North Africa. It is hoped that a team of Lagondas will be entered at Ulster and Le Mans, with Rose Richards as one of the drivers.

M.G.'s are turning out in force at Le Mans, and a new departure this year will be a ladies Team entered by George Eyston and driving P-type Midgets. The names are Miss Skinner and Miss Evans, Miss Ellison and Miss Allan, and Miss Richmond and Mrs. Eaton.

### Improving Brooklands.

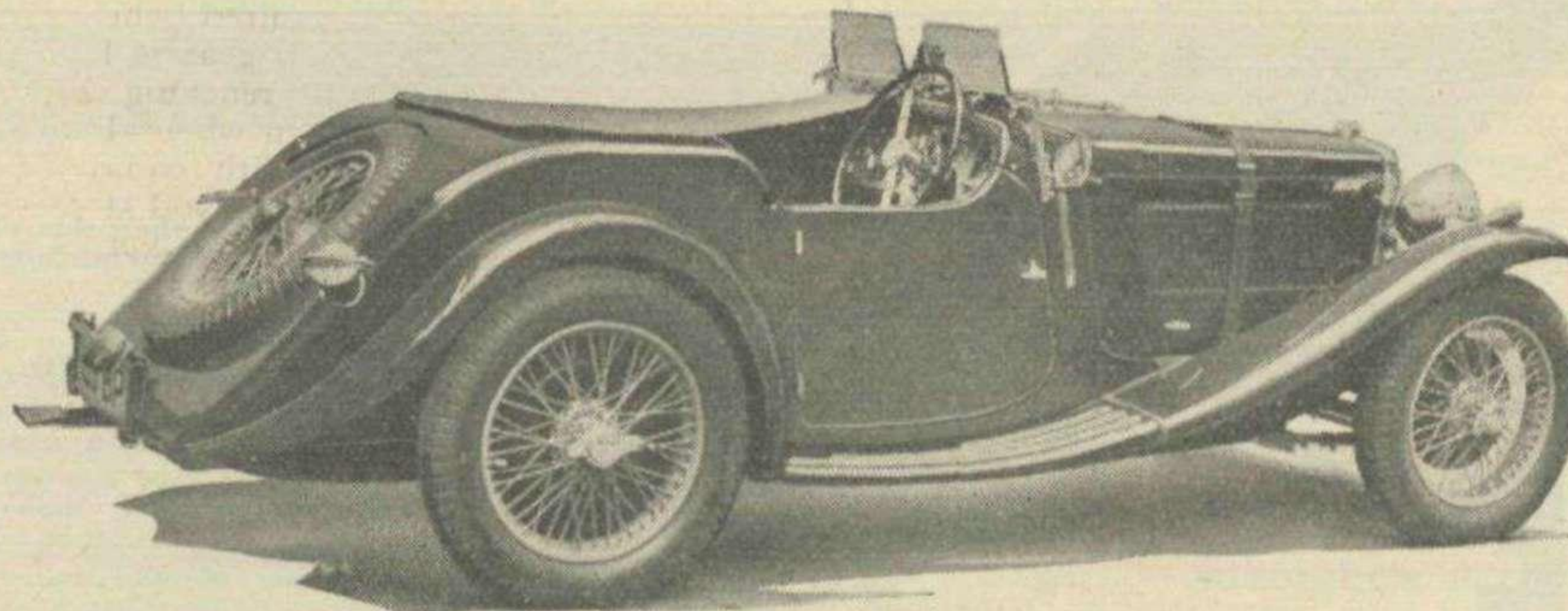
Returning from our Continental survey, what of Brooklands. The famous old Track still remains for many people in the South of England the only place where real speed can be witnessed, and Mr. Bradley and his colleagues are to be congratulated on the efforts they have made this winter in improving the

surface of the track, providing better loud-speaking equipment, and various other points which appeal to drivers and spectators alike.

On the other hand I still feel that both the catering and the surroundings of the club leave much to be desired. Unfortunately the host of untidy buildings which have grown up round the Clubhouse prevents the authorities from preserving the Country Club atmosphere which one expects after entering along the new Shell Way. I feel, however, that to be asked to pay 3s. 6d. for a lunch consisting of Irish stew and complicated but cold puddings is quite excessive, and the same goes for the bar and other accommodation at the Fork.

### Eightpence with Music.

At the risk of being proclaimed out of order, I will repeat my only "chestnut," which concerns a well-known Oxford College. Dinner on Sunday night was the "high-spot" of the catering and the impecunious undergraduate was charged three shillings and eightpence for his meal (including twopence for a napkin!). An enterprising young man wrote up to a well-known London firm of caterers, whom we will call Messrs. Joseph's, enclosing a menu and asking for a quotation for a meal of this type. In two days it came, Napoleonic in its briefness, "Eightpence, including music." While no one would expect the Club House to have the facilities to provide meals at this figure, it seems all wrong in view of the B.A.R.C. subscription that so many people should find it desirable to join the Aero Club as well in order to enjoy well-cooked food in congenial surroundings.



The remarkable success of the "N" Type M.G. Magnette has prompted us to design a de-luxe type of body which will appeal strongly to all practical motorists.

**SPECIFICATION:** Ash Frame, special alloy panels effecting considerable reduction in weight. Upholstery and body in colour to order. Upholstery in Connolly hide. Fully adjustable seats with Float-in-Air cushions. Folding windscreen side flags, usable as aero screens. Disappearing hood, exceptionally complete side curtain equipment. 11½-gallon rear tank. Quick filler caps. Spring steering wheels. Special luggage accommodation. Price £375.

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# THE TRIUMPH VITESSE SIX

A MEDIUM-SIZED SPORTS CAR WHICH SETS A HIGH STANDARD OF COMFORT AND EASY SPEED.

THERE are days when one craves a large open sports car capable of something round the hundred mark, while other times and for other journeys, a small, neat and lively saloon seems more in keeping with one's mood. The arrival of a Triumph Vitesse Six, last month, was particularly opportune, coinciding with a period of sunshine accompanied by an intensely cold wind, so that one could safely take refuge inside a closed vehicle without incurring the scorn of hardier friends.

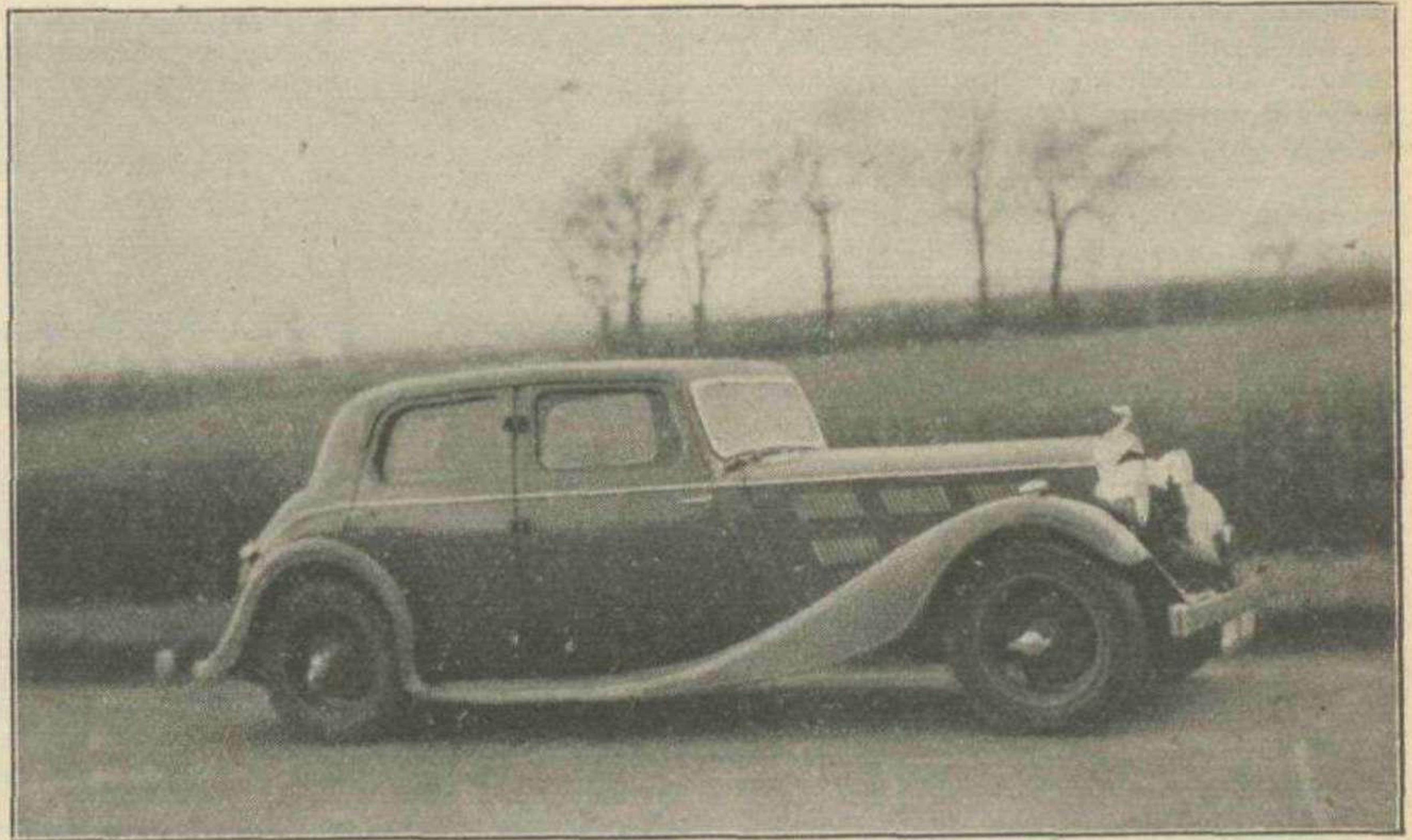
The purposeful length of the bonnet and the clean lines of the rest of the body are reflected in the performance of the car, and a short time after taking over the car from the Triumph showrooms in Great Portland Street we were threading our way at good speed for the great open spaces at the end of the bye-pass roads.

A two-litre engine is used on the 1935 six-cylinder cars, and this increase of size makes it possible to use a top-gear ratio of 4.75, which gives an engine speed of 3,500 r.p.m. at 60 m.p.h., and consequently easy travel throughout the speed range.

The normal cruising speed we found to be between 50 and 60 m.p.h., rising to anything up to the maximum of 73 on straight roads. The car is compact and behaved well on corners, and it was found that an average of 40 m.p.h. could be reeled off indefinitely on quite narrow roads without the driver being aware of making any special effort. The exhaust note was subdued, and though the car tested had accomplished a good mileage, there were no squeaks or rattles to mar

lever, but there is a tendency to pink when getting away from this speed, and best results are obtained by changing down

is required. The gears are quiet, and the only thing we did not care for was the position of the reverse catch which rubbed



*A pleasing and practical body, the Vitesse Saloon on the 2-litre Triumph.*

into third gear. The gear-change is a simple one, provided the clutch is fully depressed, and a remote-control lever brings the knob conveniently under the right hand.

The gear-change is a simple one, provided the clutch is fully depressed, and a remote-control lever brings the knob

against the hand unless the palm is kept horizontally on the knob.

The speed range of the engine extends to over 5,000 r.p.m., at which the maximum speeds in the gears are 21, 35 and 54 m.p.h., but in practice we found that it became somewhat rough and noisy at over 4,400, and we did not exceed this figure unless a high spurt of speed was required when passing another vehicle. Top gear is high enough to prevent the car reaching the rough part of the range even when all out.

With road conditions as they are to-day, brakes and steering mean more than ever to the driver of a fast car, and here the Triumph scored heavily from 40 m.p.h. the car was brought to rest in the astonishingly short distance of 48 feet. A little of this must be put down to the freshly-laid tarred chippings with which the road was surfaced, but in this and numerous



*A general air of neatness is conveyed by the front view of the Triumph.*

the enjoyment of an otherwise unobtrusive gait.

As one would expect from the power-weight ratio, the car has a useful top gear performance and runs smoothly down to 15 m.p.h. with some use of the ignition

conveniently under the right hand.

The gear-box facilitates rapid changing from one gear to the other, and though third is low enough for most main road hills, the lever can be snapped into top at full revs when maximum acceleration

### *Brief Specification.*

*Engine : Six cylinders, bore 65 mm. stroke 100 mm., capacity 1,991 c.c., R.A.C. rating 16 h.p. Push-rod operated overhead inlet valves, side exhausts. Two Solex carburettors. Coil ignition.*

*Gearbox : Four speeds and reverse, with free-wheel. Constant-mesh third gear. Ratios 4.75, 7.28, 11.3 and 18.5 to 1.*

*Brakes : Lockhead hydraulic.*

*Suspension : Half-elliptic.*

*Dimensions : Wheelbase 9ft. 6ins., track 4ft 2ins.*

*Weight with saloon body 23 cwt.*

*Price : £385.*

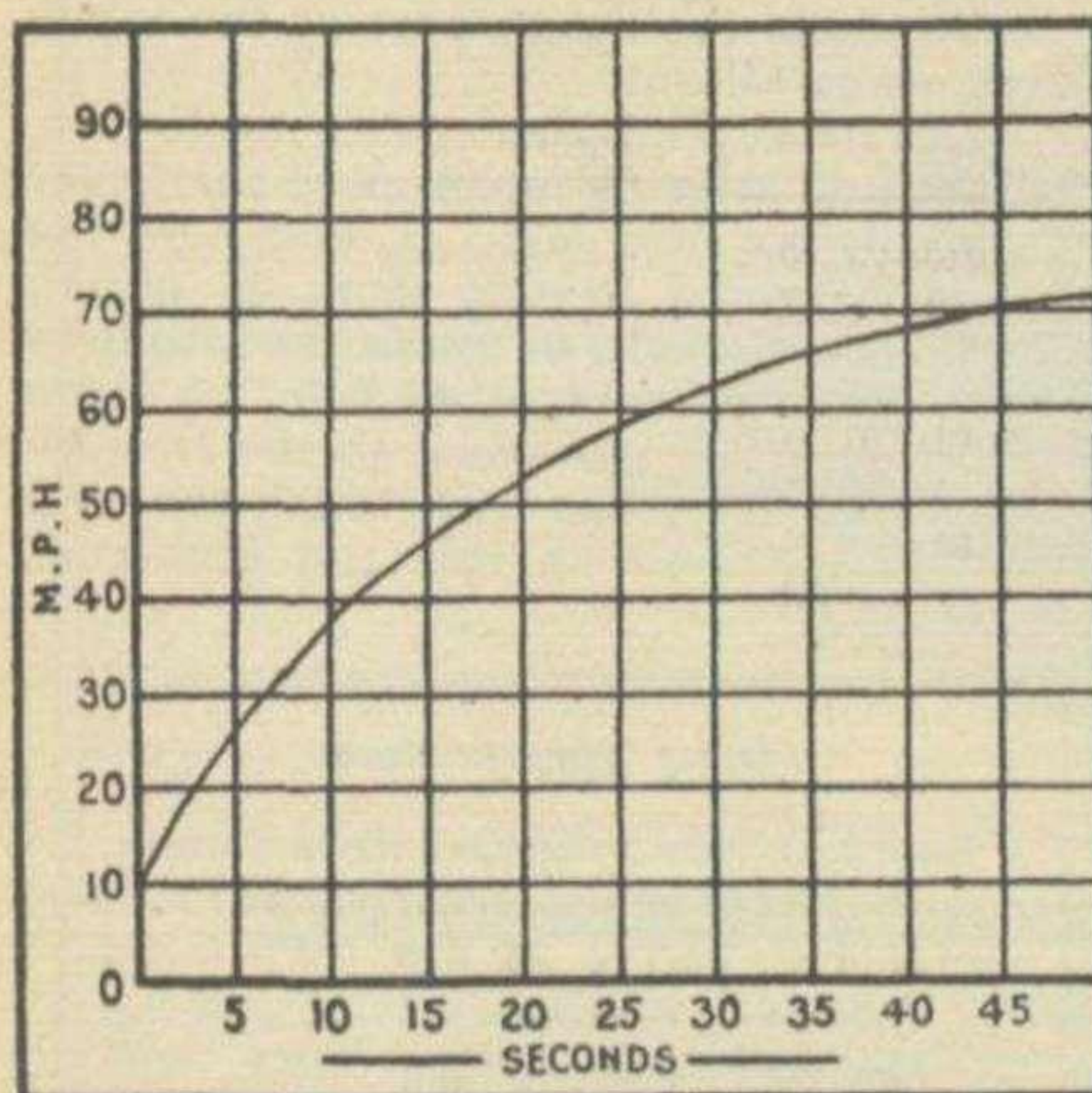


## THE TRIUMPH VITESSE SIX—continued.

other cases we satisfied ourselves that their power was indeed exceptional. Another point equally important is that they were progressive in action, with a light pedal pressure, and could be applied with full force without causing the car to swerve. The steering is pleasantly high-gearing with a strong caster action, sufficient to spin the wheel back to the central position on releasing it after a corner. The steering column is adjustable both for rake and for length, making it easy to obtain a perfect driving position. Both front wings are visible, and all the controls, including a powerful handbrake placed horizontally between the front seats, came to hand without stretching.

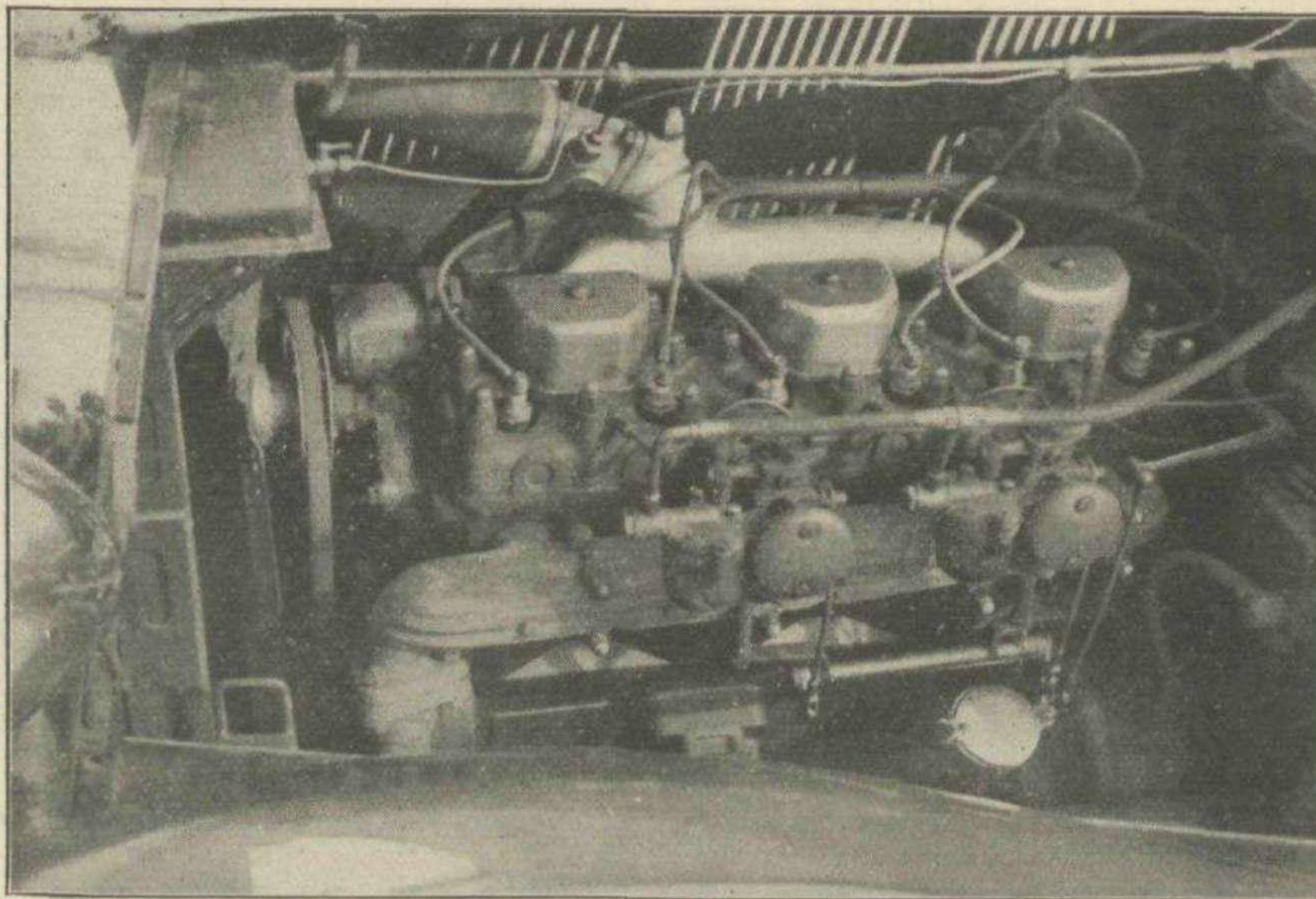
After satisfying ourselves that the Triumph was eminently suitable for all ordinary fast touring, we found ourselves compelled to drive the car really hard on a double journey totalling over a hundred miles, to keep an awkwardly timed appointment. It followed, therefore, that the accelerator pedal remained firmly down wherever road conditions permitted, but we were frankly astonished to find that over one section of quite difficult main road we had averaged nearly 50 m.p.h. The springing was firm without being harsh, and it was possible to corner with little regard to the fact that one was driving a stoutly-built saloon, but if continuous driving of this type were contemplated, the addition of friction shock-absorbers would probably prove beneficial.

Undersliding the chassis makes it possible to have a low floor line without complications, and access to the interior of the body is excellent by reason of the four wide doors. The seats are upholstered in soft leather over Dunlopillo cellular rubber, and everyone who rode in the car commented favourably on their softness and freedom from sway. The



The acceleration chart of the Triumph Vitesse Six.

front seats, which slide afford good support to back and thighs, though the back of the driving seat was raked back not quite as upright as one would like. The back was roomy, with a folding centre armrest, and the front seat cushions are clear of the floor, giving ample leg room without recourse to floor wells.



The Triumph six-cylinder engine which has overhead inlet valves and side-by-side exhausts.

The instrument board is fully equipped and the under-bonnet tool-boxes are convenient and spacious. With the windows down, a matter of seconds with the quick-winding handles, the sliding roof open and the scuttle ventilators in use, the Gloria saloon should be as airy in summer as it is warm in the icy blasts of spring, while the locker at the back provides luggage accommodation for an extended tour. The treatment of the rear part of the body is particularly successful, all springs and other chassis excrescences being concealed by the rear panelling, with a metal cover over the spare wheel. D.W.S. permanent jacks are fitted, and changing the rear wheels presents no difficulties.

As has been said, the new Triumph six-cylinder engine now has a capacity of two litres, but follows the previous design in having overhead inlet valves and side exhaust valves. A balanced four-bearing crank-shaft is used, with a torsion damper at the front end, and the engine is rubber-mounted at five points. Two Solex horizontal carburettors are fitted, with an S.U. petrol pump feeding from a 12½ gallon rear tank. Special coil equipment is used to ensure maximum efficiency at

high revs; the sparking plugs are accessible on the top of the cylinder head. A large exterior oil-filter is a welcome feature, and oil is fed by pressure to the big-ends camshaft and rockers.

The four-speed gear-box is mounted in unit with the engine, the drive being taken through a single-pate clutch, while a

free wheel is incorporated behind the gear-box. The final drive is through an open propeller shaft with needle-bearing Hardy Spicer couplings, thence to a spiral bevel back axle.

The chassis is of the usual channel section, with cross-members of similar type, and a cruciform member behind the gear-box. At the rear it is splayed out and passes under the back axle. Half-elliptic springs are used, and hydraulic shock-absorbers, those at the rear being mounted transversely. The efficient Lockheed hydraulic brakes operate in 12-inch ribbed drums. The electrical system follows orthodox lines, with the two six-volt batteries mounted on either side of the propeller shaft, and a battery master-switch as a useful safety measure.

The Triumph Vitesse Six strikes one as being a solid well-built car of many uses, equally suitable for fast cross-country journeys and week-day business calls. As a closed car it gives a high standard of comfort, while the open version which weighs 2 cwt. less and which is available at the same price, should commend itself still more strongly to the sporting enthusiast.

## SUPERCHARGERS ON HIRE PURCHASE.

In these days of financial stress the system of hire purchase has spread in all sorts of unlikely directions. The makers of Centric Superchargers have come to the conclusion that many motorists, particularly sports car owners, would like to apply a supercharger to their cars but

cannot afford the outlay of cash required. They have accordingly made arrangements whereby Centric Superchargers can now be obtained by deferred payments, spread over six or twelve months. For the latter period, payment for popular models varies between £2 10s. and £3

per month.

This is bringing superchargers within everyone's reach in actual fact, and full particulars can be obtained from Centric Superchargers, Ltd., Ribble Bank Mills, Preston, Lancs.



# A UNIQUE SOUVENIR

A NOVEL IDEA WHICH GIVES A NEW LEASE OF LIFE TO THE AUTOGRAPH HUNTER. THE WHITE SQUARES OF A CHEQUERED FLAG USED AS THE LEAVES OF AN "ALBUM"

## SOME DRIVERS AND THEIR CAREERS

**W**E have recently had the opportunity of examining something quite new in souvenirs. It is a chequered flag as used on the American speedways, with the black and red "Gilmore Lion" emblazoned across the centre. Each white square of the flag contains the signatures of various well-known American drivers.

This unique flag is in the possession of a motor-racing enthusiast, R. C. Walden, whose photographs and pictures of the sport, a huge album for each season, are well-known in this country. Walden must have the largest array of autographed photographs in existence, there being no fewer than 100 English and Continental drivers and 30 American. His latest acquisition, the autographed chequered flag, completes a remarkable collection.

Walden has kindly equipped us with some details of the various drivers who have signed the flag, and we reproduce some of them below:—

**Al Gordon.**—Age 32. One of the best drivers in the States. A.A.A. Pacific Coast Champion, 1933. Took a header over wall at Indianapolis in 1st lap, 1931, but escaped unscratched. Has great scraps with Kelly Petillo, arch-rival. Drives a Gilmore Special. In spare times runs a place called "Club Rendezvous" with Frank Brady, midget driver. Their club patronized by all "the boys."

**Carl Ryder.**—Three A driver at Ascot. Crashed sensationally short time ago. Front tire burst when coming out of curve into straightaway, pulled him into outside guard rail, up a 10 ft. dirt wall, through a solid fence, finishing upside down—4 ft. from the ambulance! Broke his leg 3 ins. above knee and cut his hand. Leg re-set at infield hospital, and now progressing favourably. Tough.

**Harris Insigner.**—Sensation of the season. After being also ran for long time has suddenly found his form with a brand-new Miller. Took Ascot by storm when he made fastest qualifying time, beat Al Gordon in the Helmet Dash (match race), took the main event and 50 laps in record time, chased home by Al Gordon, Rex Mays, Chet Gardner, Cole and Roberts. A man to watch.

**Bob Sall,** of Patterson, N. J., well-known Eastern driver. Age 29. Eastern champion 1933. Fifth in 1934. Wears glasses under his goggles. A dangerous rival when he has a good car.

**Chet Gardner.**—Long Beach driver. Fat, age 39. Big time driver for many years, with a great reputation on the Pacific coast. An Ascot favourite. Indianapolis has seen him annually since 1928.

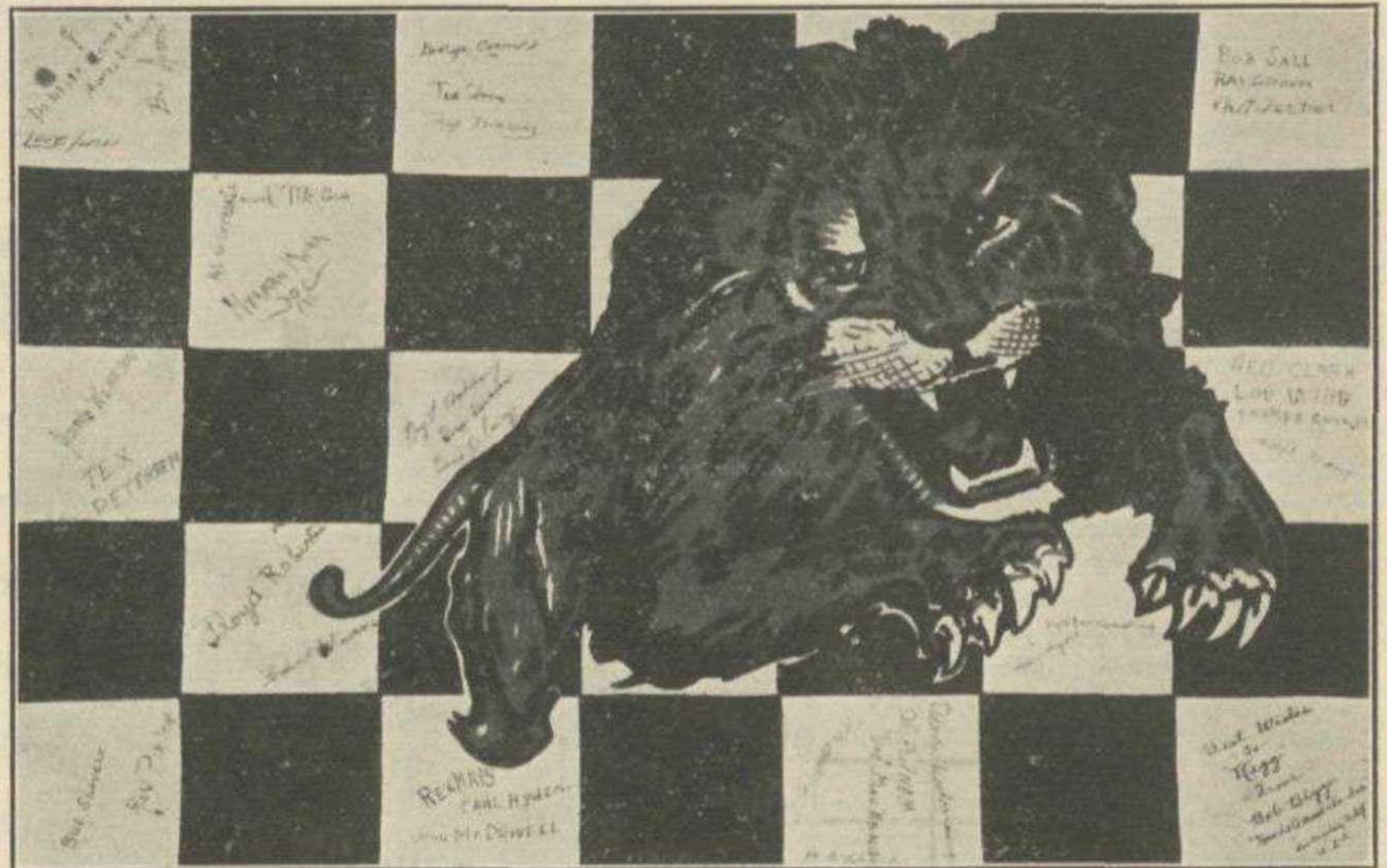
**Kelly Petillo.**—Nick-named "Knight of the Ridge Route," due to his holding a

record for trucks over a dangerous route in California. First big race Indianapolis, 1931, at wheel of 4-cylinder Miller. Now a top-notch. Daring as you can make 'em, and a constant source of worry to Al Gordon and Rex Mays. Italian by birth, which took place 31 years ago. Another Ascot favourite. Winner of \$3,500 Mines Field 200 miles road race on S. & W. Special, at 81.624 m.p.h.

**Floyd Roberts.**—Started racing in early Ascot days, when Ralph de Palma, Sig.

**Ted Horn.**—The colour-scheme exponent. Took winning award for the most pansy-looking car in 1934. Present mount called the "Atlas Chrome Special," official description "deep opalescent blue, offset by Chromium plating." Had a successful 1934 season in the East, driving Bill Razor's single o.h.c. Miller, the car with which the late Swede Smith held all Class B records at Ascot.

**Rex Mays.**—One of the best. West



This chequered flag, as used on the American speedways, bears the signatures of many well-known drivers. It is owned by Mr. R. C. Walden.

Haughdahl and "Fighting" Dave Koetzla were in their prime. Kicked out of Ascot and turned outlaw. Known then as the worst and toughest driver. Now a leading Ascot pilot, backed by Elwyn Holt, of San Fernando. Drives a Duffield Special, a flat head Winfield job, built by Jack Duffield. A wizard in making flat-toppers go fast. In 1934 drove Russ Garrant's No. 7 to many victories on  $\frac{1}{2}$ -mile and  $\frac{3}{8}$ -mile tracks.

**"Doc" Mackenzie.**—Son of Eddington, Pa, physician. Born adventurer. Took part in Red Lake, Ont., gold rush in 1926. Went by dog team and paddled 800 mile return journey in canoe. During the week is a steeple-jack, and works in a saw mill when he can't find any more steeples. Turned the Langhorne track 1 mile in 36 secs. flat, beating Wild Bill Cummings and the late Herman Schurch. While leading a race at Langhorne, just before the finish, his car burst into flames. "Doc" stuck to the cockpit and crossed the line before getting out. "Doc" all over.

Coast champion in 1932, driving Hispano Suiza motored job. Reminiscent of Lockhart. Swept the board in 1934 and won West Coast title again. So successful that Authorities ordered his engine to be checked (Ascot regulations allow a 205-in. motor and a 7 to 1 comp. ratio). Car found O.K. His "Rocker Arm Special" was a 4-cylinder B. Block model, fitted with Rocker Arm Head, built by Paul and Ed Winfield, of carburetter and cam fame, who guarantee 160 m.p.h. if car is taken to Murok Dry Lake. Mays has now swapped cars with Petillo.

**Johnny McDowell.**—Fast Ascot driver, but not fast enough for the law. Got mixed up in speed contest with a speed cop at Bell, Calif, with the cop hitting 75 m.p.h. in Ford Sedan. Johnny was getting away, so brave cop shot him in the shoulder. After Judge fined Johnny \$50 he suspended the cop. McDowell says he is not going to try it on with a small-town cop again. Apart from this, he makes the McDowell double o.h.c. racing head.





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# Letters from Readers

## British Racing Drivers

Sir,—I was very interested in the letter from Mr. Fleming, published in the March issue of MOTOR SPORT referring to Tazio Nuvolari, and whilst I endorse your correspondent's opinion of that great driver, I feel that I cannot let his fourth paragraph go unanswered, for I am quite sure that England could provide a driver of equal ability if only our men had the opportunity.

Mr. Fleming must bear in mind that English racing drivers are, in the main, composed of wealthy amateurs. We have no full time professional racing drivers such as the Continental firms employ, and provided with super racing cars with which to build up their experience and reputation.

Nuvolari in the past has been outridden, at a time when he was a motor cycle champion, by some of our own men, particularly W. L. Handley, and I recall that in your notes "Rumblings" of one of last year's issues, a contributor drew attention to the fact under a par headed "Watch Handley." To the lay mind this driver, fresh to car racing, attained no particular success last year, but to those who study our sport deeply "W.L.H." put up some great performances, spoilt by fickle fate only. Whilst writing I recall to mind the 1927 Motor Cycle Lightweight T.T. Race, when the Italian Guzzi machines were hot favourites, except that the critics again said "Watch Handley." Among the Guzzi drivers were two men who have since been classed as "Aces of Aces" in the car racing world. I refer to Varzi and the late L. Archangeli. The Italians decided that Archangeli should drive No. 21 Guzzi. Handley was on No. 22 Rex-Acme, and thus would start the race 30 seconds after Archangeli had left the line, and a most exciting duel was promised—"England versus Italy." The press said that they feared that Archangeli would set such a pace that "W.L." would crack up in an effort to catch No. 21, thus leaving Archangeli or Varzi to win for Italy. To the unbounded delight of the crowds Handley caught and passed Archangeli before the end of the first lap—so that the "leading astray" was reversed. Neither did Handley fail, but continued to win at record speed by a clear 8 minutes from Archangeli who finished second.

Our men have proved supreme in one field of road racing and given the opportunities I am sure they would repeat this success in car racing. I contend that our leading car drivers would be found amongst the rather exceptional few motor cycle aces. Our own Tourist Trophy Race of last year, when Dodson, another motor cycle crack, won, at his first attempt, from our own leading drivers, I think vindicates my viewpoint.

I am, Yours etc.,

THE LAD.

Birmingham.

## G. P. Formula Suggestions

Sir,—The new formula for Grand Prix racing cars is a matter which will have very far-reaching effects upon racing car development in the future.

May I be permitted to put forward my views which, perhaps, may be of interest in this most important matter?

(a) The chief object of Grand Prix racing must be progress in the design of every part of cars and engines. It is, therefore, absolutely essential that no restriction whatever should be placed upon the use of superchargers and special petrol, as is suggested in some quarters.

(b) If a limit to car speeds is desired, an engine limit of 2,000 c.c. should be imposed.

(c) It must not be forgotten that public interest is necessary to the financial success of race meetings, and cars must therefore be sufficiently rapid to attract spectators, in the same way that a Continental race does to-day. It is for this reason that I consider the suggested 1,500 c.c. limit as being too low.

