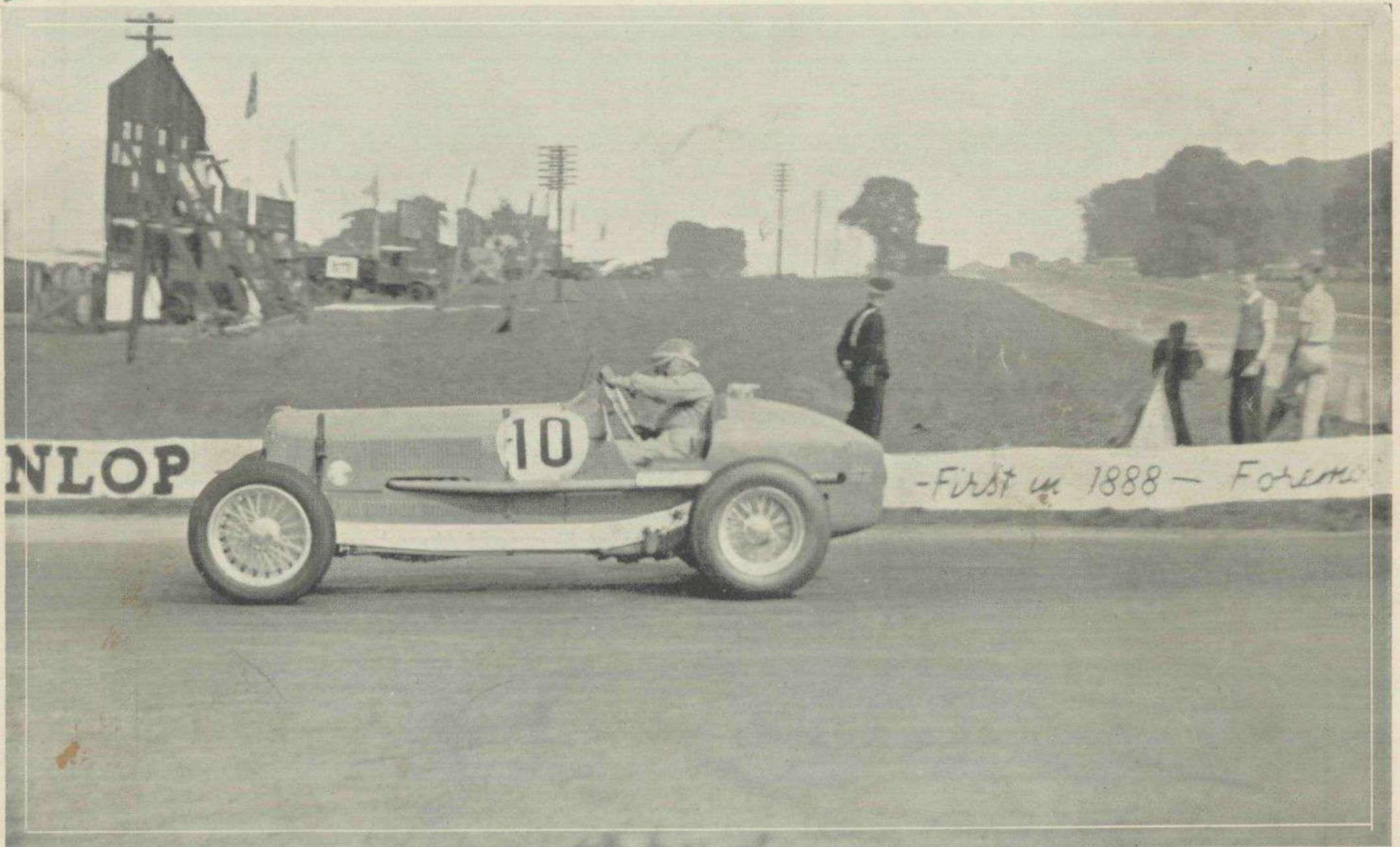


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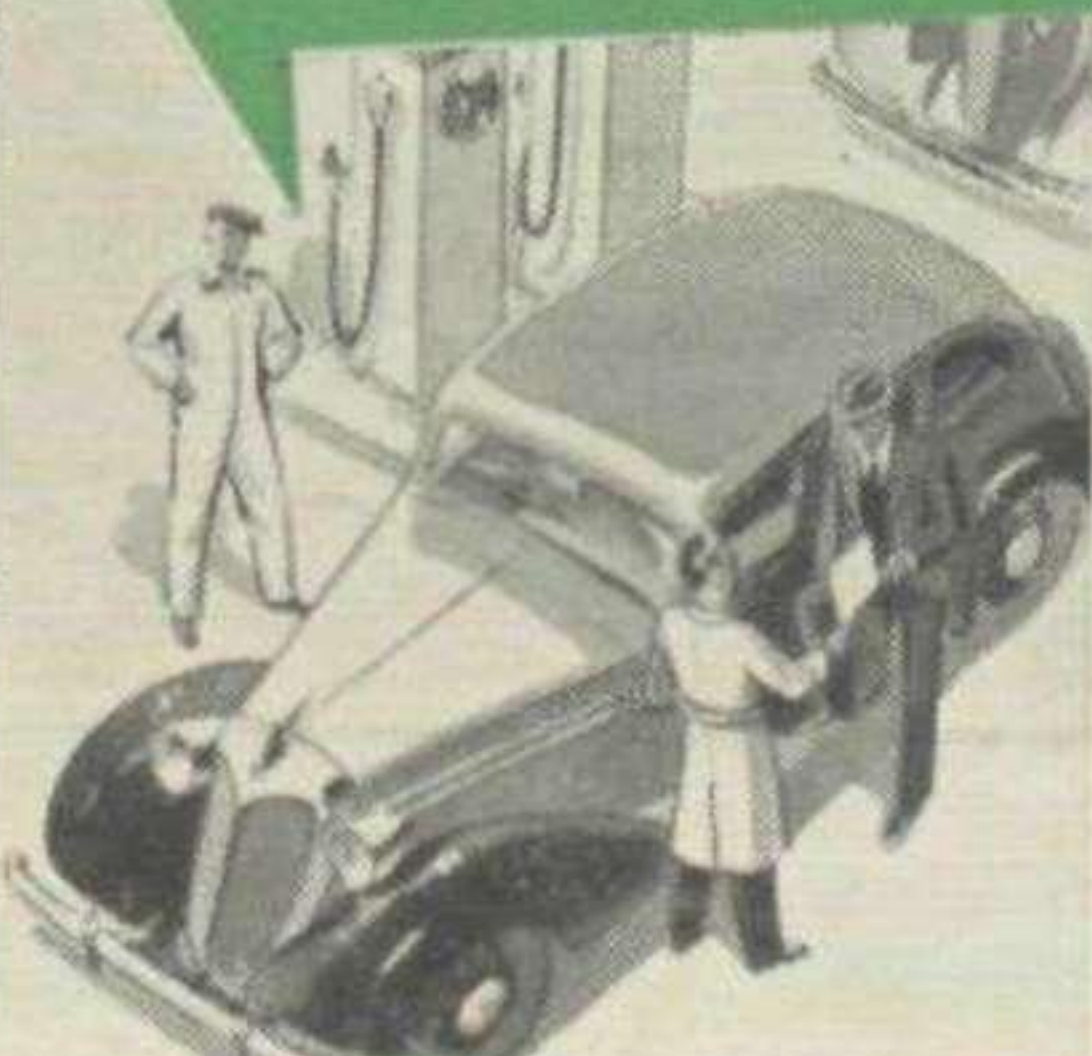
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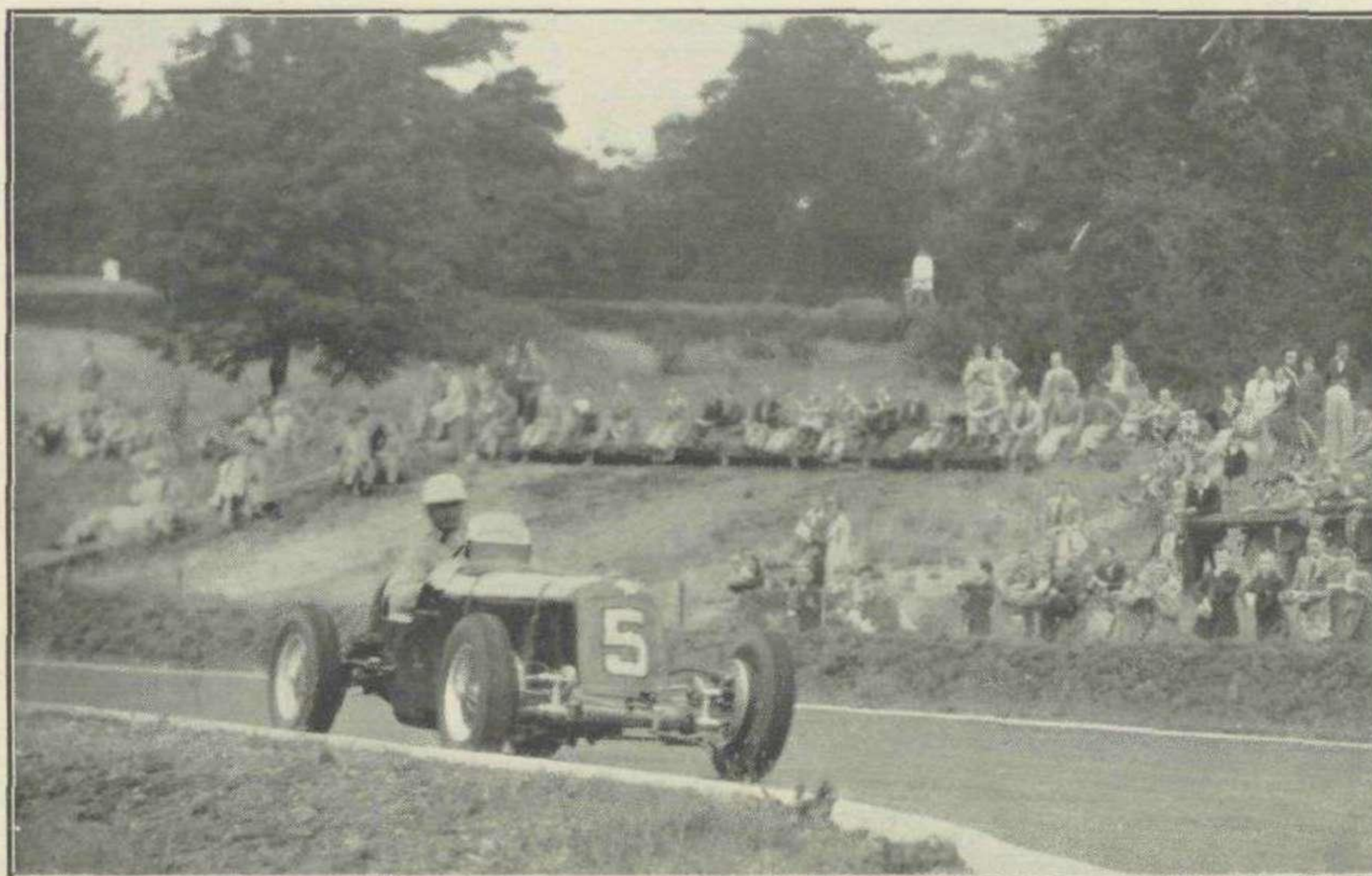
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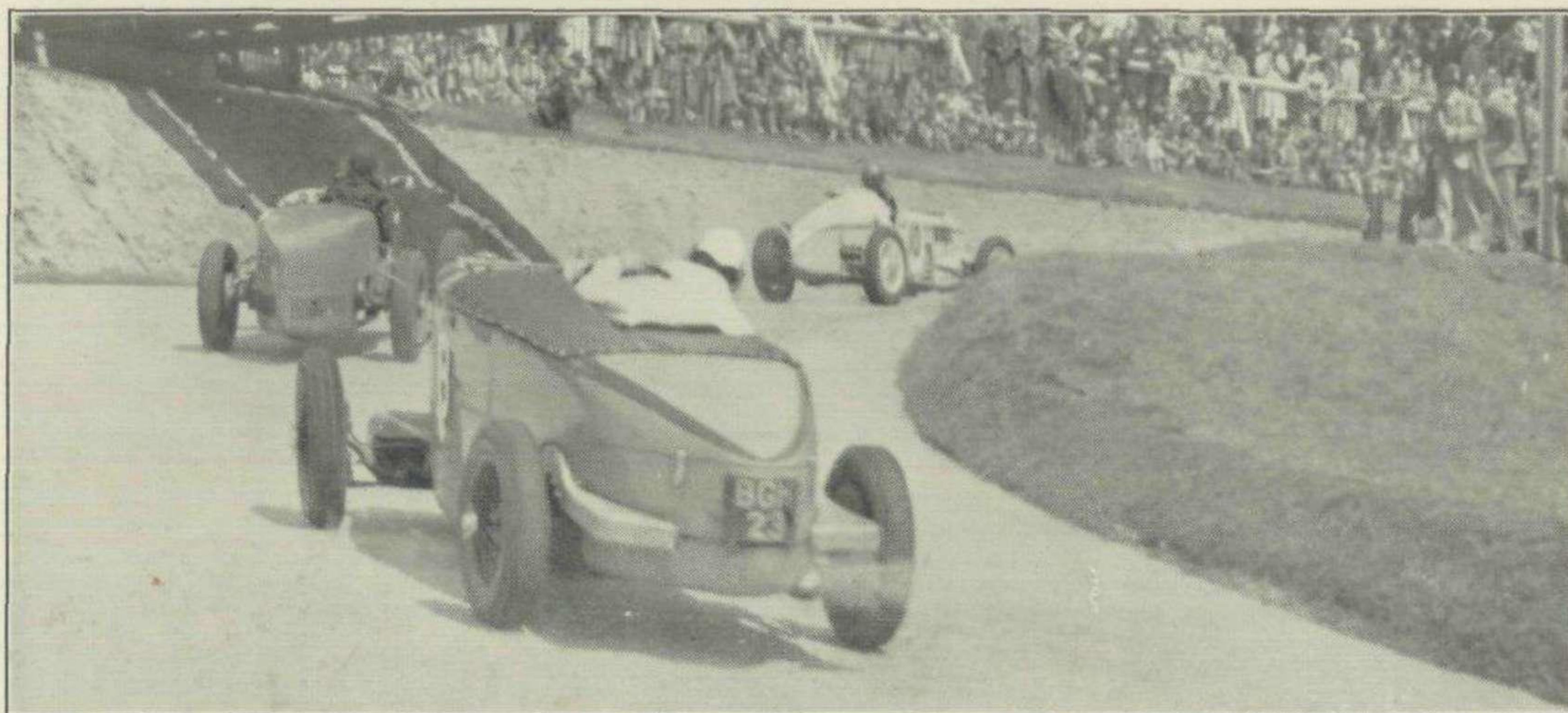
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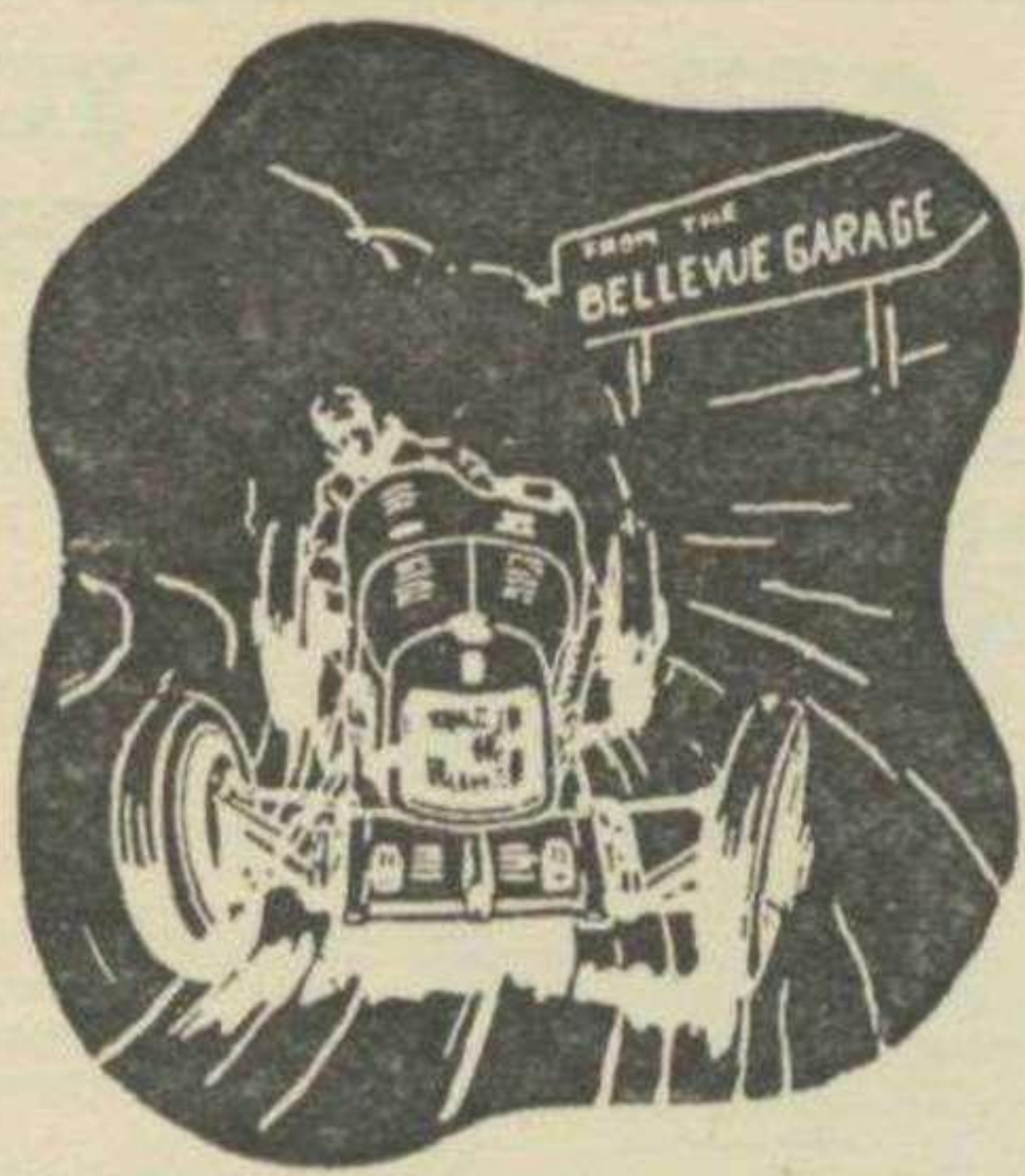
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## FRENCH POLISH AT DONINGTON