(d) There should be no weight limits. Then the manufacturer would not be tied down to producing a car of a weight which he considered inconsistent with safety. The use of light alloys to obtain a high power/weight ratio, together with improvements in road holding, would result in great benefit to the touring car of the future.

May I again stress the importance of encouraging progress in the development of the motor car?

I am, yours etc,

JOHN BURNETT.

Birmingham.

Sir,—Since the time when the A.I.A.C.R. has to decide the new G.P. formula is approaching, I suggest an idea that should give the manufacturers plenty of scope in streamlining, supercharging and fuels—that is, limit the power-to-weight ratio.

WE welcome letters for publication in these columns. Letters intended for publication must be written on one side of the paper only and they may be signed with a nom-de-plume, but the name and address of the writer must be enclosed as a guarantee of good faith. No responsibility is taken for the views expressed by the writers. Letters intended for publication should be addressed to the Editor, Motor Sport (1929) Ltd., 39, Victoria Street, London, S.W. 1.

For instance, a car (maximum speed of 200 m.p.h., acceleration 60 m.p.h. in 15 seconds) weighing one ton would require a horse-power weight ratio of about 250 h.p. per ton, ignoring wind resistance; but since this makes a great difference at high speeds this would give the manufacturers a puzzle in streamlining.

Another method is the capacity ratio of, say, 5 litres per ton.

But the point is that a direct limit reduces the field of experiment for cars, while a ratio allows no more speed but more scope for large cars and small cars.

I am, yours truly,

"NO EXPERT."

## The Racing Car of the Future.

Sir,—First I must congratulate you on your very excellent article on the above subject.

Secondly, I thought that possibly my views as producer of one of the fastest production cars in this country, might be of interest.

There is so much controversy as to whether or not superchargers are going to be used on ordinary touring cars of the future that surely the success or otherwise of blown and unblown cars, competing on a fair basis, between each other in Grand Prix races should decide the question.

Obviously if engine size is fixed the blown car would inevitably win, therefore engine size should be left open.

The question now is how to bring the maximum speed of Grand Prix cars down to a safe limit while yet leaving the engine size unlimited. Surely the deciding factor must be fuel consumption. Then we might have a big unblown engine running neck to neck with a small supercharged engine, and everyone waiting breathless to see which would last longest before running out of petrol!

The question of refuelling during the race would be so difficult to check that no refuelling should be allowed at all. The cars would have to have big enough tanks to last the existing length of 500 kilometers, or the distance of the race should be slightly shortened.

One further point, various suggestions have been made as to the maximum or minimum weight limit. The point of Grand Prix races is to improve the touring car of the future. Certainly a minimum weight limit will not encourage skilful means of weight reduction.

The English are at present very backward in this respect, and it would be a good thing if we learnt by racing experience to make much lighter touring cars.

Presumably, therefore, the best designed car in every respect, whether blown or unblown, would win a race run on these lines, and much would be learnt by the exponents of both supercharged and un-supercharged engines.

Yours etc.,

A. M. SQUIRE.

Henley-on-Thames.



## A BLOWN 30-98 VAUXHALL

A NEAT INSTALLATION EMPLOYING A CHAIN-DRIVEN MARSHALL CENTRIFUGAL SUPERCHARGER.

**M**OST of us at one time or another have toyed with the idea of fitting a super-charger on a standard sports car, mostly with the idea of improving the distribution and power-output at low speeds; for any substantial rise in maximum power output is apt to be resented by big-end bearings and other highly stressed parts. Unfortunately, the standard types of supercharger, whether of the single or the twin rotor type, are costly in the larger sizes, and are not easily accommodated under the bonnet of the average car, while the supercharging effect is more than is really required in the case which we are considering.

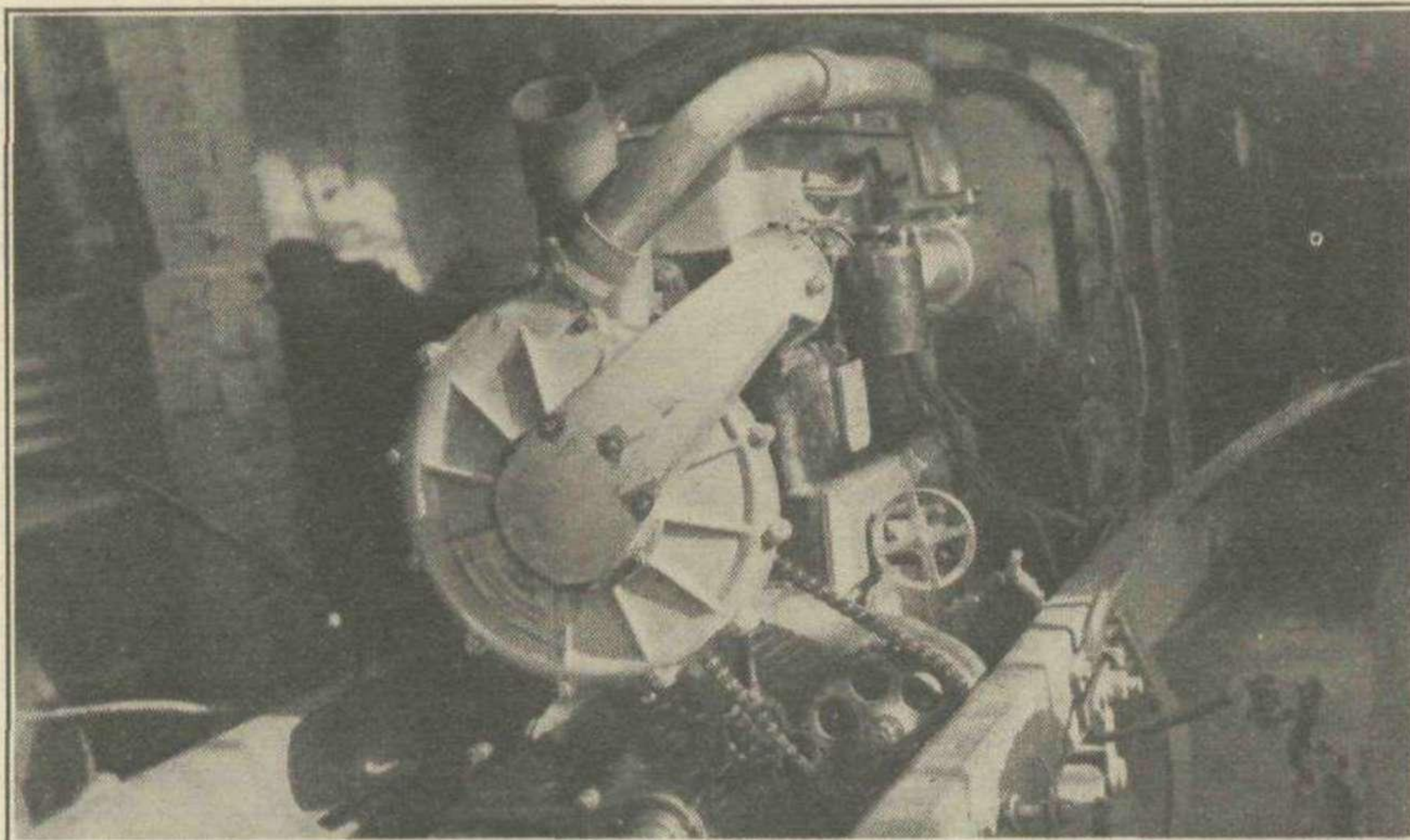
An interesting solution of the problem has been arrived at by Dr. R. A. Beaver, whose 30-98 Vauxhall has put many younger vehicles to shame on the Brooklands Mountain Circuit during last season. The engine had already been brought to the maximum efficiency obtainable on Ethyl, and develops some 115 h.p. and reaches something near the hundred mark in the short run from the Members Bridge to the Vickers Sheds. The next stage was either to raise the compression, which would have made the car unsuitable for road use, or to use a supercharger.

Dr. Beaver decided in favour of the latter plan and obtained one of the new Typhoon centrifugal blowers made by Marshall Superchargers Ltd., which cost £9 10s. 0d and blow at  $1\frac{1}{2}$  lbs. at 5,000 r.p.m. The Vauxhall runs up to about 4,200 r.p.m. and the blower runs at  $2\frac{1}{2}$  times engine speed. At maximum revs a supercharge pressure of about 3 lbs. is expected, while the horse-power should be in the neighbourhood of 150.

The blower is only four inches deep, and so it was found possible to find room for it between the radiator and the front of the engine. It is supported on a cage-like structure of steel rods, bolted on to the

fan mounting, and the water pump is now accommodated inside the cage and driven from the spindle of the supercharger. The latter is driven by roller chain from a sprocket mounted on the fan-belt drive-shaft, and runs at just over twice engine speed.

before the first Brooklands Meeting, so it will probably not be possible to get the job completely "au point" before its first public appearance. A remarkable thing about this ten-year old car, with its  $4\frac{1}{2}$ -litre engine, is that its total weight is only 26 cwts., comparing favourably with



*The centrifugal supercharger installed on the Vauxhall. The chain drive layout is notably direct and simple.*

The original induction pipe is used, but in an inverted position. One of the greatest problems was to find a suitable carburettor, since the aeroplane-type vertical Zenith could not be adapted to the horizontal intake of the blower, but in the end a horizontal R.A.G. has been pressed into service. Unfortunately, the job was not completed until a short time

many of its contemporaries of half the capacity.

The installation of the supercharger was carried out by Messrs. West and Chittendon of 306A, Walworth Road, S.E. 17, who, it will be remembered, also constructed the interesting Lambda-Dilambda combination mentioned in these pages last year.

### Lagonda Reconstruction.

Following on the encouraging figures for the last year's trading, comes the news that Lagonda, Ltd., have materially strengthened their finances by the completion of an arrangement with an influential private syndicate.

The syndicate will be strongly represented on the Board of the Company, and will take an active interest in its management and policy. The present officials of the Company will remain unchanged, and the policy of production will be continued with the current range of models.

### Circuit of Bray Preparation.

The successful Cuairt Bhré, or Circuit of Bray Race, will be held once again this year by the Irish Motor Racing Club. It will take place on Saturday, 18th May, over 40 laps of the Bray Circuit, which measures 3 miles 345 yards. The total distance will be approximately 128 miles.

The race is a handicap event, and is open to any type of car barring saloons or coupés. The question of removing the mudguards from sports models is left to the discretion of the entrants. Any type of fuel may be used, but all special fuels, as opposed to standard fuels on sale to the public in the ordinary way, must be specified as to their ingredients on the entry form.

There will be one official practising day, on Thursday, 16th May, between the hours of 5 a.m. and 7 a.m., when the course will be closed to other traffic. All entrants must complete three practice laps, one of which must not be slower than 40 m.p.h. The race itself will start at 3 p.m., on Saturday, and the cars will be sent away in groups, according to their handicap times. The handicap, incidentally, will be by a combination of credit laps and time allowances.

Entries, at £7 per car, must reach the offices of the organisers at 1-2, Foster Place, Dublin, not later than mid-day,

April 27th. Team entries, at £3 3s. 0d. per team, will close on the same day. No entries after this date will be considered, whatever the circumstances may be.

A goodly array of awards and cash prizes has been amassed, and the cash figures given below represent a minimum for each award. It is hoped to increase these, and further information on this point will be available at a later date. The winner will receive the Meath Trophy (perpetual), and Replica, together with £50. The second and third finishers will receive £30 and £20, respectively.

An interesting award is the O'Boyle Trophy presented by Mr. Frank O'Boyle, the Irish driver, and replica, which will be awarded to the best Irish-born and Irish-resident competitor. A similar award, called the Manby-Colegrave Trophy and presented by Mr. G. F. A. Manby-Colegrave, will be contested in the Phoenix Park races, run by the Irish Motor Racing Club later in the season.



## A DAY OF FAST MOTORING

TWO ENTHUSIASTS SHOW THAT THE DAY OF THE AMATEUR RACE-DRIVER IS NOT YET PAST.

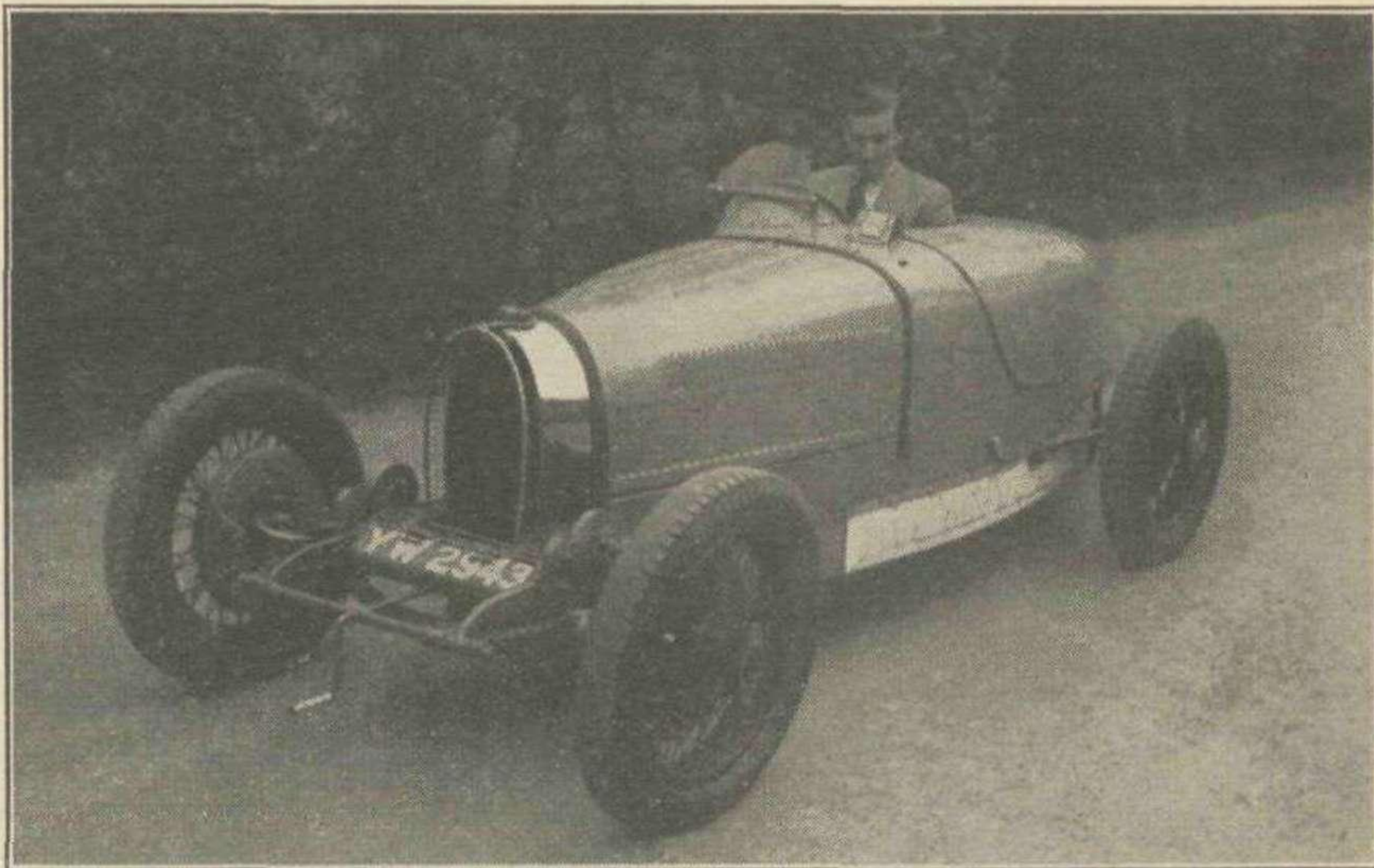
**M**OTOR racing with an inexpensive car can be made to pay for itself, provided one is prepared to tackle the job in the right way. That is a statement which should bring fresh hope to those who only have sufficient money to go in for the game in a small way. We had it last month on the authority of two enthusiasts, Miss Eileen Ellison and Mr. T. P. Cholmondeley Tapper, whose white 1½-litre Bugatti has been seen frequently at Donington, Brooklands and other meetings in England and abroad during last season.

Miss Ellison bought the car originally with the idea of using it for fast touring, and covered some thousands of miles three up, the third member of the party having a thin time balanced on a cushion on the edge of the body. Tapper drove it in a Cambridge speed trial at Kimbolton, while the pair of them had a chilly but enjoyable run in the first R.A.C. Rally. Tapper, by then, had started to learn the mysteries which govern the performance of the Bugatti engine, and in the intervals of indulging in his other great enthusiasm, that of skiing, worked on the car and brought it up to racing pitch ready for the 1933 season.

This was the year that the Donington circuit opened, and the car made its first appearance in "serious" racing at the opening meeting. During the winter the dipper oil-feed to the big-ends had been scrapped in favour of the pressure system,

this in a subsequent race. In the August meeting Tapper made his first acquaintance with the Mountain Circuit, and won

Between these events two trips to the Continent were made, one to the Kesselburg hill-climb in Bavaria, and a second



Mr. Cholmondeley Tapper in the rebuilt 1½-litre Bugatti. The car is now fitted with the latest large-diameter brakes.

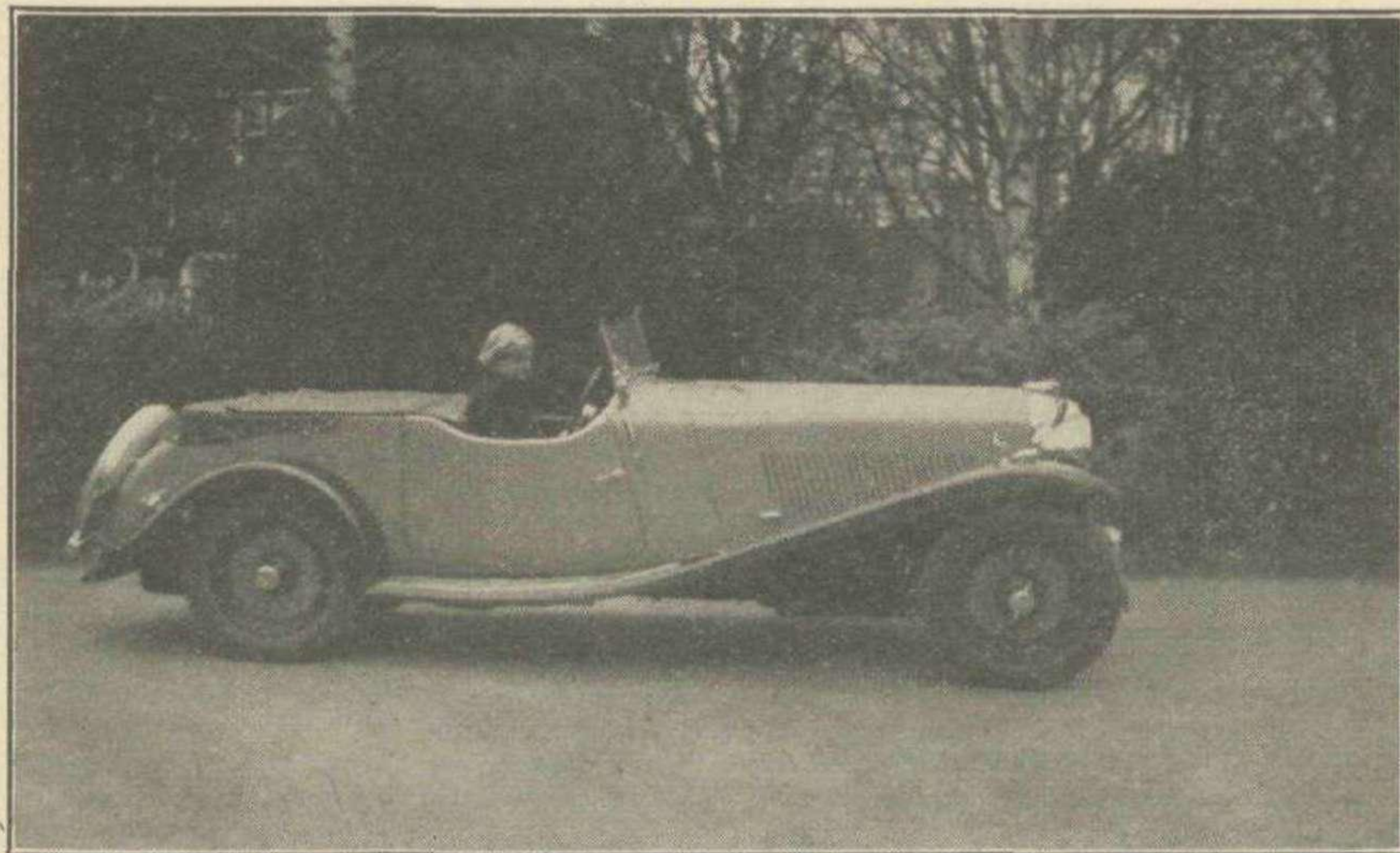
the Senior Handicap in a well-contested race at 63.44 m.p.h.

For 1934 a more extensive programme

in August, when the Bugatti was entered in the Grosser Bergpreis at Freiburg, the Klausen hill-climb, and the 1,500 c.c. class in the Swiss Grand Prix. The Bugatti was towed all the way out to Central Europe and back, Miss Ellison, her brother, and Mr. Tapper taking turns at absorbing the grit and mud thrown up by the back wheels of the Lancia, while the unit made itself to some extent independent of hotels by carrying a tent on board.

The same procedure was adopted at the hill-climbs, the two drivers taking turns as to who should take up the racing car. At the Klausen climb Miss Ellison drove the Bugatti and finished third in the 1½-litre racing class, and also the ladies' prize; while Tapper was a little embarrassed by having to drive up the Lancia in the sports category surrounded by 2.3 Alfa-Romeos. The climb is in all 14 miles in length, and the cars are started at half-minute intervals, so the drivers of the slower cars have to keep a close look-out in their driving mirrors or they are likely to get bumped into from behind.

Tapper drove the car in the German hill-climb Grand Prix at Freiburg, and considers this the most difficult of the three courses he attempted, for the road is just a succession of corners with a treacherous surface in many places, while to qualify one had to get within 20 seconds of the class record, which stood at about 10 minutes. The only "flat" race in which the car appeared was the Swiss Grand Prix, where it came in eighth, three minutes behind Seaman on the Magnette, a highly creditable performance, considering that all the other cars were supercharged, while nearly a lap was lost at the beginning of the race through the car



Miss Ellison at the wheel of the Lagonda Rapide which she will drive in the Italian 1,000 Miles Race.

and this extra supply of oil gave some trouble the first time out, but at the second meeting the car was in much better fettle, and Tapper scored a second place in one race after a fine tussle with Aldington on a Frazer Nash. At the Whitsun Brooklands meeting that year ladies were allowed to drive in Outer Circuit races for the first time, and Miss Ellison came second in a "Short," and Tapper repeated

was planned, and the "Scuderia" invested in a £15 Lancia for towing purposes. Tapper had put in some more tuning during the winter, and captured another second place in a Brooklands Mountain meeting, two seconds at the second Donington meeting, the 25 mile handicap being run at a speed of 59.6 m.p.h.; and two third places at the third meeting, his speed for the 3-litre race being 60.83 m.p.h.



*A DAY OF FAST MOTORING—continued.*

conking out on the starting line. The car had a final fling in more than one sense at the October Mountain meeting at Brooklands, when one of the clutch bolts gave way as Miss Ellison was lying third in the ladies' race. This is the only mechanical trouble which has occurred since the car has been raced, a state of affairs rather different from the experience of other drivers of the earlier models, so when we received an invitation to see the car in its new guise as a super-charged racer the offer was readily accepted.

The journey up to Shelford, near Cambridge, was quickly accomplished in a Lagonda Rapide, about which more later on. We were soon at the shed in which the Bugatti lived, and on the way there we put some questions to Mr. Tapper as to the reliability of the four-cylinder G.P. type, and the alterations required in changing it into a "37a," as the super-charged version is officially termed.

"Except for the oiling trouble at the beginning, and the pulled clutch bolt, we have never had a moment of mechanical trouble," was the reply. "One of the most important things to my mind is to warm the car thoroughly before it is driven hard, and I always give it a full hour's running before the start of a race. Another essential matter is to keep down to the rev. limit of 4,500 r.p.m., and in a strenuous race such as the Swiss Grand Prix I found 4,200 quite enough. If you take it above the limit you are liable to have expensive noises." Our own memories of Shelsley confirmed this.

"We do all the work on the car ourselves, and last season we found the starting and prize money we received on the Continent just balanced our expenses. This year there are many more 1½-litre races, and now we've got the supercharger fitted, we should stand a much better chance. Maximum speed? Oh, I never like to drive cars flat out; I feel it is being rather unkind to them, but keeping to the safe rev. limit it should be about 115 m.p.h."

The Bugatti factory wanted about £250 for a new blower, a state of affairs which at first seemed to make the conversion out of the question, but one day, visiting the experimental department of a motor factory, Tapper came across the very thing he was after, an almost new Type 37a, which had been taken to pieces and put together again so unsuccessfully that it would not even run. He purchased the whole outfit for a small sum, and working all through the winter has completely rebuilt the white car, which now, by the way, has been painted the well-known shade of blue, and is ready for the new season's racing.

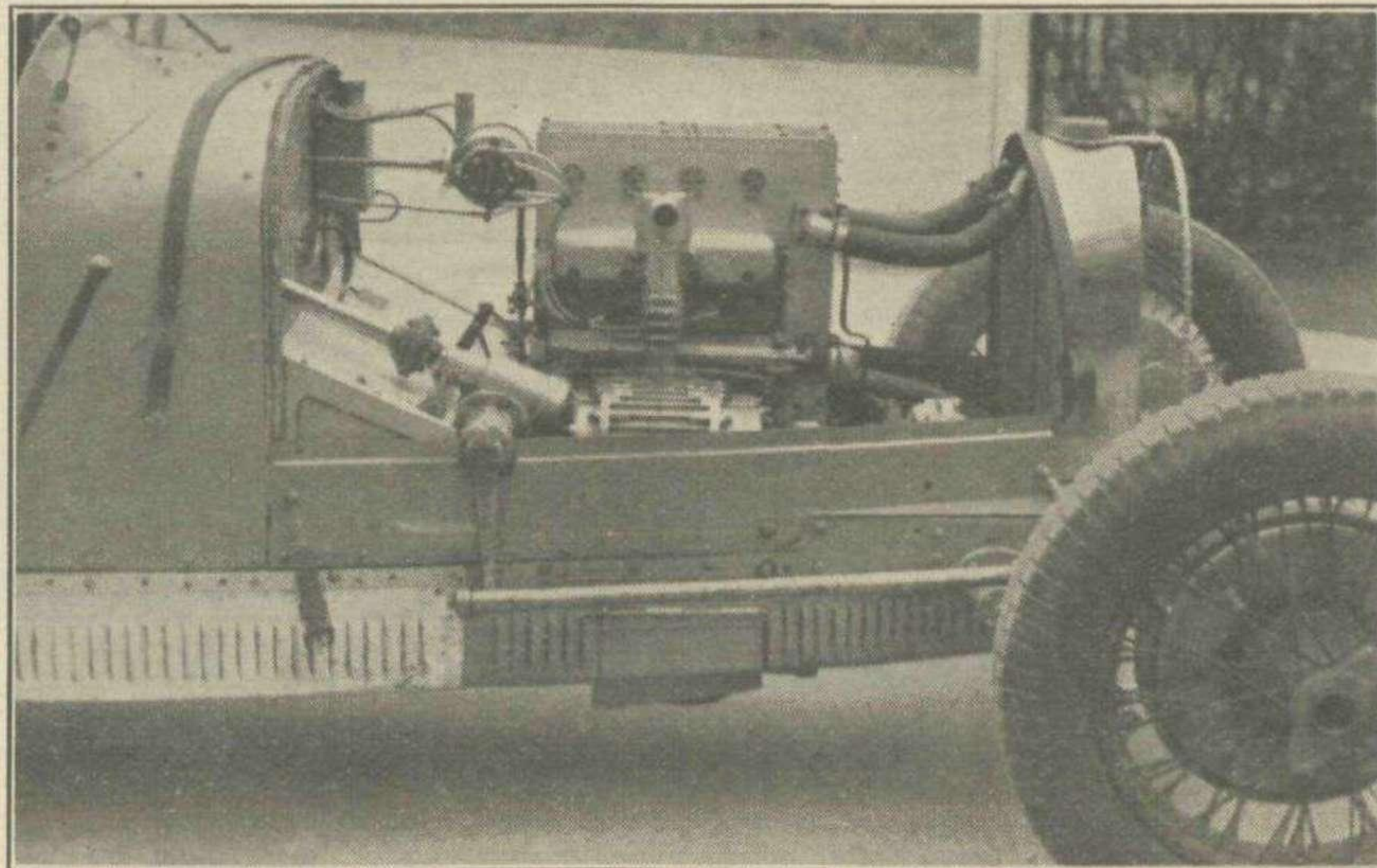
Details are now available of the forthcoming City of Rio de Janeiro Grand Prix, which is scheduled to take place on June 2nd. The organisers of this event are the Automobile Club of Brazil, under the auspices of the Department of Tourism of the Federal District of Rio de Janeiro.

The race will be held under A.I.A.C.R. rules, and will be held on the Gavea Circuit, which measures 11 kms. 160. The total distance of the race will be 20

A type 40 Bugatti has been bought to replace the Lancia as the towing car, and at the time of our visit the engine was being stripped down and overhauled. The cylinder-block, the beautifully made five-bearing disc crankshaft and other parts are interchangeable with the racing car, which is a considerable asset, while the car is a good deal livelier than the Lancia. "This year we mean to tow the racing car on a trailer, which will make travelling a good deal more comfortable, while the old Type 40 will be quite amusing to drive in hill-climbs for whichever of us is not handling the racing car. We plan

fast stretches of the Great North Road, with no sound other than that of the wind whistling by. Fortunately the run took place before the 30 m.p.h. limit came into operation, but driving with due discretion when the built up areas of London were reached, we found that without any attempt at fast driving we had covered the 56 miles from Shelford to Marble Arch in just the hour.

Mr. Cholmondely Tapper's profession and hobby is that of ski-racing, and before we left we were interested to have his comparison of the snow sport and that of the road. "There is nothing to com-



*Neatness personified—the 1½-litre Bugatti engine.*

to run at the Kesselberg, Freiburg, Zugerberg and La Turbie Hill Climbs, and at the Eifel, Avus, Picardie, Albi and Swiss Grands Prix."

"What about the Rapide?" we asked. "That we are going to drive in the Mille Miglia, the Belgian 10 hour race, and possibly in the Targa Abruzzo. We have been trying it on long journeys all round England, and it covers the ground in the most amazing fashion, and is yet so high-g geared that we can't conceive of it giving any trouble."

When the time came to return home, we took particular notice of the road and engine speeds, and found that at 2,000 r.p.m. the speeds in third and top were respectively 45 and 60 m.p.h., and since the maximum is 4,000 r.p.m. there is not much cause for complaint in this direction. The car sailed along effortlessly at between 80 and 90 m.p.h. on the

pare with shooting down a steep slope on ski. You must be doing close on 80 sometimes, with nothing to preserve you from disaster but your own sense of balance. Still we have two excellent cars this season in the Bugatti and the Lagonda and though touring the roads of England on an ordinary car seems pretty dull after the fortnight we just spent in Switzerland, we should get all the excitement we want when the season opens."

This seemed a fitting close to a day's fast motoring, so we withdrew pondering thoughts of whether to raid Junior's money box, or perhaps to stage a little snatch and grab raid to finance our entry into motor racing. Certainly if the initial capital is there, and the skill to make the best of one's car, racing can be had for small expense. We shall have to look round and see what can be done about it.

### ROLLING DOWN TO RIO.

laps or 223 kms. 200.

Last year the race was keenly contested by 38 drivers, and vast crowds lined the course. The event was considered of such importance that the President of Brazil attended as an interested spectator, as well as Secretaries of State and members of the Diplomatic Corps.

The Automobile Club of Brazil are anxious that the race, which constitutes an excellent means of propaganda for

foreign makes of cars, should become well-known in racing circles in order that the highest possible standard of driving may be attained. They have therefore offered an impressive list of awards. Besides objects d'Art and gold, silver and bronze medals, money prizes to the value of 100,000 dollars, or £1,660 will be awarded to the successful drivers. The first man will receive £1,000, the second £330, third £165, fourth and fifth £82, approximately.



## THE DE NORMANVILLE SAFETY GEAR-BOX

A CLEVER DESIGN WORKING ON THE EPICYCLIC PRINCIPLE, AVAILABLE AS AN EXTRA ON LARGER HUMBER MODELS.

**I**N the history of invention it frequently happens that two men striving to improve the same piece of apparatus will make use of the same principles, but the finished products each show advantages of their own. One pattern of epicyclic gear-box, the pre-selective self-change pattern, has now been available for British motorists for several years, but it remained for Captain de Normanville, whose name has been closely associated with motoring matters since the beginning of the century, to produce a "direct-acting" design, in which the gears are selected only as and when required. The de Normanville gearbox has been the subject of very strenuous tests throughout Europe, culminating in a trans-Sahara expedition in which the total weight of car and its associated trailer amounted to over three tons. It came through all these tests without the slightest trouble, and is now quoted by the Humber Company as an optional extra on the 16/60, Snipe "80" and Pullman models, priced at £30.

The usual epicyclic gear-trains are used for the three indirect gears. Top gear is a direct drive through a tapered Ferodolined cone, and in this ratio the gear-trains are locked and rotate as one unit. Very high efficiencies are claimed in the indirect gears, 99 per cent. being obtainable on third.

The principal novelty of the invention lies in the fact of using hydraulic power to lock whichever train is required. A simple double-plunger pump worked from the input shaft forces oil to one of four plungers, and these, which are fitted with wedge-shaped shoes engage in grooves on the trains. No adjustment is required, for any slight wear is compensated for by an increased movement of the plunger. A positive method of disengaging the top gear cones is employed, and a spring-loaded hydraulic reservoir stores up sufficient energy to make eight changes of gear without starting the engine.

A single-plate clutch of normal design is interposed between engine and gear-box, and is so linked up that the gears cannot be changed until it is freed. This relieves the brake shoes from all strain except that of bringing the trains to rest, while the clutch itself may be used for manœuvring in the ordinary way.

The control lever is mounted in the centre of the steering column, and an unusual feature is the provision of two neutral positions. When the lever is in position "N" the clutch is held out, and all the components in the gearbox come to rest, preventing the rumbling sound often experienced with self-changing gear-boxes not preceded by some form of "traffic-clutch." The other neutral position, marked "C" or coast is placed

above top gear, and simply frees all ratios in the box, and allows the car to "free-wheel" at will.

The de Normanville gearbox is handled in exactly the same way as the conventional "clash-type" except that double-clutching is never required. The clutch is depressed, the hand-lever moved to position "I," and the car moves off when the clutch is re-engaged. To engage second gear the clutch is again depressed, the hand lever moved again, and when the clutch comes up again the car is in second gear.

We drove a short distance in a 16-60 Humber fitted with the new gear, and were delighted with the almost instantaneous yet perfectly smooth change, which gave this sturdily-built touring saloon almost the performance of the "Snipe."

The clutch action is no heavier than that of the normal single-plate device, since the power required for locking the trains is derived entirely from the oil pressure stored in the gearbox and altogether this new departure on the part of the Humber Company makes a valuable contribution to the world of motoring.

An interesting illustrated booklet showing the internal construction of the gearbox may be obtained from the Humber Company of Coventry, or from the London agents, Rootes, Ltd., Devonshire House, Piccadilly, W. 1.

## CHRYSLERS MARKET OPEN SPORTS CAR FOR 1935

AIRFLOW AND OTHER CLOSED MODELS CONTINUED WITH SLIGHT ALTERATIONS.

**F**IVE or six years ago Chryslers were probably best known in this country for their smart-looking two-seater "roadsters," but since that time the policy has been to concentrate more and more on the closed car. It was a welcome sight therefore to see at the recent Trade View at the Kingsway Hall an open sports car, christened the Wimbledon Sports tourer, on the six-cylinder Wimbledon chassis, and priced at £365.

This chassis, fitted with a 3,296 c.c. engine, rated at 23.4 h.p., a synchro-mesh three-speed gear-box and hydraulic brakes and fitted with a light open body built by the Real Carriage Works of Ealing,

should have an excellent performance. The body has two wide doors, large bucket front seat with pneumatic upholstery in front and a particularly comfortable and roomy rear seat with ample room for three passengers. The rear panel swings down to reveal a spacious luggage boot.

The Richmond six-cylinder and the Kingston Eight continue with little alteration, but the body lines have been altered to give a body form more closely approaching the streamline form of the Airflow. The latter series fitted with either six-cylinder 28 h.p. or eight-cylinder 34 h.p. engines show some

alteration in radiator and bonnet design, and improved accessibility to the engines is obtained by the use of a wider hinged top panel.

Interesting technical points are the use of independent front springing on all but the low-priced Kew and Wimbledon models, and the special overdrive gearbox available on the Airflow models. The revised prices are:—Kew Six £289, Airglide Wimbledon Six £359, Airglide Richmond Six £429. The Airflow models cost £510 for the Six and £595 for the Eight, with an extra charge of £40 for the overdrive gear.

## HUDSON ANNOUNCES "ELECTRIC HAND" GEAR-CHANGE

INCREASED POWER OUTPUT ON ALL MODELS, WITH REDUCTION IN PRICES.

**E**ASY gear changing is a problem which is still engaging the attention of engineers on both sides of the Atlantic, and the latest development from the "other side" is the Electric Hand mechanism standardised on the latest Hudson cars. A tiny lever operating in a miniature gate alongside the steering is electrically coupled to valves, and these in turn control vacuum cylinders which

shift the ratios in an orthodox sliding pinion gear-box. The electric control can be cut out at will, and the gear-box manipulated in the ordinary way by means of a detachable centre gear-lever of the usual type.

Both Hudson's and the cheaper Terraplane cars have Axleflex independent front-wheel springing, improved in detail this year, anti-roll stabilisers, and more

powerful brakes, while the power output of all the engines has been further improved. The basic prices are: 16.9 h.p. Terraplane Six Standard Saloon £299; 21.6 Terraplane Big Six Saloon de Luxe £335; 21.6 Hudson Big Six Saloon de Luxe £360, and 28.8 h.p. Hudson Eight saloon £399. The open sports car on the Terraplane Big Six costs £310 and that on the Eight £385.



## WHAT HAPPENED AT PAU

A COMFORTABLE TRAINING CANTER FOR THE SCUDERIA FERRARI. BOUCLY CRASHES IN PRACTICE, FINE WEATHER AND GOOD ORGANISATION.

TO run a Grand Prix motor race in February, even in the South of France, is a fairly risky business. The last time the A.C. Basco-Béarnais organised the Grand Prix de Pau a heavy snowfall made the conditions most unpleasant both for drivers and spectators alike. On that occasion Marcel Lehoux piloted his Bugatti to first place in a blinding blizzard, after tragic Guy Moll had led for the first part of the race. That was in 1933. Now, in 1935, the race has been revived and turned out to be a first-class success.

The circuit of Pau is an interesting one, combining a variety of gradients, corners and curves all in the short space of 2 km. 769—slightly shorter than Monaco. Nuvolari said it reminded him of the Naples circuit. The race was held over 80 laps, a total distance of 221 km. 520. Owing to the narrowness of the road only 14 entries were accepted, which resulted in some of the lesser known French amateurs being turned away.

The original entry list consisted of Bugattis in the hands of Boucly, Lehoux, Delorme, Veyron, Cazaux, and Leoz, Maseratis to be driven by Brunet, Ruesch, Etancelin and Soffiatti, Alfa-Romeos in the names of Nuvolari and Dreyfus, and a solitary Nacional Pescara entered by Zanelli. About a week before the race, however, Boucly's 2.3 Bugatti blew up so mightily that he was doubtful of being able to repair the damage in time. His number was therefore issued to the first man on the waiting list, Falchetto (Maserati). At the last moment Boucly managed to get his Bugatti going once more, and the organisers, as a sporting gesture, allowed him to run, bringing the total up to fifteen.

The first practice session revealed several interesting features of the competing cars. Nuvolari's Alfa-Romeo, for example, was fitted with reversed quarter-elliptic springs at the rear, *à la mode de Molsheim*. It seemed to hold the road slightly better than Dreyfus's *monoposto* with normal Alfa springing. Nuvolari, by the way, looked rather nervy, but he made the fastest lap of the day in 1 min. 53 secs. Dreyfus, the second Ferrari representative, was driving an Alfa for the first time, and clocked 2 mins. 2 secs. Lehoux made second fastest time in 1 min. 58 secs., there being a rumour that his by-no-means new Bugatti had a self-changing gearbox. Cazaux's Bugatti had an unusual radiator, which is to be the distinguishing mark of the Cazaux-Girod *à curie*. Another Bugatti driver, the Spaniard Genaro Leoz, nearly came to grief when a rear wheel broke away. Zanelli's Nacional Pescara was a butt for

a lot of criticism, owing to its generally unprepared condition. Hans Ruesch telephoned to say that he would be unable to start in the race, as he had come to a deadlock with the customs authorities on the Franco-German frontier about his Maserati. Etancelin and Veyron both had mechanical trouble.

The next day Nuvolari again demonstrated his classic qualities by lapping in 1 min. 53 secs., while Dreyfus got down to

in front of the grand stands. He left braking until too late and slithered across the road straight into a private car which had been carelessly left there by an official of a French motor club. Boucly was shot out of the cockpit, and was removed to the hospital on an ambulance. Fortunately, he was not seriously hurt, and the doctors said he would be out and about in a few days.

There might have been a wholesale slaughter of spectators, for they all rushed across the road to Boucly's crashed Bugatti, regardless of the fact that other cars were approaching at high speed.

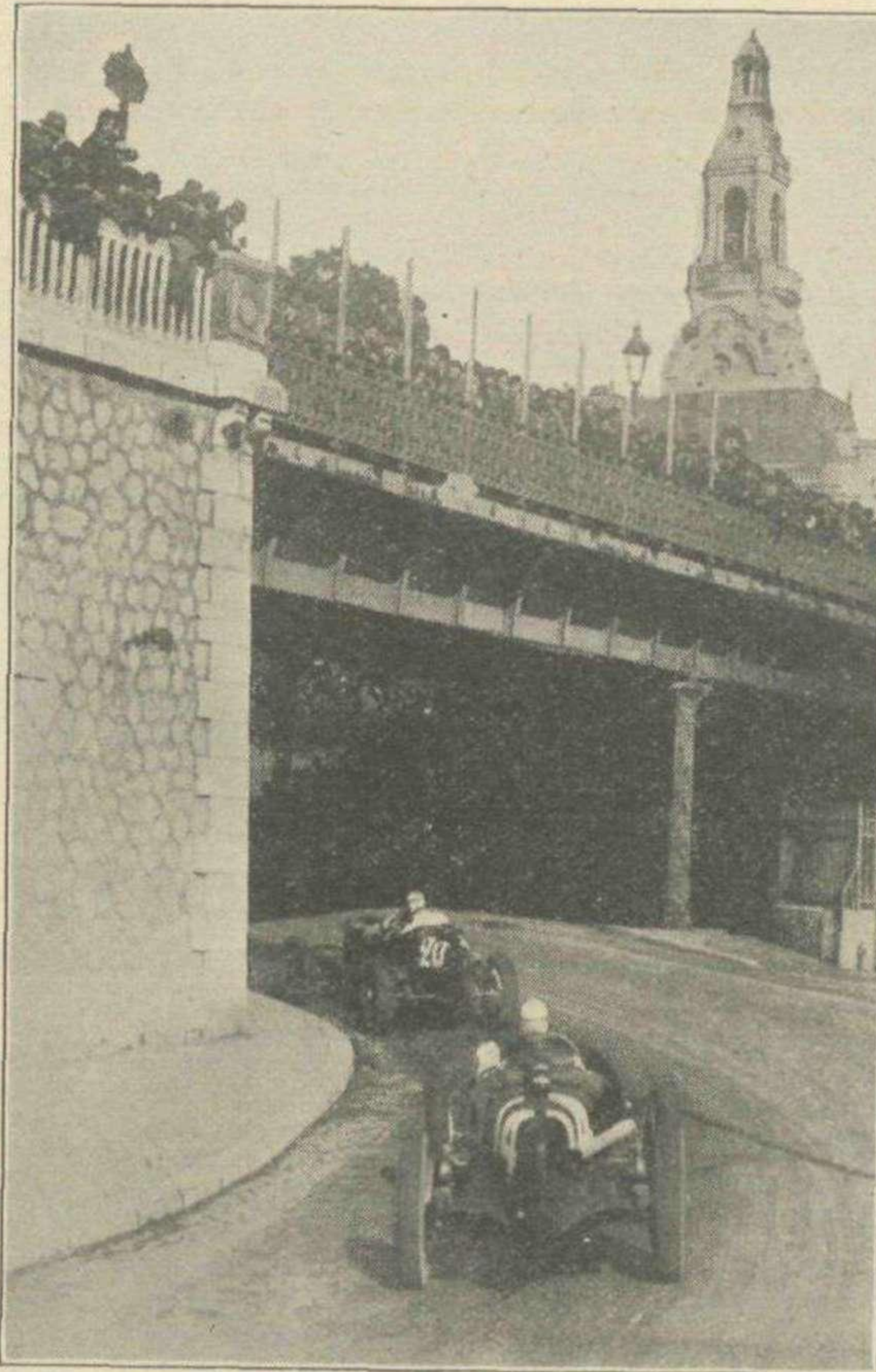
On Saturday night the sky became overcast, and a hail-storm broke out over the city. But after heavy rain all night, to the relief of everyone concerned, Sunday the 24th was a beautiful day, and a vast crowd assembled; many coming from Bordeaux and Toulouse. Starting positions were determined by practice times, with the result that Nuvolari and Etancelin were placed in the front row. The latter's mount was the same car with which he raced last season, as the new Maseratis of the Scuderia Sub-Alpina are not yet ready. Behind these two came Lehoux, Soffiatti and Dreyfus, with the rest spread out in twos and threes.

Little Marcel Lehoux jumped into the lead at the start, and was still there at the end of the first lap. Then, one after another, Nuvolari, Dreyfus and Etancelin all gradually passed him, until on the eighth lap the Algerian was lying fourth. Nuvolari and Dreyfus were taking it easy, having the measure of everyone in the race. Etancelin continued the chase for twenty laps, when his oil pump gave out and he was forced to retire. On the 18th lap Nuvolari allowed Dreyfus to take the lead, and the two beautifully prepared Ferri cars continued their effortless course.

A good battle was being waged for third place. Falchetto had passed Lehoux, but the latter managed to regain the position on the 21st lap. For several circuits they had a wonderful scrap, which quite overshadowed the leading Alfa-Romeos, and then Falchetto pushed his Maserati ahead of the Bugatti once more. The duel continued until the 32nd lap, when Lehoux came to a standstill at the Virage du Lycée, on the far side of the course.

At half distance (40 laps) the order was:

1. Dreyfus (Alfa-Romeo), 1h. 19m. 9s.
2. Nuvolari (Alfa-Romeo), 1h. 19m. 11s.
3. Falchetto (Maserati), 1h. 20m. 23s.
4. Brunet (Maserati), 1h. 21m. 15s.
5. Soffiatti (Maserati), 1h. 21m. 42s.
6. Leoz. (Bugatti).
7. Cazaux (Bugatti).
8. Delorme (Bugatti).
9. Mlle. Hellé-Nice (Alfa-Romeo).



Scuderia Ferrari in the lead. Dreyfus and Nuvolari occupied these positions for practically the whole race, but the latter went ahead five laps before the end to win the first big race of the season.

1 min. 55 secs. Etancelin had rectified the misfiring of his Maserati, and equalled Dreyfus's time. The engine had been taken down during the preceding night, and it was decided to make still further adjustments on the night before the race. Lehoux went out with the intention of taking things quietly, without attempting to beat his best time of the day before. As it happened, he fell in behind Nuvolari and Dreyfus, and in tailing them round the course he clipped a second off his personal record, clocking 1 min. 57 secs. Soffiatti was a second slower, and Falchetto a second slower still. Just before the end of the session Roger Boucly roared down the Avenue du Bois Louis to the corner



WHAT HAPPENED AT PAU—continued.

Soffiatti was the next man to warrant the attention of the crowd, which, incidentally, was estimated to be 20,000 strong. He set himself the task of catching Brunet, on a similar car, and gradually cut down the distance between the two cars. For a long time Brunet managed to stave him off, but a recent illness began to make itself felt, and the Frenchman showed signs of fatigue. Added to this, his plugs began to wilt. Soffiatti nearly caught him, but a bad skid put him right back. On the 56th lap Soffiatti achieved his purpose, and set off in pursuit of Falchetto, who was under the impression that he was a safe "third" for the rest of the race.

Falchetto's brakes were not too good, due to the rough treatment they always receive at the hands of their brusque owner. Soffiatti crept nearer and nearer, but it was not until two laps before the end that he scraped past Falchetto, who had lost one of his shock-absorbers. They were so close together at the finish that they collided after crossing the line, without damage.

Five laps before the finish Nuvolari suddenly put on speed, and passed his team-mate, René Dreyfus. Tazio gave the crowd a real thrill for the last five laps of the race, giving of his very best and bringing the lap record down to 1 min. 52 secs. (89.23 k.p.h.). He took the last curve past the stands in that characteristic slide which no other driver can quite equal.

Followed the Italian national anthem, wild scenes of enthusiasm, and the usual failure of the *gendarmierie* to prevent the crowd from attempting suicide by running all over the road. One day there is going to be such a massacre. . . .!

A word or two about the remaining competitors. Veyron's Bugatti got frightfully hot on the very first lap, and he was

7½ minutes at the pits trying to cure the trouble. On the 13th lap he gave up for good, with a recurrence of the same trouble. Zanelli experienced a complete

some time, while Mlle. Hellé-Nice and Jean Delorme were never far apart for the whole race.

H.N.



The finest sight in the world! Here is the massed start at Pau, with Lehoux (Bugatti) drawing away from Nuvolari (Alfa-Romeo), the ultimate winner.

failure of his right-hand rear brake, and retired early in the race. Etancelin and Lehoux, those old rivals, both came to an involuntary stop on the same corner. The former had a broken oil-pump, but the Bugatti's trouble was not so easy to diagnose. These were the only retirements, and all the rest were classed in the final list, albeit some of them were flagged off before completing the full distance. Leoz and Cazaux had a good scrap for

PAU GRAND PRIX.

80 laps of 2 km. 769—221 km. 520.

1. T. Nuvolari (Alfa-Romeo), 2h. 38m. 19.8s., 83.964 k.p.h.
2. R. Dreyfus (Alfa-Romeo), 2h. 38m. 46s.
3. G. Soffiatti (Maserati), 2h. 42m. 10s.
4. B. Falchetto (Maserati), 2h. 42m. 12s.
5. R. Brunet (Maserati), 1 lap.
6. R. Cazaux (Bugatti), 3 laps.
7. G. Leoz (Bugatti), 3 laps.
8. Mlle. Hellé-Nice (Alfa-Romeo), 5 laps.
9. J. Delorme (Bugatti), 5 laps.

Record lap: Nuvolari, 1m. 52s., 89.23 k.p.h.

M. G. Record Attempt.

Hans Herkuleyns, the Dutch ex-motorcyclist, put up some good performances last season with a Q type M.G. Midget. Among other achievements, he won the 750 c.c. class of the Grand Prix de France at Monthéry, and for a short time held the standing-start kilometre record in Class H.

A few months ago he had a bad accident in his native Amsterdam, which laid him up for a considerable time. Now he has emerged from convalescence and is hard at work preparing his car for an attempt on the 200 kilometre record in Class H.

Motor-cyclists generally seem to turn to M.G.'s— Dodson, Handley, Black, Simister, and Herkuleyns, to say nothing of Nuvolari!

A Dozen Cars for the French G.P.

The final and irrevocable closing of the entry list for the French G.P. has resulted in a total of 12 cars. The list with the official numbers of the cars, is as follows:

1. Mercedes-Benz I (Cavacciola).
2. Mercedes-Benz II (Fugioli).
3. Mercedes-Benz III (von Brauchitsch).
4. Auto-Union I (Stuck).
5. Auto-Union II (Varzi).

6. Auto-Union III (von Leiningen)
7. Alfa-Romeo I (Nuvolari).
8. Alfa-Romeo II (Chiron).
9. Maserati I (Etancelin).
10. Maserati II (Zehender).
11. S.E.F.A.C. (Lehoux).
12. Bugatti (—).

It can be readily understood that this list has cast a gloom over French sporting circles. A solitary Bugatti and the untried Sefac—against six German cars and four Italians.

The Germans are going to have their revenge for those ironical cheers which greeted the announcement of their retirements last year!

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## RALLYING ROUND AT BROOKLANDS

THE JUNIOR CAR CLUB'S "DAY OF TESTS" WELL SUPPORTED. HON. BRIAN LEWIS MAKES BEST PERFORMANCE OF THE DAY.

WITH a record entry of 131 cars, the J.C.C. Rally, which took place at Brooklands early last month, could hardly fail to be a success. Mr. Dyer and his merry men arranged a series of tests all round the newly opened track, the *pièce de résistance* being, as usual, a replica of the Monte Carlo Figure of Eight, and so smoothly was the event run off that the whole entry had completed their evolutions within four hours.

The cars were divided into three categories, with limits of 10, 16, and over 16 horse power, and there was a good number of Monte Carlo Rally competitors, including Whalley on the Ford, Symons on a front-drive Citroen, Lord de Clifford and the Hon. Brian Lewis on Lancia Augustas, Miss Astbury and D. E. Harris on Singers, and Miss Joan Richmond on a Triumph, and these drivers seemed to find their experience of the Côte d'Azur helpful in finishing high up the lists. Having heard so much about the good handling properties of the Lancia Augustas everyone was interested to see no less than eight of them taking part, and from this camp, the "Scuderia March" as someone called it, came the eventual winner of the Rally in the person of Brian Lewis.

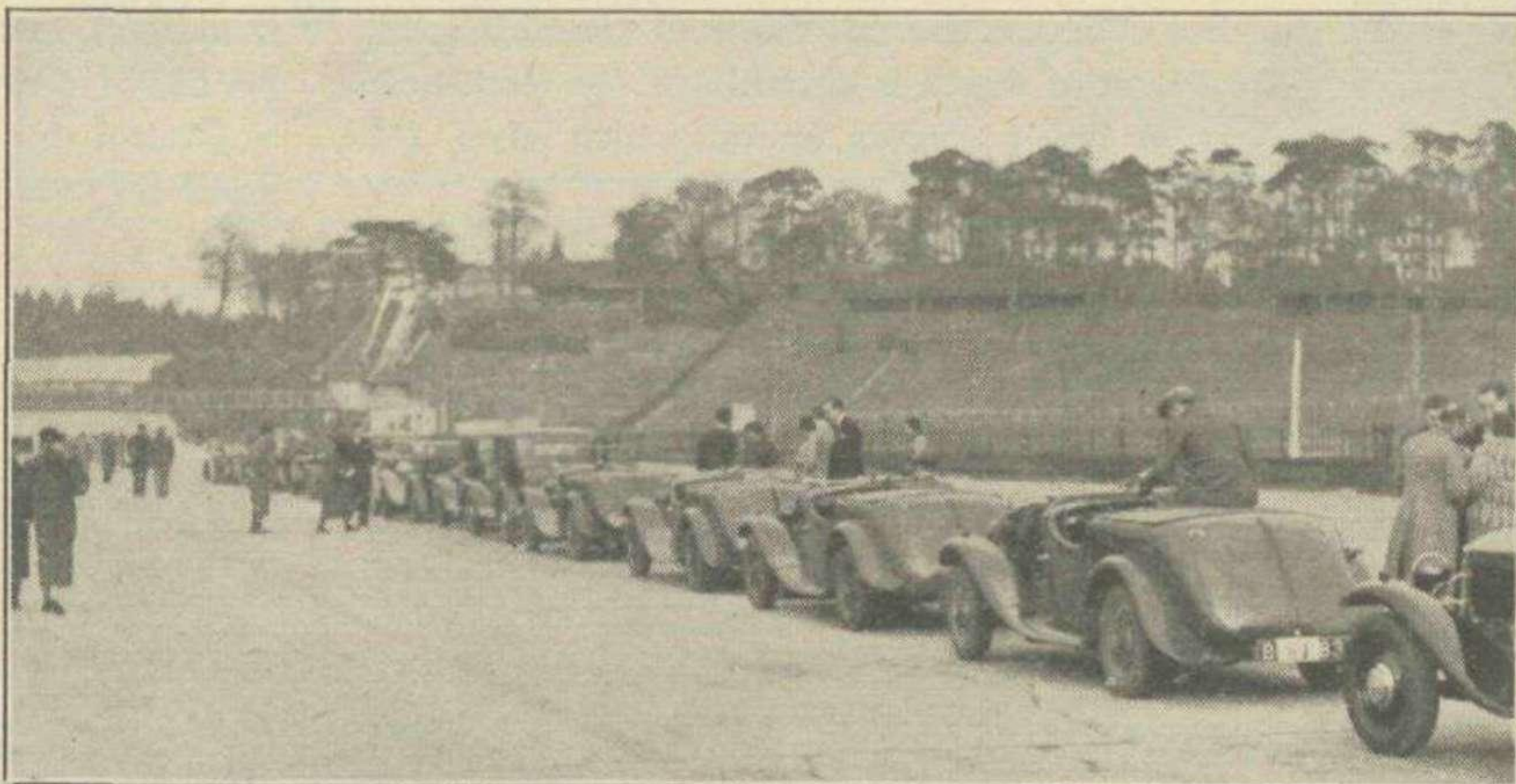
Another matter of technical interest were the number of supercharged M.G. Midgets and Magnettes, which were evidently used as normal touring mounts. Amongst them was the supercharged "N" which Symons took through the Monte Carlo Rally, now the property of Mr. H. Parkinson.

which took about an hour to make their appearance on the starting line, and were by then thoroughly cold.

The next test was carried out on the Test Hill. Each car was brought to rest with engine stopped on the steepest part of the gradient, then at a signal had to

time for cars in Groups I and II was in each case 17 seconds, while the bigger machines averaged just 1/5-second better.

Tests 4 and 5 were arranged on the Railway Straight, and on the way there behind the Aeroplane Sheds a flying mile was marked out, the minimum speeds



Queuing up for the Cold Starting Test. The cars in the foreground are the team of open Lancia Augustas.

coast down and come to rest between two lines marked out, ten feet apart, on the 1 in 5 slope. This done, the engine had to be started, the car backed over the second of these lines, and then driven down the hill again as quickly as possible

required of the three classes being 53, 58 and 63 m.p.h. Considering that most of the cars entered in the Rally were normal touring or sports cars, these speeds are quite high, and 29 failed to do what was asked of them. One of the minor annoyances was that the start was marked by a chequered flag, but to those who had read the instructions this should not have presented much difficulty.

The highest speeds recorded in each class were: Class II (up to 10 h.p.), E. H. Cavendish (Singer), 64.8 m.p.h.; Class 2 (10-16 h.p.), N. A. Pinegar (M.G. Magnette), 81.1 m.p.h.; Class 3 (over 16 h.p.), T. C. Mann (4½-litre Lagonda), 77.6 m.p.h.

This manifestation of speed disposed of, a milder test followed in the shape of a Parking Test. With their accustomed efficiency the J.C.C. had evolved a special "rig" for the job, with one fixed hurdle, and one movable one, and the officials were provided with "distance pieces" on the end of long poles, so that they did not even have to stoop to measure the distance between tyres and kerb. The hurdles were fixed at a distance apart of twice the overall length of the car, and only one reverse was allowed, but even though the distance was increased from 6 inches to 9 inches this year, there were 23 failures.

By this time a good crowd had gathered round the Figure of Eight course, which was marked out on the Railway Straight finishing near the foot of the Home Banking, where an official precariously balanced on a kitchen chair signalled to his colleague at the moment of crossing the final line.

The small cars opened proceedings and provided little excitement, other than an



N. A. Pinegar, who made fastest time in the Flying Half Mile on his M.G. Magnette. This picture shows the Restart Test on the Test Hill.

The programme began with an Easy Starting Test, in which the cars were lined up through the length of the Finishing Straight and were pushed in turn into a pen outside the Paddock. Drivers were allowed 12 seconds to run to their cars, start up and drive 10 yards, and this did not seem to cause much difficulty, though it was less easy for the late numbers,

to cross the "flying finish" line near the bottom.

The standard of driving here was on the whole high, but some of the engines on the smaller cars seemed reluctant to start on the steep gradient, and there were some distressing noises when drivers attempted sudden changes from reverse to first. It was found that the average



## RALLYING ROUND AT BROOKLANDS—continued.

occasional missed gear-change when turning into the Wiggle-Woggle. D. E. Harris created something of a stir with his all-red Singer, cornering, as it seemed, with excessive zeal, with tyres almost off the rims, but in spite of this he was found to have made the fastest time of his category, 72.6 seconds, beating Goodson, who took his Austin through with much less excitement by 3/5 seconds. Another wild man was G. H. Bull, who came within an ace of inverting his Triumph, while Miss Richmond, who followed him on a car of similar make considerably faster without having to alarm the spectators.

Class II opened with de Jong, who was far from happy on his A.C., and Uglow on a similar car, who showed how it should be done, while Biggs, on an old Alvis, had difficulty in sorting out the ratios. Then followed a group of Aston Martins, the fastest being C. M. Anthony, who just beat Morris Goodall with a time of 78.8 seconds, while Miss Hedges kept her foot down too hard on her long-wheelbase car and knocked down the hurdles on both sides of the "8." Symons fairly slung his front-drive Citroen round the bends, tyres screaming and wheels canted at a terrific angle, and Tenbosch was fiery and fast on the Ballila Fiat, which, owing to its excellent lock, was able to corner tight round the marking obstacles.

Gardner, on a Frazer-Nash, was fast and steady, equalling Anthony's time, not so Stewart and Law, who took the obstacle too wide and hit the hurdles. The Nash prestige was restored by D. A. Aldington, who slid his car round with tremendous verve and with tyres at an angle to the rims, making the best time so far of 73.8 seconds.

Then it was the turn of the Lancia Augustas, which, with their tremendous lock and easy handling, were naturally expected to give a good account of themselves. Lord de Clifford obliged with a neat run in 76.4 seconds, then came the Hon. Brian Lewis, who with superb non-chalance made the fastest time of all in 72.2 seconds, the front well heeled over, as is usually the case with independently sprung cars. Two more of these little cars also fitted with neat open bodies were driven by the Earl of March, whose firm now hold the London concession, and Lord Curzon, while Mr. Noel Rees, whose name is well known to everyone as a keen follower of the sport and whose racing cars have on several occasions been piloted to victory by Brian Lewis, "beat up" his son with a closed car, and incidentally most of the remainder of the cars in Class II.

The bigger cars gained in acceleration what they lost by reason of their length, and Charles Follett opened proceedings with a neat run in 79.8 seconds, Wood on a Buick threw his Buick about with true Continental abandon to record 75.2

seconds, while Whalley handsomely beat the other Fords with a time of 72.4 seconds. A final sensation was caused when Donald Munroe's old Invicta caught fire.

The test hill came into service once more for the Stop and Restart Test which took place on the 1 in 5 gradient, and following this all the cars had to complete the climb non-stop to avoid loss of marks. Most of them accomplished this test without trouble, modern brakes and emergency bottom gears being what they are, but some of the



All the front wheels of the "independent suspension" brigade presented an amusing sight as they negotiated the Figure of Eight. Here is A. P. F. Fane, who won a First Class award on his Frazer Nash—B.M.W.

Frazer Nashes had trouble in getting away, while several of the Wolseley Hornets pinked unpleasantly and refused to complete the climb. Parkinson also got rather confused with the self-changing gear of his supercharged Magnette and stayed put for some time.

The meeting closed with another ascent of the Test Hill, this time made while changing down through all the gears. The gnashing of teeth was less than one might have expected, for unskilful drivers got down to bottom early, while more experienced hands just snicked in the lowest ratio when nearing the summit. Only one failure was recorded, but the simple final test was nicely justified by the timely finish of proceeding which closed just as darkness was coming on. Altogether a most successful event and a worthy prelude to the season's meetings on the track and the as yet unknown task which the R.A.C. have in store for those who converge on Eastbourne at the end of the month.

## OFFICIAL RESULTS.

**Best Performance.**—Hon. B. E. Lewis (Lancia Augusta).

**Best Lady's Performance.**—Miss J. Richmond (Triumph Southern Cross).

**36 First Class Awards.**—Up to 10 h.p.: C. E. Taylor (Alta), G. H. Goodson (Austin), E. Gillett, M. H. Fortlage (Fords), D. F. Merrix (Morris), Miss K. Taylor, A. P. Squire, T. W. Davidson, L. B. Dyball (M.G. Midgets), A. L. Philips (Riley), P. J. Calvert, N. A. Prince, A. A. Bolsom, J. E. Gibson, E. H. Cavendish (Singers), A. H. Oxenford (Standard), Miss J. Richmond (Triumph), 10 h.p. to 16 h.p.: W. P. Uglow (A.C.), A. F. P. Fane (Frazer Nash-B.M.W.), C. W. P. Hampton, Hon. B. E. Lewis, Earl of March, Noel Rees, J. S. Bass (Lancias), P. B. Clarke, E. K. Monro (M.G. Magnettes), C. V. Glass (Singer), H. G.

Macklin (Triumph), C. J. Turner, R. M. Boreham (Wolseley Hornets). Over 16 h.p.: G. E. Coppin (Alvis), C. G. Fitt, R. G. Percival (Fords), E. R. L. Crockett (M.G.), R. J. W. Appleton (Railton), J. W. Whalley (Ford).

**36 Second Class Awards.**—Up to 10 h.p.: J. Harrison (Ford), J. E. Nuthall (Morris Minor), A. C. Goodman, D. H. Cottingham, Miss E. W. Watson, N. Brucey (M.G. Midgets), P. de F. C. Pycroft, W. Martin-Hurst, H. T. J. Scott (Rileys), D. E. Harris, S. L. Chappell, J. M. Palmer, M. Constanduros, A. G. Imhof, W. H. Betts (Singers), F. A. Fuller (Standard), 10 h.p. to 16 h.p.: K. de Jong (A.C.), M. H. Morris Goodall, C. M. Anthony, R. Johnson Ferguson (Aston Martins), D. A. Aldington (Frazer Nash), Lord de Clifford, I. Rees (Lancias), H. A. Peck (M.G. Magna), L. J. Turner, J. Marten (M.G. Magnettes), J. G. Redgrove (Rover), Miss J. Astbury (Singer), C. G. Allen (Standard Avon), S. M. Lawry, H. F. Burt (Triumphs), A. G. J. Bochaton (McEvoy Wolseley), F. A. Lovegrove (Wolseley Hornet). Over 16 h.p.: Charles Follett (Alvis), G. G. Wood (Buick), G. Warburton (Railton).

**21 Third Class Awards.**—Up to 10 h.p.: I, Creek (Ford), G. W. Walker, C. W. E. Windsor-Richards (M.G. Midgets), Miss P. Lacon, A. Broadley, A. C. Kelway, Miss P. D. Goodban (Singers), R. Grace (S.S.II), G. H. Bull (Triumph), 10 h.p. to 16 h.p.: H. E. Symons (Citroen), M. P. Tenbosch (Fiat Ballila), R. G. Pegler, D. G. Silcock (Lagondas), Viscount Curzon (Lancia), L. Mills (Lea-Francis), N. A. Pineger (M.G. Magnette), J. G. Crowther (Riley), Mrs. A. E. Moss (Singer), L. Prideaux-Brune (Triumph), R. P. Stewart (Frazer Nash). Over 16 h.p.: T. C. Mann (Lagonda).

## A SPORTS CAR RACE AT AVUS.

I hear that the German National Club are going to run a 12 hours race for sports and standard cars on the

Avus track. The date has not yet been fixed, but the idea is to demonstrate the reliability of standard German pro-

ductions under the strain of prolonged high speed.

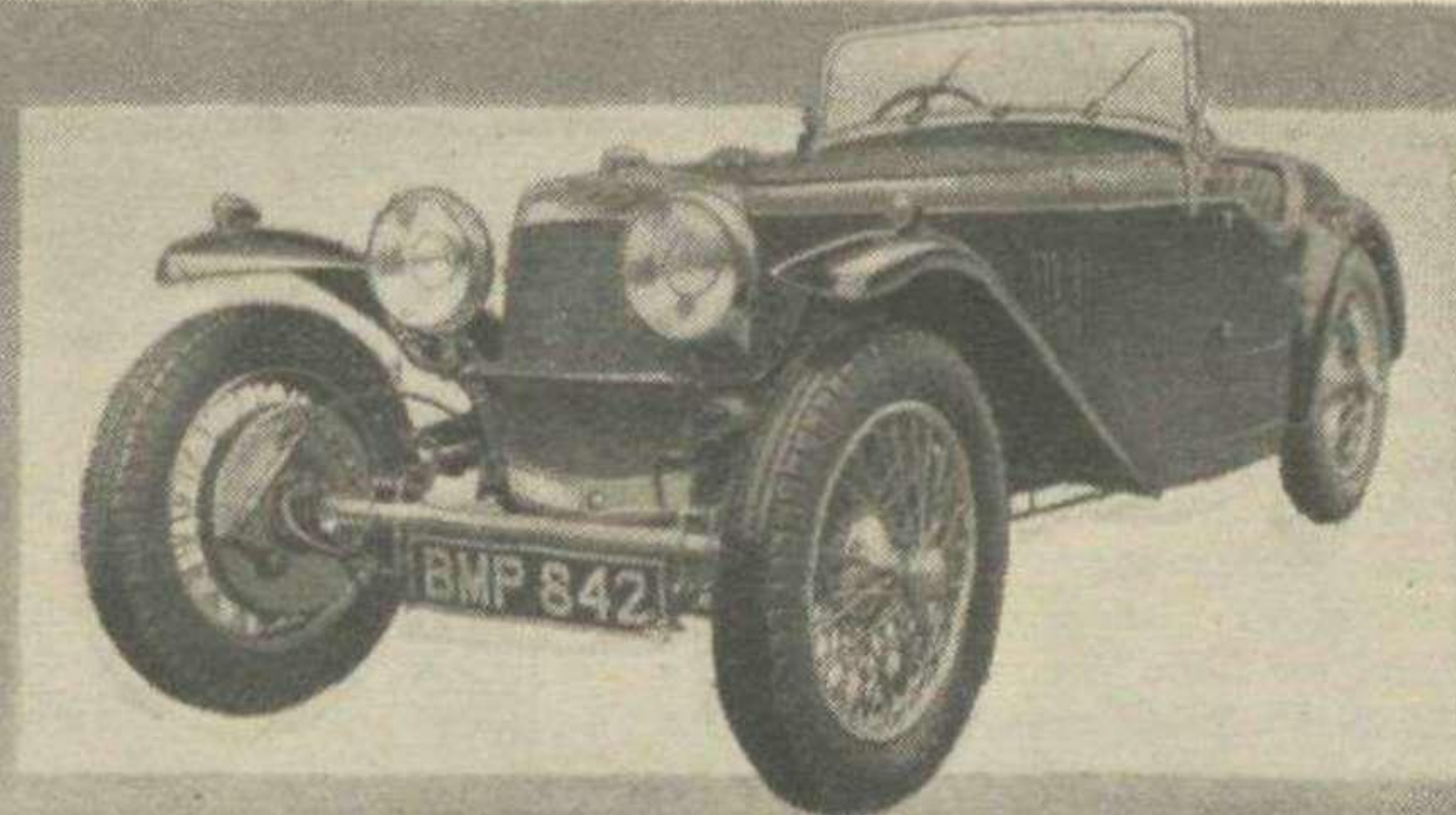


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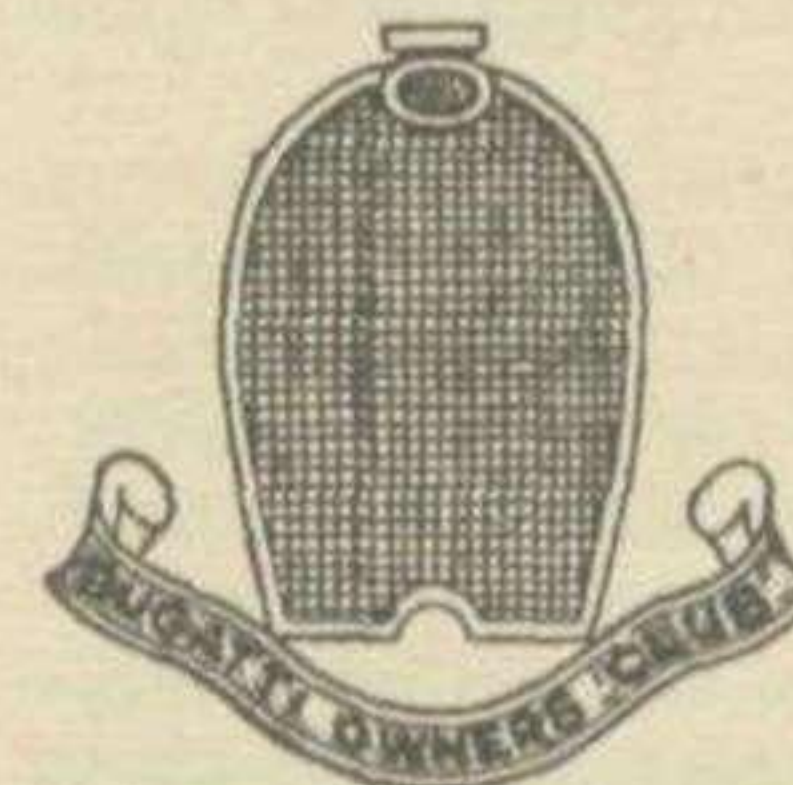
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# Continental Notes and News

By

HAROLD NOCKOLDS.

## Definitely an Inducement.

**M**OTOR racing as a whole is surprisingly free from nationalistic spirit. Not even the Nazis are badly affected by it, for we find Italians in both of their State-aided racing teams. Mussolini is most prone to demonstrations of patriotic fervour, and the classic telegrams ordering his men to win are renowned. His latest move is to attach a little matter of 50,000 liras to the Drivers' Championship of Italy, in which competitors have to drive Italian cars.