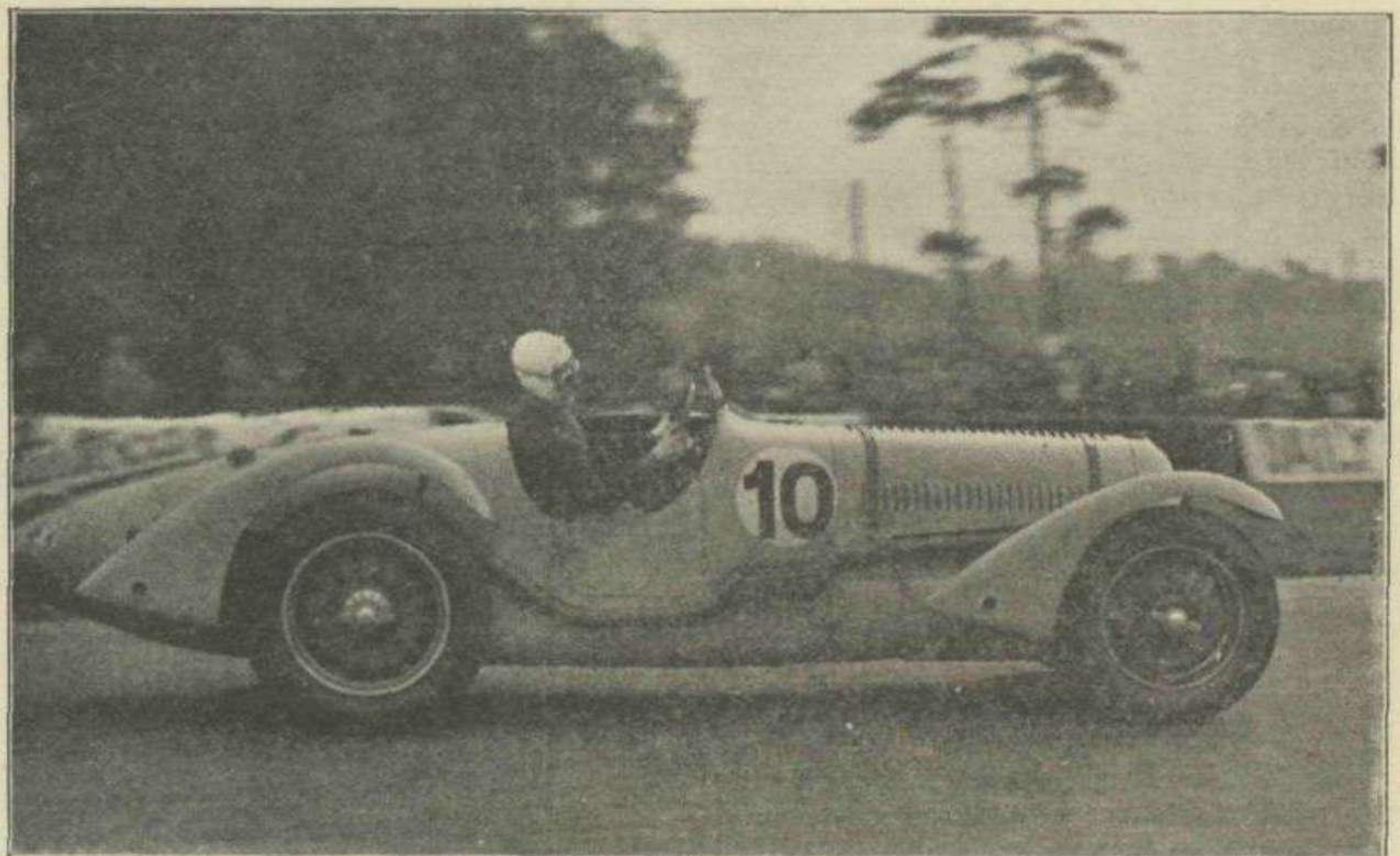
FRANCO-GERMAN DUEL IN THE TOURIST TROPHY—BRITISH SINGER PLACED FOURTH

**F**OREIGN cars swept the board in the first Tourist Trophy Race to be run in England. Previous races in the series, which began in 1905, had been held in the Isle of Man, and, since 1928, over the Ards circuit near Belfast. On Saturday, September 4th, the Royal Automobile Club had chosen Donington Park, near Derby, for the eighteenth event of the series, and G. Comotti, the Italian driver, scored a fine victory with a French Darracq at 68.7 m.p.h. The Frenchman, Le Begue, with another Darracq, was second, and third was the Siamese prince, "B. Bira," driving a Frazer-Nash-B.M.W. The first British car to finish was the Singer driven by J. D. Barnes, which came in fourth. A French Delahaye was fifth, and another Singer sixth.

The circuit at Donington Park had been specially lengthened for the race, by a loop cutting out Starkey's Corner, and running down to the new Melbourne Corner. Formerly 2 miles 971 yards in length, the circuit now measures 3 miles 220 yards. Attracted by the prestige of the race, and by fine weather, a record crowd for a car race at Donington attended, estimated at 30,000 strong. A considerable improvement for the benefit of spectators was that cars were not allowed to park within a few yards of the railings, thus allowing space to walk to and fro.

Unfortunately the powerful works team of Delahayes were non-starters, as the French firm had been busy winning the million-franc national prize at Montlhéry. "B. Bira's" Delahaye had also been put out by trouble during practice, but "Bira" took Henne's place at the wheel of a Frazer-Nash-B.M.W. It was also a great disappointment that E. R. Hall's Bentley had been withdrawn. Hall and Earl Howe are the only two drivers who had competed in every T.T. race since 1928, but Earl Howe, too, was not among the entrants.

Twenty-one starters, however, made up a fine array. The race distance was 100 laps, or 312 miles. The handicapping was by credit laps and time, the Austin driven by Charles Dodson, twice winner of the T.T., receiving sixteen credit laps and 52 secs. from the three Darracqs, Martin and Brackenbury's Lagonda, and



Comotti, the T.T. winner, in his Talbot Darracq.

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Mongin and Paul's Delahaye. Actually, at twelve noon, the Singers and Fiats, each with three cars, were the first to start, with thirteen credit laps and 2 mins. 19 secs. advantage, and these were followed by the white Frazer-Nash-B.M.W.s, workmanlike cars from the German factory.

Four B.M.W.s were on the line, but only three accelerated away to Red Gate Corner, just after the pits! Dobbs's car had given one convulsive jerk, and then stopped. German mechanics rushed out from the pit, which was under the expert direction of A. C. Bertelli, once of Aston-Martin's, and pushed the car in. Then they began the long task of dismantling the back axle, for something had snapped in the differential. Many wondered why so difficult and lengthy an operation was attempted, but the reason was that Dobbs's car was one of the nominated team of three, for Fane had orders to win "or burst," and was going out on his own.

Fane it was, who, driving at terrific speed, led the race on handicap in the

FRENCH POLISH AT DONINGTON—continued

opening stages. The Franco-German duel was on, for Sommer led the Darracq team, close behind on handicap, and occupying second, third and fourth places for the first half hour. In the next two positions came the other Frazer-Nash-B.M.W.s, driven by H. J. Aldington himself, head of the English company, and "Bira."

Sommer was all out to pass Fane, and was going up to 130 m.p.h. on the steep downhill stretch leading to the new Melbourne Corner. Just as he seemed to have attained his object, he appeared over the crest of the rise on the return leg of the new loop with an ominous clatter in his engine. An exhaust valve had dropped into the cylinder, and the dashing Sommer was out. Comotti, however, who, by the way, had taken the place of the famous Louis Chiron in the Darracq team, took up the challenge for the French cars, and after three quarters of an hour had wrested the lead on handicap from Fane.

Meanwhile the leading British car was Maclure's Riley, which had succeeded in passing Aldington's B.M.W. to take fifth place. No sooner had this success been heralded than Maclure also had to retire with valve trouble. Another car which was early in trouble was Gordini's little Fiat, which stopped several times to change plugs, but thereafter ran well.

Shortly after one o'clock Comotti had to stop for water, and lost the lead to his team mate, Le Begue. It was fine tactics how the Darracq drivers replaced one another in the lead at this stage, each waiting to step up should trouble occur. Thus at 1.15 the order on handicap was:—

1. R. Le Begue (Darracq), 68.6 m.p.h.
2. A. F. P. Fane (Frazer-Nash-B.M.W.).
3. G. Comotti (Darracq).
4. "B. Bira" (Frazer-Nash-B.M.W.).
5. H. J. Aldington (Frazer-Nash-B.M.W.).
6. J. Paul (Delahaye).

There were many skids at the new Melbourne Corner, but the B.M.W.s and Darracqs, with independent front suspension, were remarkably steady.

Half an hour later Aldington had to stop to change plugs, and took the opportunity to refuel. Meanwhile Dobbs had been watching the deft German mechanics grovelling under his car for an hour and three-quarters, and thought it time to put on his helmet and gloves. The work was being held up by tight splines on one of the axle shafts. It was not till another half hour had passed, however, that the work was done, and, amidst much clapping, Dobbs was able to enter

the fray, with two and a quarter hours lost!

Skids continued to provide excitement all round the course. Scott's H.R.G., which had arrived boiling at the pits, slid at Melbourne Corner, and Laird's Morgan also went onto the grass at the same point. Paul with the Delahaye slid right off the course at Melbourne, but recovered without stopping. Comotti, who was rapidly making up for his pit stop, held a nasty skid in Holly Wood. Gerrard with one of the Rileys had to brake furiously at Coppice Corner, at the far end of the long straight.

over the Delahaye, now driven by Mongin. This car had many adventures, and skidded wildly at several points. Once at the Hairpin Mongin went right over the grass, while the spectators gasped. Eventually he called at his pit and poured water onto the brakes to cool them, so that a great cloud of steam arose.

Aldington's recovery received a setback when his car began to misfire, loud reports coming from the exhaust as the car overran, and all plugs and jets were changed. This let Norman Black's Singer into sixth place at 3.45 p.m., and from that time till the finish of the race the



Dobbs's Frazer-Nash-B.M.W. and Black's Singer approaching Melbourne Corner.

Then Fane came into his pit, and when he tried to restart, there was a nasty noise from the back axle. The tired mechanics, not long rid of Dobbs's car, got out the jacks again, but this time there was no question about retirement, and Fane's brilliant drive had ended.

1. G. Comotti (Darracq), 69.2 m.p.h.
2. R. Le Begue (Darracq).
3. "B. Bira" (Frazer-Nash-B.M.W.).
4. J. Paul and M. Mongin (Delahaye).
5. J. D. Barnes (Singer).
6. A. C. Dobson (Riley).

The Singer driven by Barnes was running steadily, but Dobson with the Riley had been checked several times by pit stops, for brake adjustment, and twice for more water. This put him out of the running, and at 3.15 Aldington had battled his way back to sixth place, while the Singer had got the advantage on handicap

six leaders on handicap did not alter. Aldington resumed at great speed, but the unfortunate Dobbs's car developed trouble once more in the transmission, and had to retire.

The leading Darracqs had an advantage of nearly 6 mins. on handicap ahead of "Bira," but with ninety laps covered Le Begue's car began to sound unhappy, and the driver pulled onto the grass on the hill running down to the Hairpin for a brief stop. He got going again without losing second place.

Earlier in the race Le Begue had put in a lap in 2 mins. 35 secs. at 72.6 m.p.h., but Comotti, speeding up with victory in sight, accomplished his ninety-eighth round in 2 mins. 33 secs., at 73.5 m.p.h., fastest of the race.



Gerard and Gee on their Rileys, passing the pits. Gerard finished ninth and Gee retired.

FRENCH POLISH AT DONINGTON—continued

Two sensational incidents occurred during the final stages, the first when the consistently driven Lagonda of Brackenbury and Martin, which had been out-paced for sheer speed, but was putting up a fine show, lost a wheel at the Hairpin. Then Laird's Morgan suffered a similar mishap, owing to a broken stub axle, just before Coppice Corner, but in neither case was the driver injured. On its ninety-ninth lap Gordini's Fiat ran

out of fuel, and the driver had just time to run to the pits from Melbourne Corner, fetch a replenishment can, and finish within the time limit. Shapley, with Mr. Dobson's Fiat, however, had still one lap to cover when the race was declared ended.

RESULT

1. G. Comotti (Darracq), 68.7 m.p.h.
2. R. Le Begue (Darracq), 67.6 m.p.h.
3. "B. Bira" (Frazer-Nash-B.M.W.) 66.1 m.p.h.
4. J. D. Barnes (Singer), 57.8 m.p.h.

5. J. Paul and M. Mongin (Delahaye), 65.9 m.p.h.
6. N. Black (Singer), 56.3 m.p.h.
7. A. C. Dobson (Riley), 62.8 m.p.h.
8. H. J. Aldington (Frazer-Nash-B.M.W.), 63.0 m.p.h.
9. F. R. Gerard (Riley), 61.8 m.p.h.
10. A. Gordini (Flat), 54.4 m.p.h.

Class Winners

- 5,000 c.c. : G. Comotti (Darracq).  
 2,000 c.c. : "B. Bira" (Frazer-Nash-B.M.W.).  
 1,500 c.c. : A. C. Dobson (Riley).  
 1,100 c.c. : J. D. Barnes (Singer).  
 No Team finished the Race.

## MIDGET RACING IN NEW YORK

Since the Madison Square Garden Corporation began promoting midget racing last year, the fastest "doodle bugs," as the midgets are called, have been flocking to New York from all parts of the country. The races are held every Wednesday evening at the Garden Bowl. Thirty thousand seats have been removed from the famous boxing arena to make way for a one-fifth mile asphalt-track forty feet wide. The turns are slightly banked and are fifty-six feet at the widest part.

There are two barriers, a crash-rail twenty feet from the track and a crash-wall a few feet behind it. The crash-wall is held together by almost one mile of one-inch steel cable. The track is brilliantly lighted by forty-four light poles, each carrying two 1,000 watt lamps.

A meet is composed of nine events, the first one being the time trials. The second event is the first elimination heat which brings together the eight fastest cars in the time trials. This is followed by the second elimination heat comprised of the ninth, tenth, and eleventh fastest cars and the five non-winners of the first heat. The third heat includes the thirteenth to fifteenth cars in the time trials and the non-winners of the two preceding heats. Each of the heats is of eight laps.

The fifth event is a handicap race for the eight fastest cars of the time trials in reverse order. This is followed by the second handicap for the ninth to fifteenth fastest cars in the time trials. Next is the consolation race for the non-winners of the first six events and those not among the first fifteen in the time trials. Before the main event there is a special invitation race for the three fastest cars on the track. This takes the place of the miss-and-out race which was recently discontinued after being found too dangerous. In this race ten cars in single file would start. They were given two laps in which to better their positions after which the last car to cross the finish line would be flagged out. The flagging out procedure would continue until only four cars remained and these would continue for two laps more. However, there were so many serious accidents in this race that it won the displeasure of both the spectators and the drivers and was therefore eliminated. The final event is a thirty-lap affair, the field limited to the ten fastest cars of the evening.

The two outstanding cars in the Garden Bowl competition are the Dreyer and the Offenhauser Special. The Dreyer midget

is powered with a four-cylinder, two-cycle, 984 c.c. Evinrude or Elto out-board motor. They develop up to 80 h.p. at 7,500 r.p.m., and have a straight away speed of 115 to 120 m.p.h. The motor is installed vertically with a bevel gear fitted to the end of the shaft. Two bevel gears are driven from this, one working the water pump, the other connected to the gearbox. The gearbox ratio is 2:1, the gears being of twelve and twenty-four teeth. In the rear axle there is a thirteen tooth pinion gear and a forty tooth ring gear giving a ratio of 3.07:1 or a total of 6.14:1, when 12,400 tyres are used on the rear wheels. This combination has been found best when racing on a one-fifth mile asphalt or one-quarter mile dirt track. On one-fifth mile dirt tracks an eleven tooth pinion gear is used giving a ratio of 7.26:1.

The frames are specially built to stand rough treatment, although axles are usually cut down model T Ford. The springs are transverse and are equipped with Hartford shock-absorbers. To assist cooling some drivers attach a small wire basket to the stone guard in which they carry a block of dry ice. The best time made by a Dreyer at the Bowl for one lap was 14.80 seconds.

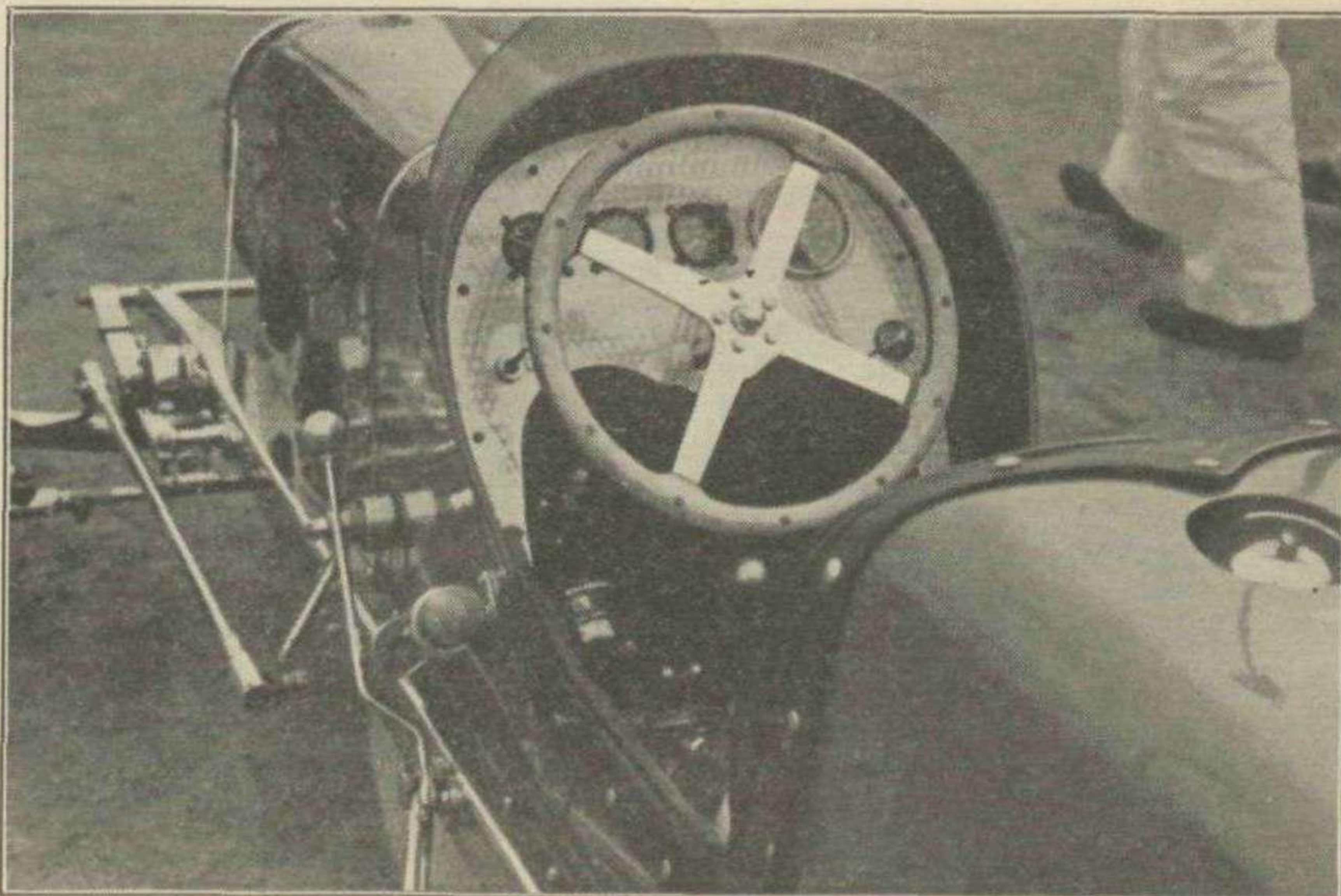
The Offenhauser Special is built by Fred Offenhauser, who for twenty-three

years was superintendent for Harry Miller until he took the Miller plant over two years ago. There are at present twelve Offenhausers competing in the U.S.A., two of which are at the Bowl.

The motor has four cylinders of 97 cubic inches displacement, dual overhead camshaft with two valves per cylinder. The bore is 2 31-32, stroke 2 1-2 inches. The crankshaft is hollow drilled with three main bearings. It is fully counter-balanced, with tubular connecting rods. The sump is dry. The motor is water cooled and produces 90 h.p. at 6,500 r.p.m.

Unlike the Dreyer which has no clutch, the Offenhauser has a conventional drive with a three-speed transmission and reverse. The best time made at the Bowl in this car was also 14.80 seconds although on straight runs speeds in excess of 135 m.p.h. have been made. The Offenhauser weighs slightly over 1,000 pounds and costs about \$3,500. The Dreyer weighs only 650 pounds and may be purchased for \$800. Both cars handle very well and are the most consistent winners on midget tracks in the U.S.A. which now number 300.

In twenty-four meets at the Garden Bowl, \$1,500 worth of tyres have been consumed, each car using from six to eight covers per meet. Twenty-five laps is the life of the average tyre.



The cockpit of the Offenhauser Special Midget.

## NEWS FOR SOUTH AFRICA

### MOTOR RACING IN SOUTH AFRICA

Excellent prospects for the coming Grand Prix Motor Racing Season in South Africa are held out by Mr. C. S. Douglas, Organising Secretary of the South African Grand Prix at East London.

In an interview he said that he expected a bigger overseas field than last year to compete in the races at East London, Johannesburg, and Capetown. He is hoping that these three races will attract the best of overseas drivers. Negotiations are now in hand to have part of the East London track widened to a uniform width of twenty-four feet throughout and it is hoped that when these improvements are completed the lap record of 115 m.p.h. will be raised to 120.

### BLOEMFONTEIN BLUE RIBBON RACES

These races which were characterised by perfect organisation and favoured by glorious weather were held on the Brandkop Speedway on August 2nd. The track was in excellent condition, and competition was very keen. The motorcycle event for the L. W. Deane Trophy which was run over 100 miles was won by J. Teeken riding a Rudge 250 c.c., with M. J. Botha (Norton 348 c.c.) second, and Joe Sarkis (Norton) third.

The Blue Ribbon Race for the "Volksblad" Trophy and £150 was won by J. van den Dool who started first and maintained his lead throughout; with G. Stewart (Plymouth) second and A. S. du Toit (Morgan) third. Van den Dool drove with confidence and fine judgment and kept a steady pace throughout and won a very spectacular race with ease over 100 miles. The scratch man Roderick, driving a Maserati, set off in great style, completing the first lap at about 70 m.p.h. At the half-way stage his car started giving trouble and he was forced to withdraw on the twenty-fourth lap. Joe Sarkis who had been lapping consistently was eventually compelled to retire through engine trouble in the twenty-fifth lap. Woodhead in a Ford V8 dropped out, with broken steering gear, on the twenty-ninth lap.

### A SOUTH AFRICAN RELIABILITY TRIAL

The seventh annual Oudtshoorn Double Twelve Trial, organised by the Cape Peninsula Motor Cycle and Car Club of Capetown, was held over the recent August Bank Holiday week-end, and

proved to be one of the most successful events of the year. The trial, which is open to all cars, running in two classes (above and below 1,500 c.c.), is run over a 650-mile course from Capetown to Oudtshoorn and back. Competitors are required to maintain an average speed of thirty miles per hour consistently, and although this is easy on level tarred roads, some degree of skill is called for when mountain passes 6,000 feet above sea-level and unmapped farm tracks have to be negotiated.

The trial commenced from Capetown at 8.30 p.m. on Saturday night when the first of twenty-one competitors left the starter, the remaining cars leaving at three-minute intervals. The first seventy miles presented no difficulties, but the next section proved the undoing of Schulenberg (Morris Eight), who took a bend on a mountain pass too fast and, colliding with the stone parapet, tore front wheels and axle away from the rest of his car. Weaver, another competitor in a Morris Eight, took the wrong road and in endeavouring to regain his position bent his front axle and broke both front springs. As he was probably travelling at something like 45 to 50 m.p.h. over a road that was almost invisible, this is little to be wondered at.

To appreciate the conditions under which these cars are competing, it must be understood that little used roads are chosen purposely, and if one realises that these roads are in places little more than muddy, rutted farm tracks with occasional wide and stony drifts, additional handicaps in the form of torrential rain, fog, and on the tops of the mountains snow being present, some idea of the difficulties to be overcome can be obtained.

A compulsory stop at Laingsburg, 213 miles away and 2,000 feet above Capetown, enabled replenishments of petrol, oil and water to be made, and afforded an opportunity for minor repairs to be carried out.

The outstanding hazard of the next section was the Swartberg Pass (6,000 feet), which, with hairpin bends and a gradient in places of one in seven, besides being surfaced with six inches of loose gravel, called for more than an ordinary amount of driving skill. Even so, of the original twenty-one competitors, nineteen managed to reach Oudtshoorn on schedule on Sunday morning.

The return journey was timed to start at 4.30 a.m. on Monday, and on Sunday afternoon competitors were able, by

forfeiting points, to make repairs to their cars, and nearly everyone was busily engaged in straightening axles or replacing headlamps, mudguards, etc., which had become detached.

Starting off once more early on Monday morning, the passes negotiated on the outward journey gave way to farm tracks and unmapped country roads, and heavy toll was taken before competitors reached the main road again about eighty miles from home. Birkby (Hillman Minx) left the road in skidding to avoid an unseen gate at dawn and lost many minutes straightening a bent tie-rod, while Pfeiffer (Ford V8) holed his sump and gear-box on a pile of rocks hidden in the grass on an almost invisible farm-road. Wilkins (3½-litre Bentley) lost valuable time in missing a turning, but, nothing daunted, drove his powerful car at an unbelievable speed to regain his position. Where corners were too sharp to be taken at speed he took to the virgin veldt and rejoined the track further on, soon making up the time he had lost.

Fourteen of the original entrants managed to bring their cars into Capetown on time after one of the most grueling reliability trials the country has known. That as many cars finished as did speaks well for the engineering of the modern car, and is also a tribute to the capabilities of the drivers.

Not a car returned without carrying some memento of the terrific battle waged over unmade roads against adverse weather. There were skids by the dozen and many crashes, but ingenious drivers and observers patched most of the cars so successfully that they were able to finish.

Motoring enthusiasts are now eagerly awaiting the Trial from Capetown to Port Elizabeth and back over a 1,000-mile course, which will take place in October.

The entries and results of the Oudtshoorn Double Twelve were as follows:—

#### RESULTS

**Light Cars:** 1, F. Priem (M.G.); 2, N. Smith (Lancia Aprilia); 3, A. Brockman (Peugeot).

Mrs. K. Davies (Ford 10); C. Liebrandt (Singer); R. Miller (Standard Nine).

**Retired:** J. Bleiman (Hillman Minx); C. Birkby (Hillman Minx); J. Weaver (Morris Eight); E. Schulenberg (Morris Eight); T. Jessop (M.G.).

**Heavy Cars:** 1, H. Nolte (Terraplane); 2, H. Wilkins (Bentley); 3, H. Bane (Peugeot).

C. Gerieke (Chevrolet); H. Pfeiffer (Ford V8); R. Miller (Ford V8); P. Sprake (Plymouth); V. Walters (Terraplane).

**Retired:** C. Segal (Nash); A. Murphy (Riley).

### THE DONINGTON GRAND PRIX—OCTOBER 2nd

We have seen some classic races contested at Donington this season, and it is fitting that F. G. Craner should close the racing year with the Donington Grand Prix, most important race at this circuit—a pukka International Scratch contest for racing-type cars over a distance of approximately 310 miles. Enthusiasts are to our knowledge already arranging to meet at Donington for this race on October 2nd. The new "T.T." circuit with the Melbourne Leg is to be used, covered 100 times. The field, limited to

thirty starters, will undoubtedly contain the pick of our racing men and cars and strong Continental opposition is expected. It will be recalled that last year Dick Seaman partnered Hans Ruesch with the 3.8-litre Alfa-Romeo, winning at 69.23 m.p.h. and putting the lap record at 73.49 m.p.h. The winner gets the perpetual Donington Park Trophy and replica and £250 in cash, the second entrant £120, third £75, fourth £50, and fifth £25, and all also receive Donington statuettes. Entries closed just as we

went to press on September 4th. A scratch race of this nature is worth going any distance to see, as all who saw the "200" will agree, for the fascination of watching famous cars and drivers' fortunes chop and change and of finally seeing the issue develop, until one is timing the leaders' advantage in the closing stages of an historic contest, can surely never fade. Again we can say—see you at Donington, on October 2nd. Particulars from: The Derby and D. M.C., Coppice House, Castle Donington, near Derby.



# CROSS-COUNTRY TRIALS IN GERMANY

ORGANISATION ON NATIONAL BASIS : SOME STRIKING NOVELTIES COMPARED WITH ENGLISH EVENTS

**N**EARLY every week-end, somewhere in England, enthusiasts are engaging in the sport of reliability trials. Abroad one hears more of racing than of trials. The International Alpine Trial is well known, but that is not quite the same thing as a trial in England. News seldom percolates to this country of the smaller "cross-country" events, and quite a number of readers of MOTOR SPORT might be surprised to learn that in Germany, at all events, this form of sport is extremely popular.

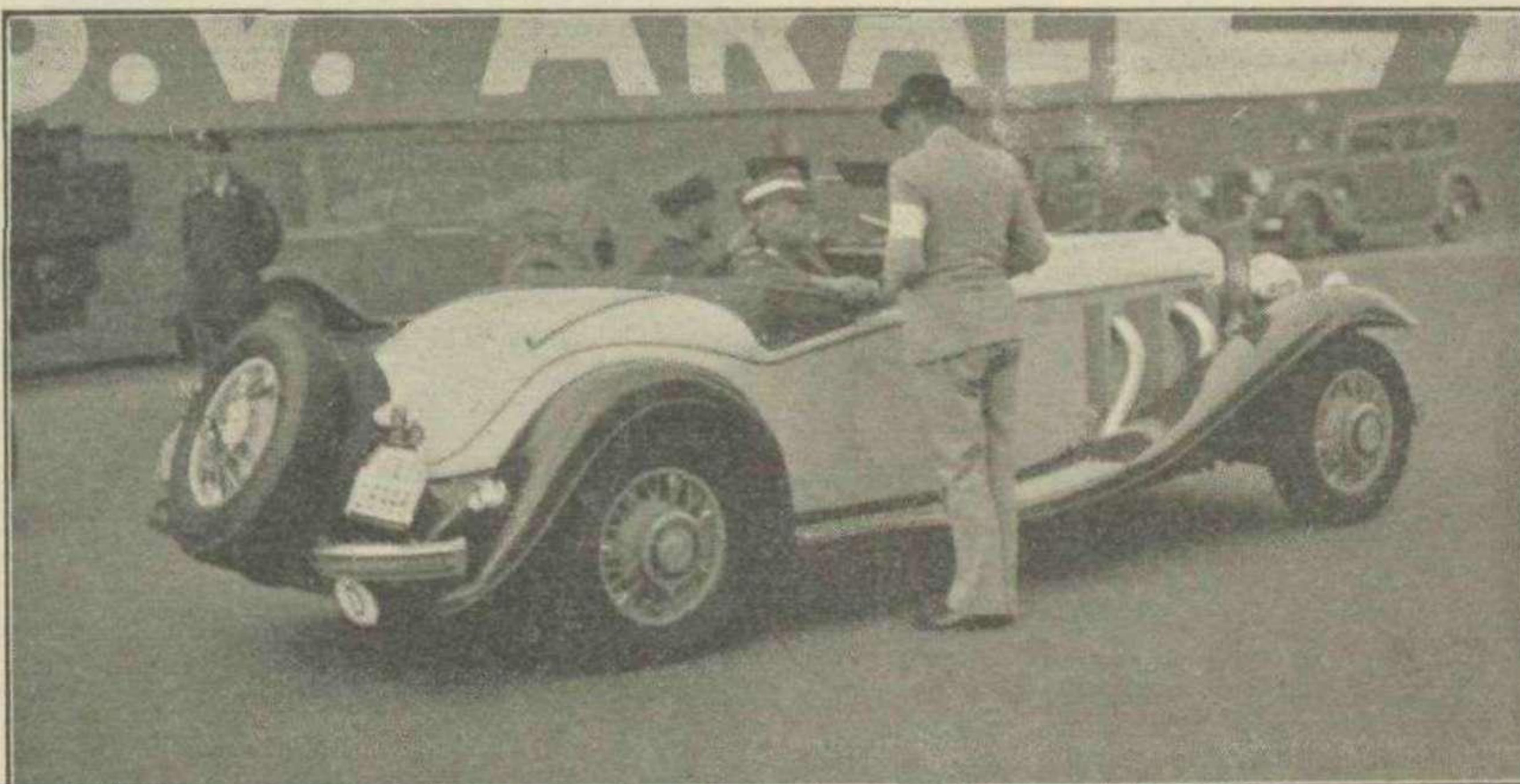
National organisation is the basis of German life in most of its aspects, and it is the same with German "reliability trials," or cross-country events. The story of any branch of motoring in Germany has been radically altered since 1933, when the first Four Years Plan came into operation. Before 1933, there were numbers of private motor clubs, as in England, but now all events are organised under semi-official control.

The D.D.A.C. (*Der Deutsche Automobil Club*) is largely a touring organisation. It organises certain rallies, but in most of its activities is somewhat similar to the A.A. in Great Britain. The governing body of motor sport in Germany is the O.N.S. (*Oberste Nationale Sportbehörde*), and at its head, as dictator of the entire realm of German motor sport, is Korpsführer Hühnlein, a well known figure at most of the Grand Prix races abroad.

department, but also, in a sense, Minister of Transport, and close in the Councils of Herr Hitler himself, the Government control of German motor sport is explained.

The shortcomings of more or less amateur marshals are thus entirely obviated.

The N.S.K.K. is divided into sections, by towns, or districts. It is these sections which organise the German cross-country



*Korpsführer Hühnlein, leader of German motor sport, in his 5.4-litre Mercedes-Benz.*

Many visitors to Continental motoring events have imagined that the N.S.K.K. men, in their brown shirts with swastika armlets, black breeches, and field boots, are in some way connected with the military. Certainly they have a very

events, all referring back in the end to the central control and General Hühnlein. The O.N.S., on the other hand, has no sections, but undertakes the organisation of the big International races, as at the Avus and the Nürburg Ring. The O.N.S. is, in fact, the R.A.C. of Germany, without the touring aspects of the British organisation.

Participation in the cross-country events is not confined to members of the N.S.K.K. Anyone residing within the area under the control of a particular section may compete in that section's events, but must hold a licence from the O.N.S. This is quite apart from an International Competition Licence, which is a different thing altogether, and applies only to the same type of events in Germany as it does in England.

The ordinary O.N.S. licences are of two kinds, for experts or novices. In big events, such as the three-day trials, or those where the course is difficult, novices are not allowed to take part. They have their own sections in many other events, and there are also events organised for novice licensees only. Novices can apply for an expert licence when they have gained three first-class awards in their own events.

The big events themselves are subdivided into sections for standard and special cars, and sometimes another class is incorporated for the special army cross-country vehicles. It would certainly be very interesting to see some of the army experts in England demonstrating their skill against the well known trials drivers. Usually these events where army vehicles take part are of considerable difficulty, and only the most expert of the experts compete. Perhaps there is a chance here for the organisers of the Lawrence Cup Trial, in England,



*A typical example of the rough going encountered during a cross country trial.*

Closely allied with the O.N.S. is the N.S.K.K. (*Nationale Sozialistische Krastsaher Korps*), of which Korpsführer Hühnlein is also chief, and from which his title of "Korpsführer" is derived. It is perhaps easier to refer to him as "General" Hühnlein. Since the General is not only, as it were, chief of the R.A.C. Competitions

soldierly appearance, but there is no connection with the army. In a way they have a political significance, inasmuch as ultimately they are under Government control, and the organisation of any motoring event is greatly helped by their presence, in large numbers, lining the course with all the authority of the police in England.

CROSS-COUNTRY TRIALS IN GERMANY—continued

which is held on army testing grounds, to provide a striking novelty.

The fixed axle creates little controversy in Germany, for locking differentials (of the type used on the Grand Prix cars, where one wheel can only spin a few turns apart from its fellow before the differential locks) are allowed, but only in the class for special cars.

The same applies to competition tyres, but here there is a difference, for in the German events it is of primary importance to maintain the set average time, which may be as high as 40 m.p.h., over a difficult cross-country course, observed hills included. It is held that those with extremely "knobbly" tyres are automatically handicapped by not being able to maintain so high a speed. It is true enough in England that a car with "knobbly" tyres does not hold an ordinary road so well at speed, but with a speed limit in force, and a much greater volume of ordinary traffic, speeds are never high enough to make the handicap felt.

The problem of the trade-supported driver is present in Germany, too, but the private owner is aided by the fact that there are no principal awards. As in a number of English events, competitors have to reach a certain standard to gain first or second-class awards. Where the courses are very difficult and likely to damage cars, private owners do not compete. It frequently happens that there is, in fact, a winner of the various classes in these difficult events, for out of a total of 429 starters in a recent three-day event, sixty won gold medals, but only fifteen lost no marks. It is apparent that there is no lack of entries.