A nice little present for Nuvolari!

## Sport in the Soviet.

One would somehow expect a motor trial in Russia to be different from an English event, and one would be perfectly correct in so doing. A 5,000 kilometre trial is shortly to be held in Turkestan, near Lake Altai, and it will be organised by the *Usbekistan Railway!* If the custom spreads to England (oh yeah!) it would not be too much to find the Lands End being organised by the G.W.R. and "the Edinburgh" in the hands of the L.N.E.R.

Joking apart, that 108 m.p.h. on the Newcastle-London route was a magnificent effort. I can never understand how the permanent way stands up to the combination of weight and speed. The movement of the rails is considerable even when a slow local train passes by. As for the spiked rails of countries abroad . . .!

## Stuck, Varzi and the Pheasants.

When Stuck went to Gyon for an attack on Caracciola's kilometre record Varzi went along with him. They found the road covered with snow, and anyway Hans didn't think it was long enough for the Auto-Union to get up its fastest speed. Before taking the train to Milan, however, the two drivers attended a terrific pheasant-shoot in Czechoslovakia, when 5,000 birds were accounted for in three days! Varzi, by the way, is delighted with the handling of the Auto-Union, and his first trial was watched by his close friend, Louis Chiron.

In Italy there was keen competition among the various *autostrada* authorities for the honour of being made use of by the Auto-Union party. After a careful investigation Stuck and Walb, the team chief, decided on the Florence-Viareggio road, choosing a 7-kilometre section at Altopascio. This stretch is as near level as possible. The owners of the Brescia-Bergamo *autostrada* were bitterly disappointed, but Stuck's reason for not using it was that there are too many side turnings, each of which makes a slight "heave" in the surface. He pointed out, too, that the tread of his tyres was only 1 mm. in thickness, necessitating a perfect road.

The Auto-Union record of 199.00 m.p.h. for the Class C flying mile record has now been confirmed. The engine size was 4,969 c.c. First of all the mile was taken at an average of 318.331 k.p.h., as

against Caracciola's 316.678 k.p.h. The kilometre record was then attacked, but plug trouble was experienced on the first run, although the return journey was made at 326.975 k.p.h., making an average speed of 308.483 k.p.h., which was considerably slower than Caracciola's 317.600 k.p.h.

Then another attempt was made on the mile, and the final record of 320.267 k.p.h. (199.00 m.p.h.) was made. The second attack on the kilometre was unsuccessful, although an average of 317.180 k.p.h. was obtained. On one run the timing apparatus failed to function, and on the extra journey the car developed fuel-feed trouble.

A side wind was blowing all day, but the Auto-Union was amazingly steady.

## Out for Records.

Two interesting trials are being held on the famous Cremona-St. Antoine road, where Borzacchini broke the Class C 10 miles record at 152 m.p.h. on the 16-cyl. Maserati.

First of all, the Scuderia Ferrari will appear with the new twin-engined Alfa-Romeo, which is rapidly nearing completion. This veritable projectile has an engine in front and another one at the rear, synchronised in an ingenious way thought out by Signor Jano. If the trials are successful an attack will be made on all class records from 1 to 10 kilometres, and from 1 to 5 miles. Nuvolari will be the driver, and will afterwards pilot the car at Tripoli and Avus.

The Maserati concern has also decided to hold the first trials of their new 4.4-litre rear-engined independently sprung G.P. car at Cremona. The car has been seen there in the hands of Zehender, and if their plans go well they believe it will be fast enough to attack the same records as are being contemplated by Ferrari, so a battle royal is in prospect. Maserati have also done a lot of work on the 1,100 c.c. record breaker, and this will be brought out for an endeavour to raise its own record and any other within reach.

## Weight Saving in the Maserati.

The new system of chassis construction used by Maserati, in which special thin steel alloy is welded into a rigid frame, effects extraordinary reduction in weight. A chassis frame for a G.P. car, built on orthodox lines, weighs something like 100 kilos. The Maserati chassis, on the other hand, only weighs 37 kilos! A saving of 60 kilos. is well worth having when you are forced to keep within the 750 kilos. limit for the complete car.

## Racing in Germany.

The customary race on the frozen lake Titisee, in the Black Forest, Bavaria, had to be abandoned this year owing to the

lake being insufficiently frozen. Instead a race was held at Neustadt, on February 10th, which provided some really good sport. The circuit lay in the heart of the town, was 3 km. 800 in length, and had to be covered 25 times. There were ascents of 1 in 10, and descents of 1 in 7, with numerous hair-pin bends and curves.

A good time was had by all, with the following results.

**1,100 c.c.**—1, Heinle (Adler), 1 h. 35 m. 2 secs., 52.200 k.p.h. 2, Sonderhoff (D.K.W.), 1 h. 36 m. 39.3 secs. 3, Wagner (D.K.W.), 1 h. 39 m. 6.1 secs.

**1,500 c.c.**—1, Illmann (D.K.W.), 1 h. 31 m. 1.4 secs., 54.400 k.p.h.

**Unlimited.**—1, Schweder (Adler), 1 h. 28 m. 19.4 secs., 56.200 k.p.h. 2, P. v. Guilleaume (Adler), 1 h. 30 m. 33.2 secs. 3, Baecher (Adler), 1 h. 31 m. 41.1 secs. 4, G. v. Guilleaume (Opel), 1 h. 35 m. 4 secs.

## Rally instead of Race.

At the suggestion of M. Letorey, Montlhéry clerk of the course, and M. Catineau, the proposed round-the-houses race in the centre of Paris has been abandoned in favour of a Rally. The regulations for the latter are now being considered by the préfet de la Seine.

## Salmson Wins the Bol d'Or Eliminating Race.

An entry of 32 cars was received for the Bol d'Or Eliminating Race, held at Montlhéry on the 3rd March. The circuit routier of 9 km. 181 was used, and the race was a duration affair of 8 hours.

Unfortunately many of the enthusiastic owners of small sports cars let their enthusiasm get the better of them while practising on the wide open spaces of the track, and the field was decimated to exactly one-half of its original strength. Of these 16, exactly one-half finished the course on the actual race day. The start was fixed for 8.30 a.m., but a thick mist reigned at Montlhéry when the cars lined up, so proceedings were held up for an hour.

After an interesting race, which did not finish until nightfall, Debille (Salmson) was found to be the winner, having covered 7 kilometres more than his nearest rival Devand (Amilcar). Manuel, who was greatly fancied as a possible winner, came in third.

Here is the full list of finishers:—

1. Debille (Salmson), 721 km. 978, 90.247 k.p.h.
2. Devaud (Amilcar), 714 km. 867.
3. Manuel (B.N.C.), 695 km. 790.
4. Levits (Amilcar), 668 km. 061.
5. Jam (Derby), 651 km. 851.
6. Gordini (Fiat), 614 km. 988.
7. Poiré (Amilcar), 614 km. 894.
8. Lemâitre (E.H.P.), 885 km. 486.

The first three qualify for the Bol d'Or proper. In view of the good average speed of all the contestants it is possible that the organisers will allow the fourth man to take part in the big race as well.

Only four people entered for the 750 c.c. race; of these Todd (M.G. Midget) was the sole survivor after five hours, and then he too packed up. His trouble was fuel-feed.



CONTINENTAL NOTES AND NEWS—continued.

**British Women in the Paris-St. Raphael.**

There were two English competitors in the Paris-St. Raphael Women's Rally, namely Miss Riddell (M.G. Magnette), and Miss Haig (Singer). The Rally consisted of the usual set average speed to St. Raphael, 40 to 50 k.p.h.; a hill-climb of 1,000 metres in which minimum qualifying speeds were set, and an acceleration test of 500 metres.

The hill climb took place during the first day's run from Paris to Vichy, at a place called Pougues. Here Miss Riddell (53.4 secs.) and Miss Haig (59.6 secs.) were first and second, respectively, in the 1,500 c.c. class; while an M.G. driven by Countess Moy (55.8 secs.) was first in the 1,100 c.c. class, followed by a Singer in the hands of Mlle. Lucas (1 m. 5 secs.), so that altogether the British cars in the Rally fairly swept the board in this test. The fastest climb was made by Mme. Siko (Bugatti) in 44 secs.

On the next day the competitors travelled to Chambéry. Miss Riddell had to stop with a broken oil-pipe, but she repaired it in time to reach the control without penalisation. Mme. Messerli, a Swiss competitor, had a sensational accident between Donjon and Digoin, her Fiat making a complete somersault and landing on all four wheels again. None of the four occupants were hurt!

The chief obstacle of the following stage was the climbing of the Col de Lus-la-Croix Haute. Bad weather made things even more difficult, thick snow being encountered on the Col, but all the drivers got through safely to Digne. Toulon was the next objective, but first of all the 500 metres speed trial at Marseille was held. Soon after leaving Digne, incidentally, a competitor with the same name as that town had the second big accident of the Rally, again without serious consequences. Her Peugeot got into a terrific skid and turned over, falling down an embankment.

After a rousing luncheon at the Joseph-Autran hotel the drivers lined up for the speed trials. Again Miss Riddell (27.4 secs.) and Countess Moy (26.2 secs.) on M.G.s made the best performances in their classes, with Miss Haig (Singer, 28.4 secs.) second in the 1,500 c.c. division. Mlle. Lucas' 950 c.c. Singer (28.6 secs.), however, lost second place to Mme. Roux's Fiat (27.6 secs.). Fastest time of all was made by Mlle. Lamberjack (Ford V8) in 22.2 secs.

On arrival at St. Raphael eliminating tests took place in order to sort out the competitors who had not been penalised en route. Here the British colours were successfully upheld by Countess Moy, with her M.G. Midget. Miss Riddell was classed third in the 1,500 c.c. category with her M.G. Magnette, but Miss Haig made an error in manœuvring which put her right down to 10th place.

The total marks for the whole Rally showed a victory for Mlle. Olga Thilbaut (Peugeot Type 201) with 2,487 marks. Miss Riddell's supercharged M.G. Magnette was placed 9th with Miss Haig 17th. Here are the first ten:—

1. Mlle. Olga Thilbaut (Peugeot 1,084), 2,487 pts.
2. Mme. Ronalt (Delahaye 3,227), 2,483 pts.
3. Mme. Schell (Delahaye 3,555), 2,196 pts.
4. Mme. Dubac-Taine (Fiat 995), 2,158 pts.

5. Mlle. Luca (Singer 972), 2,142 pts.
6. Mlle des Frest (Lancia 1,196), 2,137 pts.
7. Mme. Savoye (Renault 4,800), 2,052 pts.
8. Mme. Conche (Salmson 1,496), 2,046 pts.
9. Miss Riddell (M.G. 1,086), 2,014 pts.
10. Mlle. Pignal (Peugeot 1,307), 1,932 pts.

**Record Breakers at Monthéry.**

Two groups of drivers will be seen in action at Monthéry shortly, in an endeavour to break records. Maillard-Brune and Druck, the M.G. drivers, who last year broke some 750 c.c. records with a Midget, have now acquired a Magnette, with which they hope to attack as many records as possible up to 48 hours in Class G.

Raymond Sommer, Louis Chinetti and Pesato have been seen at the track recently with their 2.3-litre Alfa-Romeo, and will probably go out for the world's 48 hours record, at present held by Delahaye at 109 m.p.h.

**Buy a Badge!**

All over France, at every garage and filling station, the sale of badges to assist the fund for building French racing cars is going ahead. They are priced at 2, 5 and 50 francs, and at every motoring function they are on sale. It is hoped in this way to collect a really worth-while sum, assisted by propaganda in the Press and "on the air."

**This Formula Business.**

All the arguments and discussions about the G.P. formula always bring forth the statement, at some time or other, that the German cars are too fast, and that it is a pity that the original 2.3-litre engines used when the Formula first came into being were not adhered to.

To my mind this statement denies the very purpose of motor racing, which is test and perfect run and beneficial features of design. The Germans have demonstrated the advantages of independent springing, and surely that alone is sufficient justification for the increase in speed.

Frankly, I can nearly always detect a hint of jealousy in those who criticise the German cars, particularly when that criticism emanates from Continental manufacturers and experts. Mercedes-Benz and Auto-Union entered the racing field when the *monoposto* Alfa-Romeo was absolutely unbeatable, and in one season they have attained a state of superiority which will doubtless hold good for another season. All due to designing genius and the courage to test new ideas.

Without independent springing the German cars could not have gone faster than the Alfas with any degree of safety. They cut down weight without sacrificing security, so that they could use bigger engines and get more speed. Manufacturers can—or I should say could—learn far more from the new German cars than from the 2.3-litre cars of a few years ago. You have only to look at the magnificent German production cars to realise that.

**Another "Sweepstake" Race.**

Inspired, no doubt, by the highly successful Tripoli G.P., the A.C. de Tunisie are going to incorporate a gigantic

sweepstake in their Tunis G.P., which is due to take place on May 5th.

The prize money offered is 40,000, 25,000, 15,000, 10,000 and 8,000 francs, respectively, for the first five finishers. In addition to this, however, generous *primes* will be given, based on the total of the sweepstake. In fact the money will be good.

The circuit of Carthage has been slightly modified. The organisers realise that the public want speed, so the *chicane*, or kink, near the grandstands has been cut out. In its new form the course measures 12 km. 600, and as the race will be for 40 laps the total distance will be 504 kilometres.

With an eye to attracting the special twin-engined Alfa-Romeo and any other non-formula cars available, the race will not be run under A.I.A.C.R. regulations and will be open to all racing cars of over 1,100 c.c. capacity, without restrictions as to weight or fuel. It is hoped to obtain 25 entries.

**Italian Control.**

The sport in Italy is controlled by the R.A.C. d'Italia, and under the guidance of the new president, the Duke of Spoleto, some drastic alterations in the executive of the latter body are being made. The sporting Commission now consists of the following members: Prince Rudolfo del Drago (President), C. Benassati, G. Canestrini, A. Dacco, C. Filippini, Count Mazzotti, A. Mercanti, A. Rivetti, R. Staccioli, and E. Tron.

**Cancelled.**

The usual cancellations are gradually coming in. In addition to those already announced the Riesrennen, a hill-climb in Austria, which should have been held on May 9th, and the G.P. de Luxembourg, scheduled for August 11th, have both been struck off the Calendar at the request of their organisers.

**The New Targa.**

At the end of this month, on the 28th to be exact, the Targa Primavera Siciliana takes place in Sicily. This race replaces the late lamented Targa Florio, and will be run in two classes, over and under 1,100 c.c. The circuit measures 72 kilometres, embracing the towns and villages of Cerda, Scillato, Collerano, and Campfelica. The big cars will do six laps, and the tiddlers four.

**Dreyfus at La Turbie.**

René Dreyfus has a habit of winning the classic La Turbie Hill Climb. He will be there again on the 18th of this month, this time with an Alfa-Romeo from the Scuderia Ferrari.

**The Independent Society.**

The fourth meeting of the A.G.A.C.I. or Society of French Independent drivers, took the form of a highly successful dinner, at which 60 members attended.

The President of the Society is Jean Delorme, the Bugatti driver, and he outlined the benefits of membership to those assembled. A useful addition is that entitling members to five hours free practice at Monthéry every week, providing the member will take part in the Championships of Paris on September 8th. The

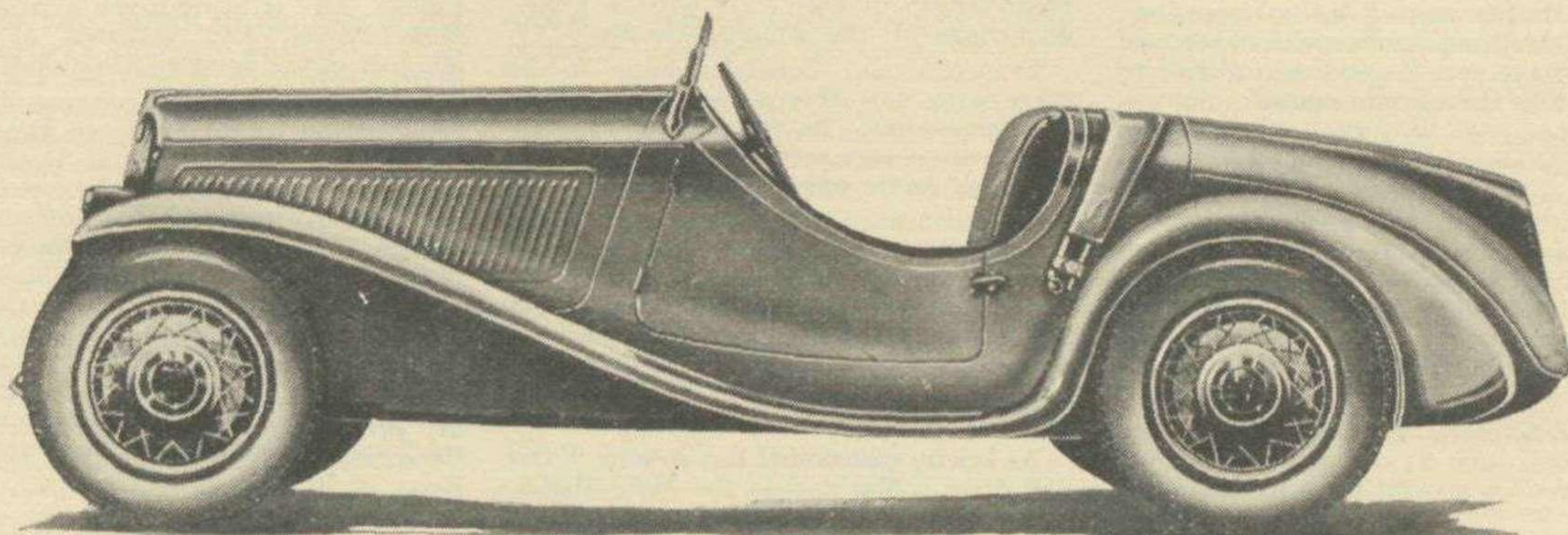


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### THE TIMES:

"This performance, especially in view of the size of the engine, which is only 995 c.c., speaks for itself; and the machine was a standard production, in fact, the car was exhibited for sale at Olympia."

### THE MOTOR:

"The achievement is even more astonishing when it is mentioned that the car used for this tremendous task was the identical little red car shown at Olympia . . . during the last half of the trial the Balilla was touching 86 m.p.h."

"Grand Vitesse," of "The Motor," added after a personal trial: "It is one of those cars you drive for the fun of it, as often and as fast as you can. The Balilla is very much a sports car. Steering, road-holding and hydraulic brakes were first class . . . and the suspension was something really exceptionally good in so small a vehicle."

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### THE LIGHT CAR:

"The little 995 c.c. Balilla Sports Fiat did rather remarkable things at Brooklands last week. It covered 1,000 miles on the Mountain course in 18 hours 8 minutes 39.2 seconds, an average of 55.11 m.p.h. The car's best lap was 60 m.p.h. flat."

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## CONTINENTAL NOTES AND NEWS—continued.

latter race supplants the Grand Prix de France.

Delorme has been in constant touch with various clubs which organise races, and it really looks as though there will soon be some races reserved for independents only.

**The Diesel comes into its own.**

I understand that the Contest Board of the American Automobile Association, through its European delegate, Mr. W. F. Bradley, has suggested to the International Sporting Commission in Paris that special classes in races should be provided for heavy-oil engined cars. They argue that the Diesel engine has made great strides in recent years, not only in speed—although the present record now stands at 133 m.p.h. For the last three years Diesel engined cars have competed at Indianapolis. Record-breaking, that powerful tonic and growth developer, will carry the type a good deal nearer to perfection in the coming season.

In America the first Diesel-engined car for private use is about to be put on the market, selling at £200. Whether the public will ever overcome their prejudice against the unorthodox, quite apart from the question of noise while ticking over and accelerating, remains to be seen. The present cheapness of the fuel is, of course, merely ruled by lack of demand.

As for racing, the only events in which Diesels can make a good showing are track races, such as our Brooklands 500 miles race. A special class in this race,

providing sufficient entries were obtainable, would be really interesting and instructive.

**Monaco Prospects.**

The Monaco G.P. holds a unique position in the motor racing world. It is not a big national event, nor is it held on a typical Grand Prix circuit, and yet it starts the season with a bang.

The new Alfas will not be ready in time, but a team of three, or possibly four cars, will represent the Scuderia Ferrari. These will be 3,200 c.c. monoposto with independent springing, and will be handled by Nuvolari, Chiron, Dreyfus and Brivio. Against them will be ranged three Mercedes-Benz, in charge of Caracciola, Fagioli and von Brauchitsch. Stuck and Varzi will be there with Auto-Unions, although they are rather afraid that the great length of their cars will be a disadvantage on the winding circuit.

Etancelin and Zehender hope to be there with new Maserati's, and possibly Farina as well. As for Bugatti; *hélas*, there will be no works entry, and Lord Howe will be the only driver of the *marque*.

A great deal of work has been put in by the authorities in improving the road surface and eliminating adverse cambers on the corners. The circuit will be in perfect condition on April 22nd, and the lap record ought to fall.

**Mille Miglia Entries.**

As briefly mentioned last month, Varzi will drive a Maserati in the Mille Miglia.

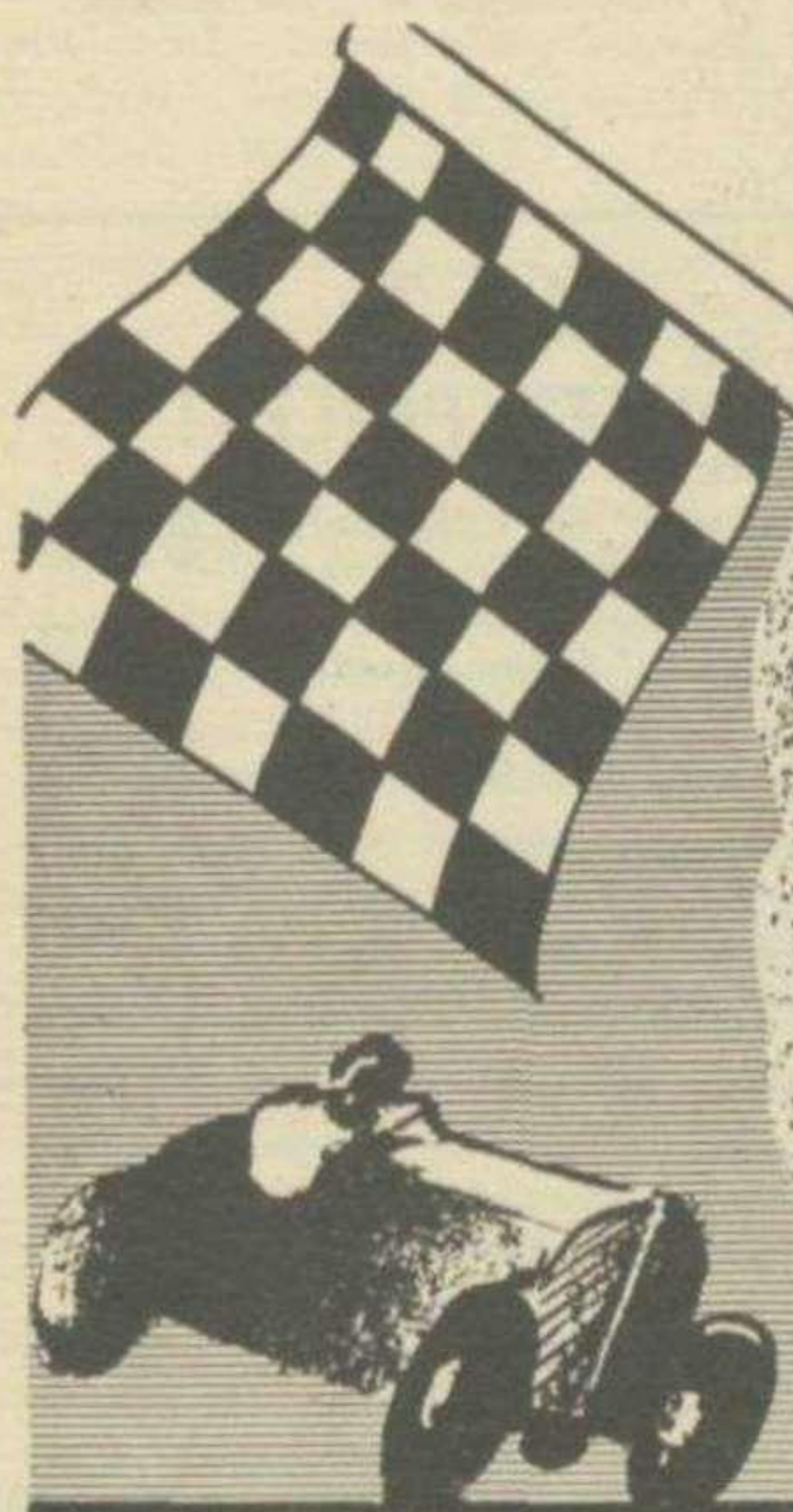
His contract with the Auto-Union people does not apply to sports-car events, and he has been snapped up by the Scuderia Subalpina for the great Italian race, which he won last year for Ferrari. This year he will handle a 6-cyl. 3.3-litre Maserati, having Bignami as his co-driver. The Subalpina will probably enter a 1,500 c.c. and a 1,100 c.c. Maserati as well, to be driven by Scarfiotti, Gherzi and Carraroli, Ruesch will also drive his own Maserati.

Ferrari had originally intended to enter a team, but this idea has now been scrapped. The Modena stable will now be represented by a newcomer, Pintacuda, driving an Alfa fitted with a monoposto engine and a sports body. The attention of the Scuderia was attracted to Pintacuda by his excellent performance in last year's Coppa d'Oro, which he won, with a Lancia. He is being given a trial in the Mille Miglia, and becomes a regular member of the Scuderia if he does well.

Other Ferrari entries are those of Brivio, Comotti and Tadini, on closed Alfa-Romeo production models. Tadini, by the way, has signed up with the Scuderia once more.

Although there are no official M.G. entries, Magnettes will probably be driven by Pellegrini, Dei and Gazzabini.

A really interesting award has been donated by Mussolini for the holder of the record from Brescia to Rome, the fastest part of the course. The record at present stands to the credit of Caracciola, on a 7-litre S.S.K. Mercedes-Benz, at 70 m.p.h.



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## STUCK COMING TO SHELSLEY

**H**ANS Stuck gave an interesting interview to a group of journalists last month. In describing the long journies a driver has to make between different races he gave as an example his own programme of the Tripoli G.P. one week-end and Shelsley Walsh the next! I think we may take it, then that an Auto Union will at last be seen in this country. Incidentally, from April to September Stuck will only have one free week-end!

Talking of his record attempt in Italy, the Auto-Union driver said that he thinks the streamlined model will be able to reach 220 m.p.h. in favourable circumstances. He contradicted the rumour that closed cockpits will be used by the German cars for road races. No driver could stand the heat, which in the case of the Auto-Union at Florence, was 60° C., even though the air stream from the narrow aperture in the radiator passed through the cockpit.

As for the maximum speed possible on land, Stuck stated that this depended on tyres and road surface. He was full of enthusiasm for the new road being built at Karlsruhe in Germany, where a really long straight will allow terrific speeds to be attained. He thinks that Sir Malcolm Campbell will go there, instead of to Daytona. A remarkable feature of the Auto-Union as a record breaker, which he

puts down to the light weight and independent springing, is that the set of tyres he used in Italy, with ultra-thin treads, covered 300 kilometres at really high speed.

No man is better fitted to talk of hill-climbing than Stuck, and it is his opinion that this form of the sport is more difficult than G.P. racing. The reason he gave was the fact that your only adversary at a hill-climb is the stop-watch, which sometimes results in a good G.P. driver being an indifferent hill-climber.

The Germans are renowned for their thorough organisation, and it is interesting to hear that four mechanics are sent with each Auto-Union to a hill-climb, and five to a road race. On top of this, a tyre expert, a petrol expert, and a racing manager accompany the team.

Talking of different circuits, Stuck confirmed the report, exclusively given in these columns last November, that Monza is to be completely rebuilt, so that the fiasco of last year's race there will not be repeated. The new course will have corners not unlike those on the Circuit de la Forêt de Bremgarten at Berne, where Hamilton met his death last year. Given a dry road, he thinks his present lap record of close on 100 m.p.h. could be improved. Some of the corners could be taken at 155 m.p.h.—by a brave man!

One of the most serious aspects of motor racing, in his view, is to find new drivers capable of controlling the really fast modern car. Apparently the Auto-Union trials at Nurburg Ring last autumn were an expensive failure. Several of the drivers were actually slower on the Auto-Union than on their own cars, such as 1½-litre Bugattis! Three perfectly good Auto-Unions were mauled about so badly that they were only fit for the scrap heap, and the whole experiment of trying new drivers cost the firm the tidy sum of 250,000 marks, or nearly £20,000!

Asked what he thought was the chief asset of a driver, Stuck replied that physical fitness was absolutely necessary for a 500 kilometre race. The path of a successful racing driver is not a bed of roses, and endless disappointments have to be overcome in acquiring experience. He must never be too proud to learn an extra wrinkle; he must be able to take a defeat with a smile; and if he ever has feelings of indecision or fear—he had better stop before it is too late.

Stuck finished with some impressions of the Auto-Union. In Italy it was revving at 6,500 r.p.m. The temperature of the atmosphere has a great influence on the engine, which can easily overheat if the sun is shining. Although he greatly admires its road-holding and steering—he would still rather have the engine in front of him!

### CONTINENTAL NEWS—Continued.

#### Another Scuderia.

That charming French driver, Raymond Sommer, has teamed up with Count José de Villapadierna, of Spain. The two will drive 3-litre Maseratis in Continental events.

#### Coming Events and Entries.

The Circuit du Sud-Ouest is a rally which is down to take place on April 21st-22nd. The total distance is 722 kilometres, starting and finishing at Bordeaux. There will be an acceleration test, a braking test, and a driving test in order to sort out the competitors into a final order.

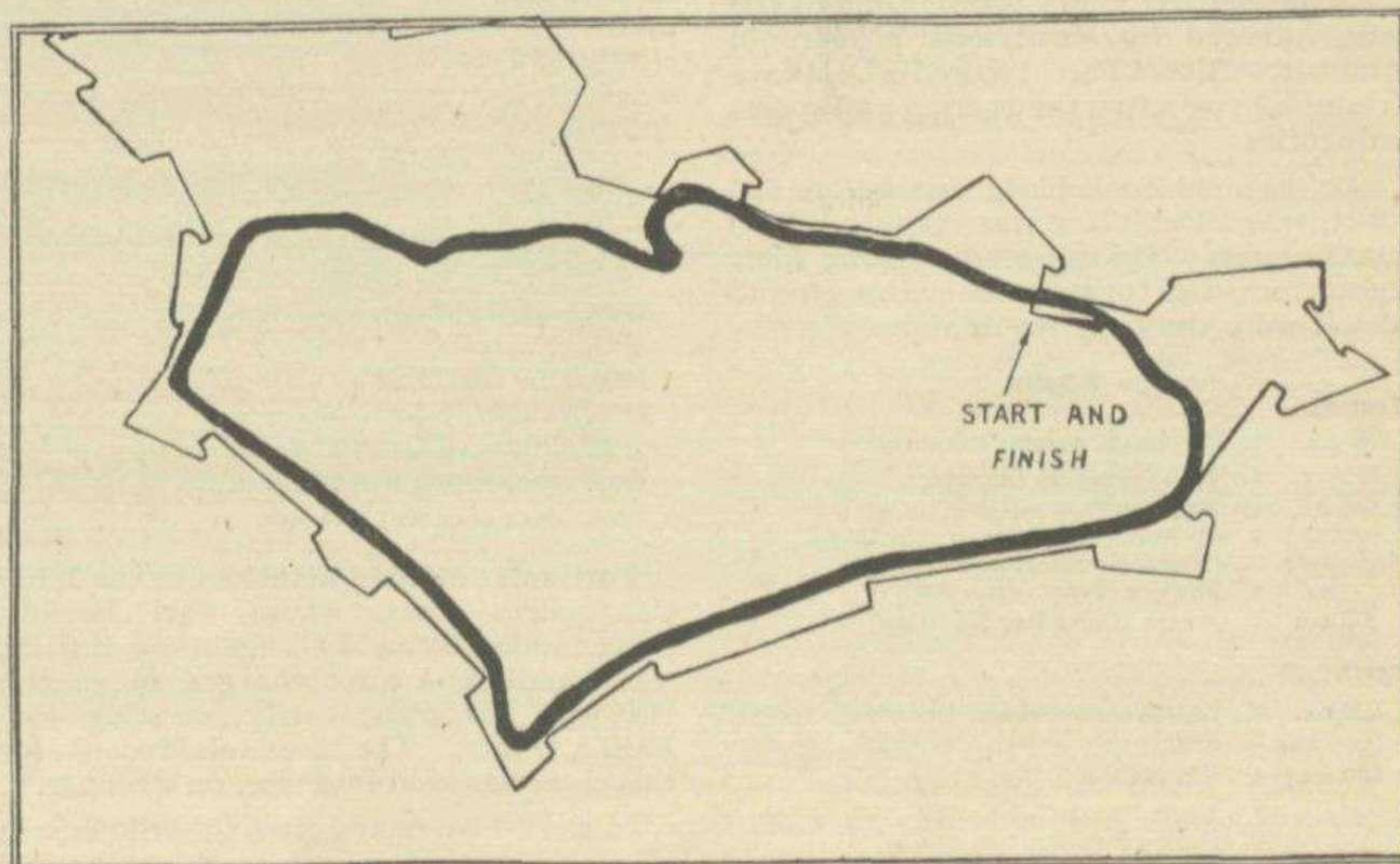
The classic Château-Thierry hill climb will be held on April 7th. The gradient is an average of 1 in 15, and the queer custom of the cars having to stop on the finishing line will be observed. Entries so far include one British car, a Singer entered by Mme. Dax. Others are Sommer (Alfa-Romeo), Jahan (Salmson), Lagrolière (Salmson), Rés (Salmson), Girod (Salmson), Cazaux (Bugatti), Cattaneo (Bugatti), Mestiver (Amilcar), Schell (Delahaye), and Colin (Saurer-Diesel).

The chief award in the Bouzerea hill-climb, which is to take place on March 31st, is the Guy Moll Challenge Trophy, value 5,000 francs, which will become the property of the first driver to win it for three consecutive years. Fastest time of the day, irrespective of class, will win the Trophy. The hill lies on the outskirts of Algiers, and is 3 km. 200 in length.

Town to town racing will receive another recruit in April, when the Bucarest-Rome-Bucarest race takes place. The A.C. d'Italia is combining with the Roumanian Club in the organisation of the event.

The annual Saint-Eutrope hill climb is due to be held on March 31st, organised by the A.C. Orangeois. The length is 1 kilometre, standing start, and the event is open to all comers.

The Grand Prix de Picardie should provide the first victory for a British driver since Featherstonhaugh walked away with the G.P. d'Albigeois last year. Lord Howe and the Hon. Brian Lewis will probably be on the line with their new 3.3-litre Bugattis, and judging by the entries received so far, should have easily the fastest cars in the race. Other entries, at the time of writing, are Lehoux (Sefac), Sommer (Maserati), Falchetto (Maserati),



The Coppa di Bergano course which runs through the streets of the town, following the lines of the town walls, which are indicated by the lighter line.



CONTINENTAL NOTES—continued.

Brunet (Maserati), Villapadierna (Maserati), Delorme (Bugatti), Mme. Itier (Bugatti), Mlle. Hellé-Nice (Alfa-Romeo). Entries are also expected from Cazaux (Bugatti), Leoz (Bugatti) and Zanelli (Nacional Pescara). The prize money for this race is quite good, because the organisers have 100,000 francs to play with as their prize from the F.N.A.C.F. The race takes place on May 26th.

Another round-the-houses race, in addition to Monte Carlo, Nice, Douglas, Biella, Naples, Bergamo, Turin, Varese, and Como. The latest on the list is to be held at Genoa.

The Genoese affair will have a circuit of 4.5 kilometres, over the finest streets of the city, starting and finishing at the Corso d'Italia.

\* \* \*

June 23rd is the day fixed for the First Circuit of Trieste—the same day as the French Grand Prix. The new race really replaces the old Trieste-Opicina hill-climb, which in its heyday, round about 1929, used to attract men like Nuvolari and Varzi. Latterly, however, it has declined in importance. The chief award in the new race apart from cash prizes is the Coppa Salem. The circuit will measure 28 km. 500, and will be covered 10 times, embracing villages of Barcola, Bovedo, Faro della Vittoria, Controvello, Prosecco, Santa Croce, Aurisina, Sistiana, Strada Costiero and Barcola.

**Singer Victory at Chanteloup.**

In the same way that small French sports cars used to be popular in England ten years ago, the British sports car is finding many admirers on the Continent. On the 17th of last month the Chanteloup hill-climb took place, and one of the best performances of the day was made by Mme. Pierrette Dax on a 1½-litre Singer, which beat a Renault and a couple of Lancia Augustas.

Chanteloup is a sporting little hill, with its corners and steepening gradient, and is 1,200 metres in length. Cazaux's 2.3-litre Bugatti made fastest time of the day, followed by Mestivier's 7 year old Amilcar. Albert Perrot scored a Delahaye triumph by winning the touring and sports categories.

An accident took place just before the start, when Delaplace was making a final practice run. He ran amok among some spectators, and turned over. Bruises and shock were the only result, however.

Touring.		Results.	
750 c.c.	1. Jacobs (Rosegart) 1m. 26.6s.		
1,110 c.c.	1. Hub (Peugeot) 1m. 24.2 s.		
1,500 c.c.	1. Mme. P. Dax (Singer) 1m. 23.6 s.		
	2. de Malleville (Renault) 1m. 26.6s.		
	3. Hénon (Lancia) 1m. 27.8s.		
	4. Mortier (Lancia) 1m. 30s.		
5-litres	1. Perrot (Delahaye) 1m. 6.6 s.		
Sport.			
1,100 c.c.	1. Lagrolière (Salmson) 1m. 5.2 s., record.		
	2. Bogachi (Sénéchal) 1m. 25.2s.		
1,500 c.c.	1. Rès (Salmson) 1m. 10.6 s.		
2,000 c.c.	1. Testu (Bugatti) 1m. 12.4 s.		
	2. Buffy (Bugatti) 1m. 37.4 s.		
5,000 c.c.	1. Perrot (Delahaye) 1m. 4.6s. record.		
	2. Vramand (Ford V8) 1m. 19s.		
	3. Pépo (Chrysler) 1m. 21.6s.		

**Racing.**

750 c.c.	1. Jahan (Salmson) 1m. 8s.
	2. Herkuleyns (M.G.) 1m. 20s.
1,100 c.c.	1. Mestivier (Amilcar) 1m. 2.4s.
	2. Raff (Salmson) 1m. 7.8s.
	3. Druck (Salmson) 1m. 8.2s.
1,500 c.c.	1. Girod (Salmson) 1m. 8s.
	2. Cézure (Bugatti) 1m. 9.2s.
2,000 c.c.	1. Renaldi (Bugatti) 1m. 4.4s.
	2. Breillet (Bugatti) 1m. 14.4s.
3,000 c.c.	1. Cazaux (Bugatti) 1m. 1s.
	2. Delorme (Bugatti) 1m. 5.4s.

**The Sefac Progresses.**

With the backing of Marcel Lehoux, who has entered the car for the G.P. de l'A.C.F. the construction of the Sefac car has been speeded up. The designer and constructor, M. Emile Petit, has had a very rough time in getting the car to its present stage without any financial assistance, but his determination to place a 100 per cent. French racing car at the disposal of French drivers has kept him going. Petit, by the way, was the designer of the 4-cylinder Salmson, which swept all before it in its day, over here as well as in France.

To refresh the reader's memory (to say nothing of mine) here are a few details of the specification of the Sefac. It has an 8-cylinder engine, in two vertical banks of four. With a bore and stroke of 70 x 90, the total capacity is 2,760 c.c.—rather a handicap, this, against the 4.5-litre engines of its rivals. Two valves per cylinder. Special blower, designed by Petit, running at engine speed. Vertex magneto. Double acting water pump. Revs. at 6,000-7,000 r.p.m. Multiple-plate clutch. Exceptionally rigid chassis, tubular cross-members. Independent springing in front. Bendix brakes.

It is hoped to have the complete car at Monthléry shortly for its first trials, which will be watched with great interest.

**Ruesch wins at Geneva.**

Every year, to mark the Motor Show at Geneva, the Swiss A.C. runs a hill-climb just outside the town, known as the Grand Saconnex. The hill is exactly one kilometre in length, is quite straight, and climbs 50 metres. This year a flying start of 100 metres was allowed before entering the timed stretch.

The previous winners have been as follows:—

1927.	Dr. Karrer (Bugatti) 38.2 secs.
1928.	Escher (Bugatti) 34.4 secs.
1929.	Not held.
1930.	Not held.
1931.	Stuber (Bugatti) 30.6 secs.
1932.	Stuber (Bugatti) 27.4 secs.
1933.	Stuber (Bugatti) 28.8 secs.
1934.	Hug (Bugatti) 28.4 secs.

Particular interest attached to the 1,100 c.c. sports class, where Carl Becker, a mechanic at the M.G. agents in Zurich, was handling a supercharged Magnette. He won his class easily, beating two Ballila Fiats. The previous record for this class was held by Price, on a Singer.

In the 2-litre racing class the winner was Max Christen, of Zurich, with a Maserati owned by the late Pedrazzini. Christen has finally abandoned the old Aston-

Martin which he has raced since 1925. This specially built twin-camshaft job was the subject of the cover picture of "Motor Sport" when it was manufactured, and a detailed description appeared in the same issue.

Fastest time of the day was made by Hans Ruesch, with his 3-litre Maserati, which now boasts a huge 200-litre petrol tank. Braillard, in army uniform, made second fastest time, with Hug third. The latter's Bugatti has been streamlined rather in the mode of the latest Mercedes Benz, but in the excitement of the moment the driver forgot to turn on the petrol pump and his climb was spoiled before the error was discovered.

**RESULTS.**

**Touring.**

1,100 c.c.	Pilloud (Fiat) 44.4s.*
2,000 c.c.	Wenger (Citroen) 1m. 16.8s.*

**Sports.**

1,100 c.c.	1. Becker (M.G.) 39.8s.
	2. Frey (Fiat) 46s.
	3. Billeter (Fiat) 46.6s.
2,000 c.c.	1. Montfort (Bugatti) 30.2s.*
	2. Mandivola (Bugatti) 32.8s.
	3. Dr. Avondet (Alfa-Romeo) 36.4s.
	4. Blanchain (Alfa-Romeo) 39.4s.*
	5. Bien (Bugatti) 45.6s.
3,000 c.c.	1. de Toledo (Bugatti) 34.8s.*

**Racing.**

1,100 c.c.	1. Ryf (E.R.) 38.4s.
1,500 c.c.	1. Leuzinger (Bugatti) 32.4s.
	2. Mandirola (Bugatti) 35.4s.
2,000 c.c.	1. Christen (Maserati) 30.2s.
3,000 c.c.	1. Ruesch (Maserati) 24.4s.
	2. Braillard (Bugatti) 25.6s.
	3. Hug (Bugatti) 26.6s.

\* Amateur.

**STANDARD CAR OWNERS CLUB.**

The S.E. Section now produce a Monthly Bulletin of Events, and the current number shows the Club to be in a healthy state of activity. The membership list now totals 202, and every effort is being made to cater for all tastes in the matter of trials and competitions.

A Club Evening will be held in April at the Northumberland Rooms, while other events in the future include a party at Donington Park Motor Races on April 13th, and a Motor Gymkhana at Hanworth Aerodrome on June 2nd.

The Hon. Sec. of the S.E. Centre is Mr. C. C. W. Burrage, Grand Buildings, Trafalgar Square, London, W.C. 2.

**A RECORD OF THRILLING ACHIEVEMENTS.**

The annual booklet "Achievements" takes an important place on the bookshelf of every motor-racing enthusiast. The 1934 edition is just as good as its predecessors, and is a comprehensive illustrated record of the outstanding speed achievements of the year, on road and track, and in the air.

Pages of photographs and sketches, many appearing exclusively in this book, illustrate epic events, such as the smashing of the Brooklands lap record, the fastest flight to Australia by a woman, the T.T. and Isle of Man races.

A free copy of "1934 Achievements" can be obtained post free by any reader of MOTOR SPORT.



# IT'S GOOD TO BE AT BROOKLANDS AGAIN!

A PLEASANT OPENING TO THE B.A.R.C. SEASON. SOME INTERESTING NEW CARS AND ONE OR TWO CLOSE FINISHES. SURFACE IMPROVEMENTS TO THE TRACK.

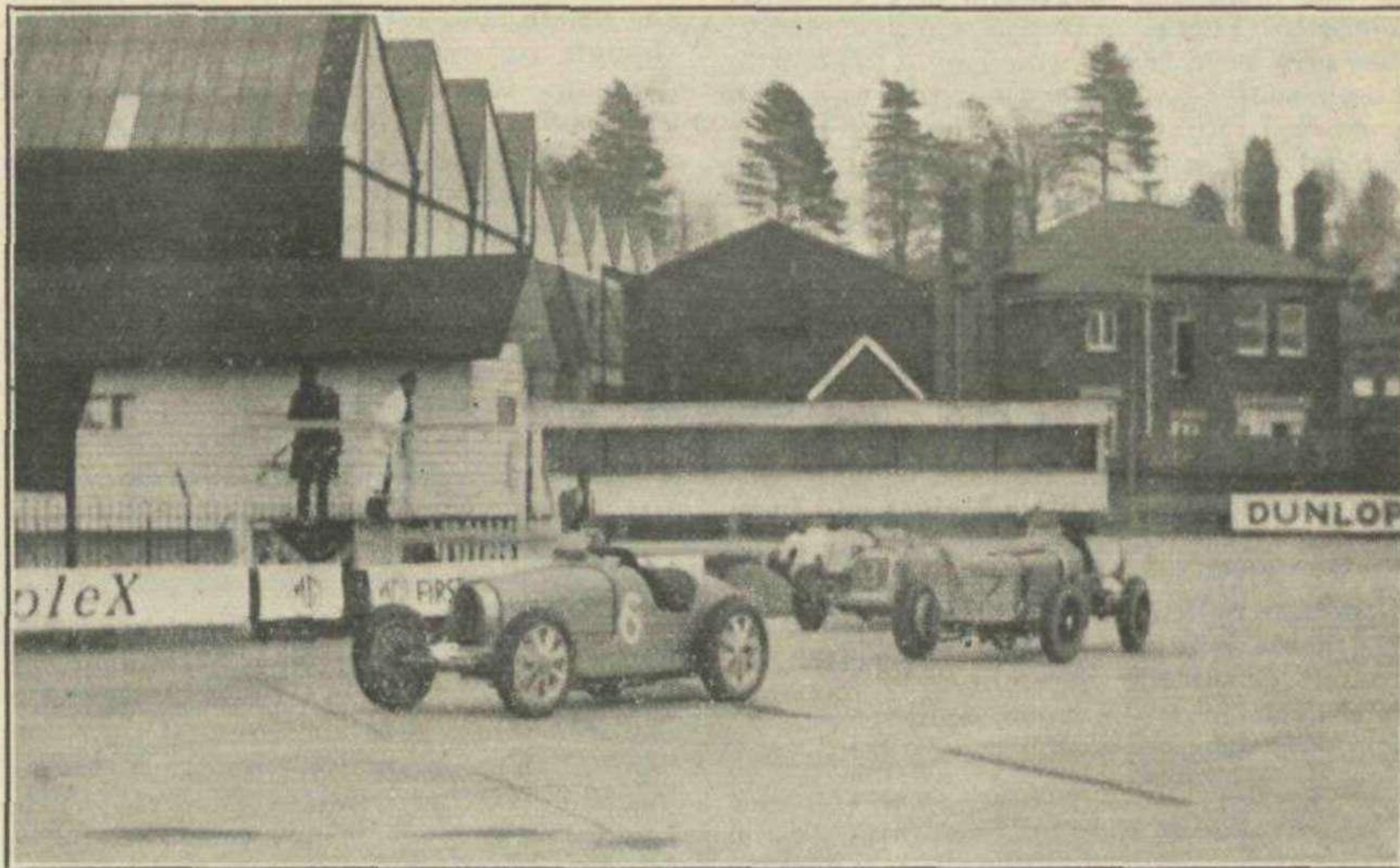
**B**ROOKLANDS! It certainly seemed an astonishingly short time since the last meeting when we drove into the Paddock entrance on March 16th. Shellway once again reminded us of the approach road to Nurburg Ring, and in a moment we were doing the familiar dive down to the tunnel under the track.

It is difficult to change the face of Brooklands by alterations that are even quite drastic. Nothing of that nature is being attempted this year, and the most noticeable difference we saw was in the little Paddock, up till now occupied by Mr. Jackson's tuning depot, the Dunlop place, and lots of little motor-cycle sheds. Now, adjoining Sir Malcolm Campbell's big workshop, a large new building is being erected.

The Paddock itself is always a busy place a few hours before zero, which in this case was at 2 o'clock. A good deal of work was going on in the row of "stalls," but we did not see any of that feverish rebuilding which so often goes on in these historic stalls, but there was plenty to interest us all the same. Bertram's Delage, still driven by him, but now owned by the J.R.D.C. and entered by the Secretary, L. Klemantaski, occupied the coveted No. 1 stall. The Delage had developed a bulge in its middle, which we found to be a two-seater cockpit. Apparently a "ride" in the Delage is to be a benefit of J.R.D.C. membership! Mechanically the Delage is always pleasing to the

ship the car has been given a thorough coat of silver paint, which has altered its appearance considerably. It is indeed a

line. Instead, we will walk to the "road," or the "gate," whichever you prefer, and watch the cars leaping over the famous



A nice bunch at the Fork. Charles Martin (No. 6, Bugatti) leads H. W. Cook (E.R.A.), the ultimate winner, R. Jarvis (No. 3, Maserati) and H. G. Dobbs (Riley).

pretty car, and is going to do big things this year.

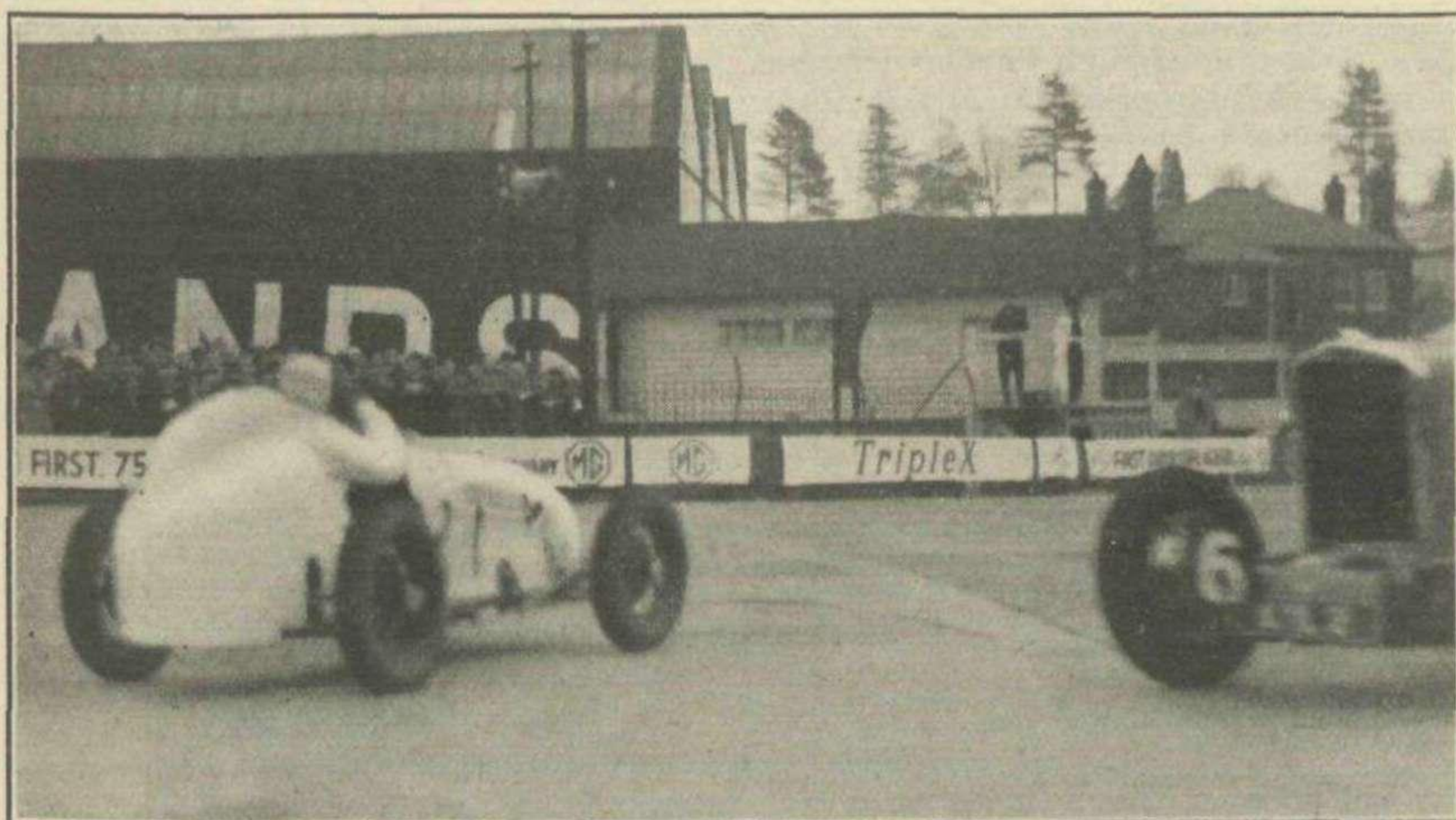
Probably the most closely examined car in the Paddock was Shuttleworth's latest acquisition, a "genuwine" monoposto

bump, as they sweep off the Members Banking on to the Railway Straight.

As the field appeared from behind the hill, changing up through the gears, we noticed that both the M.G.'s. on the programme had been scratched. One was to have been driven by the Bedford man. Fred Allen, while the other was R. R. Jackson's "Q" type, to be handled by A. R. Samuel. Beaver was waving his arm to indicate that the alarming banging and back-firing of his 30/98 Vauxhall was not normal. He has supercharged his aged but powerful machine, which seemed to resent this slight on its dignity. The 4.9 Bugatti, Froy driving, sounded fluffy, but by the time they came round again it had recovered its tune.

By this time E. G. Hughes (Frazer-Nash) had taken the lead from J. F. Connell (Austin), the limit man, and Miss P. McOstrich, on an old Nash fitted with a quaint little 2-seater body. Then came Bainton on his "Special," which already looked a winner, followed by Lindsay Eccles (Bugatti 4-cyl.), "B. Bira," an Eastern prince who drove his Riley "Imp" in the classic grass-cutting manner, right at the inside edge of the track; Joy (Talbot 90); Waller, with his Silver Eagle Alvis shortened and fitted with a racing body; Lord Avebury, driving Lace's Singer; and finally the 4.9 Bugatti. Just before reaching the bump the car seemed to slip its gear, but Froy continued leaving behind him clouds of blue smoke.

On the final lap Bainton overhauled the men (and woman) in front, catching Hughes at the Members Bridge, to run out an easy winner by 150 yards. His speed was 95.59 m.p.h. Hughes was second and Eccles third. The Bainton



In the path of destruction! Driscoll's Austin slides round in front of Dr. Roth's Talbot. Driscoll had previously beaten the 750 c.c. lap record with a speed of 74.95 m.p.h.

eye, but bodily, as it were, it was not so good, owing to there being no time in which to apply a coat of paint.

Next door lay the 4.9 Bugatti, once owned by Kaye Don and called Tiger II. Manby-Colegrave is its new owner, while Dudley Froy is to handle it at all track events. To celebrate its change of owner-

Alfa-Romeo, with a 3-litre engine, what's more, it gave you a thrill to look at it—sleek perfection in every line. Lucky man!

The gentle reader is now probably asking, not so gently, when we are going to describe the racing, so we will defer giving details of the many other new cars till such time as they appear on the starting



## IT'S GOOD TO BE AT BROOKLANDS AGAIN—continued.

Special did more than win the first race of the season; it showed itself to be a force to be reckoned with in the future, exceptionally steady and ideally suited to the rather peculiar conditions of Brooklands.

The high-spot of the second race was the impressive début of Miss Doreen Evans with her brother's Q-type M.G. Midget. This car, always a quick motor, has now been transformed by a neat little single-seater body, very narrow, and with a cowed radiator. From the very first it looked and was tremendously fast. Miss Evans, who started third, passed Mrs. Petre (Bugatti 2-litre unblown) on the Railway Straight and flew after Dunham's Alvis, which had 17 secs. start. The Speed Twenty kept ahead, however, until the Fork was reached on the second lap. Just as everyone was saying "Well done, Doreen," the two cars came under the Members Bridge and we saw, to our consternation, that the little Midget had been unable to consolidate its position. The brown Alvis was right on its heels, and Dunham pulled his car down to pass on the inside as he came off the banking. They roared down the Straight side by side, with the Midget's revs. falling all the while as the faulty plug passed out.

But now both were menaced by Marker's Bentley, a really fast car with its six-cylinder 6½-litre engine in the 4½-litre chassis. Seen from the "road" the three cars appeared to cross the line abreast, and it was not until we strolled back to the Paddock that we learnt the result. Miss Evans a length ahead of Dunham, with Marker the same distance astern. Speed 101.77 m.p.h.; remarkably good in the circumstances. Incidentally, this car would probably be improved by a longer tail, to give it greater stability at the really incredible speeds it can undoubtedly attain.

Froy turned out for this race, but sheared his back axle on the line. After being towed back to the Paddock it was jacked up, when one wheel promptly fell off! The break revealed a fracture that had taken a long while to develop, and Froy shuddered to think of the 40 practice laps he had done before the meeting!

It was not surprising that Major Gardner did not start in the third race, for he happened to be at Daytona just

then! "Mr. Bira" led for a lap, but was soon displaced by Eccles (Bugatti), Dunham (Alvis) and Bainton (Bainton Special), while the two scratch men, Shuttleworth (Bugatti 2.3.), and Marker (Bentley Six) had a furious battle in the rear. The Bugatti made a fine start, but Marker overhauled him on the second lap in the Railway Straight. He came up on the inside, and for a moment it looked as though an unpleasant situation might develop, for the two 130 m.p.h. cars approached the Byfleet Banking side by side. Taking it low down, Marker immediately shot up to the top, but Shuttleworth pulled back a bit and all was well.

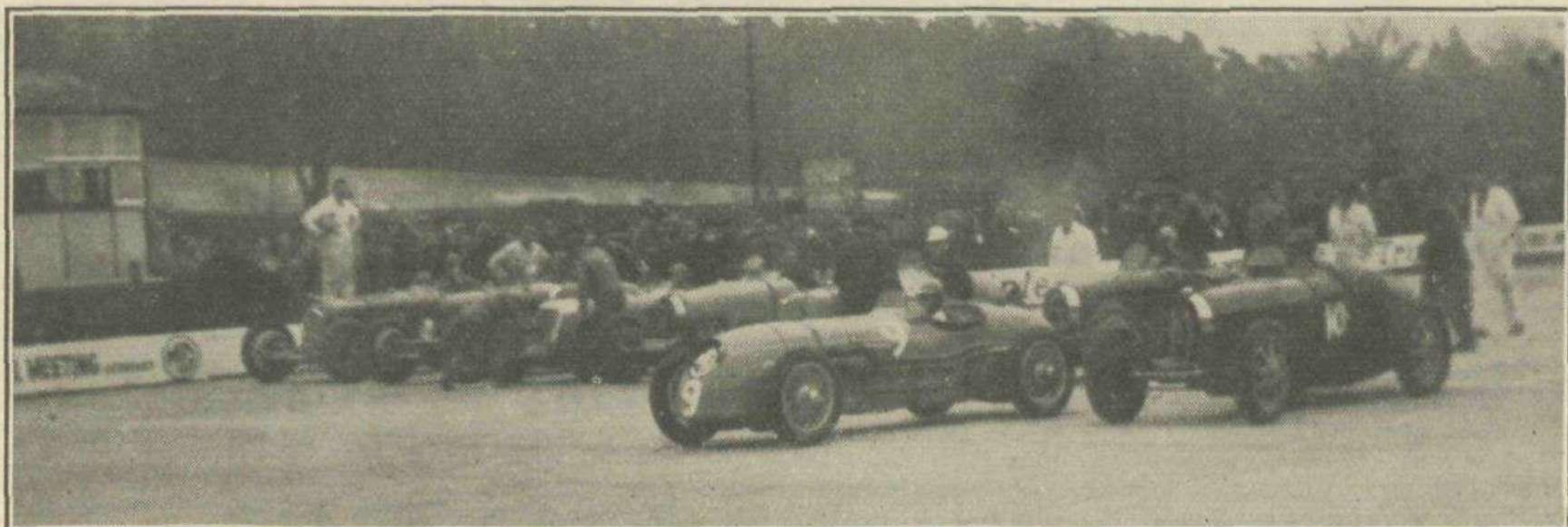
But there was no catching Bainton, in spite of his 12 seconds re-handicap. Marker passed Eccles on the Home Banking, but by this time Bainton was entering the Straight. Dunham, too, was safe and finished second, with the Bentley a rapid third. Bainton's speed was 104.26 m.p.h. this time. Miss Allan (Bentley) and R. E. Tongue (M.G. Magnette) fell out.

The fourth race might have been historic, but for a scratching. Delaney, of Lea Francis fame, was to have driven a new front-drive Citroen, the first time this *marque* has competed in a R.A.R.C. meeting. Other non-starters were Fotheringham (M.G. Magnette), Davies (M.G. Midget), Bartlett (Salmson), and Casswell (Frazer-Nash). The race was an uneventful one, unless we remark on the slow cornering of Smith (M.G. Midget). Dobb's new 6-cyl. Riley deserved its victory, or at least its driver did. Wilkins was good with the red Alfa in getting second place, while the best performance in the race was that of Hartwell (M.G. Magnette) in finishing third after starting on the scratch mark.

The little stand at the Fork gives a nice view of the Chronograph Villa corner, and it was well patronised on March 16th. Improvements have been made in the "standing" accommodation at the Fork. We fancied Ivan Waller's Alvis for the fifth race, and regretted afterwards that we hadn't dashed back to the Paddock to call on our friend Mr. Linton. Waller has studied cornering, and his driving shows it: cool, vigorous and controlled. Spikins, the Singer driver, who did so well in the R.A.C. Rally last year, had a

terrific tussle at the start with Connell (Austin), both giving clever displays of fast cornering. Connell nearly overdid it on one lap, though! Driscoll got into second place on the last lap with the "works" single-seater Austin, but turned right round at the Fork in the path of Roth (Talbot) who successfully avoided a collision, and carried on to take second place behind Waller. The Austin's new body closely resembles the G.P. Mercedes-Benz, with a rounded nose and a high faring behind the driver's head. Perhaps Burggaller has had a say in the matter? You may remember that he drove one of the Austins in Germany last season. Briault, with modified streamlining on his Alta, fell out on the first lap; while Bowler's 3-litre Bentley, which does trials, ordinary motoring, and Brooklands work all as a matter of course, coughed discreetly on the last lap.

The sixth race produced a really close finish. It had been a fierce race the whole way, with four Bugattis (Rayson, Martin, Leith and Eccles), the 2½-litre ex-Whitney Straight Maserati (Jarvis), a 1,500 c.c. E.R.A. (Cook) and a 2.6-litre Alfa-Romeo (Penn-Hughes), giving little indication as to who would be the ultimate winner. On the second lap Rayson, Letts ("Magic" Magnette), Cook, and Martin came round the Fork corner in a magnificent group, but Penn-Hughes dropped out at the same point. Dobbs was out in the lead, but Cook, Martin, Jarvis and Rayson were coming up fast. Cook took the lead, going down to the Fork for the last time, but he misjudged the corner in his excitement, and lost the lead to Jarvis and Martin. Luckily for him his E.R.A. showed the most terrific acceleration up the Finishing Straight, and he was leading Martin by 20 yards as they flashed over the line, with Jarvis another 15 yards astern. Martin and Jarvis both drove splendidly, and one of them deserved to win. The Maserati is now painted pale blue, and its new driver will do well at the track this year. Last season he drove the Alfa-Romeo handled by Wilkins on this occasion. Martin was deputising for Dobson, and enjoyed himself thoroughly. The Hon. Jock Leith has apparently deserted his old warrior, the Sunbeam, for something rather more modern in a red 2.3 Bugatti.



The start of the last race, with D. N. Letts ("Magic" Magnette) leading E. K. Rayson (Bugatti) off the mark. On the extreme left can be seen Shuttleworth's new Monoposto Alfa-Romeo.

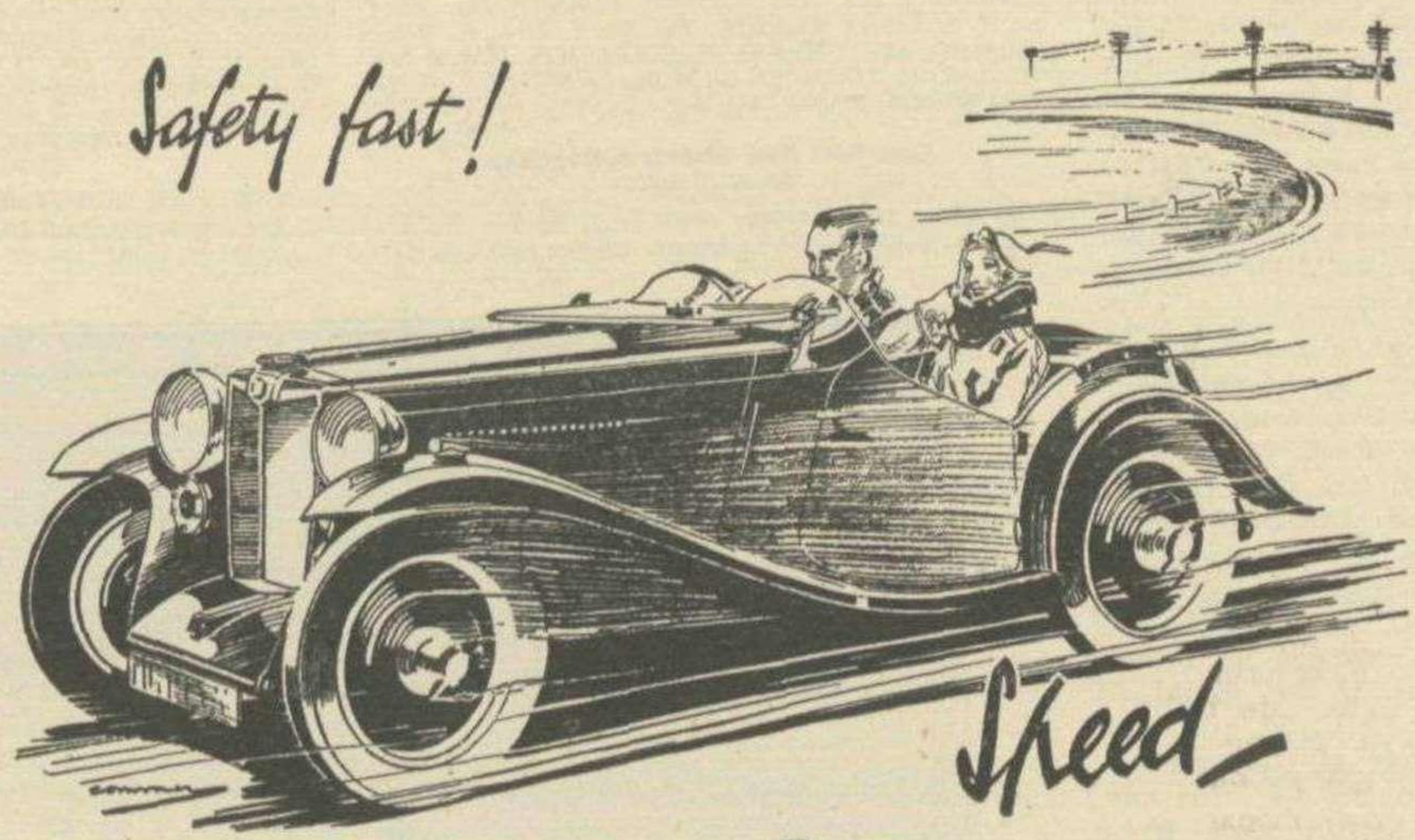




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- 1st JUNIOR ACERBO CUP (ITALY) RACE
- 1st 24 HOURS BOL D'OR RACE (FRANCE)
- 1st A.R.C.A. C.P. OF AMERICA
- 1st JUNIOR CIRCUIT MODENA RACE
- 1st 750 c.c. CAR TO DO 120 m.p.h.
- 1st GRAND PRIX OF FRANCE (1100 c.c.)
- 1st 1100 c.c. CLASS KLAUSEN HILL CLIMB
- 1st AUSTRALIAN GRAND PRIX

- 1st 1934 ULSTER T.T. RACE
- 1st JUNIOR SWISS GRAND PRIX
- 1st S.E.D.C. EMPIRE TROPHY RACE
- 1st GERMAN GRAND PRIX HILL CLIMB
- 1st WINTER "100" AUSTRALIA
- 1st JUNIOR PHOENIX PARK RACE
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IT'S GOOD TO BE AT BROOKLANDS AGAIN—continued.

Frazer Nashes provided all the excitement in a rather dull 7th race. On the very first lap Dent nearly collected a barrel, and his corners at the Fork were always spectacular. Percival was the second member of the thrill-team, his share being a neatly rolled barrel on the second lap. Driscoll's Austin was misfiring from the first, and never got going. Greene ran a fully equipped M.G. Magna, and seemed in no hurry, being lapped by every car in the race in three circuits! After leading for three laps Joy (Talbot 90) was ousted by the enterprising Dent, who in turn gave way to Dr. Roth (Talbot 110), who finally won by 100 yards at 64.41 m.p.h.

And so came the eighth and last race of the day, to say nothing of the long-awaited monoposto Alfa-Romeo. On paper the race looked good, with Penn-Hughe's "2.6" as well, the Bugattis, the E.R.A. and the Maserati, but as it turned out our attention was completely taken up in watching Martin doing his stuff with Dobson's Bugatti. If England has a potential road-racing "ace" of Continental standard he is to be found in Martin. At the Fork he could not have been faster, giving that all-too-rare impression of being "on top of" his car, forcing it round in a terrific slide, front wheels slithering outwards and the rear wheels spinning furiously. When he gets his new 3.3-litre G.P. Bugatti there is going to be some real excitement. The best one can say is that he is worthy of owning such a car.

To return to the race, as we suppose you would like to hear what happened. Well, the monoposto was decorous, Shuttleworth being new to the car, and not trying anything drastic. He retired before the end. Jarvis was good, keeping ahead of the monoposto for some time. Rayson deserved second place, as did Wilkins his third.

Yes, it's good to be at Brooklands again!

RESULTS.

First New Haw Short Handicap.

About 6½ miles.

1. A. G. Bainton (Bainton Special, 4,310 c.c.) 46s.
  2. E. G. Hughes (Frazer-Nash, 1,496 c.c.), 1m. 20s.
  3. A. H. L. Eccles (Bugatti 1,496 c.c.), 46s.
- Won at 95.59 m.p.h., by 150 yds., 300 yds. between 2nd and 3rd.

Also ran: I. F. Connell (Austin S.), 1m. 38s.; Miss P. McOstrich (Frazer-Nash), 1m. 33s.; "B. Bira" (Riley), 1m. 6s.; Lord Avebury (Singer), 58s.; I. Waller (Alvis), 53s.; D. Joy (Talbot), 50s.; R. A. Beaver (Vauxhall S.), 35s.; D. Froy (Bugatti S.), scr.

Second New Haw Short Handicap.

About 6½ miles.

1. Miss D. B. Evans (M.G. 747 c.c. S.), 36s.
  2. C. G. H. Dunham (Alvis 2,511 c.c.), 53s.
  3. R. R. K. Marker (Bentley 6,597 c.c.), 18s.
- Won at 101.77 m.p.h. by 1 length. 1 length between 2nd and 3rd.

Also ran: Mrs. K. Petre (Bugatti), 39s.; A. H. L. Eccles (Bugatti S.), 18s.; D. Froy (Bugatti S.), 4s.; O. Bertram (Delage), scr.

New Haw Long Handicap.

About 9 miles.

1. A. G. Bainton (Bainton Special 4,310 c.c.), 1m. 0s.
  2. C. G. H. Dunham (Alvis 2,511 c.c.), 1m. 6s.
  3. R. R. K. Marker (Bentley 6,597 c.c.), 19s.
- Won at 104.26 m.p.h. by 400 yds. 200 yds. between 2nd and 3rd.

Also ran: "B. Bira" (Riley), 1m. 39s.; Mrs. A. C. Lace (Singer), 1m. 32s.; Miss M. Allan (Bentley 4,398 c.c.), 1m. 23s.; D. Joy (Talbot), 1m. 16s.; A. H. L. Eccles (Bugatti), 1m. 12s.; Mrs. K. Petre (Bugatti), 52s.; Miss D. B. Evans (M.G. Midget S.), 42s.; R. E. Tongue (M.G. Magnette S.), 45s.; R. O. Shuttleworth (Bugatti S.), scr.

First New Haw Mountain Handicap.

About 6 miles.

1. H. G. Dobbs (Riley 1,486 c.c.), 8s.
2. R. S. Wilkins (Alfa Romeo 2,336 c.c. S.), 3s.

Third New Haw Mountain Handicap.

About 6 miles.