Teams are a prominent feature, and here there are some striking novelties to English events. Team members are allowed to help one another as much as

the governing factor of average speed must not be forgotten, and those who wait to help others may lose on time. These cross-country events are regarded



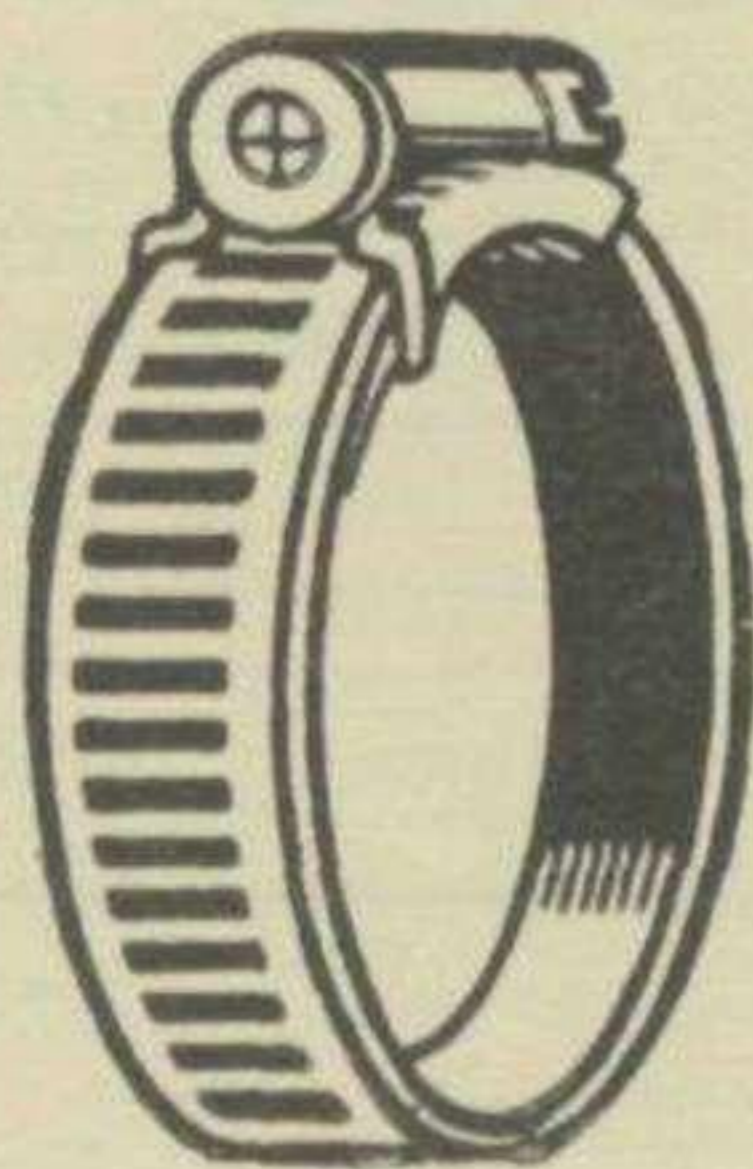
In trials in Germany, passengers need not be seated as is the normal practice in this country.

possible. In a number of events, the members of a team may stand on a hill ready to push their comrade if he is in danger of stopping. If a car breaks down, team mates may tow it to the finish. However,

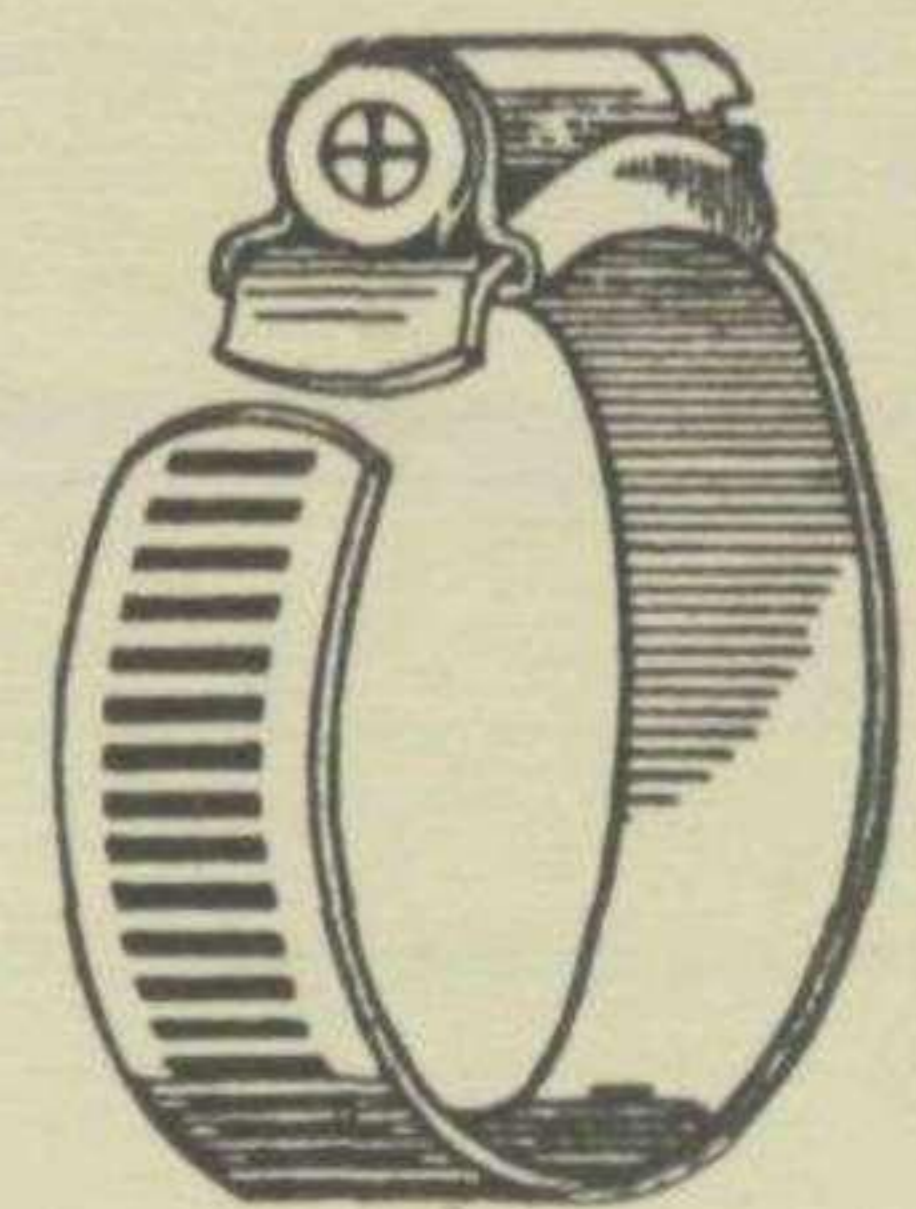
as useful training for big races. Several of the cadets in the Mercedes-Benz team, such as Hugo Hartmann or Heinz Brendel, constantly take part in the "trials," and have gained many successes.

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# TUNING THE BENTLEY

SOME NOTES GLEANED DURING AN INTERVIEW WITH L. G. MCKENZIE

## The 3-litre

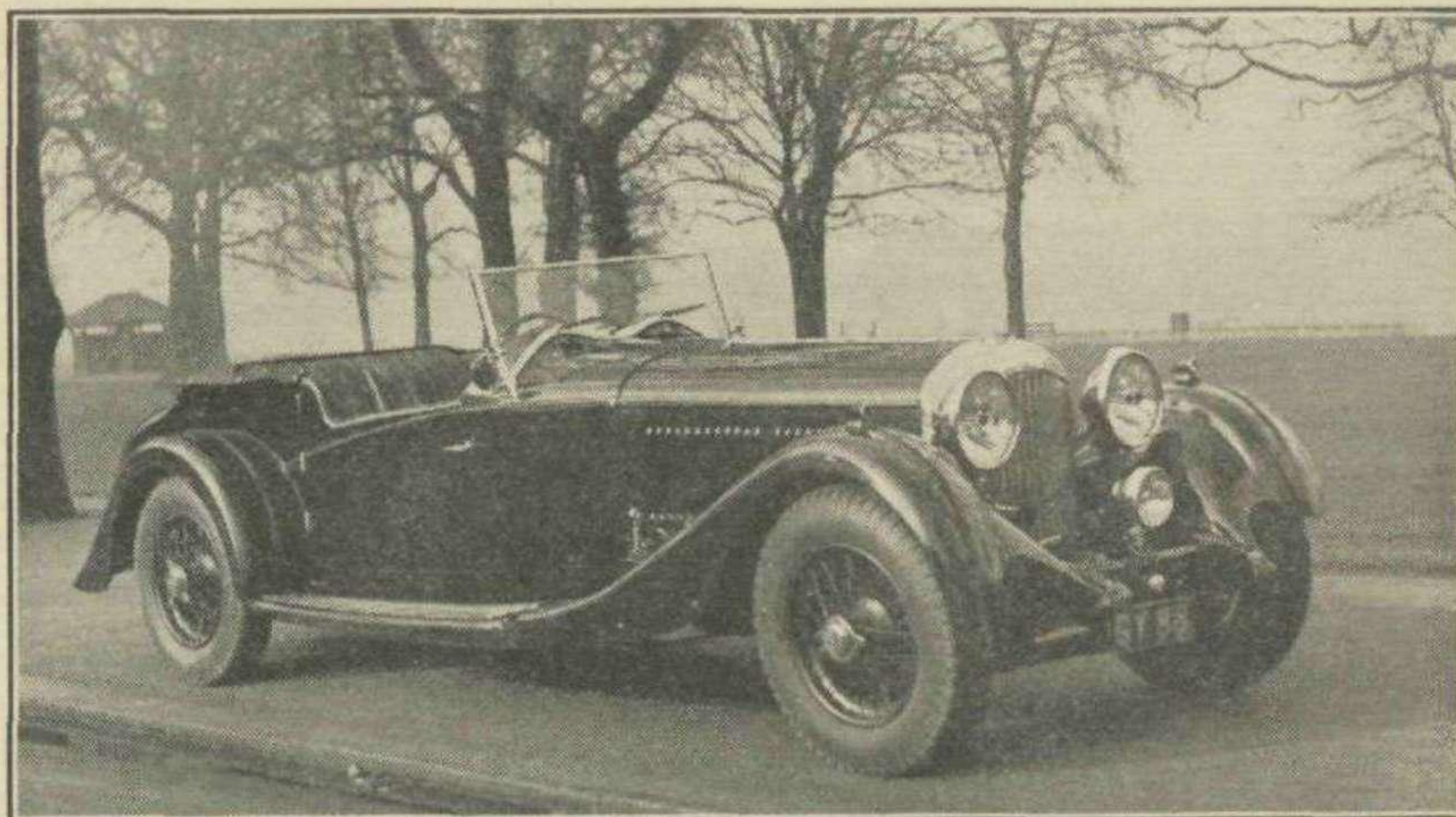
SO many readers are interested in the Bentley marque, and as every owner of an old-school Bentley we meet seems to enthusiastically read *MOTOR SPORT* we feel that some notes on improving the performance of the old-model Bentleys may prove of interest. We are indebted to Mr. L. G. McKenzie, the well known Rolls-Royce and Bentley specialist, for the information that follows. This article follows on those about the tuning of the M.G., Talbot and Frazer-Nash cars, which appeared in *MOTOR SPORT* in January, February and March, 1936, back issues of which are available.

The first Bentley model was the famous 3-litre 80 x 149 mm., four-cylinder car, designed just after the War by W. O. Bentley and the late F. T. Burgess, and put into production in 1921. There were two editions, the Standard and the Speed Model, usually known to-day as the "Blue Label" and "Red Label" models respectively, by reason of the colour of the centre portion of the winged radiator badges. The former, in all forms up to 1924, with open bodywork, would do 46 m.p.h. on third gear and 70 to 75 m.p.h. in top and the Speed Model 67 on third and 80 to 82 m.p.h. in top without exceeding the maker's rev. limits of 3,000 r.p.m. and 3,500 r.p.m. respectively. Naturally, tuning a "Blue Label" resolves into first converting it into a "Red Label," so that it is permissible to deal with the variations in specifications between the two types. The Standard car had a wheelbase of 10 ft. 10 ins., the Speed Model one of 9 ft. 9½ ins., the respective weights being 24½ cwt. and 22¾ cwt. in chassis form. The weight limits under guarantee were, respectively, 35 and 28½ cwt. The Standard car has a single Smith-Bentley five-jet carburetter, the Speed Model twin S.U. instruments. The Standard chassis had the "B" type gearbox with ratios of 16.2, 8.8, 6.5 and 4.23 to 1 (reverse 16.2 to 1). The wide gap between first and second resulted in a slow change, but the 16.2 to 1 bottom gear is useful for mountainous touring and is sometimes loaned for this reason by Mr. McKenzie to Speed Model clients. The Speed Model normally had the "A" type box giving ratios of 10.0, 6.18, 5.05 and 3.78 to 1 (reverse 10.0 to 1) and a rapid change from first to second if a clutch stop is fitted, a straight through change from second to third, and a slower change from third to top. Naturally, higher speeds on the indirects are possible with the "A" type box. Other differences include D.N. shock-absorbers on the long chassis and Hartfords on the Speed Model, a single, three-baffle silencer on the Speed Model and a double expansion-box with fantail on the long chassis, and a lower tail pipe on the Speed Model. The long chassis cars had a compression-ratio of 4.3 to 1 and developed 70 b.h.p. at 3,800 r.p.m., while the Speed Models up to 1925 had a compression-ratio of 5.3 to 1 and gave 80 b.h.p. at 3,200 r.p.m. The 1926-28 Speed Models were designed for a 5.8 to 1 compression-ratio but an error

was made in the drawings and they actually have 5.6 to 1. The twin carburetters have been mentioned; they were Smith single-jet on the 1924 Speed Models and S.U.s thereafter. Tuning a "Blue Label" long chassis model resolves itself into first of all converting to "Red Label" specification. The wheelbase can be shortened by cutting the side-members in front of the rear spring anchorage and before the compensator cross-shaft and shortening the propeller shaft, but a better method is to obtain a new, short frame which will be unstressed and in good order. Twin carburetters with the manifolding to belt them in place without drastic alteration can be obtained from Bentley Motors, Ltd., for about £13 10s. Actually, two different

balance is satisfactory but the con.-rods should be balanced and the piston weights equalised, which can sometimes be done by changing round the rings. These modifications, carefully carried out, will increase the output to about 88 b.h.p., which was the power developed by Bentley's own Le Mans cars. Mr. McKenzie has had 100 b.h.p. out of the 3-litre, but only in highly experimental form. The road performance can be further enhanced by using the "C" type gearbox from a late 1927 or 1928 Standard Six Bentley or from a 4½-litre. The "A" and "D" type boxes have ratios of 2.64, 1.63, 1.23 and 1 to 1, whereas the "C" type box has ratios of 3.364, 1.823, 1.375 and 1 to 1.

Before leaving the 3-litre there are some servicing matters of interest to



A three-quarter front view of a Bentley, modified by Mr. McKenzie.

sizes of carburetter are available. The "B" type gearbox can be fitted but if this is done the higher axle-ratio should be used. The Speed Model normally had the 3.78 axle, but a few cars had a top gear of 3.53 to 1, useful for speed work.

Turning now to the Speed Model, additional modifications can be carried out for speed work, but it is a unit that does not show a great increase in horsepower. If the valves are stamped "S" they must be scrapped and replaced with K.E. 965 or Hadfield's Heckler valves. The compression-ratio can be put up to 6.5 to 1 without resort to special fuels, although the 3-litre is more prone to pinking than the 4½-litre. This ratio can be obtained by machining 5 m.m. from the base of the cylinder-block, which is the limit permissible with the standard pistons (low-compression type). If this is done the top piston rings must be omitted and it is essential to deepen the con-rod relief slots by 1½ m.m. as even with the standard compression-ratio the rods are apt to foul if big-end clearance is too liberal. A better method of raising the compression is to use special pistons, particularly as modern thought suggests that the older designs use too narrow ring lands. The crankshaft

those developing this power-unit. Particularly is it desirable to pressure-test the cooling system whenever the block is removed, for the oil-drain tubes passing oil from the camcase to the sump are apt to corrode and leak water into the crankcase, and a tiny trickle will pass unnoticed, yet can dilute the lubricant sufficiently to ruin the engine bearings in three months. Another important point is that the long chassis cars had camshafts needing .004" and .006" clearance on inlet and exhaust respectively, with the engine hot. Speed Models for 1926 and subsequent years require a clearance of .019" all round. Frequently the earlier cars have been fitted with the later-type camshafts and new owners, on the advice of an early instruction book, set to the small clearances, whereupon the exhaust valves burn and shed their heads. The trouble can be avoided by remembering that BM 2391 camshafts require the small clearances and BM 6800 camshafts the larger setting. The very early engines (up to No. 222) require a setting of .015" and this usually applies if they have hardened valve caps. The standard carburetter setting recommended by Bentley's for the Smith-Bentley carburetter was:— 45 Well jet, 45 No. 1, 75 No. 2, 50 No. 3 and 35 No. 4. Standard ignition advance

TUNING THE BENTLEY—*continued*

was 45° before t.d.c. fully advanced on both magnetos. The thermostat setting should maintain 75 to 80°C. The correct oil-pressure is 12 lb. at 30 m.p.h. in top gear with the oil thoroughly hot. Firing order 1, 3, 4, 2.

The 3-litre Bentley engine, although designed with a big safety margin, nevertheless developed almost its maximum safe power output in production form. To raise this by 8 b.h.p. is a very satisfactory accomplishment and tuning chiefly resolves itself into improving the torque to improve acceleration or to enable higher gear-ratios to be used with a consequent increase in speed. Performance increase is largely dependent on reduction of weight and head resistance. Even so, we believe that a special-bodied 3-litre guaranteed to do 100 m.p.h. was put on the market about 1925 and early racing examples driven by Dr. Benjafield and Capt. Woolf Barnato lapped Brooklands at 102 to 103 m.p.h. and about 104 m.p.h. respectively. H. P. Bowler's four-seater lapped at over 95 m.p.h. As the year of the car affects subsequent hotting-up modifications, it may be noted that 1924 engines are numbered 368 up and 376 up, 1925 engines from 747-749 up, and 1926 engines from 1,200 up—engine numbers on the front cross-member. The 3-litre was virtually discontinued in 1927 but about twenty-five long chassis and some five Speed Models were made that would rank as 1928 cars. Although the Speed Model wheelbase has been quoted as 9 ft. 9½ ins., ten special cars were made with a wheelbase of 9 ft. Concerning the chassis, front brakes were added to both chassis about September 1923. 1922 chassis have geared up dynamos running at three times camshaft speed. Late 1923 chassis have a Hardy coupling in the carden shaft. One final note: if new pistons, etc., have been fitted as part of the tuning operation, it is well to remember that Bentley Motors Ltd. used to specify a running-in period of 200 miles for new pistons and 500 miles for new bearings.

**The 4½-litre**

The 4½-litre, 100 x 140 m.m. four-cylinder Bentley was produced as an experiment for the 1927 24-Hour Race at Le Mans and followed the general specification of the 3-litre so closely as to be a

virtual enlargement. It was put into production in 1928. All years had twin S.U. carburetters. The closed models usually had a compression plate to give a ratio of 5.1 to 1 and the open-bodied cars had a compression-ratio of 5.3 to 1. The output was about 110 b.h.p. The 1928 cars had a cone-clutch, later models a plate-clutch. A refinement is to fit a plate clutch to the 1928 cars, and Mr. McKenzie can now supply Borg and Beck plate clutch assemblies for £30, which are not only a great improvement but which save 60 lb. over the Bentley plate clutch, being only about 6 lb. heavier than the 1928 cone assembly.

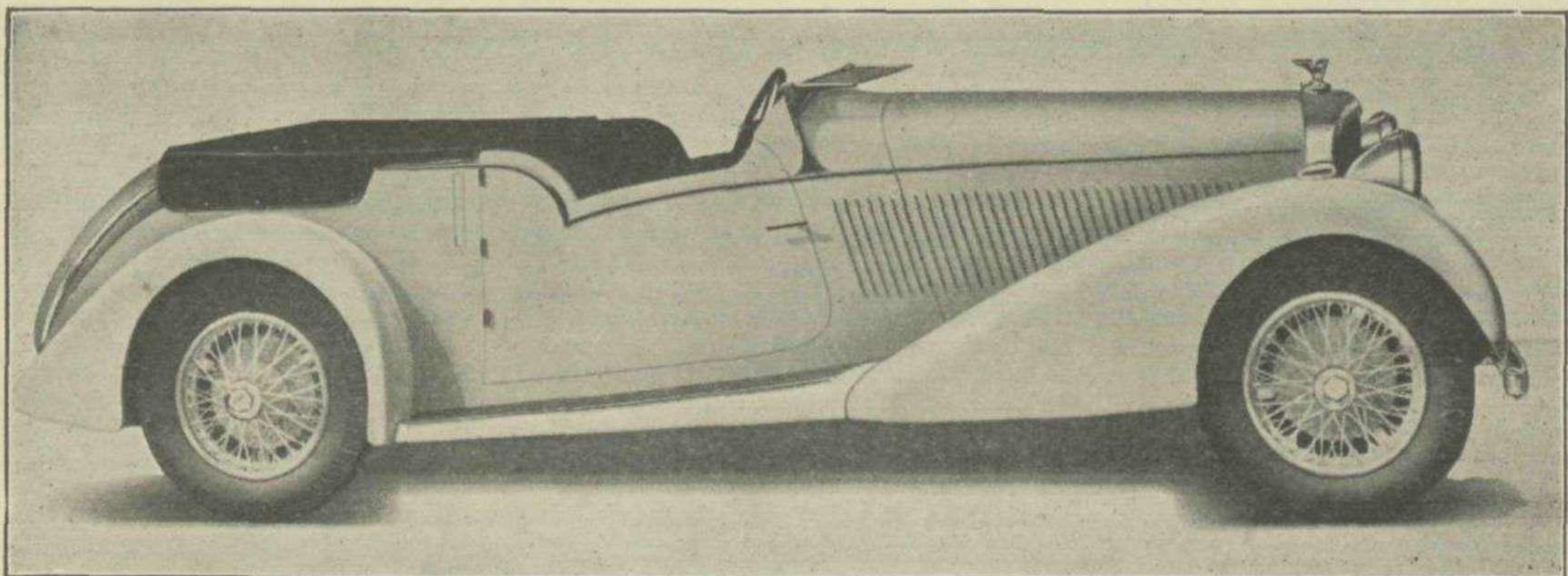
Tuning operations largely follow those applying to the 3-litre. The crankshaft only requires balancing for racing work, but con-rods should be balanced and piston weights equalised. The flywheel should be lightened, which also applies to the 3-litre. Up to 14 lb. can be removed but further weight reduction is difficult to achieve. The lubrication system can cope with the additional loads, but a high-geared oil-pump may be used for racing purposes. The valve springs can be left unaltered. The compression-ratio can be raised by milling the base of the block. For speed work 6 m.m. may be removed, and pump fuels can still be used. Special pistons are desirable. Specialoid can supply suitable ones, with a saving of about 3 oz., but Mr. McKenzie has a design of his own which has several considerable advantages and a weight conservation of 4 oz. each. The standard B.H.B. pistons are prone to head collapse at speeds above 3,500 r.p.m. With 6 m.m. off the block the output will be in the region of 125 b.h.p. at 3,500 r.p.m. Normally this is the highest output permissible and in any case torque may be expected to fall away above 3,750 r.p.m. When the block is milled the camshaft drive is sometimes disturbed. The best remedy is to bore the taper and allow the vertical shaft to protrude higher than before into the head assembly. The standard S.U. carburetters, either 45° or vertical, cannot be bettered, nor should the standard settings be changed for ordinary tuning purposes. As with the 3-litre cars, much can be done by variation of gear-ratios and reduction of chassis weight. The top gear ratios are usually 3.78 or 3.53 to 1, with 3.3 to 1

the highest ratio, sometimes used on two-seater examples. These are with the "C" type and "D" type boxes. The standard chassis weighs 25 cwt. and the four-seater about 37 cwt. Weight reduction is naturally dependent on the shortening of the wheelbase from the standard length of 10 ft. 10 in. The car built by Windrum and Garstin for M. Chambers to drive weighs about 27 cwt. with a shortened frame (actually a 3-litre chassis) but the fuel tank when full adds 4 cwt. which is valuable from the viewpoint of wheel adhesion under trials conditions. There is one very important point to be considered before hotting-up is commenced. Certain early 4½-litres had unsatisfactory connecting rods, most of which have been replaced, but about twenty cars remain in service with the original rods. This applies to S.L. and S.T. series engines and these rods should be replaced before any attempt is made to increase speed and output. Incidentally, these chassis number prefixes were changed about every twenty-five cars, without there necessarily being any change in specification. The unblown 4½-litre, normally capable of 85 to 90 m.p.h., can be developed into a very fast car. For example, the short chassis car aforementioned lapped Brooklands at over 91 m.p.h. with a 6 to 1 compression-ratio, and it has extremely good acceleration. Miss Margaret Allan's four-seater lapped Brooklands at over 98 m.p.h., and Baker-Carr's short two-seater at over 104, while a 4½-litre Bentley engine developed for racing purposes and installed in the single-seater Pacey-Hassan chassis, has lapped at over 128 m.p.h. The tappet-clearance is .019" all round.

**The Blown 4½-litre**

A development of the standard 4½-litre, to which a Villiers-Root supercharger driven from the nose of the crankshaft was added by C. Amherst-Villiers for Bentley Motors Ltd. and on which much experimental work was carried out on behalf of the late Sir Henry Birkin, Bt., at his Welwyn shops. The 1930 engine was blown at 10 lb. per square inch and the 1931 unit at 12 lb., the latter having a ribbed blower casing. The compression-ratio is believed to have been the same for both years but was later reduced to

*Continued on page 391*



*The New 4½-litre Bentley.*

## ON SPORTS CARS FOR RACING

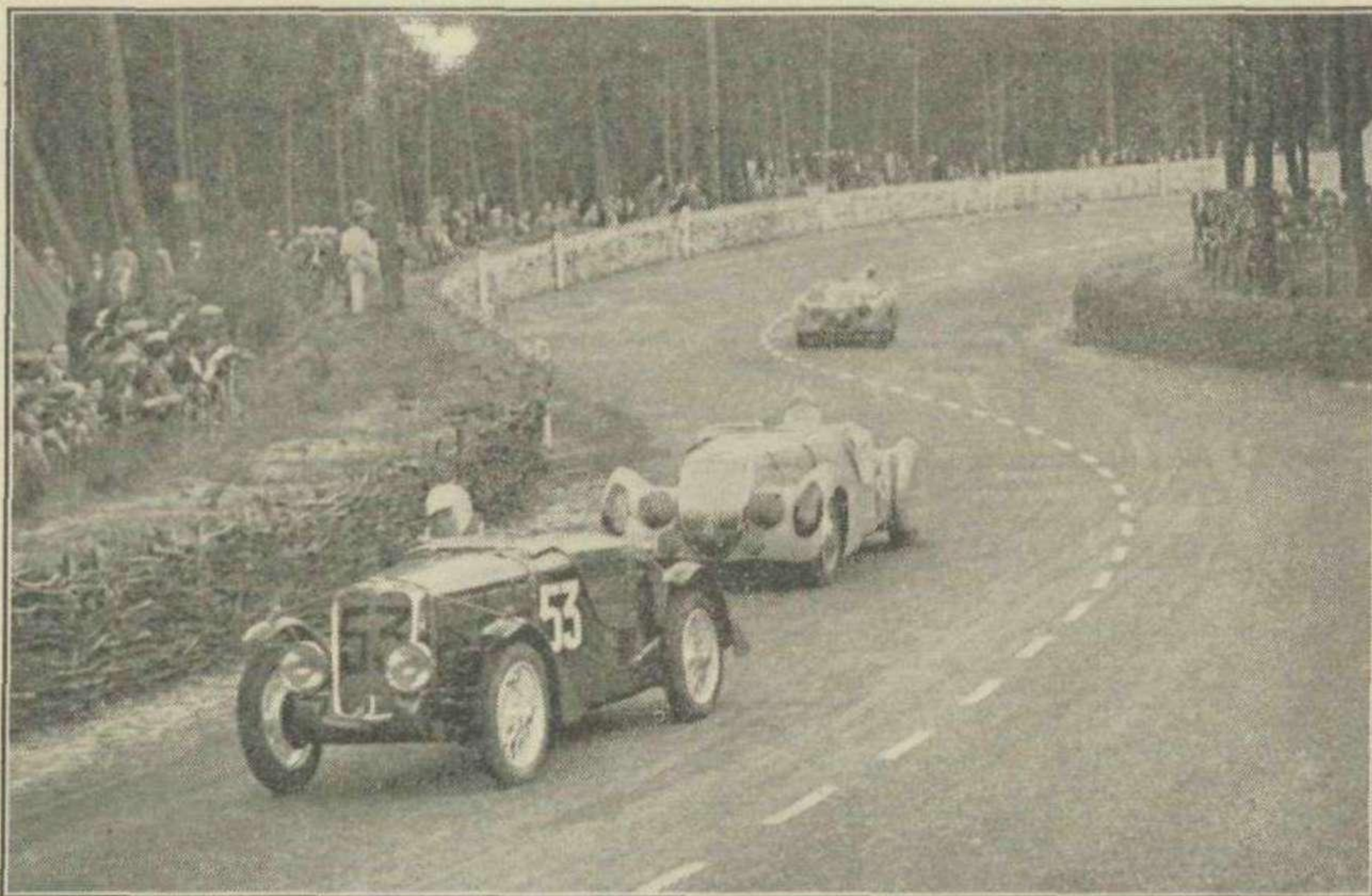
It is rather a pity that there are not more purely speed events open to ordinary drivers of ordinary sports-cars. Nowadays we are confined to the sprint events in the form of widely scattered speed trials and speed hill climbs, a few club meetings at Donington, and the altogether excellent One Hour orgies provided by the Junior Car Club (with corners) and by the Motor Cycling Club (without corners) at Brooklands. We no longer have the smaller clubs gaily indulging in a series of short and long handicaps at Weybridge, and those semi-classic sporting-car races, run by the J.C.C. and the late lamented Essex M.C., have passed with the passing of the years. Nor is Brooklands opened in these enlightened days for one-make parties, such as that at which Helleys Ltd. entertained their Alvis-owning clients or Lagonda Ltd. the Lagonda owners—about which, incidentally, a wicked friend avers that these events had to be put on because Alvis and Lagonda cars were so essentially reliable that the respective service stations had next to nothing to do; but that afterwards they worked non-stop for six months or so . . .

At all events I often wonder how many sports-cars would be left on our roads, and how design would trend, if it came about that trials were banned by law, and, much more surprisingly, if Brooklands and Donington and the Crystal Palace were to be opened almost every week-end for racing by amateur club-drivers—bridges might perhaps spring up at Brooklands so that clubmen could dice on the outer circuit while the speed-kings fought it out amongst themselves over an abbreviated version of the Campbell road-course, or vice-versa. Anyway, it brings one to the absorbing subject of the requirements of ordinary cars used for racing and of what existing sports-cars could do in this sphere of competitive motoring.

In the very first place, a really high maximum speed becomes of real value, as distinct from a performance factor which can only be very rarely exploited, when the road permits or the Track visited, or when a speed-trial course is long enough for a car to reach full-throttle speed—and the idea that a super-fast car has so much more in hand lower down than its not-so-fleet rivals has less value in these days of good power development at moderate crankshaft speeds than it had formerly. But for racing and high speed trials a three figure maximum comes rightly into its own. I do not propose to quote a comprehensive list of 100 an hour motor-cars, because MOTOR SPORT already receives rather more correspondence than it can publish, but obviously this magic maximum can be comfortably attained by the 3.3-litre Bugatti, the latest Alfas, the Type 540 K Mercedes-Benz, the 2-litre Type 328 Frazer-Nash-B.M.W., and our own "Shelsley" Frazer-Nash and unsupercharged 4½-litre Lagonda "Rapide." And in this connection the remarkable Frazer-Nash-B.M.W. scores heavily, for not only has it officially demonstrated its ability to exceed 100 m.p.h. in touring rig, but has shown that

an hour's motoring at such a pace does it no sort of harm.

Actually the question of which cars can safely be raced in standard trim without disaster—I am thinking of disasters in the transmission, brakes and equipment as well as beneath the bonnet—is one on which it is by no means easy to expound. Primarily, the difficulty centres around the lack of any standard of practical judgment, owing to the rules for the classic sports-car races permitting of very material divergences from standard specification, of which anyone competing at all seriously is obliged to take advantage, coupled to which are the numerous instances of cars in the smaller speed events averaging a greater speed than they will attain when we extend the standard version over a flying quarter.



*A Singer and two of the unusual-looking Peugeots in the Grand Prix d'Endurance this year.*

Even so, I think it can be generally taken that those cars which have been modified or hotted up to do these non-catalogue performances, and which still possess that reliability essential to success, will be reasonably useful for racing in any events wherein such meddling with the machinery is not allowed. This being so, we can take heart and look around at the modern sports-cars that have "shown meritorious" in racing.

I do not think that the 3½-litre and 4½-litre Bentleys on which Eddie Hall has had such fine drives in the T.T. races and at Shelsley Walsh can have been so very non-standard, and they have proved beyond all manner of doubt the fitness of the present-day Bentley to stand up to the stiffest form of race. Much the same holds true of the 4½-litre Lagonda, which marque Arthur Fox, who runs that big service station by the Kingston By-Pass's biggest traffic island, a garage which seems to prosper without any kind of advertising, has entered into the classic sports-car races with excellent results, including the outright win at Le Mans

in 1935. Then the Frazer-Nash-B.M.W. has proved its stamina and high-speed abilities very thoroughly, not only in our own T.T., but with a very fine string of successes abroad, and the Riley has shown its adaptability to serious racing, being especially potent without recourse to supercharging. We have seen what the 2-litre Aston-Martin managed at Le Mans this year, apart from Seaman's exhibition of their speed in the last T.T., and the new short-chassis examples look promising while the older 1½-litre Astons had all the reliability under racing conditions anyone could wish, doubtless assisted by the oil-temperature reducing qualities of the dry-sump lubrication system. Moreover, the H.R.G. has drawn favourable comment in its first big race, and sports-type Alvis have done well on

Brooklands. Marques unquestionably score from having been built to a standard not governed by a pre-determined price limit and naturally cars in this category are not going to be so worrying under racing conditions as the cheaper machines. Thus, while no dogmatic statement is possible, there is every indication that there is on the market quite a number of sports-cars that would acquit themselves well under racing conditions in standard trim. Indeed, even the vintage cars can be looked at favourably in this respect, for have not old-school Bentleys, in particular, and 12-50 Alvis, Austin Seven, 3-litre Sunbeam, Lea-Francis, Salmson, f.w.d. Alvis, the old Frazer-Nashes and 2-litre Lagondas, amongst others, done extremely well in big races? Though it is absolutely imperative to remember that these performances were made when those cars were in production and that present examples, the engines, frames, axles and so on of which will have seen years of hard service, are not likely to repeat the former showing, nor are they usually

## ON SPORTS CARS FOR RACING—continued

suitable, before overhaul, for serious racing.

It is interesting to speculate on the primary features desirable in a sports-car used for racing.

Apart from a high maximum speed, already mentioned, high maxima on the indirect gears are at once valuable, although with traffic as it is to-day this also applies largely to a car used for rapid road travel, for I confess a liking for a maximum in third of at least 65-70 m.p.h. when passing other drivers in a fast stream of traffic, unless at the wheel of a car like the Railton or 4½-litre Bentley, with really good acceleration qualities on the highest ratio.

**Engines**

Modern power-units have reached a very high standard so that maintenance of high crankshaft speeds does not necessarily spell early and expensive trouble, but the fact looms large that no one modification is likely to contribute so much to the peace of mind of an owner using his car for a high speed trial as raising the axle-ratio, and it is difficult to see how that can be done in the case of those small sports-cars that need nearly 5,000 r.p.m. to attain 65 m.p.h. on third or a maximum on top that barely suffices for the work we have in mind.

**Brakes**

Brakes would have a very tough time indeed, so that those cars with properly-cooled drums should score, and some form of adjustment from the driving-compartment, as on the H.R.G., would probably be of real value. Road-holding would also be shown up very thoroughly and experience would doubtless indicate that those sports-cars which tyre-howl horribly on main-road bends at 40 m.p.h. would do even more unpleasant things when cornering at racing speeds. Were racing universal I think we should all know a deal more about tyre pressures, that "Mr. Andre" would sell even more Telecontrol, and that all-wheel independent suspension would be hastened, if Atalanta, Aprilia-Lancia and Mercedes-Benz once demonstrated its desirability. Possibly the present-day slab fuel tank would give way to a streamline tail and spare wheels accommodated within the wheelbase. Clearly, low-geared steering would be impossible and low first-gears of no value. Staggered seating might return, and obviously equipment would undergo revision, an oil-gauge as big as a rev-counter seeming very necessary, while the absence of an oil thermometer would endanger the sales-success of sports-type cars, and bonnet-straps, aero-screens, lap-scoring equipment, lamps and radiator stoneguards, and higher seating positions would become universal. Really efficient tonneau-covers and stow-away hoods would become essential and door locks and hinges might need to undergo revision. Much, of course, would depend on whether cars were generally required to run fully equipped, or whether, as at the Frazer-Nash C.C. Donington Meeting a month or so ago, standard sports jobs were allowed to run in stripped condition. In the former case radiator,

wing and lamp mountings might need generally quite drastic revision, for not many modern sports-cars possess the rigidity in this area for which the better vintage motors are proudly upheld, and while this only results in mildly annoying flip-flappings on the road, it might well lead to the shedding of things, dangerously, during a race. Of course, frame design often has a deal of bearing on this matter, as was especially noticeable in the case of a modern 2-litre that I drove not long ago, which flip-flapped mildly all over in towns, but which stiffened its frontworks quite happily with 150 lb. screwed-up on the front Telecontrols, only to retaliate by furiously wagging its scuttle parts over bad going—and, as with so many moderns, this scuttle supported the steering-column...! On the other hand, if stripping for speed work became a universal rule, some moderns would be the very devil, and might be no faster when all the bits and pieces were removed, while I imagine that amongst current sports jobs the Frazer-Nash and H.R.G. would strip more easily than any. You will please note that I am thinking of stripping by spanner and not during boisterous driving to the venue!