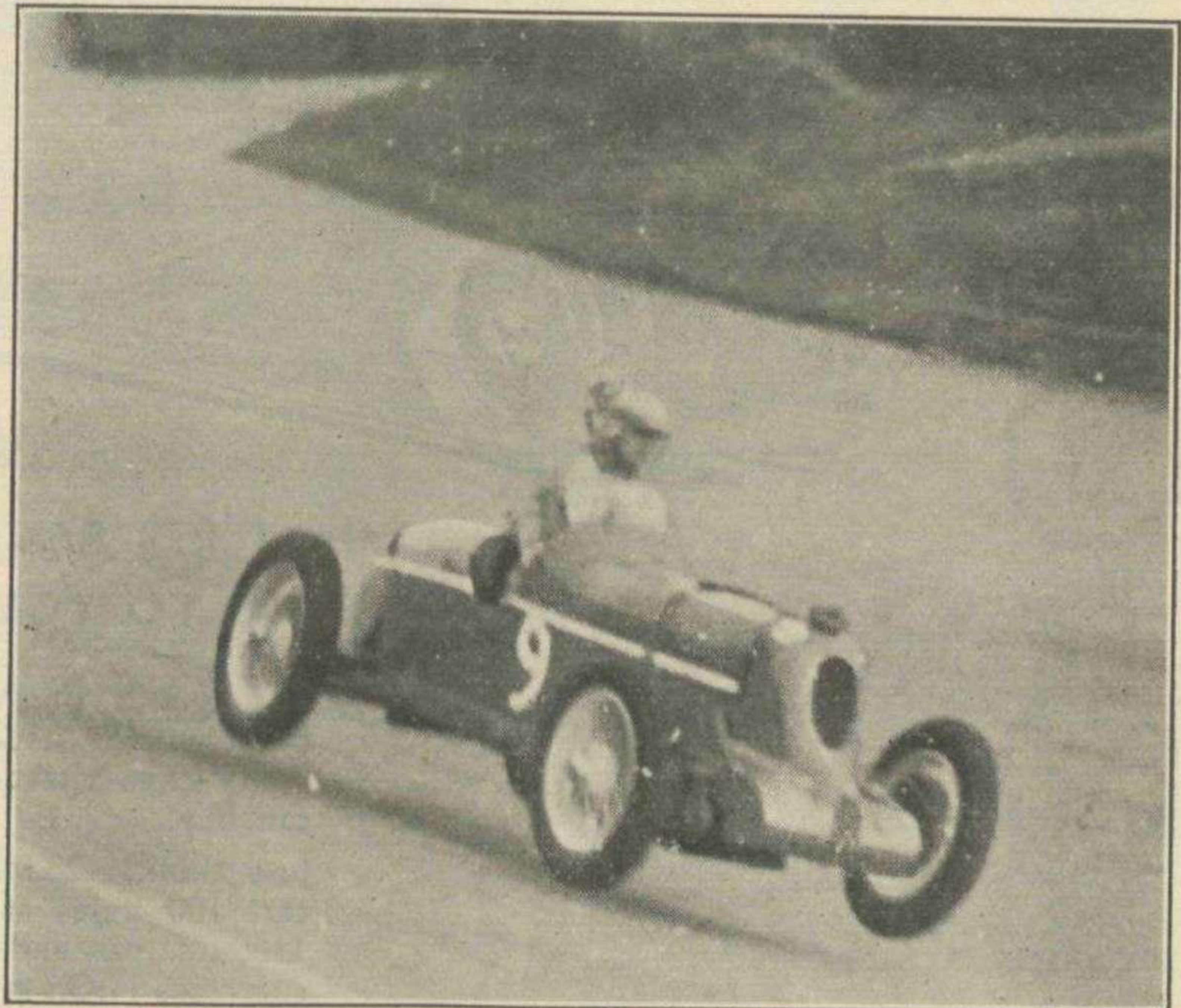
1. H. W. Cook (E.R.A. 1,486 c.c. S.), 7s.
  2. C. E. C. Martin (Bugatti 2,263 c.c. S.), 4s.
  3. R. Jarvis (Maserati 2,494 c.c. S.), scr.
- Won at 71.15 m.p.h. by 20 yds. 15 yds. between 2nd and 3rd.

Also ran: L. Klemantaski (M.G. Midget S.), 33s.; C. T. Baker-Carr (Bentley 4,487 c.c.), 33s.; H.G. Dobbs (Riley), 15s.; E. K. Rayson (Bugatti S.), 10s.; D. N. Letts (M.G. Magnette S.), 10s.; Hon. J. Leith (Bugatti S.), 4s.; A. H. L. Eccles (Bugatti S.), 4s.; C. Penn Hughes (Alfa-Romeo S.), scr.

Fourth New Haw Mountain Handicap.

About 6 miles.

1. E. J. H. Roth (Talbot 2,970 c.c.), 25s.
2. C. A. Richardson (Riley 1,089 c.c.), 17s.
3. D. M. Dent (Frazer-Nash 1,496 c.c.), 48s.



Hold tight! Miss Doreen Evans almost leaves the cockpit as her Q type M.G. Midget leaps over the famous bumps. She won this race at 101 m.p.h.

3. G. Hartwell (M.G. Magnette 1,087 c.c. S.), scr.
- Won at 66.44 m.p.h. by 150 yds. 100 yds. between 2nd and 3rd.

Also ran: E. G. Hughes (Frazer-Nash), 24s.; A. A. Rigby (M.G. Magna), 24s.; L. Levy (M.G. Magnette), 13s.; C. A. Richardson (Riley), 13s.; J. H. T. Smith (M.G. Magnette S.), scr.; R. E. Tongue (M.G. Magnette S.), scr.

Second New Haw Mountain Handicap.

About 6 miles.

1. I. Waller (Alvis 2,211 c.c.), 51s.
  2. E. J. H. Roth (Talbot 2,970 c.c.), 41s.
  3. C. T. Baker-Carr (Bentley 4,487 c.c.), 33s.
- Won at 63.44 m.p.h. by 200 yds. 75 yds. between 2nd and 3rd.

Also ran: I. F. Connell (Austin S.), 1m. 11s.; F. R. G. Spikins (Singer), 1m. 8s.; A. Powys-Lybbe (Alvis), 1m. 4s.; H. P. Bowler (Bentley), 1m. 1s.; W. A. Bowen Buscarlet (Riley), 1m. 1s.; D. C. Briault (Alfa S.), 51s.; L. P. Driscoll (Austin S.), 13s.; R. O. Shuttleworth (Bugatti S.), scr.

Won at 64.41 m.p.h. by 100 yds. 50 yds. between 2nd and 3rd.

Also ran: D. Joy (Talbot), 55s.; A. Powys-Lybbe (Alvis), 51s.; W. A. Bowen-Buscarlet (Riley), 48s.; S. G. Green (M.G. Magna), 48s.; J. A. Elliott (Crossley S.), 38s.; R. A. Beaver (Vauxhall S.), 28s.; R. G. Percival (Frazer-Nash), 28s.; G. Hartwell (M.G. Magnette S.), 4s.; L. P. Driscoll (Austin S.), scr.

Fifth New Haw Mountain Handicap.

About 6 miles.

1. G. E. C. Martin (Bugatti S.), 4s.
  2. E. K. Rayson (Bugatti S.), 14s.
  3. R. S. Wilkins (Alfa Romeo S.), 24s.
- Won at 73.70 m.p.h. by 75 yds. 125 yds. between 2nd and 3rd.

Also ran: J. H. T. Smith (M.G. Magnette S.), 21s.; R. E. Tongue (M.G. Magnette S.), 21s.; D. N. Letts (M.G. Magnette S.), 14s.; H. W. Cook (E.R.A. S.), 4s.; How J. Leith (Bugatti S.), 8s.; R. Jarvis (Maserati S.), 4s.; C. Penn Hughes (Alfa-Romeo S.), 4s.; R. O. Shuttleworth (Alfa-Romeo S.), scr.

A SINGER RECRUIT.

The already strong Singer representation in trials and rallies will be strengthened in future by the addition of J. Eason Gibson, the well-known Brooklands and Donington driver. He will have the choice of two mounts, either a 9 h.p. or 1½-litre model, according to the nature of the event.

Eason Gibson, of course, is the presiding genius of the Beecholme Motor Company, of Nightingale Lane, Clapham Common, where sports car owners can have "that little extra" crammed into their engines. The concern is now a direct agent for Singers, so owners of the make in the district will be able to get all the service

they want.

Judging by his performance in the J.C.C. Rally when he gained a first-class award and made second fastest time in his class both in the Monte Carlo test and the braking test, Eason Gibson should be a worthy representative of the famous Coventry *marque*.



## NEWS FROM THE U.S.A.

By

*Our American Correspondent*

T. MERIWETHER-SMITH

### Cummings Shatters Diesel Records.

Bill Cummings, winner of the Indianapolis race last year and national AAA champion, set a new record for oil burning machines at Daytona Beach, March 1st, at an average speed of 137.195 miles per hour. Earlier in the week Cummings had raced 133.023 miles per hour to break the mark set up by Dave Evans at 125.065 miles per hour.

Cummings was driving the special machines built by Clessie L. Cummins, of Indiana, and the same car that competed last May at Indianapolis. The body had not been changed since the 500-mile race and very little had been done to engine.

Evans, also a famous American speedway star, broke Captain George Eyston's record of 120.33 miles per hour on February 15th, but Evans made his record over a very rough beach. The popular driver is returning to the beach late in March for further record attempts. He is driving a Waukesha Comet Special, built by the Waukesha Company of Wisconsin, builders of diesel motors for commercial purposes. The car is streamlined beautifully, and Evans believes 150 miles per hour possible with the car, which he designed himself.

It is highly probable that these two oil burning cars will be entered at Indianapolis this year, while a third will be sent to the wire by Cummins. However, Bill Cummings will be at the wheel of a Boyle Products job in the 500.

### Indianapolis News Fills Air.

With the 500-mile race still two months away rumours are rampant concerning cars and drivers for this year's classic. It is rather certain that Cummings will be with the Boyle team, Frame will be in his own front drive Miller 8, Louis Meyer will enter his own Miller 4 again and that Billy Arnold will not be seen in the race. But other than these great drivers very little is known definitely of other affiliations.

Wilbur Shaw, one of the very finest of the pilots, is said to have the inside track for the wheel of the new £30,000 front-drive now being built by Offenhauser on the West Coast for Gil Pirrung, wealthy sportsman. This car was originally intended for Doc Mackenzie, but Mackenzie has asked for the old 4-cylinder rear drive Pirrung machine. It is a very fast, capable car.

Jimmy Snyder, one of the sensational "outlaw" mid-western drivers, will be seen at the wheel of a Studebaker motored car. The entry is streamlined radically and should give a good account of itself in Snyder's hands.

Vernon Orenduff, young AAA dirt-track star, will be seen in a new car now being built in Philadelphia. Babe Stapp is busy on a new car equipped with a 253 cubic inch Miller marine motor which will be handled by young Clay Weatherly. Harvey Ward is expected to back two cars for George Connors and Floyd Roberts in the race. Al Gordon will drive the car formerly handled by the late Ernie Triplett. Rex Mays will drive

the 4-cylinder Miller that carried Lester Spangler to his death at Indianapolis in 1933.

But most interesting of all the Indianapolis chatter is the definite report that Miller is constructing five machines in Detroit and will race them at Indianapolis. These cars will go abroad for late summer races if they prove their worth in the 500, it is said. No details have been released concerning the Miller jobs, but they are certain to be radically different from anything now racing under his name in America.

Traffic lights on the speedway? Yes, that is just what Indianapolis is installing this year. A complete system of electrical signal lights is now being erected about the giant saucer, with six light towers placed at strategic points on the big oval. The lights will flash green as

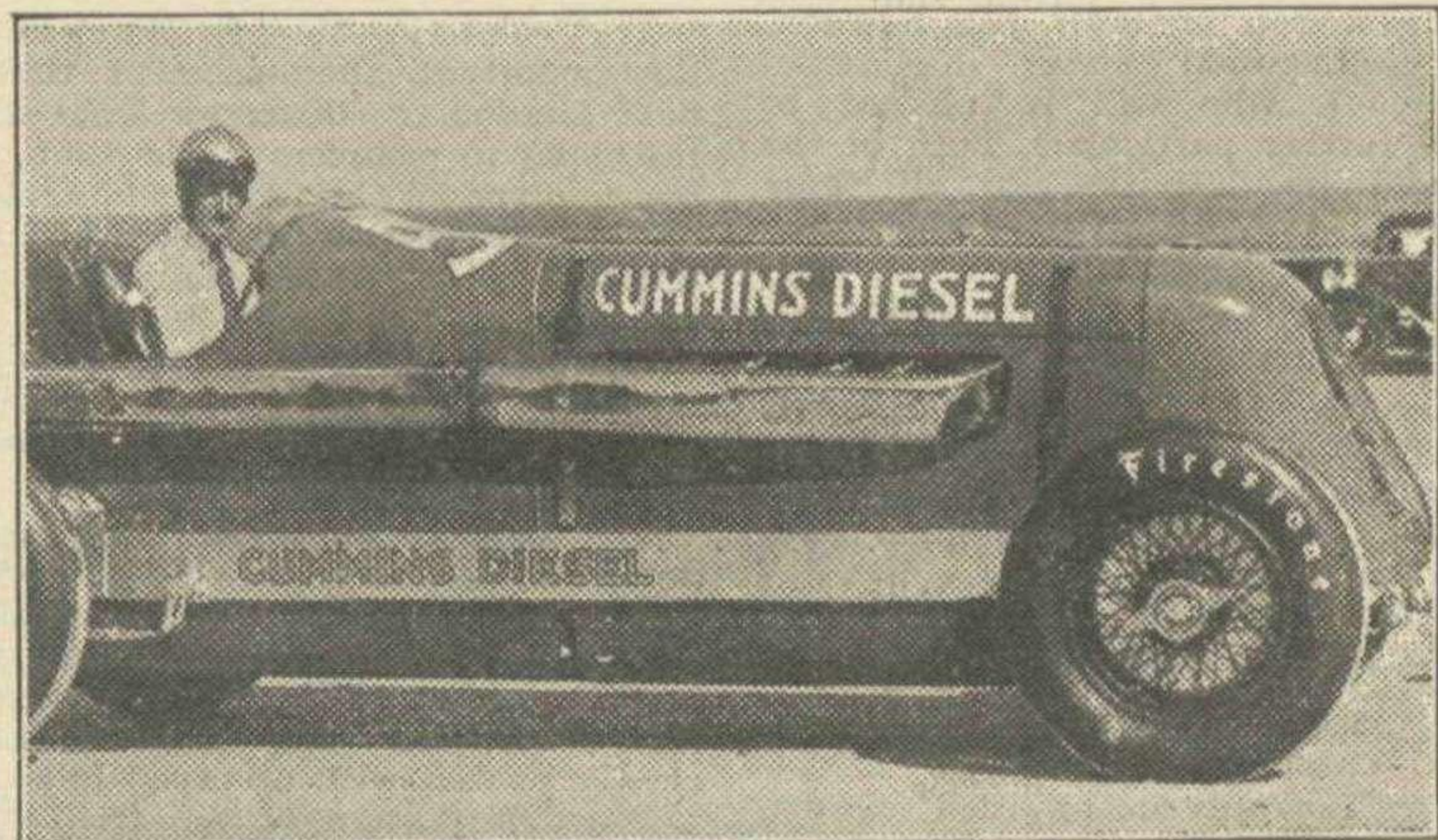
badly injured on this track a year ago that he barely escaped with his life, but with rare determination and courage, Insigner returned to Ascot and has been one of the features of the last five months. In this race, 100 laps, Insigner passed Gordon on the last lap to win. Rex Mays was third with Gardner fourth.

### Midget Racers off to Honolulu.

Twelve crack midget race drivers of the West Coast sailed from Los Angeles for Hawaii this month to compete in three months of racing on the pleasure island. The boys carried their fast little machines along and look forward to an interesting vacation. Among the party were Whitey Theuson, Karl Young and Leo Faulkner, prominent drivers.

### Midget Driver is Killed.

"Speedy" Lockwood, Los Angeles midget race driver, suffered fatal injuries in a midget race at Gilmore Stadium early in March. Lockwood was one of the pioneers of this sport and he will be greatly missed in the midget ranks. This is the second fatality in midget racing



"Wild Bill" Cummins in the Cummins Diesel in which he set a new record for oil burning machines at Daytona, March 1st. The car, the same machine that was raced at Indianapolis by Dave Evans, set up a new mark of 137.195 miles per hour.

long as the race is proceeding smoothly, but once a car goes into a spin, or crashes the wall, the yellow (accident) light will be immediately flashed at all six terminals. Race judges will be in each tower and it is possible for one of these officials to flash all the lights simultaneously with a single button. This is expected to prevent many crackups, and to do away entirely with protests entered by drivers claiming competitors had taken advantage of the caution flag to improve their positions.

### Insigner Wins Ascot Race.

Harris Insigner, Pennsylvania driver, won the feature race of late February at Ascot after a brilliant duel with Al Gordon, Rex Mays and Chet Gardner. It was Insigner's first major victory on the West Coast and the young pilot seems destined to attain the heights. Insigner was so

after over two years of racing, with literally thousands of races having been held.

The proposed 600-mile International Gold Cup, intended for Chicago this summer, has been abandoned because those interested in the event were unable to agree on many details.

Wade Morton, famous race driver of a decade ago, and member of the famous Duesenberg team of Kreis, Shafer, De Paolo and Morton, in 1925 and 1926, died in March of injuries received when his motor car crashed into a truck on a high way in Florida. Morton was considered one of the finest automotive engineers ever to leave auto racing's ranks, and had been employed by several large passenger car manufacturers in capacity of engineer. He was employed by Packard Motor Car Company at the time of his death.



# Club News

## R.P.M. MOTOR CLUB.

This club was originally founded in 1925 for members of the Newcastle Colleges of Durham University. It has now been reconstituted so that members of the general public may be admitted. The Committee, encouraged by the consequent growth in membership, has arranged an extensive programme for the coming season composed of the following events: April 7th, Spring Trial; June 30th, Summer Trial; September 22nd, Autumn Trial; November 3rd, Guy Fawkes Trial; and December 15th, Winter Trial.

With the exception of "one make" Clubs, the R.P.M. Club is one of the very few car clubs in the North-Eastern area of England, and the varying events which are being organised will cater for every type of vehicle.

The Hon. Secretary is Mr. J. L. Fawdon, of 2, Collingwood Street, Newcastle-upon-Tyne, I, who will be pleased to forward further particulars, both of the Club and its activities, to all those interested if they will write to him at the above address.

A reliability trial was held in the Wear-dale District on 3rd March.

The course was a circuit of approximately 85 miles, but on the high moorland sections the roads were blocked by deep snow drifts and much of the original route had to be by-passed.

The Trial attracted an entry of 20 Competitors, the results being:—

1. T. J. W. Edge (4½-litre Lagonda), 19 points lost.
2. G. A. Hutchinson (M.G.), 24 points lost.
3. R. T. Wheatley (M.G.), 32 points lost.

Pewter Tankards are awarded to Edge and Hutchinson.

## ROYAL SCOTTISH A.C.

The Fourth Scottish Rally will take place on Monday to Friday, 10th-14th June. Once again the aim of the organisers has been to provide a sporting tour through the finest of Scottish scenery, with the added interest of competition in a worth-while event.

It is not surprising, therefore, to find few changes from last year's regulations. The chief of these is the sub-division of the three groups into open and closed classes. This move brings the number of individual premier awards up to six, while all finishers of the Rally and Tests will receive the usual Scottish Rally Plaque.

Differing from other Rallies, the Scottish Rally will have only one starting control, so that all the competitors will be placed on an equal footing as to route. Stirling has been chosen as the starting control, by virtue of its central position, while the finish will be at Glasgow. The Coachwork Competition will also be held in the latter city. An interesting clause in the regulations for the *concours* is that

all entrants must have completed the Road Section and the Special Tests, and have gained at least a third of the marks of the individual class winners. The Special Tests will, of course, be kept secret until the last moment.

As for the route, competitors will leave Stirling at night, taking breakfast at Gairloch, in the Ross-shire hills, from which magnificent views of the Isle of Skye, the Hebrides and the Atlantic Ocean are obtained. The two nightly stops will be at Pitlochry and Oban, so that competitors need have no fear of the fatigue which accompanies non-stop Rallies.

Full particulars with entry forms can be obtained from the Secretary, Mr. Robert J. Smith, C.B.E., C.A., 163, West George Street, Glasgow.

## N.W. LONDON M. C.

The "Club Gazette" for March includes the important announcement that the next London to Gloucester Trial will be restricted to members of the Club. The reason given for this new regulation is that in the past many entries have had to be returned, owing to the full quota being quickly reached; and in some cases entries have been returned to N.W.L. members. This is obviously an unsatisfactory state of affairs, and the new rule will meet with universal approval.

The London-Gloucester entry was in danger of assuming unwieldy proportions, and it is to be hoped that the restriction of entries to Club members will result in a diminution of the delays experienced last December. The difficult course, closely packed with observed hills, is an inseparable feature of the trial, and it would be a thousand pities to alter the circuit in order to accommodate a larger field.

The current "Gazette" contains several new and bright features. A series of "Club Personalities" have been inaugurated, with that successful sportsman M. H. Lawson, as No. 1. "Our Spotlight" and "Cameos" are both full of amusing information.

On Thursday, March 14th, a most enjoyable social evening took place at the Talbot Restaurant, London Wall. After an informal dinner, Mr. Donald Healey gave a most interesting talk on his many experiences in Rallies and trials, after which a film-show was given by Mr. C. J. Lowe.

## BRIGHTON & HOVE M. C.

The annual Twelve Hours Trial will be held on Sunday, April 7th, starting from Lobscombe Corner, on Salisbury Plain, at the witching hour of 1 a.m. The route will be roughly 150 miles in length, and some totally new hills have been found by Mr. G. Patrick, the organiser. There will

be eight observed sections, and the finish will be at Blandford where the first man will arrive at about 9 a.m.

## GREAT WEST M. C.

The London to Bournemouth Spring Cup Trial takes place too late in March for inclusion in this issue, but a full report will appear in our May Number. Starting from the Ace of Spades Garage, the competitors will proceed to the Grosvenor Hotel, Shaftesbury (which will be an optional start), for breakfast. The hills include some entirely new terrors on the private Tank Corps Ground at Wood Heath. Gradients of 1 in 2 are rumoured, but certain well-known competitors have been heard to say that if a whippet Tank can climb them, they'll eat their hats if they can't!

The finish will be at the Poole Harbour Club.

## ULSTER A.C.

Fifth of the series, the Ulster Motor Rally will be held this year on April 22nd and 23rd, i.e. Easter Monday and the day following. There will be only two starting points, Belfast and Dublin, and the whole 500 miles route will be in Ireland.

The usual finishing point, Bangor, will be used once more, and the eliminating tests will take place there on the afternoon of the 23rd. The nature of the tests will be made known to the competitors at the start of the Rally. It will be noticed from the rules that the Regularity Section formerly included has been discontinued.

This year the field will be divided into two classes, up to 13 h.p. and over. The winning car, irrespective of class, will receive the Ulster Automobile Club Challenge Trophy, while the drivers gaining the greatest number of marks in each group will receive a cheque for £25. The second, third and fourth finishers will receive £15, £10, and £5 respectively. The team prize will be £9 9s. 0d., and there will be a special award for Ladies and an Old Car Cup, open to vehicles registered prior to December 1927.

Entries, at double fees, can be accepted up to Monday, April 8th, at £4 4s. 0d. for non-members, and £2 2s 0d. for Ulster A.C. members. Applications should be made to the Secretary, 65, Chichester Street, Belfast.

*The Editor invites Club Secretaries to send details of their fixtures, sporting and social, for publication in these columns. These items should be sent to reach this office not later than the 16th of the month.*



## CLUB NOTES—continued.

**VINTAGE SPORTS CAR CLUB.**

An entry of 15 was received for the Club's second Trial, which took place over a course near Haslemere, Surrey, on Sunday, 10th March.

The hills were all in a very dry condition and were for the most part very easily negotiated by the majority of competitors. Aldworth accounted for five failures, and proved to be the most difficult section of all.

D. Munro (Invicta) put up the best performance of the day, his figures for the acceleration test (19 2/5 secs.) and for Dog Leg (24 secs.) both being the best times recorded, though G. H. S. Brooks (Morris), equalled Munro's time in the Dog Leg test, and might have bettered it but for an attack of cramp in the middle!

It is interesting to note that although second, third and fifth places were taken by small cars, the principal award was won by one of the largest cars entered. This was certainly not the case in the Chiltern Trial in January, when no large car gained a first class award. O. Issard Davies had bad luck with his super-charged Lea-Francis, which persisted in boiling and lost all power on Bexley Hill, and failed. However, he rejoined the course and managed to finish. This was particularly bad luck, as he had climbed Aldworth in very fine style.

Below is a list of provisional results:—

**Principal Award.**—D. Munro, Invicta.  
**First Class Awards.**—C. Clutton, Frazer Nash; H. P. Powell, Amilcar.  
**Second Class Awards.**—G. H. S. Brooks, Morris; Miss B. M. C. Marshall, G.N.

The Hon. Secretary of the Club is Mr. C. P. L. Nicholson, 7, Abercorn Mews, London, N.W. 8.

**LIGHT CAR CLUB.**

On the kind invitation of Mr. and Mrs. Curtis, a tea and private cinema show will be given on Sunday, April 7th. A Novelty Run will be started from the Drift Bridge Hotel, Reigate Road, Epsom, on the same day at 2.15 p.m. in order to collect members and arrive at the show to schedule.

**S.S. CAR CLUB.**

The Committee of the SS Car Club is at present busily engaged upon organising an SS National Rally to be held at Blackpool on 21st-23rd June, 1935.

The Club has been fortunate in securing the co-operation of the Blackpool Corporation in connection with this event and very generous support has been promised.

The programme, at present being devised, will include the following:—

Friday, 21st June: Arrivals. Supper Dance.

Saturday, 22nd June: a.m., Special Tests on Promenade (Monte Carlo type); p.m., Luncheon and Mayor's Reception, Flying display by Cathcart Jones-Waller, etc. (this is being arranged subject to certain details being completed); evening, Club Dinner-Dance.

Sunday, 23rd June: a.m., Parade of Cars and Concours d'Elegance.

A suitable Hotel is being nominated as Headquarters and it is confidently expected that at least 400 SS Cars will

attend with a total of some 700-1,000 visitors.

Entry forms can be obtained from the Hon. Secretary, Mr. G. Moxon Cook, 385, Euston Road, London, N.W. 1.

**FRAZER NASH CAR CLUB.**

The second Follow-my-leader Trial was a great success. Starting from Buxton at about 10 o'clock on Sunday morning, March 17th, the sixteen competitors set off for Jenkin's Chapel, the first hill of the route. By the time they arrived there, however, Secretary Cundry had fallen out with a broken magneto, which he later repaired and joined up with the field at the luncheon stop.

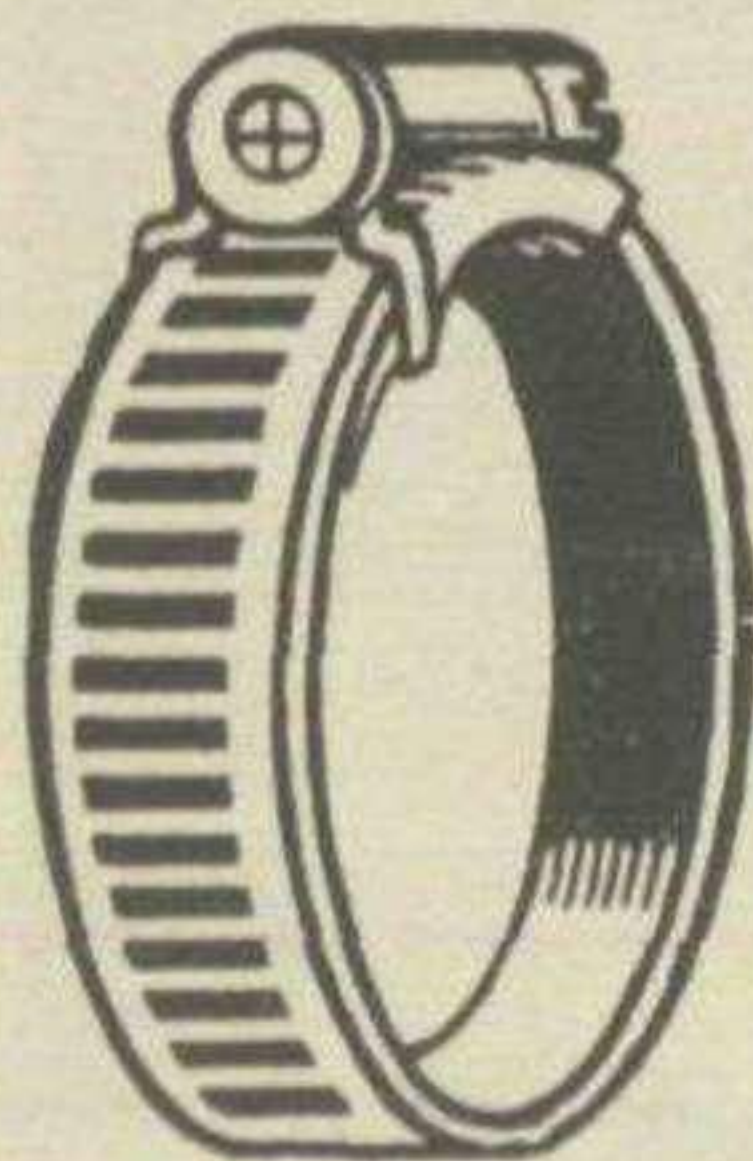
Something new in special tests was held on the downhill approach to the hill. Competitors had to reverse, with engine switched off and the gear lever in neutral, round two bends. In this manoeuvre Cutler made fastest time in 19.1 secs.

Only three people succeeded in climbing Jenkin's Chapel, these being Wright, Thompson and Sinclair. One other hill was tackled before lunch, this being Eyam Bank, which was climbed by everyone.

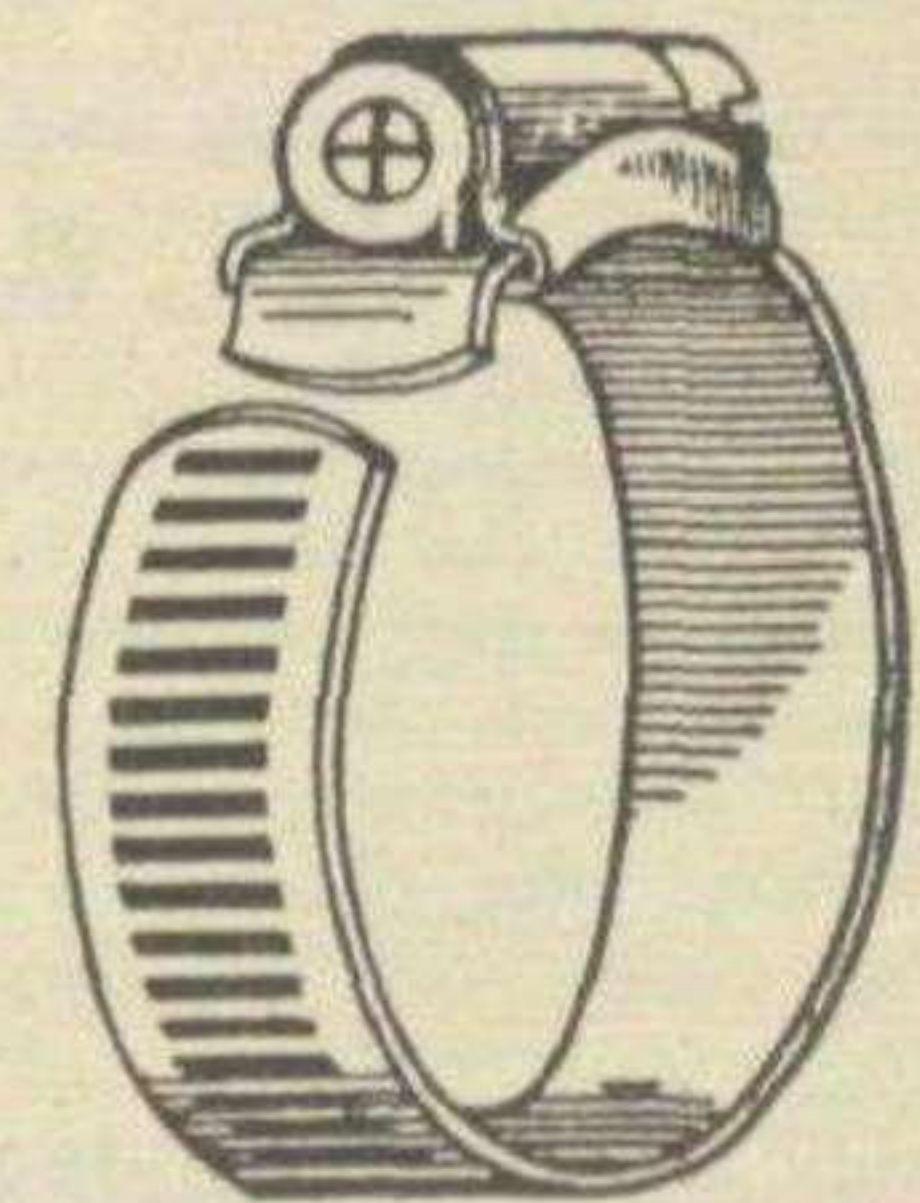
Bamford Clough, the next hill, has a mighty reputation, which was justified if the Frazer Nash onslaught was anything to go by. Not a single car got anywhere near the top, for the combination of slippery surface and steep gradient was overpowering. Litton Slack, too, was in grand form and refused to let anyone get up unaided; Sinclair and Higgins got within pushing distance of the top thereby making the best performances.

# JUBILEE WORM-DRIVE CLIPS

**THE BEST POSSIBLE TO GET**



**MAKE SURE YOU HAVE THEM  
FITTED ON YOUR RADIATOR  
JOINTS, LEATHER COVERS,  
ON UNIVERSAL JOINTS, AIR,  
OIL & WATER HOSE JOINTS.**



**ALL IN ONE PIECE.  
EASY TO FIT.**

**NO PARTS TO LOSE.  
GUARANTEED NEVER TO LEAK.**

A KEEN MOTORIST WRITES: "I cannot understand anyone using any other pattern, as yours are the last word in satisfaction and efficiency."

STOCKED BY ALL GARAGES  
& ACCESSORY DEALERS.

MANUFACTURERS:

**L. ROBINSON & Co.,**

2, London Chambers,  
GILLINGHAM, KENT.



## THREE NEW ITALIAN ROAD CIRCUITS

THE ROUND-THE-TOWN RACE CONTINUES TO FLOURISH.

"**L**A Course dans la Cité," the famous race round Monte Carlo, was as far as we recollect the first race to be held solely in the streets of a town, and the same idea has since then been frequently used, for instance at Nimes, Nice, Pau and Vichy in France, Montreux in Switzerland, and Biella in Italy. This year two new Italian events of this type will be held, the Coppa di Bergamo and the Coppa Salem, at Trieste.

Bergamo is, of course, a prosperous industrial city 30 miles north-east of Milan, but the old walled town still remains almost untouched, and it is in that section of the city in which the race will be held. The circuit measures 2.8 kilometres in circumference, and since there is a climb of a hundred feet on the south section and a sudden drop with some snaky corners on the return run, the Bergamo circuit should offer a test almost compatible with the famous one at

Monte Carlo. Fifty laps will be covered, making a total distance of 140 kilometres or 85 miles. The race will be held on the 19th May, and as the Grand Prix of Algiers, which was fixed for the same day, has been cancelled, there should be some good entries. Not more than twelve will be accepted and the Scuderia Ferrari will probably participate.

The Coppa Salem, at Trieste will be held on a go-and-return circuit at the outskirts of the town, with an unpleasant looking hair-pin and the end of the fastest section. The lap distance is 2.5 kilometres, but the number of laps has not yet been settled. Prize money to the extent of 70,000 lire has been subscribed, and the race takes place on the 30th June.

The Coppa Salem replaces a well-known hill-climb that of Trieste-Opcina. The Circuito di Superba has been the outcome of similar circumstances, the hill-climb

in this case being the classic Pontedecimo-Giovi event. This latter was held on the main road from Genoa over the Appenines to the plains of Lombardy, and naturally caused some dislocation of traffic.

The Superba race will be held on the 20th October. The course is on the outskirts of Genoa at a place called Lido d'Albero, and part of it lies along the edge of the sea. The length of the lap will be 4.38 kilometres.

The good citizens of Bari, a large town on the south-eastern spur of Italy, are also contemplating holding a road-race there to coincide with the famous Trade Fair which is widely attended by buyers from all over the Levant. The publicity value of such a race must be considerable, but somehow we cannot see the worthy burgesses of Birmingham indulging in an event of this sort when the British Industries Fair opens there in May.

### A RACING CALENDAR.

The 1935 edition of Messrs. Frank Ashby's Racing Calendar is a little booklet which every sports car enthusiast will find a use for. A new feature which will be greatly appreciated is the series of photographs depicting various aspects of motor-racing, some of which have appeared in *MOTOR SPORT*. The captions are amusing in their brevity.