There is insufficient space to enlarge on possible design trends that would be likely to be fostered if speed-events gained precedence over trials, but I should expect efforts to be made to reduce oil-temperatures, by the possible adoption of dry-sump systems on the more expensive cars, and by increased sump capacity (ground clearance would be of less moment than at present,) and the elimination of wind-deflecting protuberances around the base-chambers, for the less costly cars. That there would be a universal reduction in weight is doubtful, because frames would need to be stiffened and bodies would have to be much more rigid. Therefore performance increase would probably be sought by the time-honoured process of pushing up the power-output. Consequently, interest attaches by the efficiency of sports-car units, although only maker's figures are usually available and what is of real importance is the period over which such engines will function safely at or near peak revs. and their ability to withstand an increased output, for, as in trials, competitors would inevitably raise compression-ratios and tack on superchargers. Particulars for some of the most interesting sports-cars are not available, but roughly a b.h.p. per litre of forty is claimed for the 16-80 A.C. Ace, thirty-one for the Alvis Speed Twenty-five, thirty-one for the 4½-litre Lagonda, thirty-three for the big blown Mercedes-Benz and forty for the S.S. 100. The older engines seem to compare quite well. I believe that the 1½-litre side-valve Anzani, used in a number of sports-cars, normally gave off about thirty-one b.h.p. per litre and the 1½-litre push-rod Meadows, used for certain Frazer-Nash models, thirty-three-and-a-half, increased to about thirty-nine to forty b.h.p. per litre as subsequently modified by A.F.N. Ltd. and by Mr. Godfrey for installation in the modern H.R.G. I believe that another proprietary unit, the six-cylinder 1.6-litre Blackburn, gives

some 48 b.h.p. per litre and the 1½-litre twin o.h.c. Anzani, that really likes a blower, around forty-seven.

**Collecting Data**

Another way of going into the matter is to collect the data for past J.C.C. and M.C.C. High Speed Trials, when the possibilities of individual standard motors may be assessed, provided one continually bears in mind that it is impossible either to find out how far the cars depart from standard or to know what sort of state they are in mechanically at the conclusion of the hour's run. But at all events you will see that some very striking speeds are possible. Thinking in terms of speed alone, there were averages of 77 m.p.h. by S.S. Jaguar, nearly 90 m.p.h. by 4½-litre Lagonda, 76 m.p.h. by 1½-litre Singer, 80 m.p.h. by M.G. Midget, 96.5 m.p.h. by 3½-litre Talbot saloon, 78 m.p.h. by 2½-litre S.S., 98.5 m.p.h. by 2-litre Frazer-Nash-B.M.W., 89 m.p.h. by 1.6-litre supercharged Frazer-Nash, 79 m.p.h. by A.C. Ace, 83 m.p.h. by Aston-Martin, 76 m.p.h. from F-type and Magnette M.G.s, 85 m.p.h. by 1½-litre Frazer-Nash-B.M.W., 75 m.p.h. from Morgan 4-4, and so on—quoting at random from last year's M.C.C. event. The J.C.C. affair is even more fun to analyse, because brakes, gear-changing, road-holding and acceleration are all brought into the picture, as I realised last year when the Frazer-Nash-B.M.W. in which I was passenger had to keep flat out all round all the time to pinch its Premier, excellent motor that it is. It is significant that a Type 328 Frazer-Nash-B.M.W. recorded fastest time in last month's J.C.C. event.

Certainly, if racing for the amateur became more general, repair bills would soar and sports-cars would be very frequently "in dock," as I realised very forcibly when, having written most of this outpouring, I went up to Donington for the Stanley Cup Competition. Quite apart from actual "blow-ups," there were numerous instances of queer and unwelcome noises developing in expensive machinery, not to mention a very emphatic weakening of normally dependable brakes—and on this occasion only the "little" circuit was in use.

But when all is said and done I think it might be a very good thing if we could have more races for clubmen and fewer trials. What do the clubmen think? I do feel that present-day trials are developing sports-cars not altogether suited to the requirement of safe, fast travel on the road, which, after all, is the work for which the majority of sports-cars are purchased. But that will have to wait until a future issue . . .

\* \* \*

**A CLUB FOR THE NORTH**

It is proposed to form a northern section of the Vintage Sports Car Club. The former secretary and one of the founders of the Club in the South, E. T. Lewis, of 22c, Oak Road, Withington, Manchester, will be pleased to send particulars to anyone interested.

## AMONGST THE QUALITY

THE NEW ATALANTA, WITH ALL-INDEPENDENT SUSPENSION, MAGNETIC GEARBOX, AND MANY INGENUOUS FEATURES

**S**PORTS-CARS are not so numerous that the advent of a quality newcomer can be neglected. The new Atalanta was announced at the beginning of this year, and a certain number of models have already found their way into the hands of the general public. Now plans are ready for serious production in the spacious works at Staines, and the original design has been modified in detail, to present a specification of considerable appeal to the connoisseur.

First of all, the Atalanta is available in two forms, either 1½-litre or 2-litre, in each case with four cylinders, and either version may be supercharged or unsupercharged. A special feature of the supercharged models is that the blower may be brought into action, or not, at will.

The engine has three valves per cylinder—two inlet and one exhaust—a Cotal magnetic gearbox is fitted, and, finally, all four wheels are independently sprung. In this last respect the car is, with the exception of one racing machine, unique amongst those produced by British manufacturers.

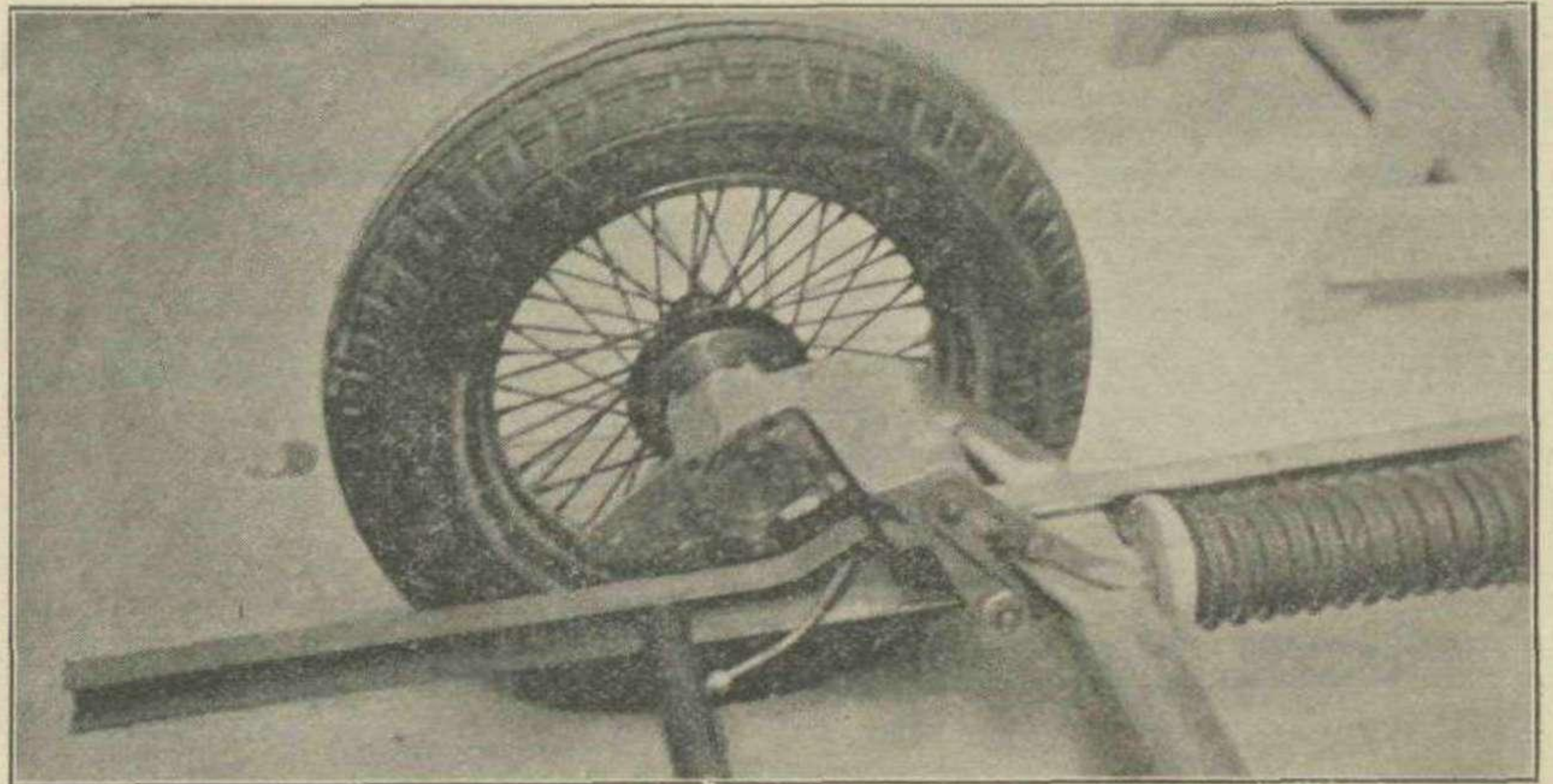
To take the engine first, a single overhead camshaft operates all the valves, which are placed vertically in the cylinder head, and are made of KE 965 steel, according to the best racing practice. The two inlet valves for each cylinder are operated simultaneously by one cam, by means of a bridge piece which fits over the top of the valve stems. The stems are threaded to take the valve spring collars, and the tappet clearance is adjusted simply, by means of a hardened

by a separate magneto, of vertical type and driven off the crankshaft by gears and a double roller chain. The camshaft is also driven by chain, with a tensioning device.

On the unsupercharged models two Arnott carburetters are fitted, one on each side of the cylinder head, and owing

as in the other case of the famous car where the supercharger can be brought into action at will.

On the Atalanta the supercharger clutch may be engaged or released by means of a lever under the dashboard. The induction system from the blower has two branches, one on each side of the



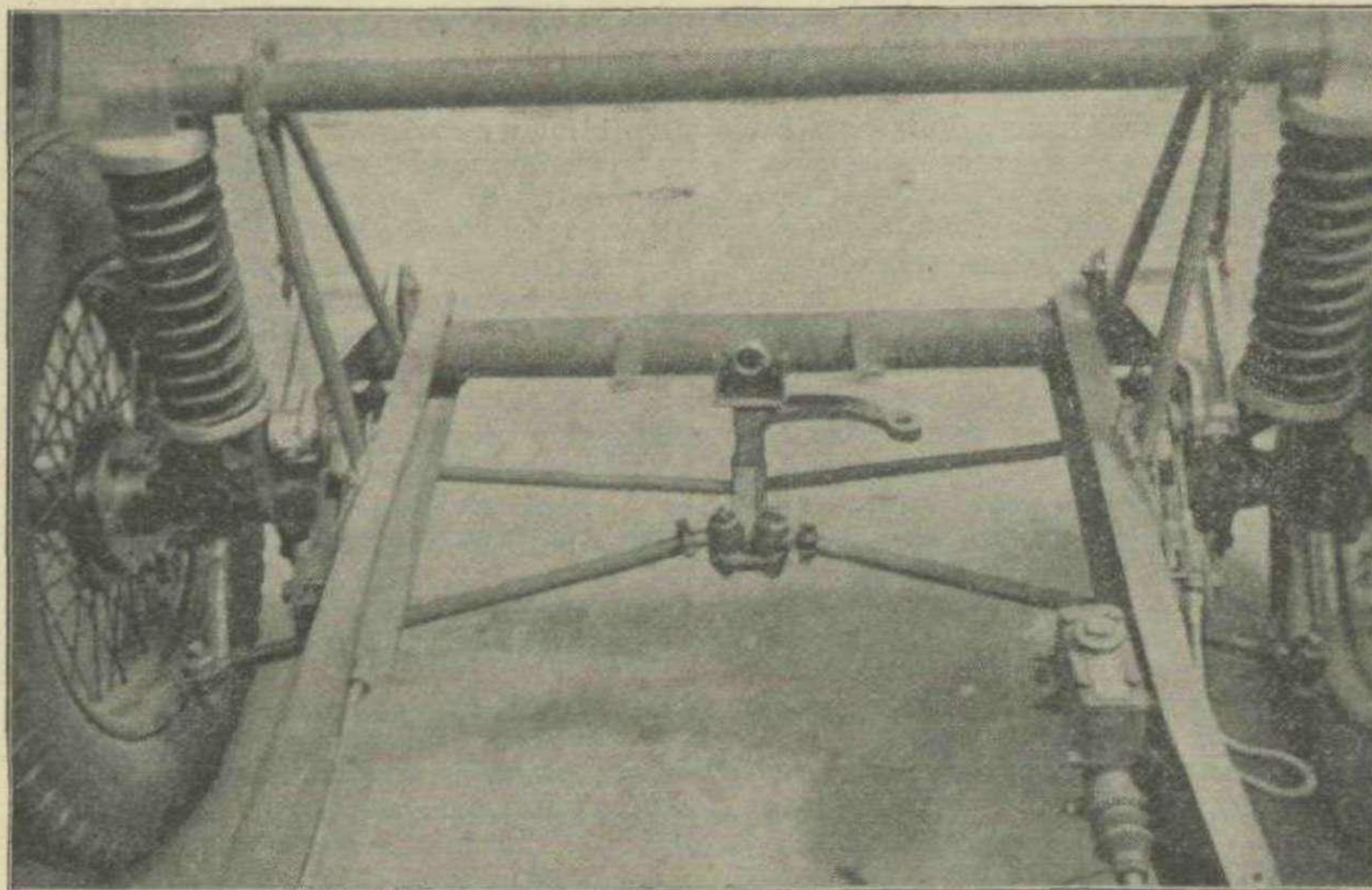
*The rear suspension system by R.R. 53, links and horizontal coil springs working in compression. The transmission is not shown.*

to the paired arrangement of the two inlet ports for each cylinder, the effect is that each cylinder is fed by two carburetters, though the carburetters only number two in all.

engine, and in each branch there is a valve, connecting to a passage direct to the carburetter. When the supercharger is not in action, these valves are held open against a light spring, and, though the blower is sucked gently round, the engine draws its fuel direct from the carburetter without passing through the supercharger vanes. When the blower is working, the valves close and allow pressure to be developed in the induction pipe. This system is simple yet extremely ingenious, and is designed to allow a driver to cruise easily without the blower, but to have a vast reserve of power available if desired. In order to help in accommodating the blower in front of the engine, on the supercharged models the wheelbase is increased by 6 in.

There is, however, no difference in wheelbase whether a 2-litre or a 1½-litre engine is fitted, since the external dimensions and appearance of both powerunits are identical. The bore and stroke of the 2-litre are 75x113 mm. (1,996 c.c.), while the 1½-litre engine measures 69x100 mm. (1,496 c.c.).

Practically, the bore and stroke dimensions are the only differences between the two engines, though the 2-litre has a longer throw crankshaft. The crankshaft has three main bearings, which really are of generous diameter, and all oil ways are cast in the side of the crankcase, which is of aluminium. The cylinder block, which is separate from the crankcase, is of grey iron, and has aluminium side-plates forming part of the water jacket, a device by which much weight is saved. Water space is allowed all round each cylinder barrel. The sump is of



*The independent front suspension and steering layout with a divided trace rod.*

steel hexagon which acts as a lock-nut on the end of the stem.

Two 14 mm. sparking plugs are fitted for each cylinder, and these are placed on each side of the exhaust valve, with masked orifices. Each set of plugs is fed

When a supercharger is fitted, this is mounted in front of the engine, and is driven via a clutch off the nose of the crankshaft. The single large carburetter is on the outside of the supercharger, not between the supercharger and the engine,

*THE NEW ATALANTA—continued*

electron, and holds nearly three gallons, and there is a large external Tecalemit oil filter. The clutch bell housing is also of electron.

Specialloid pistons are used, and the connecting rods are of RR 53 alloy, running direct on the crankshaft, without white metal interposed, according to aero engine practice. The rods are thus extremely light, but of substantial design.

The Cotal magnetic gearbox has proved very satisfactory, and is actually lighter than several other types of box. The gears are changed by a kind of switch working in a little gate. For reverse a separate lever is fitted. This has three positions—forward, neutral, and reverse. Thus one not only has four forward speeds, but also four reverse gears as well, while the neutral position can be obtained either by the lever or in the magnetic gearbox. The gear ratios are 12.8.8, 5.6 and 4.25 to 1., giving 5,000 r.p.m. at 100 m.p.h. in top gear.

Now one comes to the extremely interesting chassis. There are three light gauge tubular cross-members, and a cruciform bracing, drilled for lightness, in the centre. The front suspension is by vertical coil springs, working in compression. The stub-axles are supported by parallel links of RR 53 alloy, cutting

down the unsprung weight, and the coil springs themselves are mounted on a tubular member carried high up and supported by triangular tubes. The whole of this rigid construction is so skilfully concealed by the radiator and wings that one would scarcely suspect a suspension out of the ordinary.

Similar RR 53 links are used at the rear, and coil springs are again employed, but in this case are disposed horizontally, inside the side members of the frame. An adjustment is provided to vary the spring strength, according to the type of body fitted. André Telecontrol shock absorbers are used at front and rear.

In the steering gear a divided track rod is used, operating both wheels, and pivoted in the centre on the immensely strong front cross-tube.

The brakes are of Lockheed hydraulic pattern, and, as in racing practice, a double-barrelled master-cylinder is used, so that in the unlikely occurrence of either the front or rear brakes failing, the other set will continue to function. The drums are enormous, 16 inches in diameter, and are made of electron, with cast iron liners. The wheels are, naturally, of knock-off pattern, and are provided with 5.25x18 inch tyres.

The petrol tank is at the rear, and holds fifteen gallons, and two separate petrol pumps are fitted. It is said that the petrol consumption on the unblown 2-litre is about 24 m.p.g., and on the blown 1½-litre about 20 m.p.g.

At present the Atalanta is available either as a sports two-seater or with a drophead coupé body. The track is in all cases 4 ft. 5 in., and the wheelbase varies from 8 ft., for the unblown special two-seater, to 9 ft. 6 in. for the blown coupé. In between there are the blown two-seaters, with 8 ft. 6 in. wheelbase, and a 9 ft. chassis, either for the blown or unblown engines. Weights vary, according to body style, from 15½ cwt. to 21½ cwt.

Altogether the Atalanta is a most interesting car, with many ingenious features, and it should certainly make its mark among British sports-cars. It is hoped that a road test will appear in a forthcoming issue of MOTOR SPORT, when some excellent performance figures are expected.

Prices are:—

*Supercharged* 1½-litre; two-seater, £700; Coupé, £725; 2-litre; two-seater, £760; Coupé £790.

*Unsupercharged* 1½-litre; two-seater, £540; Coupé £565; 2-litre; two-seater, £580; Coupé £595.

## G. E. T. EYSTON'S NEW RECORD BREAKER

4,800 H.P. FOR 350 M.P.H. BID

Great Britain has produced yet another car with which to attack world's flying start short distance records, or, in the eyes of all the non-technical world, to attempt to further raise the "motor-car speed record," held by Sir Malcolm Campbell's Rolls-Royce-engined car, for this country, at 301 m.p.h. The new car is the work of Capt. George Edward Thomas Eyston, and never before has anyone kept so stupendous a task so quiet. The daily Press news-hawks, who are usually quick to send motoring stories, even if not accurate in their presentation, only managed to get pictures of the partially-completed monster as Eyston sailed for America to inspect the Utah salt-lake course.

Eyston aims to raise the record to around 350 m.p.h., and as "Bluebird," the present holder, would require 50 per cent. extra horse-power to realise this speed in theory, the new car has been given two engines of the make and type used by Sir Malcolm, so that double the power is available, or approximately 4,800 to 5,000 h.p. It seems likely that to accommodate these two engines will necessitate a greater frontal area than that of the present record-holder, but against this must be set the 100 per cent. additional power. Capt. Eyston has chosen the make of engine that has figured in recent speed attempts of this nature on land and water and which is accepted as best for our control of the

sky—the Rolls-Royce. These two twelve cylinder Rolls-Royce aero-engines are mounted side by side behind the driver, and they drive a central three-speed gearbox via a train of gears. The gearbox drives a bevel-box mounted on the chassis frame and the rear wheels are driven by jointed shafts from this box, being carried on wishbone links and controlled by transverse springs. At the front are four wheels, all inter-connected for steering purposes, but all separately sprung by transverse links and transverse leaf-springs set above the linkage. The brake drums are carried apart from the wheels, those at the front being connected to the second pair of wheels by shafts. Thus unsprung weight is conserved and heat is kept from the tyres. There are also novel air-brakes at the tail. The wheels are of disc pattern. The driver sits on the off side, ahead of the engines, and the body is a shell enclosing the wheels, having an "air-ship" nose, and a fairly short tail possessed of a very large and high stabilising fin. The radiator is carried in the nose and is a deep, hexagonal "box" with large feed pipes. It will be seen that Eyston's car breaks fresh and revolutionary ground in respect of its engine location and wheel arrangement. Independent suspension is also unique in this sphere of activity. Consequently the record-attempt should have a very high research value. On the other hand, it is interesting that the drive is still taken to a single

axle, at the rear of the car, while the streamlining is of more straightforward conception than that of several of the "Bluebirds." The cockpit is enclosed, but this can hardly be regarded as revolutionary nowadays, when closed cockpits have figured successfully in long-distance record runs. Eyston's attempt will undoubtedly give rise to sceptical queries as to the value of these ultra high-speed dashes in freak, high-powered cars. A sufficient answer is that the realms of higher research must not be allowed to stagnate, apart from the possibility of America striking a surprise blow to British prestige in this sphere, as Ray Keech once did years ago, and Fred Dixon's 10-litre 350 m.p.h. car is nowhere near complete, anyway. So the warmest wishes to the success of Eyston's newest, and boldest, venture. It is difficult to give accurately the actual power of his car. Some reports give it as double that of Campbell's car, i.e., 4,800 h.p., others prefer the round figure of 5,000, others quote 6,000. By way of emphasising the enormously increased output of these special engines, the output of a standard 27-litre Rolls-Royce "Merlin" is just over 1,000 h.p. Which draws attention to the highly specialised engineering technique devoted to creating these cars. We humbly suggest that the time is ripe for a book dealing with post-war attacks on the "Land Speed Record." Such a book might well be named "Into the Unknown."



# Letters from Readers

## STEAM CARS

Sir,

I have been a regular reader of your journal since its "Brooklands Gazette" days, and although never keen on notoriety, I have been associated with some of the best-known designers, and have built, and caused to be built, some very excellent special cars, including one outstanding example incorporating a four-speed and reverse epicyclic gear with dog-clutch engagement, a special six-cylinder Burt-McCollum S.S.V. engine with the identical sleeve-drive now used in the Bristol "Perseus" engines, and a laminated plywood bullet (lead) proof body, and this was completed in 1923.

The article in your June issue, page 243, under "Matters of Moment" and entitled "Excitement over Steamers," has been very adversely criticised, and several of my friends have asked me to write you because, although I still drive fast I.C. engined cars after over thirty years' experience, I also still believe in the very great possibilities of the steam powered car, airplane, heavy road vehicle, locomotive, and ship.

Your reference to "dogs have to be muzzled at periods, so steam enthusiasts let off steam, etc., etc." is both feeble and futile, and so was the article in "The Aeroplane" to which you referred.

It is obvious that you are unaware of the many developments which are taking place in steam-powered road vehicles, locomotives and seacraft, and the complete reversal of policy in favour of steam power, and more especially in the case of the C.I. engine, and I enclose a few details for your information. May I also suggest that you investigate the remarkable results obtained in Germany with the Henschel and Sohn flash steam vehicle; the Huettner steam turbine, and the Strohschein steam turbine and vapour-pressure generator for aircraft in the U.S.A. In the latter instance Mr. Stanley Yale Brach, Aeronautical Editor of "The Scientific American," may be of use to you.

It is not possible to deal with the very many mechanical advantages of the modern flash steam unit in a letter, but I would like to state that there are many people in this country whose enthusiasm is not only due to the known and proved advantages of flash steam power, but on an even safer and surer foundation, viz.—

*National.*—The proper development of the coal and oil resources of their country to make it less dependent upon imported fuel.

*Health.*—Elimination of poisonous and foul exhaust fumes, and noise.

*Safety.*—At least partial elimination of the fire hazard, and simplification of controls.

But even the greatest flash steam enthusiast would not suggest that the I.C. and C.I. engine should necessarily be eliminated.

I have personally both seen and heard more absurd claims made for I.C. and C.I. engines than have ever been made for flash steam units, and have recently had ample proof of incredible results obtained from a certain flash steam unit, which, when published, will put even the best results obtained from I.C. and C.I. engines in the "also ran" class, so please do not muzzle the steam enthusiasts, but allow them to let "off steam," and during one of those "fairly regularly defined cycles" to which you referred you will sit up in amazement and "read, mark, learn and inwardly digest." There are indications that this particular "cycle" is approaching, but it is neither "regular" nor even "defined."

I am, Yours etc.,

G. J. A. HOWARTH.

Manchester, 1.

*Sunday Express*, July 4th, 1937.

## LOCOMOTIVES

### Argentina Goes Back to Steam

Buenos Aires Great Southern and Buenos Aires Western Railways have recently placed large orders for steam locomotives in this country, which represents a complete reversal of policy. Less than three years ago the chairman of these two railways said: "There is such a large margin of economy attainable between burning coal or oil in the firebox of a steam locomotive and exploding oil in the cylinder of a Diesel locomotive that I have no doubt we shall find that it will pay us well to replace over a series of years all our steam locomotives with Diesels. It is therefore unlikely that the Great Southern will again ship a steam locomotive to Argentina."

Subsequent experience with Diesels showed the management that there was nothing like steam. This is now admitted.

*Sunday Express*, July 11th, 1937.

## STEAM LORRIES RETURN

Steam lorries are returning to the roads. Several idle, unregistered machines are going back on the roads after overhaul at the Sentinel works. Already new vehicles are appearing on the roads. Sentinel has supplied a fleet of steam wagons to South Africa, obtained a gold medal for another from the Turkish Minister of Economics (and orders), and is now sending a wagon out to Russia for trial.

*Daily Mail*, July 14th, 1937.

## STEAM LORRY NOW COMPETING WITH PETROL VEHICLE

The steam wagon in open competition with the petrol driven vehicle has a great advantage in pulling power and in speed with heavy loads, but for years has been almost driven from the roads by the Transport Ministry's restrictions on weight.

One of the biggest users of road lorries in the country, the Gas Light and Coke Company, has, I hear, so far demonstrated its confidence in the steam vehicle under the new conditions as to order fifteen from the Sentinel Waggon Works.

[At least we have been fair and published Mr. Howarth's views in full. But we are still unconvinced that any existing steam-cars are a match for the better petrol-cars on the divers counts by which motor-cars are judged. If so, we would like a personal demonstration, say, a 1920 steamer against a "30/98" Vauxhall of the same age. Nor can we yet visualise a 14 cwt. steam-car able to beat an E.R.A. in a 200 mile race—and by racing is car-efficiency gauged. Whatever the future may hold, it is difficult to see how steam enthusiasts will compete against vested interests. Finally, we are at least proud to share our futility with so respected a journal as "The Aeroplane."—Ed.]

\* \* \*

## HAVE YOU ANY SUGGESTIONS?

Sir,

I am very glad to see your paper once more in full swing, and if I may make a suggestion I think that more photographs would increase its popularity. One or two good "close-ups" of Grand Prix cars every week would cater for a public not interested in Club News and Trials Reports.

One other point. I wish the Aldington Bros. would not use the correspondence columns of motor papers to advertise the B.M.W. It is very bad form.

I am, Yours etc.,

C. S. G.

Southgate.

\* \* \*

## INFORMATION WANTED

Sir,

I wonder if any of your readers have had any experience in converting a Morgan Super-Sports three-wheeler into a four-wheeler; if so I should be very grateful for their advice.

I am thinking of fitting a solid back axle driven by a single chain in the centre. Also I had thought of the brakes being one on either side of the drive, and being on this axle. The chief snag so far as my limited knowledge is concerned is the springing.

I am, Yours etc.,

B. CROOKES.

Sheffield, 10.

[If any reader has any suggestions to make, we shall be glad to forward any letters.—Ed.]

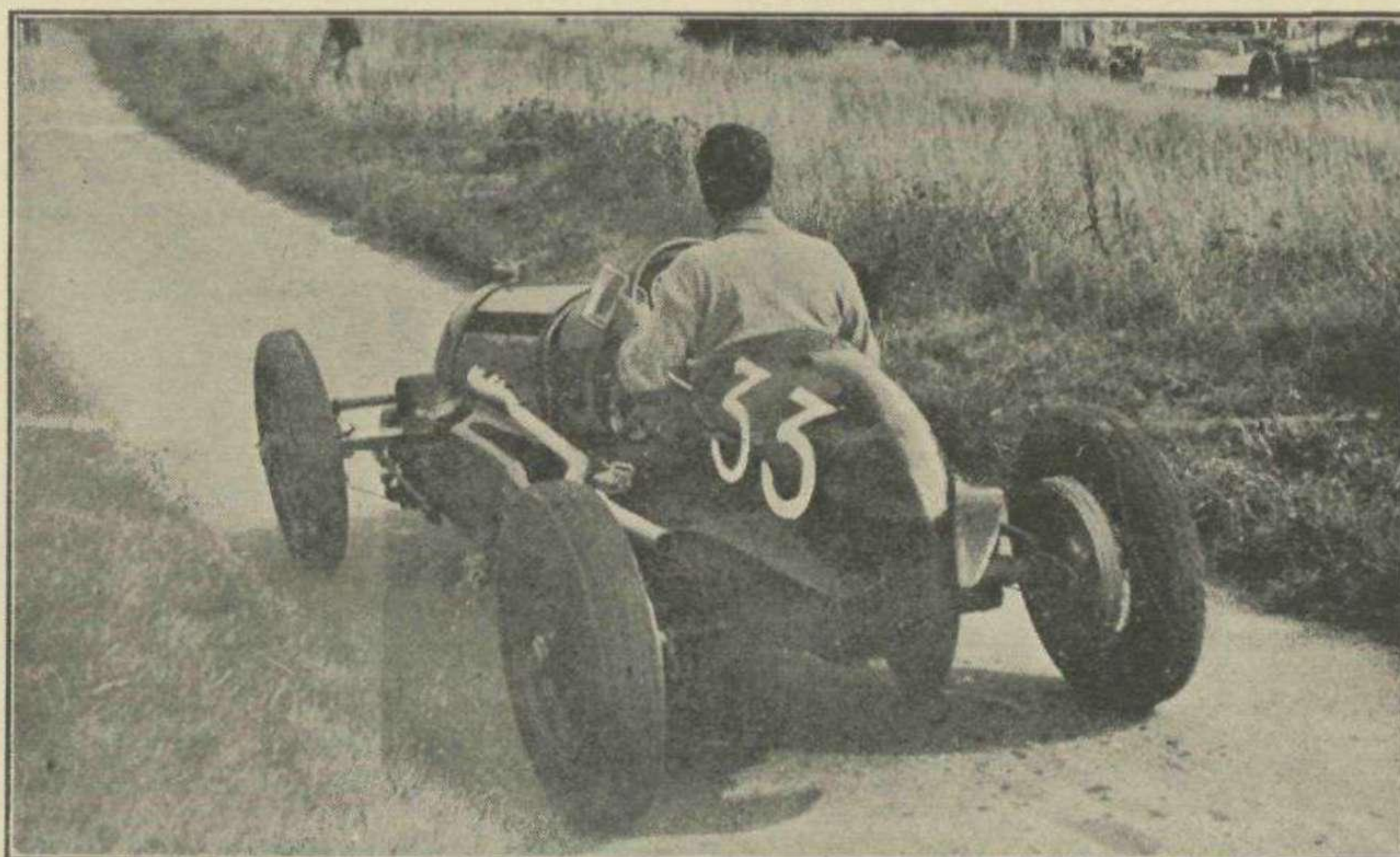
# THE THIRD LEWES MEETING

COURSE RECORD LOWERED BY 2-LITRE ALTA

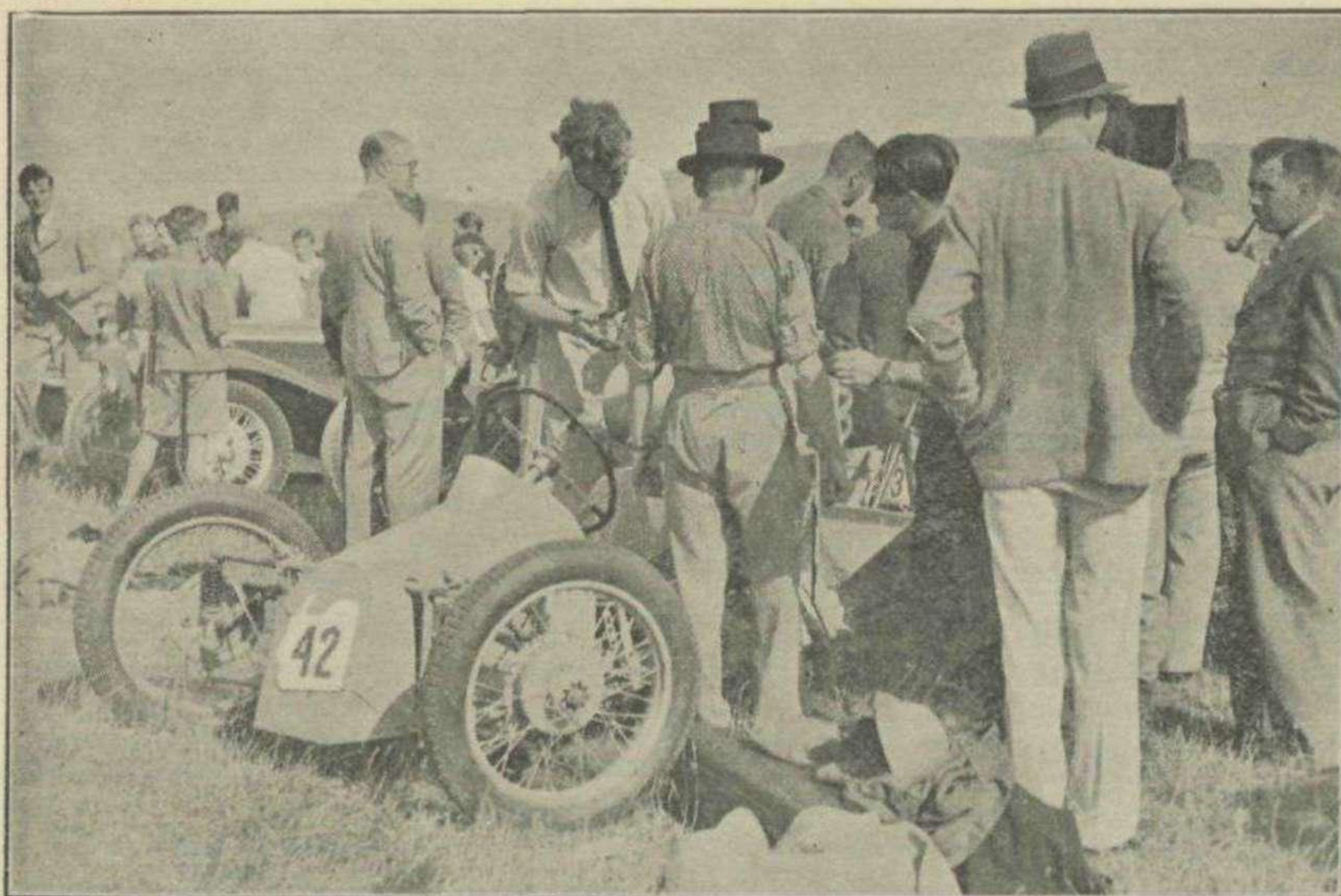
**T**HE Lewes speed trials up Race Hill on the Sussex downs are really excellent. They retain all the old-time tradition and are almost as free and easily run, for no charge is made to spectators and competitors park in fields beside the  $\frac{1}{2}$ -mile course. This time a policeman really did his job in keeping the onlookers behind the ropes, and we hope the Arm of the Law is suitably rewarded by the promoters. Lewes continues to attract the "specials brigade," and on August 21st Sumner brought the blown Sumner J.A.P., J. G. Fry his very fast mid-engined Freikaiserwagen, a photograph of which had found its way into the daily Press on the Monday, Orlebar the Red Biddy Special, Symonds the B.H.D.-G.N., Whitfield-Semmence his recently completed A.C. engined Semmence-Special, E. R. Stafford his well finished Moses, and G. A. Stedall a streamlined Batten-Special-Ford V8. Then there was T. B. O'Reilly's Borborygmus, which Tony Curtis, sportingly enconced as usual in his roomy broadcasting van, told us was the correct medical term for belly-rumblings. This car is actually the old Horton-Special, with Alta engine, chain transmission, and a generally Frazer-Nash layout. Most of the body has now been cut away and it looks a most business-like job. Incidentally, we feel that it would be better were original names to be used in the entry forms, subsequent pet names to be the sole right of owners' friends, and to be painted on bonnets between inverted commas.

Fane, going off carefully as is the habit of a Frazer-Nash, won the  $1\frac{1}{2}$ -litre standard sports class from Farley's H.R.G., in spite of Farley putting through the power at something like "4,500." Fane again scored in the 2-litre and unlimited sports classes, driving a Type 328 Frazer-Nash-B.M.W., with Farley's H.R.G. runner-up. In the 1,100 c.c.

So to the racing classes, the first of which went to Denis Evans, who arrived from Eastbourne in his brother's Alfa-Romeo and did his fastest Lewes run yet, in 19.44 secs. He drove the Bellevue cut-down, C-engined Mcntlhery M.G., which still has its original gearbox, transmission and typically flimsy front axle. The Sumner-J.A.P. was driven well to



A fine speed impression of A. G. Sinclair and his  $1\frac{1}{2}$ -litre Alta.



Lewes always encourages the "specials" at its meetings. Here is one surrounded by enthusiasts.