The main purpose of the booklet, how-

ever, is to provide a complete International Fixture List of races, speed and reliability trials, hill-climbs and rallies. In addition, a list of last year's race winners is given, with room for the coming season's results to be filled in. Other useful items are the Brooklands Lap Tables for both the Outer and Mountain Circuits, and data for the Sports Car Owner.

Copies of this booklet can be obtained from Messrs. Frank Ashby & Sons, Ltd., who are, of course, the manufacturers of the well-known sports car equipment, on mentioning *MOTOR SPORT*. Owing to the high cost of production, it has been found necessary to charge the sum of 3d. in stamps to cover dispatch costs and postage. Their address is Stirchley, Birmingham.

### A REALLY CHEAP BRAKE TESTER.

Although of particular interest to garage owners, the new Smith Quick-Test Brake Dynamometer will also appeal to enthusiastic motorists with a well-equipped private garage. First and foremost in its list of merits comes the price, £12 10s. 0d., which is really amazing for a machine of this type.

It is simple in design and construction, consisting of a caterpillar track which gives a perfect grip to the tyre. This track is driven through gearing by a handle containing the measuring apparatus. When the brake is applied the resistance to the rotation of the wheel is transmitted to the dynamometer handle. The dial has two needles, one yellow and one black. They show the braking figure for the near and offside brakes respectively.

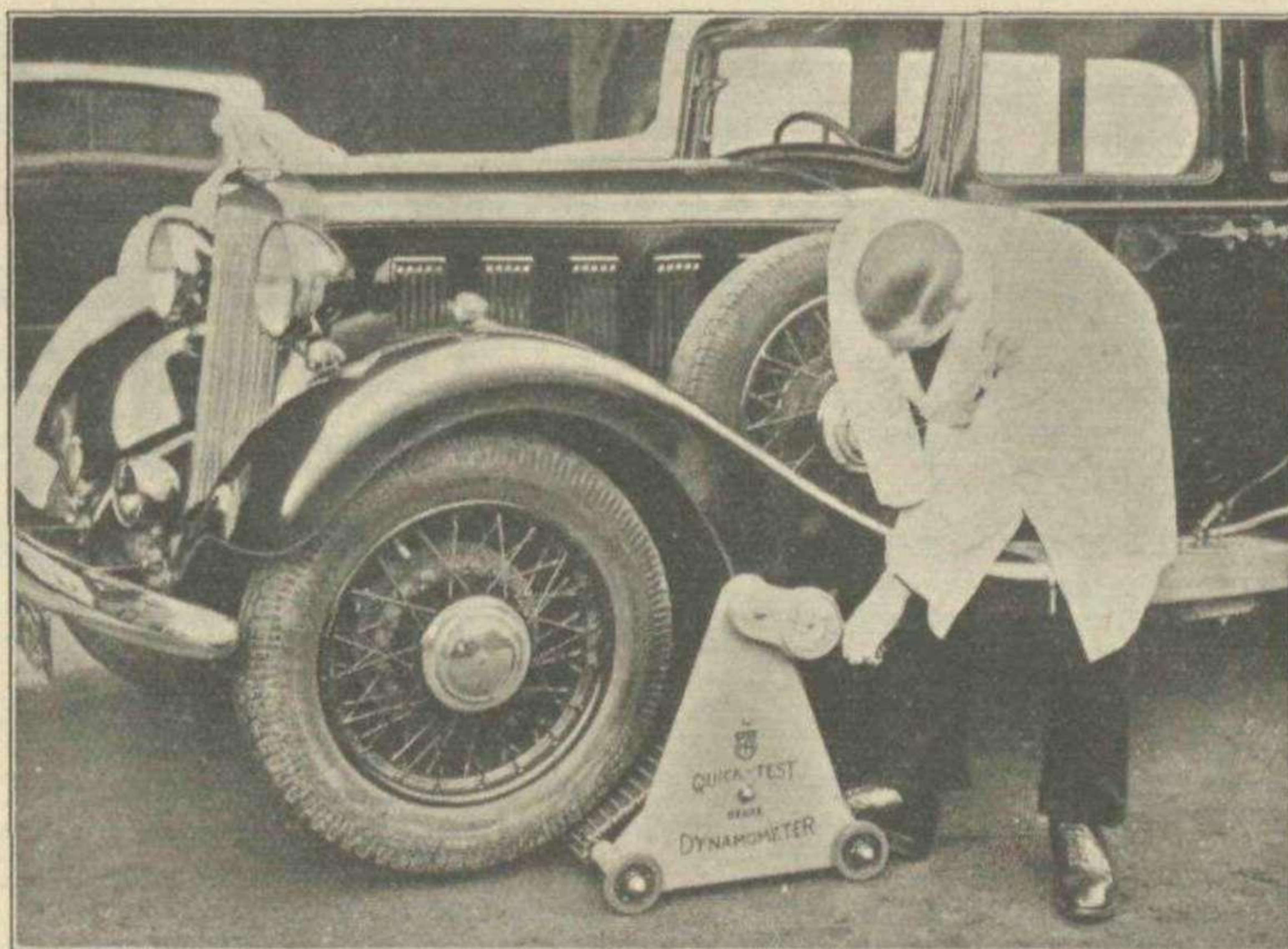
When adjusting the brakes an even pressure on the pedal is obtained by means of a special jack, which depresses the pedal about half-way down. The brake-tester is then applied to each of the four wheels, and a similar reading obtained, by adjustment, on each. The principle used is not to demonstrate the maximum braking figure available, but to simplify the balanced adjustment of the brakes on all four wheels.

A common complaint among cars with a long mileage behind them is that their brake-drums become slightly oval. The Smith brake tester shows this clearly,

for brakes in such a condition give a constantly varying figure on the dial.

An attractive booklet about the Brake-Tester has been produced by Messrs. S.

Smith & Sons (M.A.), Ltd., and free copies may be obtained, by mentioning *MOTOR SPORT*, from the Publicity Department, Cricklewood Works, London, N.W. 2.



The small, compact and inexpensive brake dynamometer introduced by S. Smith & Sons (Motor Accessories, Ltd.).



# SIR MALCOLM CAMPBELL'S NEW RECORD

FIVE WEEKS' WAITING ENDS IN TRIUMPH—A GALLANT EFFORT IN THE FACE OF DANGEROUS CONDITIONS—  
280 M.P.H. EXCEEDED FOR THE FIRST TIME IN HISTORY.

**A**LTHOUGH he has had to leave Daytona Beach without reaching the coveted goal of 300 m.p.h. Sir Malcolm Campbell is to be heartily congratulated on his latest achievement of raising the World's Land Speed Record to 276.816 m.p.h.

Fate, in the form of Daytona Beach, has been against him all along. After several weeks of anxious waiting, during which time the beach was never in good condition, the little party comprising the Campbell *équipe* began to lose heart. Then suddenly, on the morning of March 7th, a favourable tide left the long stretch of sand in a passably smooth state. With typical decision, Sir Malcolm ordered "Blue Bird" to be brought out, and the timing officials foregathered on the Beach.

It was a lovely morning, with a slight haze. To the uninitiated the sands looked as smooth as a billiard table, but Sir Malcolm's experienced eye told him that he would be in for a rough passage when the 250 m.p.h. mark had been passed.

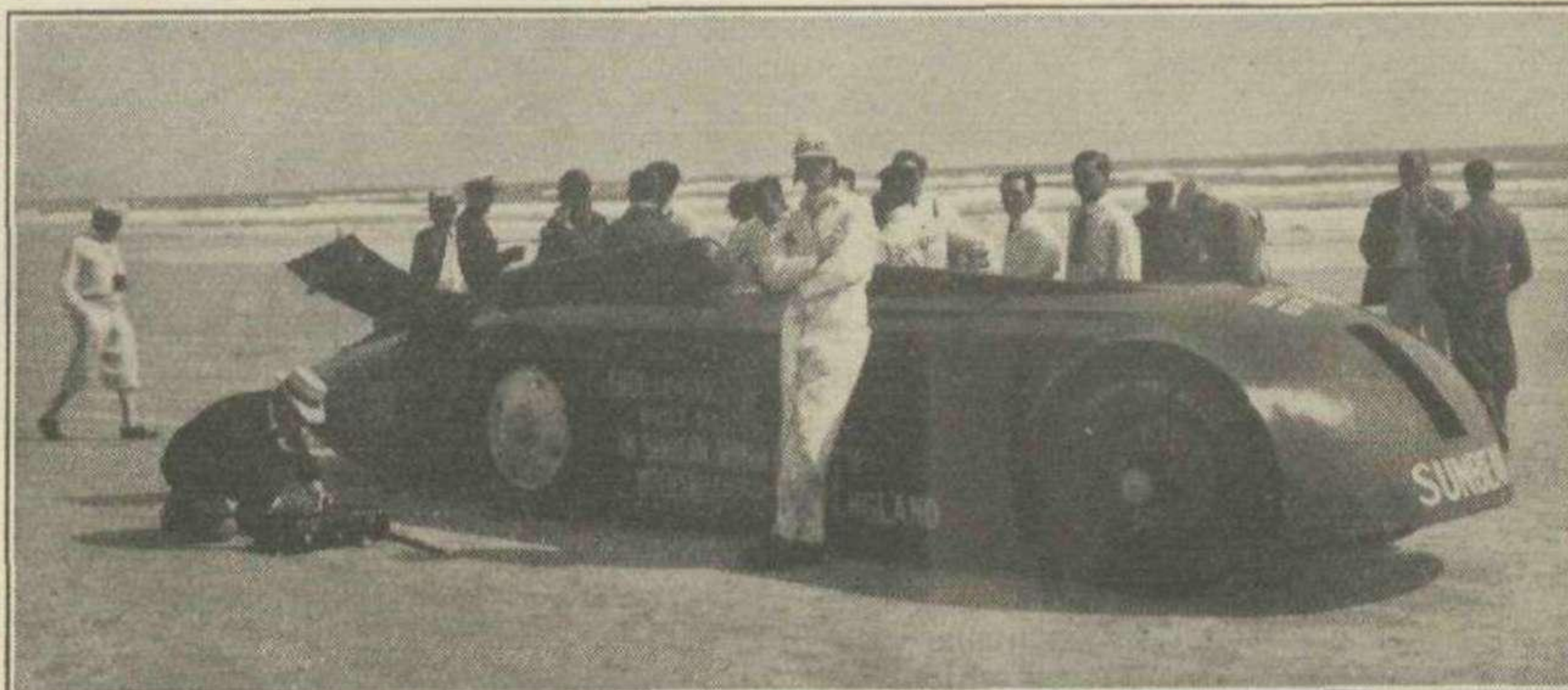
Two runs were made, one in each direction, and both were fraught with danger. On the first run he strained the muscles of his wrist in changing into top gear. At 200 m.p.h. on Daytona "Blue Bird" throws the driver about so badly that he has to be strapped in like an aeroplane pilot, and gear changing under such conditions is no easy matter. Just before entering the measured mile he closed the radiator slot, but the great car could not give of its best owing to continuous wheel-spin. The sand was too soft to give the wheels a chance to transmit the full power of the 2,350 h.p. engine. On top of this the familiar little wrinkles on the sand had a disastrous

effect on the thin tyre treads, and the front ones were frayed before the measured mile was reached. By the end of the run the tyres were stripped of their treads, but even so Sir Malcolm praised them highly for withstanding the rough treatment they had received without puncturing or bursting. On this first run his speed was 272.727 m.p.h.

On the return journey all went well until a soft patch of sand was suddenly

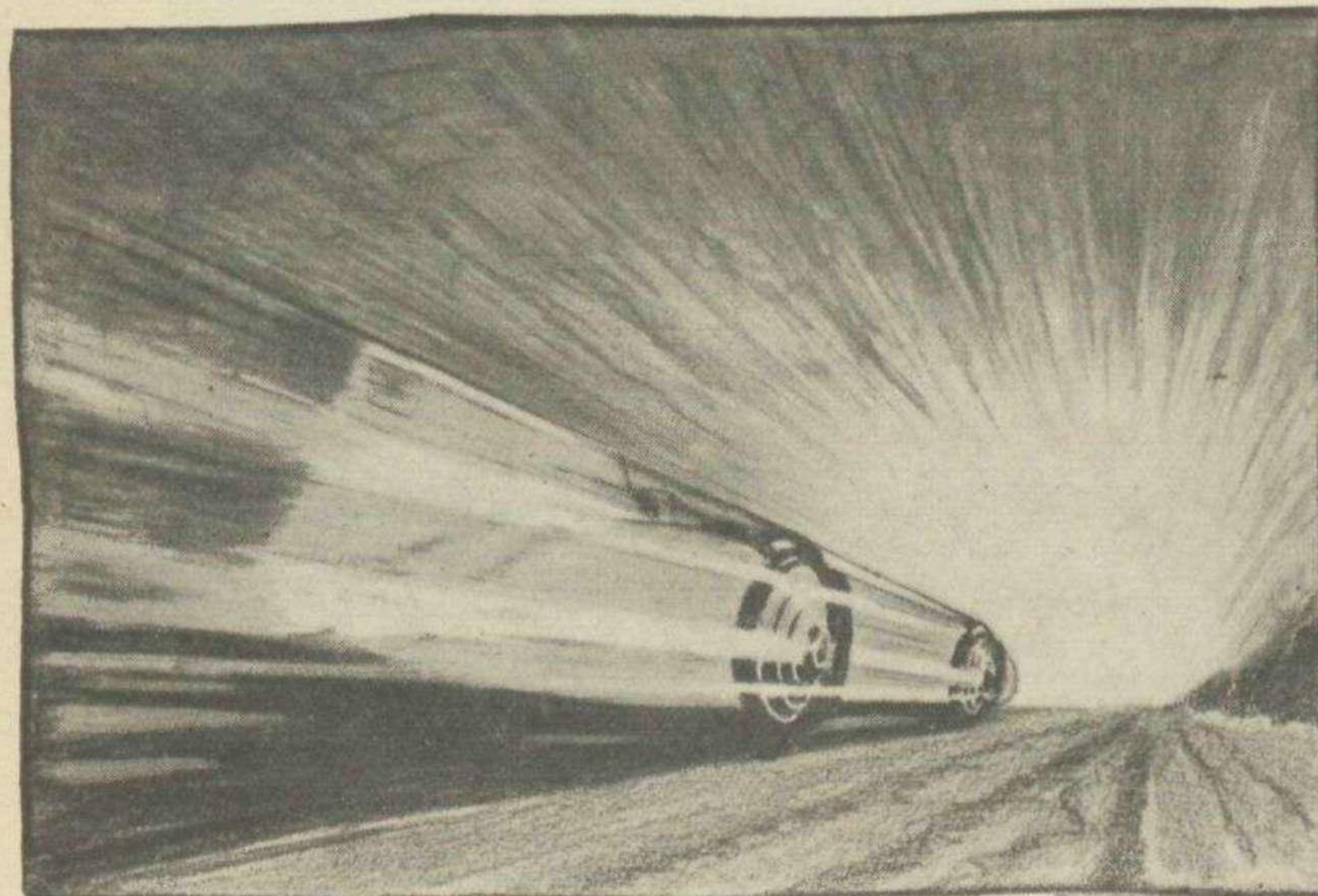
and on one occasion travelled a distance of 30 ft. with all four wheels clear of the ground!

The speed for the second run was 281.030 m.p.h., making an average for the two runs of 276.816 m.p.h., as against "Blue Bird's" previous best of 272.46 m.p.h. The car was timed over other distances as well, and the full list of records, subject to official confirmation, is given below. The figures in parenthesis



The honour of being the first man in the world to travel at 200 m.p.h. fell to the late Sir Henry Segrave with the twin-engined Sunbeam, here seen at a practice run at Daytona.

encountered, and in a trice the five-ton projectile slewed sideways. The onlookers held their breath while Sir Malcolm struggled to control the long skid, handicapped by his sprained wrist, but no one knows better how to deal with such a situation and the car was held on its proper course. Some idea of the appalling ride this record run turned out to be may be judged by the fact that the car was constantly leaping into the air



Reynolds 1935

Bravo, Sir Malcolm! For the seventh time "Blue Bird" breaks the World's Land Speed Record, this time at 276.816 m.p.h.

## THE WORLD'S LAND SPEED RECORD.

Date.	Driver.	Car.	Speed. m.p.h.
1898	Chasseloup-Laubat	Jeantaud ...	39.24
1899	Jenatzy ...	Jenatzy ...	41.42
1899	Chasseloup-Laubat	Jeantaud ...	43.69
1899	Jenatzy ...	Jenatzy ...	49.42
1899	Chasseloup-Laubat	Jeantaud ...	58.25
1899	Jenatzy ...	Jenatzy ...	65.82
1902	Serpollet ...	Serpollet ...	75.06
1902	Vanderbilt ...	Mors ...	76.08
1902	Fournier ...	Mors ...	76.60
1902	Augières ...	Mors ...	77.13
1903	Duray ...	Gobr'n-Brillié	84.21
1903	Ford ...	Ford ...	91.37*
1904	Vanderbilt ...	Mercédès ...	92.30*
1904	Rigolly ...	Gobr'n-Brillié	93.20
1904	de Caters...	Mercédès ...	97.26
1904	Rigolly ...	Gobr'n-Brillié	103.56
1904	Barras ...	Darracq ...	104.53
1905	Hemery ...	Darracq ...	109.65
1905	Bowden ...	Mercédès ...	109.75*
1906	Marriott ...	Stanley ...	121.57*
1909	Hemery ...	Benz ...	125.9
1910	Oldfield ...	Benz ...	131.72*
1911	Burman ...	Benz ...	141.73*
1919	de Palma...	Packard ...	149.87*
1920	Milton ...	Duesenberg...	156.04*
1922	Guinness ...	Sunbeam ...	129.17†
1924	Thomas ...	Leyland-Thomas	129.73†
1924	R. Thomas	Delage ...	143.31†
1924	Eldridge ...	Fiat ...	145.90†
1924	Campbell...	Sunbeam ...	146.16†
1925	Campbell...	Sunbeam ...	150.86†
1926	Seagrave ...	Sunbeam ...	152.33†
1926	Thomas ...	Higham ...	169.23†
1926	Thomas ...	Higham ...	171.09†
1927	Campbell...	Napier-Campbell	174.88†
1927	Seagrave ...	Sunbeam ...	203.79*†
1928	Campbell...	Napier-Campbell	206.95*†
1928	Keech ...	White Triplex	207.55*†
1929	Seagrave ...	Irving Special	231.44†
1931	Campbell...	Napier-Campbell	246.09†
1932	Campbell...	Napier-Campbell	253.96†
1933	Campbell...	Rolls-Royce-Campbell	272.46†

\* Over 1 mile † Average of runs in two directions.



SIR MALCOLM CAMPBELL'S NEW RECORD—continued.

are the previous records:—

- 1 Mile (f.s.), 276.816 m.p.h. (272.11 m.p.h.).
- 1 Kilometre (f.s.), 276.160 m.p.h. (272.46 m.p.h.).
- 5 Miles (f.s.), 251.396 m.p.h. (242.75 m.p.h.).
- 5 Kilometres (f.s.), 268.474 m.p.h. (257.30 m.p.h.).

In the hope that he would still be able to reach 300 m.p.h. Sir Malcolm stayed on at Daytona for two weeks, but in the end he had to admit the impossibility of making further attempts. Before returning to England, however, he may go to the famous Salt Beds in Utah to see whether the conditions there are more favourable than those at Daytona. In any event it is extremely unlikely that the Beach will be used for record purposes in the future. In spite of all the ministrations of the A.A.A.—and they are considerable—the sand is too variable a surface for any certainty to be placed in its condition.

As things are, Sir Malcolm is in the tantalising position of possessing a car which is undoubtedly capable of reaching his life-ambition of 300 m.p.h. So much is certain. There remains the problem of finding a suitable track on which its full power can be unleashed. If the Salt Beds are useless, Sir Malcolm's only hope lies in the new motor road now under construction at Karlsruhe, in Germany.

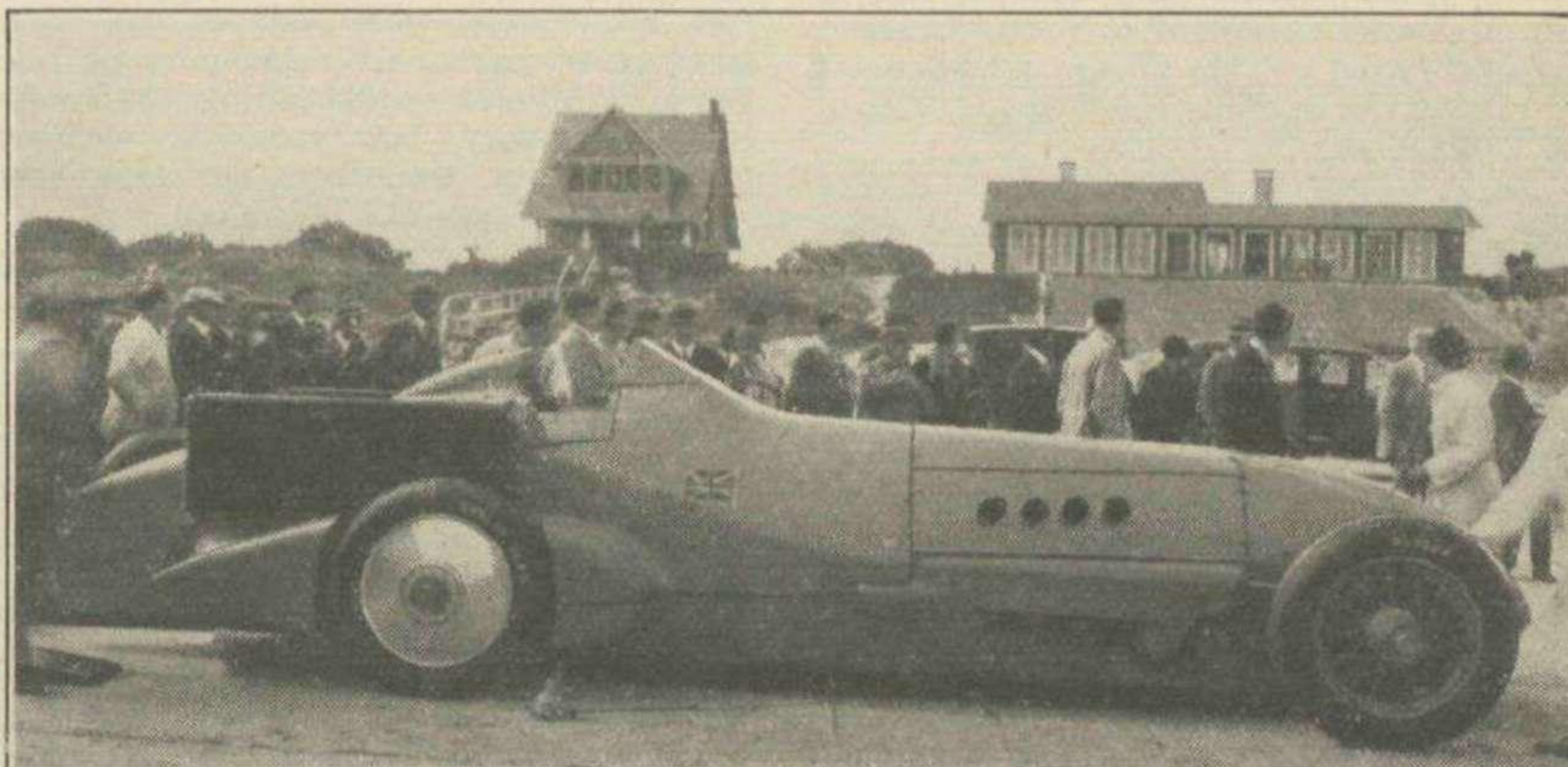
No account of his recent achievements would be complete without a tribute to all those concerned in its manifold aspects. Sir Malcolm deserves—and we are sure he receives—the admiration of

all who have automobile progress at heart. His quest for unknown speeds is the supreme example of pioneer work. Mr. Reid Railton, the designer of "Blue Bird," has the satisfaction of his theories being vindicated on every attempt by

mention in detail, and we must content ourselves with giving a full list of the component parts, as follows:—

**"BLUE BIRD'S" CONSTRUCTION.**

The design of "Blue Bird" is the work of Mr. Reid A. Railton, and the car was constructed by



Sir Malcolm Campbell's first 200 m.p.h. "Blue Bird" was the car illustrated above, with which he attained a mean speed of 206 m.p.h. at Daytona in 1928.

"Blue Bird." His designing genius gives unbounded prestige to British automobile products abroad. To all those who have contributed, both in their products and financially, to the success of the enterprise, we extend the congratulations they deserve, not only for their enthusiasm and support for a venture which reflects credit on the British automobile industry as a whole, but for the success of their products in withstanding the severest test of all time. They are too numerous to

Messrs. Thomson and Taylor. The following components were used:—Rolls-Royce engine, Dunlop wheels and tyres, Ace discs, Tyzack clutch plates with Ferodo linings, Clayton Dewandre servo-motors, Ferodo brake linings, Hoffman bearings, K.L.G. sparking plugs, Serck radiator, E.N.V. back-axle gears, D.B.S. gearbox gears, Moseley Float-on-Air upholstery, Hadfield front-axle and rear-axle forgings, shafts, etc. Burman Douglas steering gear, T.T.N. stabilizers Hardy-Spicer steering column, Woodhead road springs, Andre Silent-bloc shock absorbers, Castrol oil, Guest, Keen and Nettlefold's bolts and nuts, B.T.H. magnetos, chassis frame by John Thompson Motor Pressings, Ltd., Smith instruments, Petroflex tubing, Pyrene fire fighting equipment, and fuel prepared by Pratts-Triplex windscreens and goggles.

**WEST HANTS L.C.C.**

Bournemouth is to have a "Motoring Weekend" commencing Saturday, 29th June, which should appeal to most "Owner-Drivers." The "weekend," which is being organised by the West Hants Light Car Club, will consist of a *Concours d'Elegance* of some 14 classes of cars of varying values from £100 to

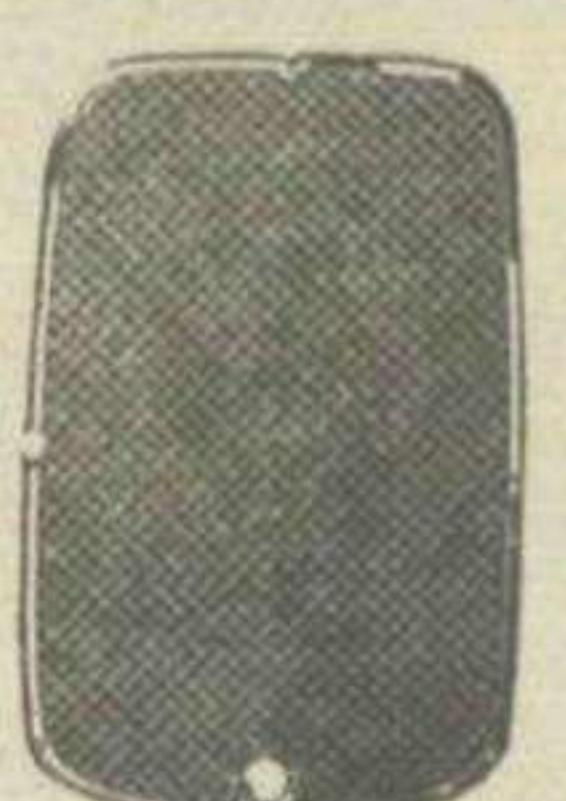
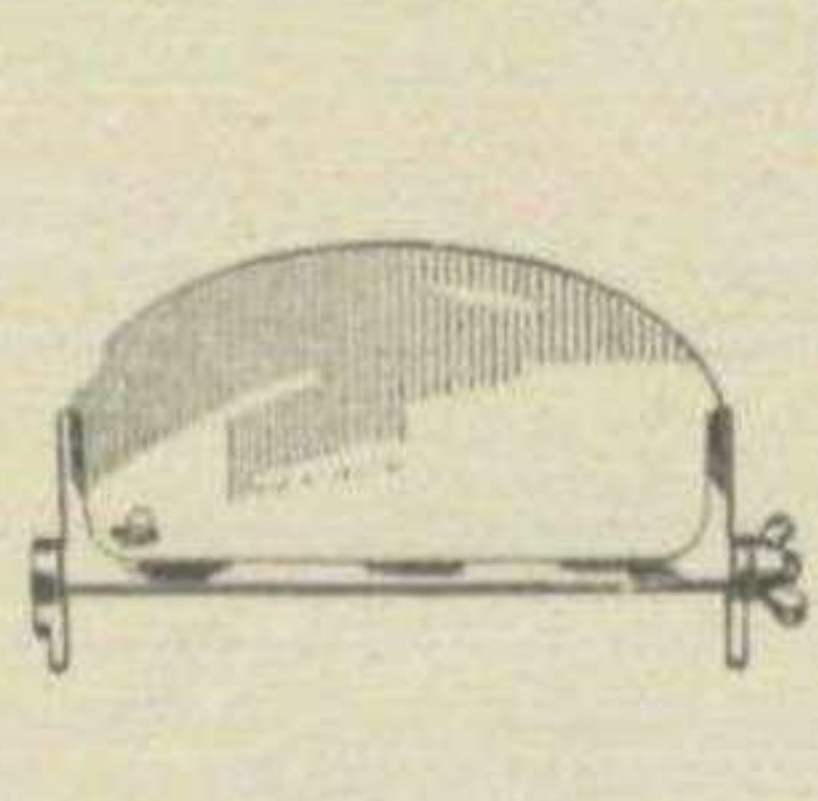
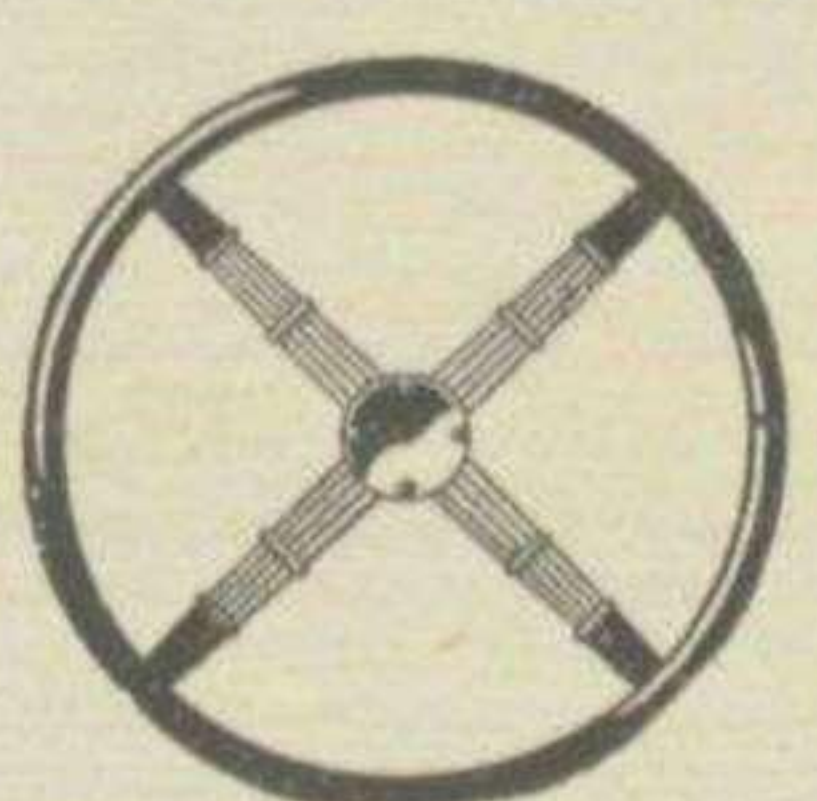
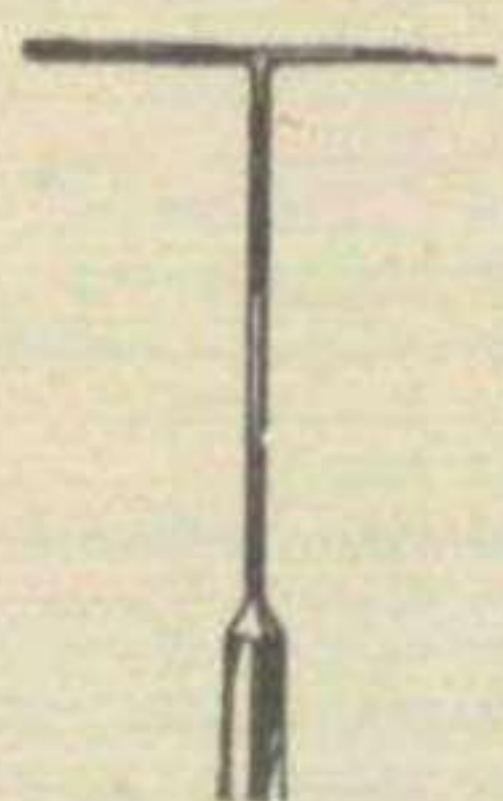
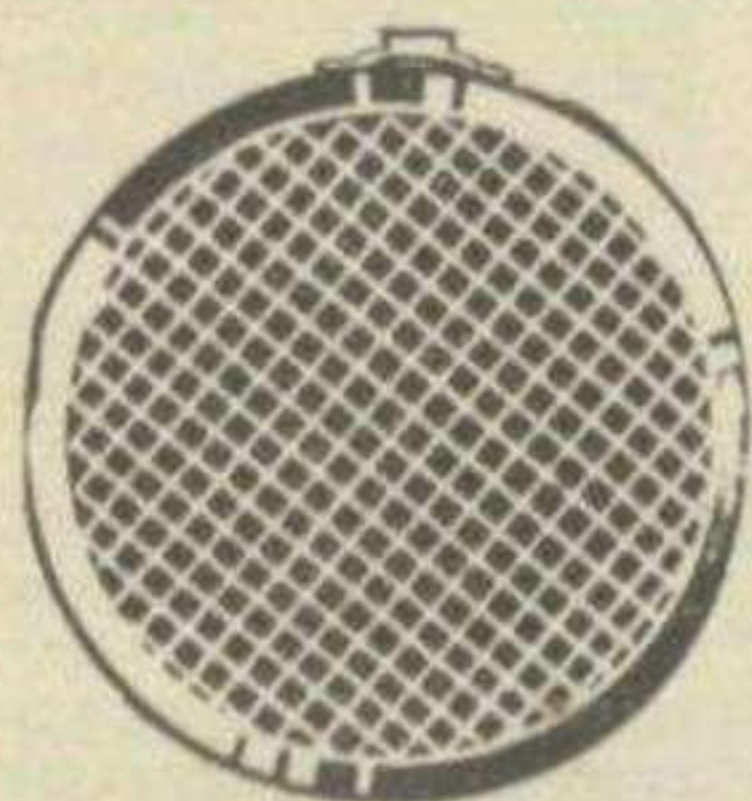
those over £1,700. Numerous cups and prizes are to be offered for competition and are to be restricted to Owner-Drivers only. Trade Entries will not be accepted.

A Gymkhana followed by a Ball in the evening at Bournemouth's famous Pavilion, as well as a "Treasure Hunt" and Social Run through the New Forest and

the country beloved of Thomas Hardy, are included in the ambitious programme being arranged.

Further particulars will shortly be available from the Hon. Secretary S. P. Robey-White, R. A. C. Offices, Bournemouth.

**"BROOKLANDS" SPORT EQUIPMENT**

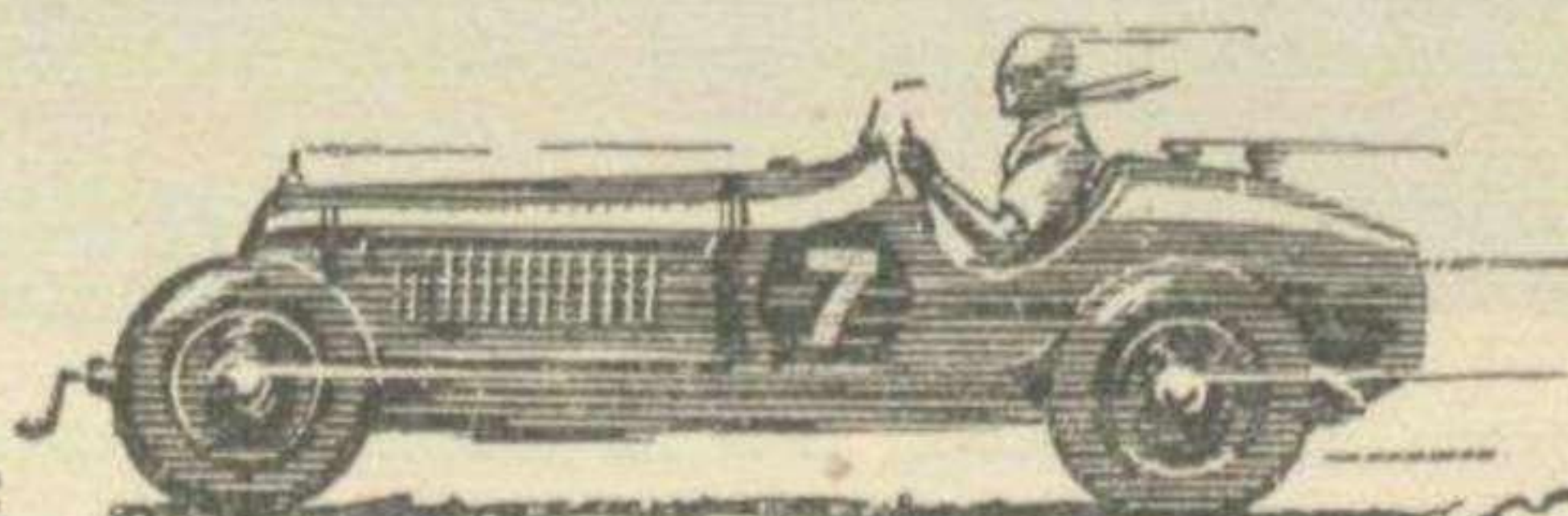


● "Brooklands" Sport Equipment includes Headlamp Guards, both Hinged and Fixed, from 19/- pair. Solid Brass throughout. Chromium Plated and fitted with double crimped diamond pattern mesh. Plug spanners, Fixed 8/6, with Universal Joint 12/6. Copper Clouters 12/6. Steering Wheels for Morris 8, Austin, Ford, Riley, M.G., etc. Morris 8 36/-. M.G., 38/-. Austin 7 40/-. Bentley 52/-. Ford 8 45/-. Ford 10 43/-. Ford V8 50/-. Minor 36/-. Riley 47/6, Vauxhall 50/-. 200 Stock Bosses.

**Send—**

If you want a copy of our 1935 International Fixture List, include 3d. in stamps. The List includes all Racing and Sports Club Fixtures, complete list of 1934 race results, 5 pages of photographs of racing incidents, Lap Speed tables, Calendar, formulæ, etc.—28 Pages in all. Limited quantity only available.

FRANK ASHBY & SONS, LTD.,  
STIRCHLEY - BIRMINGHAM.





## A SPECIAL 6½-LITRE BENTLEY

A SECOND-HAND CAR OF UNUSUAL INTEREST.

IN pre-war days if you wanted to go fast, you bought a car with a large engine, and the speed you achieved depended largely on how much chassis space you were prepared to sacrifice to the all-important motor. Engine power, braking systems and road-holding have been vastly improved since those far-off days, but the principle still remains the same, and the Bentley which forms the subject of this article came as a refreshing interlude in the stream of small high-revving cars which have become almost universal nowadays.

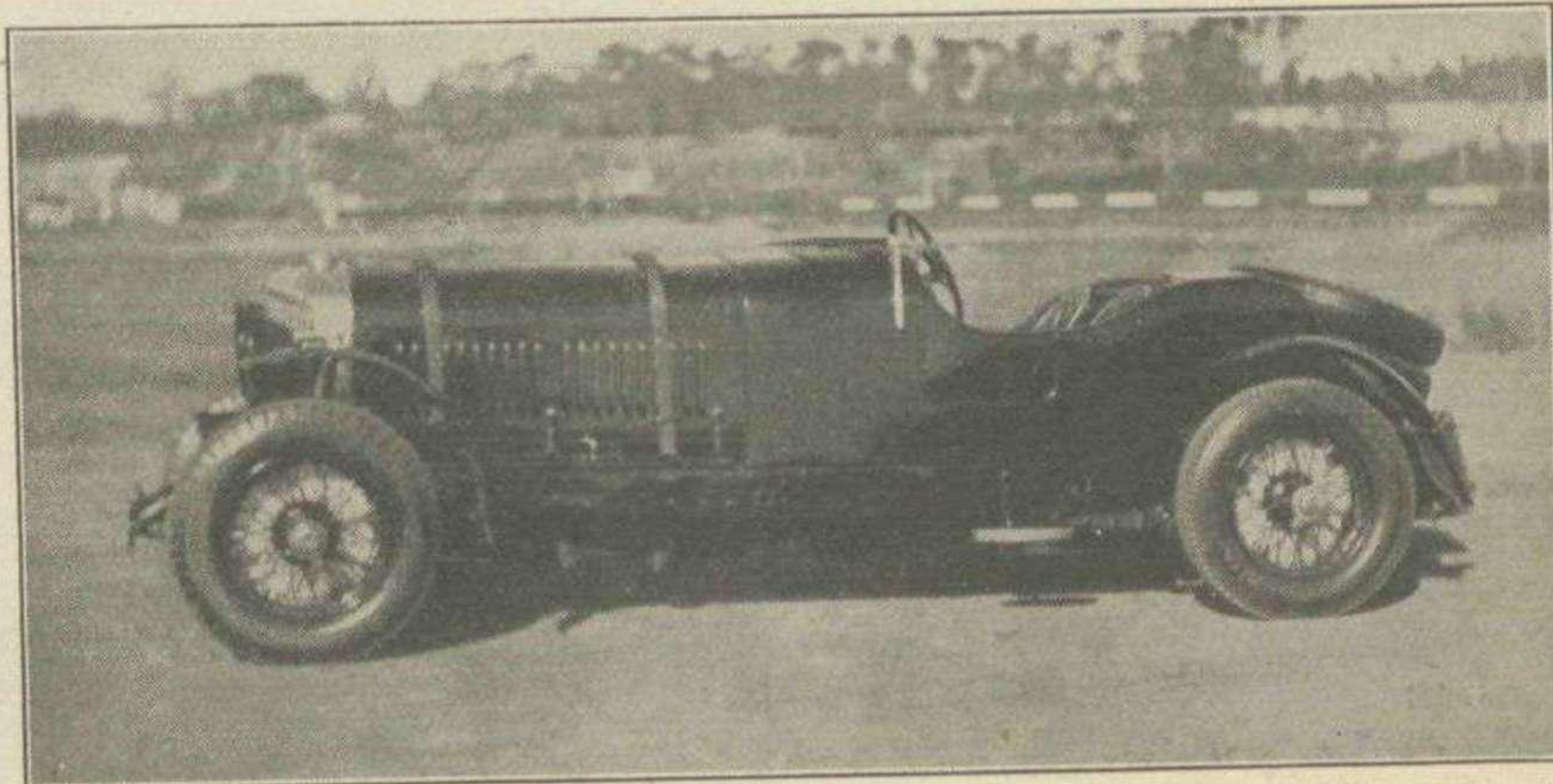
The origin of the car is interesting. It started life in 1927 as a standard 6½-litre saloon and continued as such until 1934, when it came into the hands of Messrs. H. M. Bentley & Partners, who specialise in Bentley cars; Mr. H. M. Bentley is of course, a brother of "W.O." the originator and designer of the famous marque.

Mr. Bentley was approached by a customer who wanted a car on the lines of the short chassis S.S. Mercédès-Benz. "We can do it," was the reply, and the car selected was the 6½-litre Bentley already referred to. The wheelbase was reduced from twelve feet to ten, the compression of the engine was raised to 5.8, and the induction system was altered to take two Zenith carburettors. The bonnet-line was lowered by fitting a Speed-Six radiator and a sporting two-seater body was fitted, and the overall height dropped further by substituting 18-inch wheels in place of the 21-inch type originally used. The result was a

really striking car, with a performance to match.

When the car was started up, the deep rumble from the Brooklands exhaust system and the rattle of the hour-glass

ratio implied an engine speed of only 500 r.p.m. Driving our way gently through London traffic, quite an easy matter by reason of the excellent driving position, we were soon on our way to Brooklands,



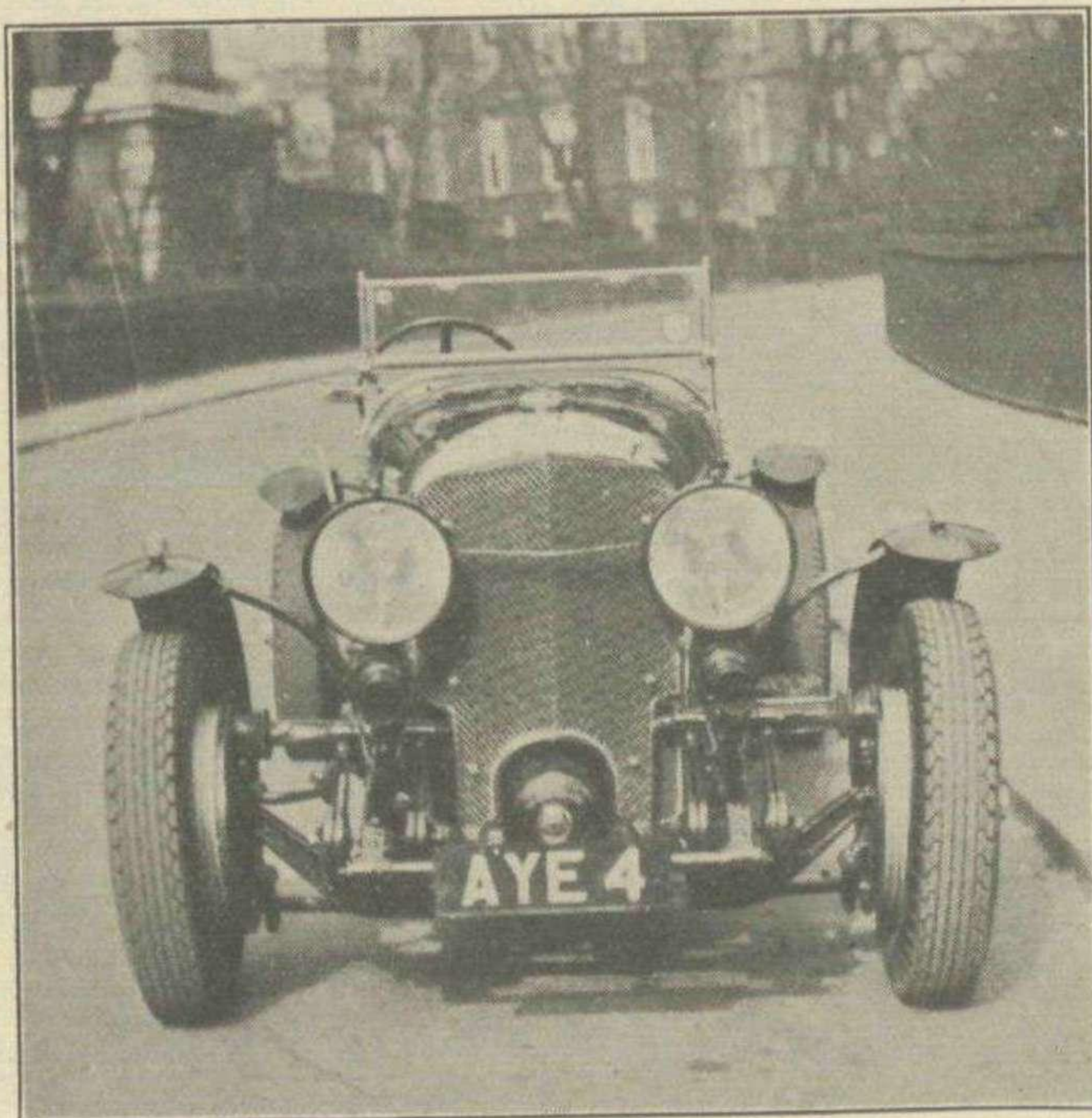
"A he-man's motor car" in the best sense of the words. The photograph fails to reveal fully the extent to which the car has been lowered.

pistons recalled very vividly some of the pre-war cars we have had the chance of driving, but once at the wheel, and out on the road, it proved perfectly docile. Starting off in first gear, the lever could then be transferred immediately to the third or fourth gear positions, and in the latter we burred along quite contentedly with ignition retarded, at 15 m.p.h., which, with the special 3 to 1 back axle

the only place where one can nowadays safely try a car of this calibre. However luck was against us, for the plugs proved unsuitable for high speeds and the best speed we were able to achieve before misfiring set in was 90 m.p.h. in less than one lap of the Track. Later on, however, we reached this speed on the open road with windscreen raised and on a slightly unfavourable gradient so the stated maximum speed of 102 m.p.h. should be reached fairly easily. The same car fitted with larger wheels actually put up a standing lap of 81.77 m.p.h. in last year's M.C.C. meeting, and also a flying lap at 101 m.p.h. Another piece of misfortune was the failure of the rev-counter, and the acceleration chart shown is based on changing up at 45 and 60 m.p.h. instead of the 55 and 80 m.p.h., which calculation afterwards showed were permissible.

Performance on the gears is a valuable asset, but what one looks for on a high-powered car like the Bentley is a tremendous flow of power on top gear. In this we were not disappointed. Changing up at 50 or so, the car fairly steamed away to 75 and beyond and held this figure with just an occasional touch of throttle, and as an instance, starting from the end of the 30 m.p.h. limit on the Henley Fairmile, the car bounded up Bix Hill as though it was all level going. Likewise on a test route over deserted road in the West Country our previous highest speed was easily equalled without any attempt to make use of the car's maximum, but simply sitting there and letting it maintain its effortless 75. The engine at this speed is running at about 2,800 r.p.m.

Few people can settle down behind the wheel of a racing car, with its length of powerful bonnet stretch out in front without a feeling of exhilaration, and this was how we felt about the Bentley. In spite of its size, however, the bonnet did



The businesslike front aspect of the Bentley.



THE 6½-LITRE BENTLEY—continued.

not prevent one seeing both front mudguards, while there is a real satisfaction in directing this large projectile round corners with the certainty of knowing that if what in front of you gets round, the back will look after itself. The Brooklands silencers give the car an organ-like note which is very stirring in the open country, and yet the car can be run in town without giving offence, but a pair of Burgess or similar pattern silencers would be an asset if much town work is contemplated.

The driving position behind an unusually large steering wheel gave one complete confidence in the car, which the steering itself had that definite quality which speaks of fine workmanship, and a caster action which centred the wheel of its own accord after rounding a corner. Cornering with heavy cars always seems to us a technique on its own, and it takes a little time to remember to choose the correct path beforehand. Once this was done the Bentley took them as it were in its stride, with the minimum of effort on the part of the driver, and we proved it to our full satisfaction in a long chase we had with a solo motor-cycle, a contest which ended comfortably in favour of the car.

The suspension proved equally satisfactory on road and track, and the weight distribution was such that the tail slid slightly with really violent cornering, though the six-inch tyres seemed to exert such a powerful grip that it was hard to provoke even a squeak. The brakes are of the mechanical type, fully compensated, and with a vacuum-servo motor to aid the driver, came on powerfully with a light use of the brake pedal. They proved very satisfactory, as can be appreciated from the braking figure of 52 feet from 40 m.p.h.

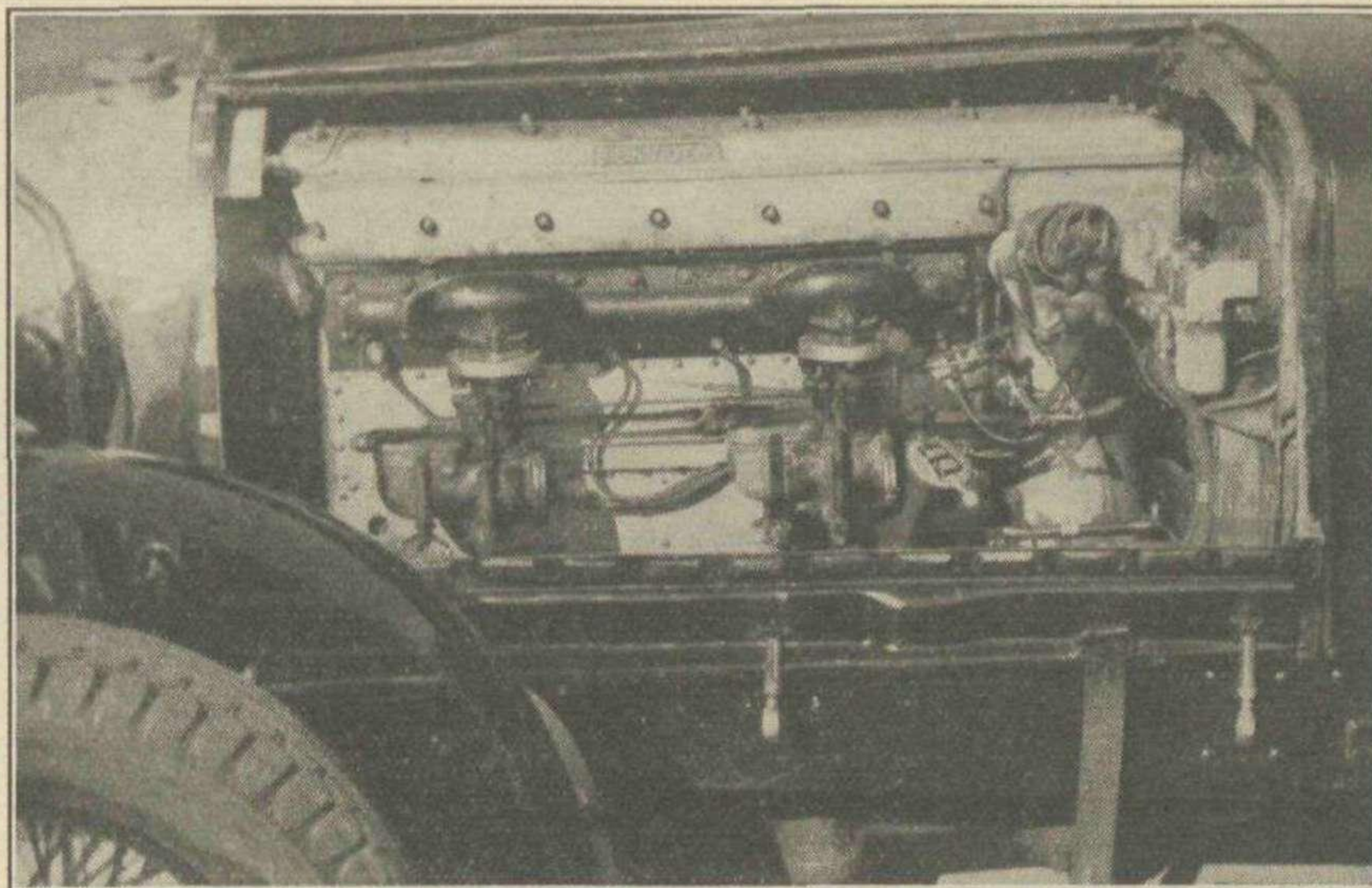
Gear-changing as would be expected, is needed much less on the Bentley than on smaller cars, but the maxima of 80, 55 and 35 can be employed with effect when needed. The gear-changing requires a fair amount of practise before a noiseless change can be guaranteed, more by reason of the low engine speeds than any inherent difficulty of manipulation. The gearbox was made well before the time of "silent-thirds," but the hum from the gears is quite unobjectionable. The back axle is fitted with special straight-tooth racing bevels, and these actually make more noise than the gearbox pinions, but in view of the increased factor of safety for track work, their use is justified. The overall gear ratios are 3.03, 3.88, 5.51 and 10.2, the "low top-gear ratio" as Messrs. H. M. Bentley call it, being installed to give a good top-gear performance on the road, and limits the all-out speed to 102 m.p.h., but if the car were used for track work, this could be raised by fitting larger rear wheels.

The car was rebuilt in April, 1934, and has since done 10,000 miles.

The engine runs quietly, smoothly, and without any periods, and the carburetter is satisfactory throughout the range. Two plugs per cylinder are used, with coil and magneto ignition. It is worth recalling, perhaps, that two inlet and two exhaust valves per cylinder were used on the large six-cylinder engine, giving a long period of service without needing for re-grinding.

The lighting and ignition system is controlled with the minimum of complication through single-pole switches on the dashboard, and the Marchal headlights which give an even spread of light behind which one can drive in comfort at 70 m.p.h., have a dipping mechanism controlled through a foot-switch.

The two-seater body fitted was attrac-

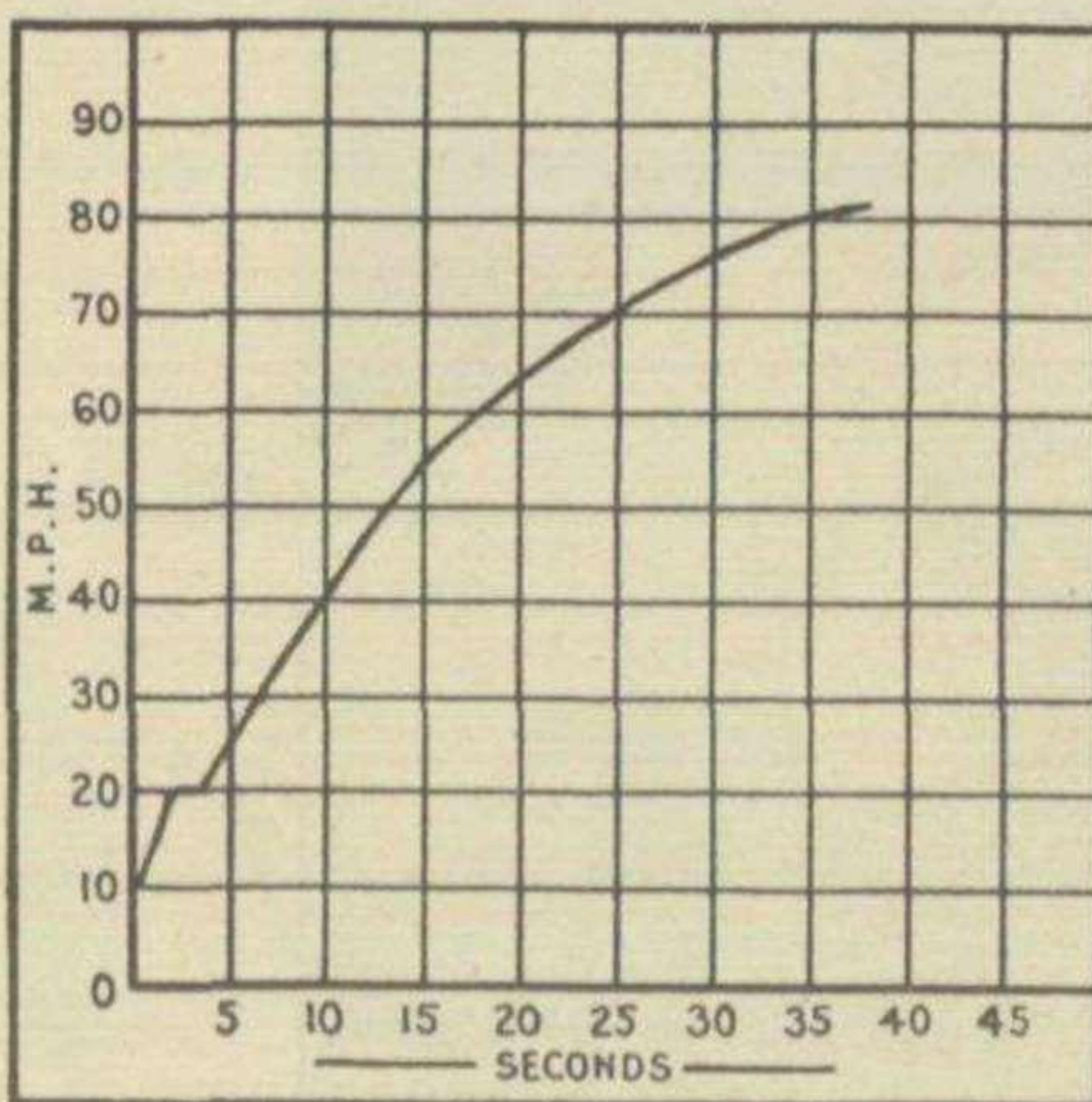


Something like an engine! This 6½-litre Bentley differs from standard in having two Zenith carburetters. Read about its performance on the road in the accompanying article. It's a real motor-car.

Another feature peculiar to these engines was the ingenious drive for the overhead camshaft which was effected through a system of rods and eccentrics from the rear end of the crankshaft. Two Centopulse electric pumps are used to supply fuel from the 16-gallon rear tank. The petrol consumption worked out at 10 m.p.g., and we found Pratts Ethyl well suited to the engine's requirements.

tive in line and eminently suited to high speed on road or track. The same unfortunately cannot be said for the windscreen, which was too low, too far away and would also have been improved by being given a backward rake. However this matter could be rectified at small expense. The two front seats had peculiar high narrow bucket backs, which absolutely prevent side sway when cornering and are set at an appropriately alert angle. The wings were small and readily removed. The only luggage space provided was a small locker behind the seats, and this is also used for stowing the hood and its collapsible frame.

As a super-fast road car for summer touring in England or abroad this Special Six Bentley, would be ideal, while its equipment has been determined largely with a view of its also being raced at Brooklands or elsewhere. Actually with more complete wings and weather protection there is no reason why it should not be used all the year round, and anyone who buys it is assured of a car which will both create an impression and justify it. The car is for sale, the price being £675, and we have to thank the present owners Messrs. H. M. Bentley and Partners of 3, Hanover, Court, London, W. 1, for their courtesy in permitting us to test it.



The acceleration chart of the 6½-litre Bentley.

30 CARS AT TRIPOLI

The full quota of 30 entries has already been received for the Tripoli G.P., on May 12th.

Here is the full list of drivers: Varzi,

Stuck, Fagioli, Caracciola, Von Brauchitsch, Etancelin, Zehender, Siena, Ghersi, Nuvolari, Chiron, Dreyfus, Trossi, Brivio, Comotti, Balestrero, Rosa,

G. Ferrari, Lord Howe, Ruesch, Sommer, Lehoux, Widengren, Pintacuda, Taruffi, Barbieri, Tadini, Soffietti, Premoli, Minozzi, and Farina.



## What Do You Know About Cars ?

**T**EST your memory of the racing and sports cars of yesterday and to-day. You may win a guinea!

### Report on Problem No. 12.

I guessed as much! That last one set you guessing. Out of all the entries submitted, only two were correct. The first opened on the morning of March 15th, was that sent in by:

Mr. W. Templeton,

"North View," Bramhope, Nr. Leeds, to whom we have sent our congratulations and a cheque for one guinea.

And now perhaps you would like to hear the solution. The car in the photograph last month was none other than a Delage, year 1919, type C.O. The actual car depicted was one of the first two specimens to be shipped to this country. Nice looking car, isn't it, or wasn't it?

The "post-mortem" reveals a considerable difference among our readers as to the identity of the car in question. So varied were the entries that I wondered at times whether all of us see alike. The most popular solutions were Napier and Mercedes, followed by Sunbeam and Sizane-Berwick. These four makes represented the bulk of the entries, although Alfa-Romeo and Itala both had many adherents. After that the list becomes more varied, and I find the following names on the pile of coupons on my desk: Metallurgique, Austro-Daimler, Schneider, Crossley, Isotta-Fraschini, Steyr, Lagonda, Farman, Chenard-Walcker, Ansaldo, Fiat, Hispano-Suiza and Lea-Francis.

### Rules for Problem No. 13.

The rules for Problem No. 13 are as follow:—

1. Cut out the coupon on the inside back cover, fill in your name and address and solution in block letters, and send it

to us in a sealed envelope, marked "Competition."

2. Any alterations or defacements on the coupon will automatically disqualify the entrant.

3. Entries must reach this office, 39, Victoria Street, London, S.W. 1, not later than the first post, April 15th, and a prize of one guinea will be awarded to the sender of the first correct solution opened on that day.

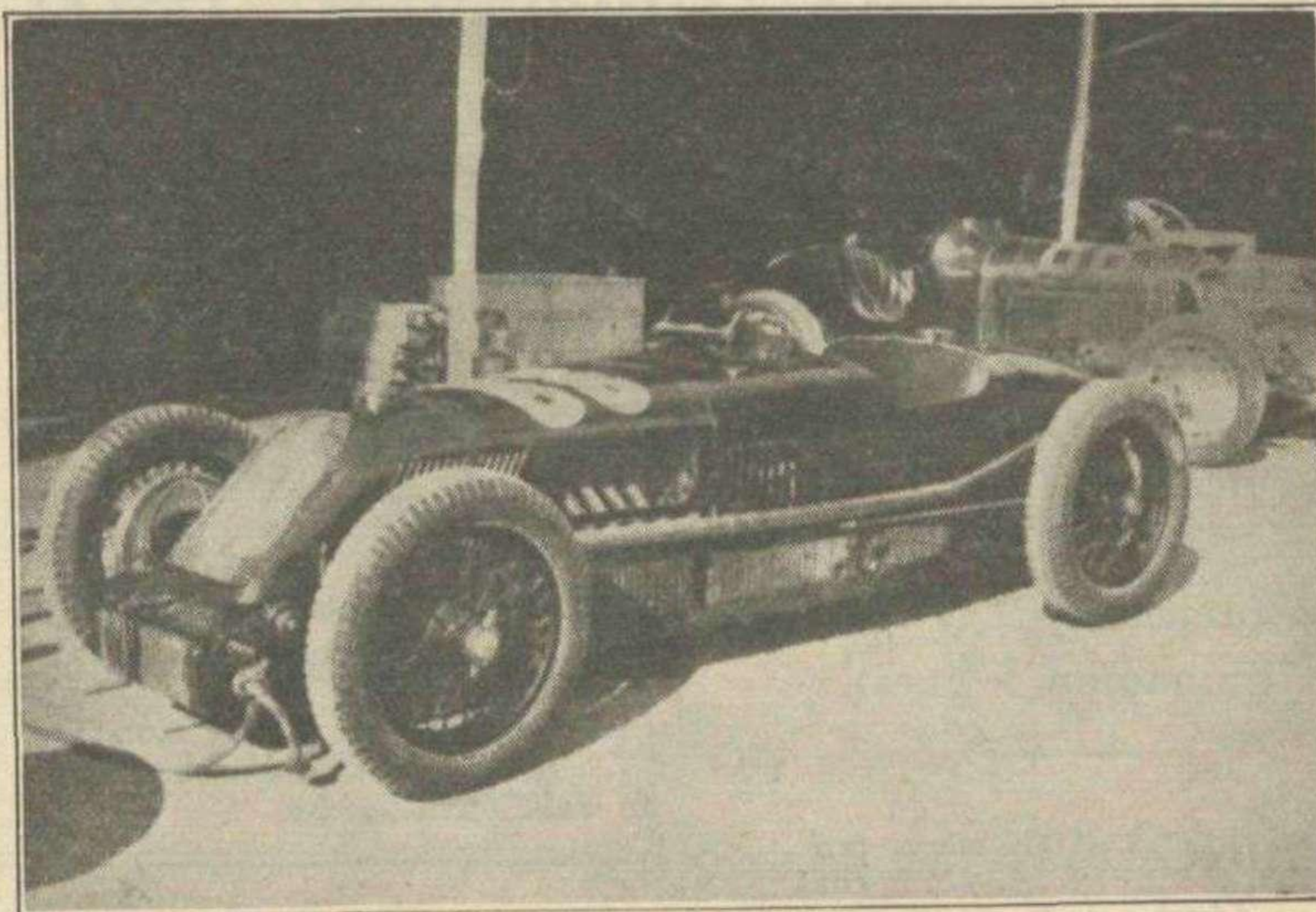
4. More than one coupon may be included in one envelope.

5. No letter must be sent with the coupon.

6. The result will be published in our May issue.

7. Employees of Motor Sport (1929), Ltd., are not eligible to compete.

8. The Editor's decision is final.



PROBLEM NO. 13—What is the make of car in this Illustration?

### Send Us Your Puzzle Picture!

A prize of half-a-guinea is offered every month for the photograph used in the competition. The picture of the Delage last month was submitted by Mr. G. H. B. Dodd, of 37, Ellesmere Road, Greenford, Middlesex, to whom we have sent a cheque for that amount.

If you have a photograph in your collection which you think would puzzle readers, let us have a look at it. It may be worth half-a-guinea! Incidentally, photographs submitted must be real photographic prints, not cuttings from newspapers, from which it is impossible to make printing blocks.

THE JUDGE.

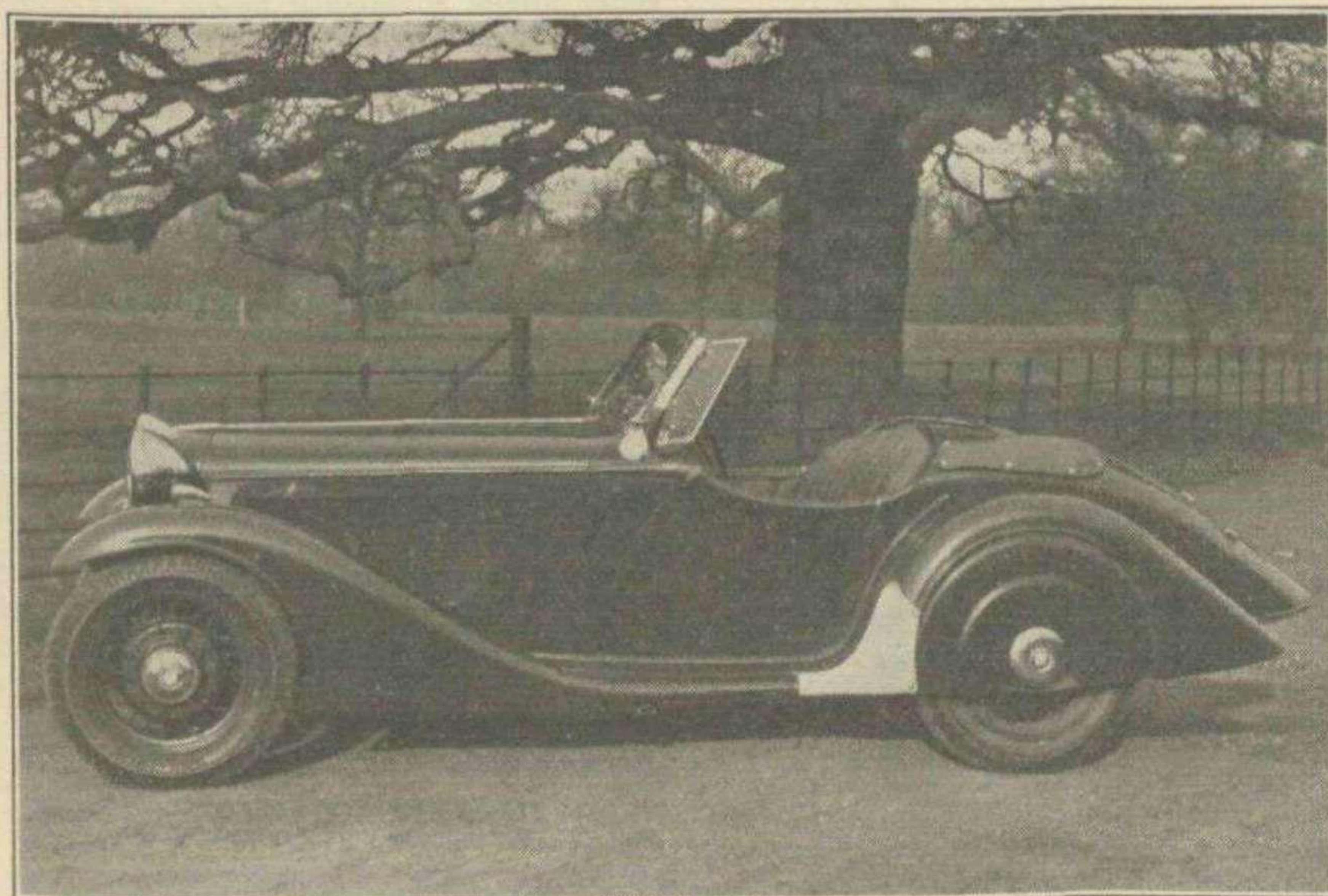
### AN ATTRACTIVE 1½ LITRE

The good looking sports model illustrated on the left is the new B.M.W. 1½-litre sports two-seater.

Several features of this famous German car, which is now handled in this country by Messrs. A. F. N., Ltd., of London Road, Isleworth, are worthy of attention. For example, the aim of the designers has been to obtain a smooth exterior, as far as possible, and this has been accomplished by means of concealing the hood (which is nevertheless a really practical affair), covering the rear wheels with detachable panels, storing the spare wheel in the tail, where it lies under a circular locking cover, concealing the direction-indicators, and fitting the rear light, stop light, and number plate all flush with the tail. The number plate is illuminated from behind the plate.

The detachable wind-deflectors are a good idea, and the wide doors are to be noted.

Altogether a very nice motor-car.





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**1928** 1½-litre ALFA-ROMEO drop-head coupé by Young of Bromley, nice condition. Apply Box 28 c/o MOTOR SPORT.

### AUSTIN

**1927** AUSTIN 7, chassis frame, axles, springs, steering, crankcase, gearbox. £5. Biggs, 21, St. Andrews Road, Enfield, Middx. Enf. 0643.

### BENTLEY

**BENTLEY** 1927 Model, Speed 3-litre Red label Gurney Nutting Weyman 4-door Sportsman saloon. Short chassis LT 1582. Twin carb. Privately owned. Accept £150 quick sale. Box 049 c/o MOTOR SPORT.

### FRAZER NASH

**FRAZER NASH** Cars, Falcon Works, London Road, Isleworth (Hounslow 0011) have for disposal a number of reconditioned cars.—Full particulars on application.

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**Leather Coats Raglan ... 55/-, 65/-, 75/-, Double Breasted ... 85/-, 105/-**  
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**Large Oval ... 6/6 Small Oval ... 5/6**  
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**Ditto in cheaper make ... 7/6**  
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*(Continued next column.)*

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