A dull morning gave place to the sun and the usual cars towing racing-motors or strange trailers descended upon Lewes, filled with weirdly garbed enthusiasts and vivid women, as one expects at one of these meetings. Samuel opened things by winning the Frazer-Nash class against slight opposition. Some delay while the timing-set was coaxed to refuction and

super-sports class J. N. Innes's K.3 M.G. won after an excellent run, and improved its time to dominate the  $1\frac{1}{2}$ -litre section. Then Forrest Lycett, who had brought McKenzie down as passenger, won the unlimited class with his 8-litre Bentley, beating Matthews's ex-T.T. Ford V8 and the Frazer-Nash-B.M.W.s of Fane and D. N. Leon, amongst others.

take second place, beating the unblown Freikaiserwagen by .22 of a second. In the  $1\frac{1}{2}$ -litre class Hartwell's fabric-tailed M.G. Magnette did 19.95 secs. and Evans could only manage 21.76 secs. Sumner was third, faster this time, in 21.89 secs. Nigel Orlebar ran a very short Brescia Bugatti, that arrived behind the Granville Grenfell Lambda Lancia.

The 2-litre class saw Geoffrey Taylor's 2-litre single-seater Alta win in 19.6 secs., Evans, still unable to equal his first time, being second. Then, in the unlimited class, Taylor got his start just right, did not shut off for snaking, and recorded 18.75 secs., going over the finish at something like 103 m.p.h. on this very narrow, bumpy road, averaging 63.9 m.p.h. This beats the old record, established by R. G. J. Nash last year with his Frazer-Nash-Union-Special, by .31 of a second. Baron was second in 19.53 secs., driving the ex-C.E.C. Martin 3.3-litre G.P. Bugatti, now looking very smart after a repaint and starting easily on its transverse handle at brother Baron's bidding. Hartwell's M.G. was third. In the handicap class, in which Sumner ran the 12-cyl. Delage, Nigel Orlebar was victor, with his vintage Brescia Bugatti.

#### RESULTS

Frazer-Nash Cars : 1, J. O. C. Samuel, 26.12s.  
Standard Sports-Cars  
1,500 c.c. : 1, A. F. P. Fane (Frazer-Nash), 27.80s. ;  
2, E. K. Farley (H.R.G.), 28.10s.  
2,000 c.c. and Unlimited : 1, A. F. P. Fane (Frazer-Nash-B.M.W.), 25.83s. and 25.72s. ; 2, E. K. Farley (H.R.G.), 27.80s. and 27.30s.

Continued on next page

# THE SOUTHPORT 100-MILE RACE

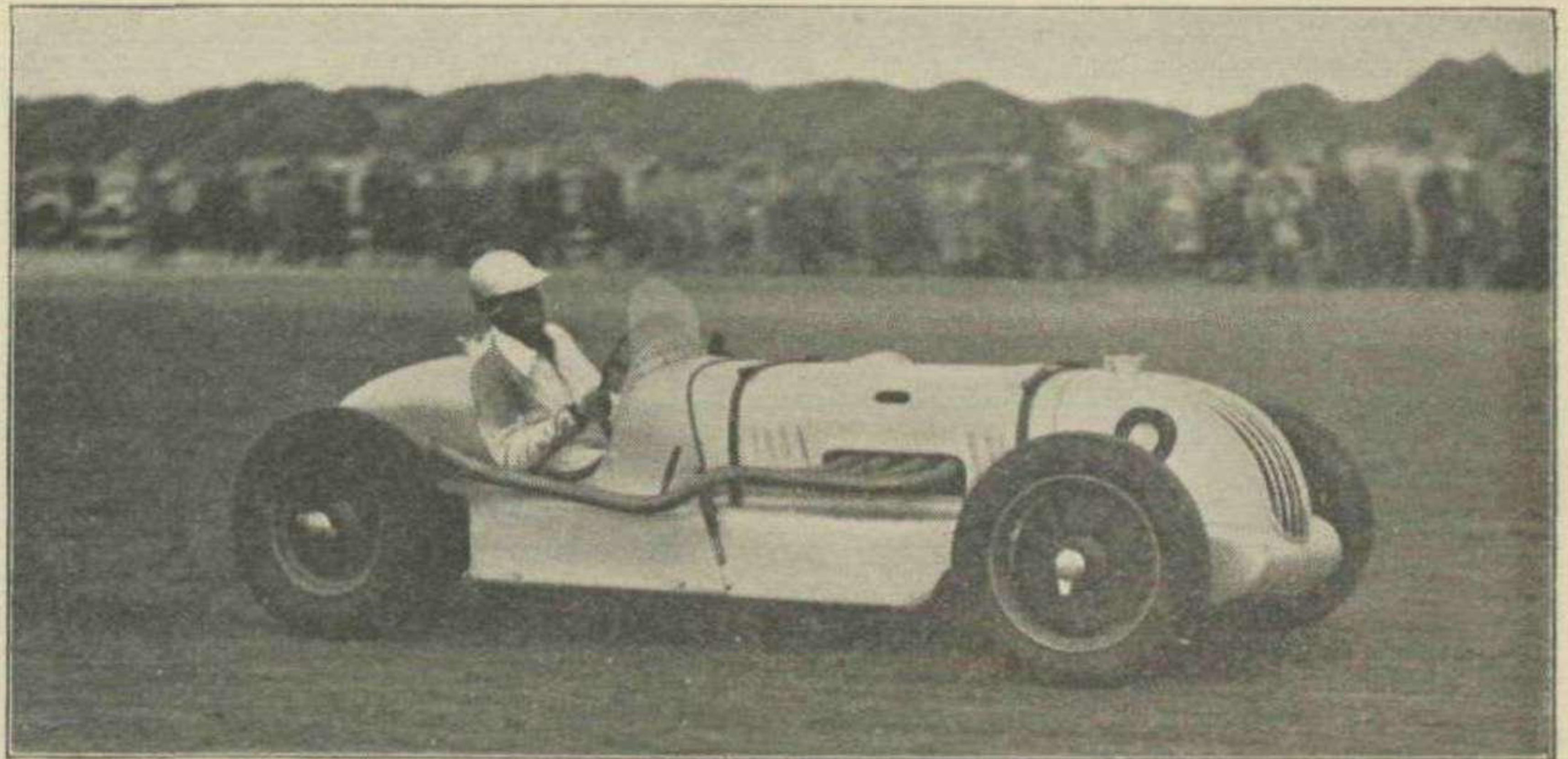
## BILLY COTTON WINS WITH M.G. MAGNETTE

Midland enthusiasts contrive to race satisfactorily and seriously over the course on Ainsdale Sands, Southport, and the Southport Motor Club's 100-Mile Handicap is a classic. Dry weather broke before the race and although the rain ceased in time for the start, it left the course loose and muddy on the two bends which join the mile straights. Moreover, a stiff breeze blew loose sand about in a manner unpleasant for occupants of fast motor-cars. Thirty-four entries contained some well known names, including Jack Bartlett, who won this race in 1931 and 1932, and who was handling his Alta, Charles Goodacre, with the Austin, and Cotton (M.G. Magnette). Thirty-one actually started. Handicapping was on a "B.A.R.C." basis, by credit laps. Charles Brackenbury, on a 2.3-litre Bugatti, commenced to lap at 60 m.p.h. and Cotton found even more speed from the M.G., and the limit men began to feel less happy after sixty laps had been run. By this time Sir Ronald Gunter's Ford V8-Leidart had fallen out, the Hatch-Special had wrecked its chain-drive, Moncreiff found his Riley's radiator leaking seriously and Williams's blown M.G. Magnette had ceased to function.

Brackenbury and Cotton engaged in a stirring duel, the Bugatti needing fresh plugs, then taking three laps in which to catch the M.G., finally suffering further plug maladies and retiring. At forty-two laps, Cotton entered a place, behind Jackson (Riley) and Bailey (Riley). Jackson then hastily refuelled, Cotton closed, and the effort of trying to draw away apparently cracked the Riley up, as it retired within a couple of miles. Bailey led from Cotton, then the M.G. went into first place and Bartlett's 2-litre Alta caught both Bailey and Guy Warburton's Riley to hold second place. Then Bartlett deemed it advisable to visit his pit to take on fuel, leaving Cotton to win easily in 1 hr. 54 min. 26 secs. for 115 miles, an average of 60.3 m.p.h. Bartlett averaged 59.76 m.p.h. and Bailey was third at 52.03 m.p.h. Cotton found

goggles more suitable than a visor under the prevailing conditions, and the popular dance-band leader drove bare-headed. The M.G. Car Co. Ltd. appreciated his victory to the extent of issuing a special poster, depicting Cotton in full flight, leading a car that looked curiously like Marcus Chambers's '07 Renault, but which is presumably meant to represent

4. P. Stephenson (747 c.c. Austin, S.), 56.34 m.p.h.
  5. G. Warburton (1,087 c.c. Riley), 55.85 m.p.h.
  6. H. Hodgson (1,087 c.c. Riley).
  7. E. N. R. Hewitt (847 c.c. M.G.).
  8. J. W. Burnand (1,123 c.c. "J.W.B.").
  9. C. H. Strang (1,496 c.c. Bugatti).
- No other cars completed the course within the timelimit.



J. H. Bartlett (Alta) who finished second in the 100-mile race.

the Austin. Baron's Bugatti split its crankcase, the Leidart a cylinder head, Tinker's Bugatti suffered "plugs," and in all nine finished and six cars were flagged off. Goodacre had a wing fitted over the off-side front wheel of the Austin, to combat flung sand. Brackenbury drove L. Eccles's Bugatti. In the straight mile races Moncreiff's Riley, Burnand's Riley-engined J.W.B., Brackenbury's Bugatti and Brooke's 30/98 Vauxhall were to the forefront.

### RESULTS

#### 100 Mile Race

1. Billy Cotton (1,087 c.c. M.G., S.), 60.30 m.p.h.
2. J. H. Bartlett (1,996 c.c. Alta, S.), 59.76 m.p.h.
3. W. Bailey (1,087 c.c. Riley), 52.03 m.p.h.

#### First Invitation Straight Mile

- Heat 1: 1. G. J. W. Moncreiff (1,089 c.c. Riley Special); 2. H. Cocker (1,087 c.c. Riley); 3. F. E. Robinson (1,990 c.c. Bugatti).
- Heat 2: 1. J. W. Burnand (1,123 c.c. "J.W.B."); 2. H. Hargreaves (1,087 c.c. Salmson); 3. D. W. Jackson (1,089 c.c. Riley).
- Final: 1. J. W. Burnand; 2. H. Cocker; 3. H. Hargreaves.

#### Second Invitation Straight Mile

- Heat 1: 1. C. Brackenbury (2,263 c.c. Bugatti, S.); 2. A. Baron (1,496 c.c. Bugatti, S.); 3. A. Tinker (2,270 c.c. Bugatti, S.).
- Heat 2: 1. A. Brooke (4,234 c.c. Vauxhall); 2. W. L. Woodcock (1,911 c.c. Frazer-Nash-B.M.W.); 3. H. J. P. Williams (1,087 c.c. M.G. Magnette, S.).
- Final: 1. C. Brackenbury (Bugatti); 2. A. Baron (Bugatti); 3. A. Brooke (Vauxhall).

## THE "500" OUTLOOK

Because of, or, as we believe, in spite of the reduction in race length and change in handicapping, the B.R.D.C. has confounded the pessimists by obtaining a really good entry for the "500" on September 18th, to be run over 500 kilos. of the Brooklands outer-circuit. Twenty-nine entries were in by the single fee closing date, which is four more than that at which the list closed last year. They include two of the French sports Talbots, three of the new, very fast, sports twelve-cylinder Delahayes, "Bira's" privately-owned six-cylinder sports Delahaye which

won the Donington 12-Hour sports-car race, Billy Cotton's Bellevue-prepared M.G. Magnette, winner of the recent Southport 100 Mile Race, R. Parnell's well known, twin camshaft M.G. monostro, Maclure's Riley, two works Rileys, the team of three works Austins, Powys-Lybbe with the interesting 4-litre V12 Sunbeam which belongs to Cobb and was modified for Sir Malcolm Campbell but little used—Cobb started the J.C.C. International Trophy Race with it last month—and John Cobb himself with the 24-litre Napier aero-engined Napier-

Railton. While no one would decry the drivers' task in this very fast and gruelling race, the fact remains that the cars count for much more than in a shorter road contest, so that students of design swarm about the pits. Another aspect is that in a season when fields have varied little event after event, there is some interesting new material in this B.R.D.C. race. It is very probable that those who forgather at Brooklands on Saturday, September 18th will see the fastest classic race ever run. This is the ninth race of this important International series.

### THE THIRD LEWES MEETING—continued from page 376]

- Super Sports-Cars**  
**1,100 c.c.:** 1, J. N. Innes (M.G. K3), 26.12s.; 2, H. Witley Burt (939 c.c. M.G.), 28s.;  
**1,500 c.c.:** 1, J. N. Innes (1,087 c.c. M.G. K3), 26.02s.; 2, H. J. Griffiths (G. Taylor's 1,496 c.c. Alta), 26.58s.; 3, A. F. P. Fane (1,496 c.c. Frazer-Nash), 27.80s.  
**Unlimited:** 1, Forrest Lycett (8-litre Bentley), 22.27s.; 2, G. S. C. Matthews (Ford V-8, ex-T.T. car),

- 26.36s.; 3, A. F. P. Fane (2-litre Frazer-Nash-B.M.W.), 26.48s.  
**Racing-Cars**  
**1,100 c.c.:** 1, Denis G. Evans (747 c.c. M.G. Monthery), 19.44s.; 2, R. A. C. Sumner (998 c.c. Sumner-J.A.P.), 22.57s.; 3, J. G. Fry (1,097 c.c. Freikaiserwagen), 22.79s.  
**1,500 c.c.:** 1, G. Hartwell (1,287 c.c. M.G. Magnette), 19.95s.; 2, D. G. Evans (M.G. Monthery),

- 21.76s.; 3, R. A. C. Sumner (Sumner-J.A.P.), 21.89s.-  
**2,000 c.c.:** 1, Geoffrey Taylor (2-litre Alta), 19.60s.; 2, D. G. Evans (M.G. Monthery), 20.90s.;  
**Unlimited:** 1, Geoffrey Taylor (2-litre Alta), 18.75s.; 2, A. Baron (3,300 c.c. Bugatti), 19.53s.;  
**3, G. Hartwell (1,287 c.c. M.G. Magnette), 20.79s.**  
**Handicap:** Nigel B. Orlebar (Bugatti); 2, A. L. Baker (M.G.); 3, A. Baron (3,300 c.c. Bugatti), time from scratch 19.01s.; 4, G. A. Halford (H.R.G.),

## THE FASCINATION OF SHELSLEY WALSH

ANY sporting motorist could find Shelsley Walsh for you on an up-to-date map of Worcestershire, for since 1905 Shelsley, as the centre of one of the most popular events in the motoring calendar, has been very much on the map indeed.

The same sporting motorist, however, would probably be surprised to know that he could also find Shelsley Walsh on a medieval map of Worcestershire. The famous hill is, in fact, as old as the Domesday Book, and its name, with many variations of spelling, crops up from time to time in the history of Worcestershire and of England, with such dramatic associations as the downfall of Cardinal Wolsey and the arrest of the Gunpowder Plotters!

And now, twice each summer—the next event takes place on September 11th—Shelsley is the scene of mock battles fought on the most modern and scientific lines, with all possible resources of mechanical and technical skill. This has been going on for thirty-two years, only the War years interrupting the series.

It is not difficult to account for the popularity of the Shelsley hill climb; from all points of view it is a satisfying contest and a thrilling spectacle. Many famous names in motoring history occur in the annals of the event, beginning in 1905 with Louis Coatalen (Sunbeam), E. M. C. Instone (Daimler), G. H. Lanchester (Lanchester), T. C. Pulliner (Humber) and F. S. Bennett (Cadillac). Instone's Daimler made the fastest time—77.6 secs.—at that first meeting. In the year before the War the time had been reduced to 55.2 seconds, by J. Higginson (Vauxhall), and in 1921 a Sunbeam driven by C. A. Bird bettered this record by three seconds.

The name of Raymond Mays first appeared in 1923, against an unofficial record, made with a Brescia-Bugatti, of 51.9 seconds. Two years later another great name was in the lists, the late Sir Henry Segrave making fastest time with a 2-litre Sunbeam. The following year saw the first of the strictly amateur hill climbs, and also the first September meeting, bad weather necessitating the postponement of the open event from the original date in July. Fastest time of the day was made by B. H. Davenport, and this was the first stage of his hat-trick, for he repeated the success with Frazer-Nashes in '27 and '28. Raymond Mays broke the record for the hill in 1929 with a Vauxhall Villiers supercharged Special, and in the same year Earl Howe made the record for sports-cars with a climb in 47.6 seconds, his car being the Mercedes-Benz which won the 1929 Ulster T.T.

The Shelsley Open Climb became a recognised International fixture in 1930, being the British event for the Hill Climb Championship of Europe. Hans Stuck and Rudolf Caracciola were among the competitors, the former putting the record for the climb at 42.4 seconds, with an Austro-Daimler. This was the first time the honour had gone abroad, and three years elapsed before it was recaptured. In '33, however, it was won back in no uncertain fashion by Raymond Mays and Whitney Straight, who took turns at reducing Stuck's time by fifths of a second until Straight, on his second run, clocked 41½ seconds.

Since 1934 it has been Mays and his E.R.A.s who have monopolised the honours. At the May meeting of 1935

stantly improving the organisation, both from the competitors' and the onlookers' point of view. One of the chief assets of Shelsley for the visitor is that wherever he chooses to take up his position he has practically a complete view of the course. Moreover he can wander from point to point exactly as he pleases, and this atmosphere of freedom is matched by a friendliness and informality which is equalled in few other motor-sporting events. Shelsley Walsh, indeed, might well be called the Goodwood of Motoring, as the Car T.T. may be thought of as the Derby, and the Brooklands 200 as the Ascot, of the motor world. As Goodwood appeals to all classes of racegoers, so does Shelsley to all followers of the other great sport.



Raymond Mays, who has monopolised the Hill's best times since 1934.

he put up a time of 39½ seconds, which remained unbeaten until the June meeting of the present year, when he clocked 39.09 seconds under the new timing arrangement. By this means, instead of starting, as before, at the fall of the flag, the cars automatically time themselves by breaking rays of light at the start and finish, the apparatus not only registering the result to one-hundredth of a second, but printing the time on a card! It should be noted, however, that this method, by cutting out the inevitable time-lag between the fall of the flag and the full start, does not give a true comparison with times registered under the old procedure.

Year by year Shelsley Walsh has attracted better entries, more interest and larger crowds of spectators, and the promoters of the event have kept pace with this increasing popularity by con-

The short but infinitely exciting course, the opportunity of seeing some of the world's finest drivers at close quarters, of comparing their tactics and admiring their skill—these are some of the points which appeal to the Shelsley enthusiast. Then again the lovely surroundings in which the hill is situated would make it a pleasant enough venue even if it were not, as it is, one of the trickiest little climbs in the world; while the amazing variety of cars which compete, ranging from the big Maseratis, Mercedes, Bentleys, etc., down to the odd little home-made contrivances that often do so extraordinarily well, gives all classes of enthusiasts the keenest possible interest in the event. For the true devotee of motor sport there is only one thing better than to go and watch the Shelsley hill climb—and that is to go and take part in it!

### EAST COTSWOLD M.C.

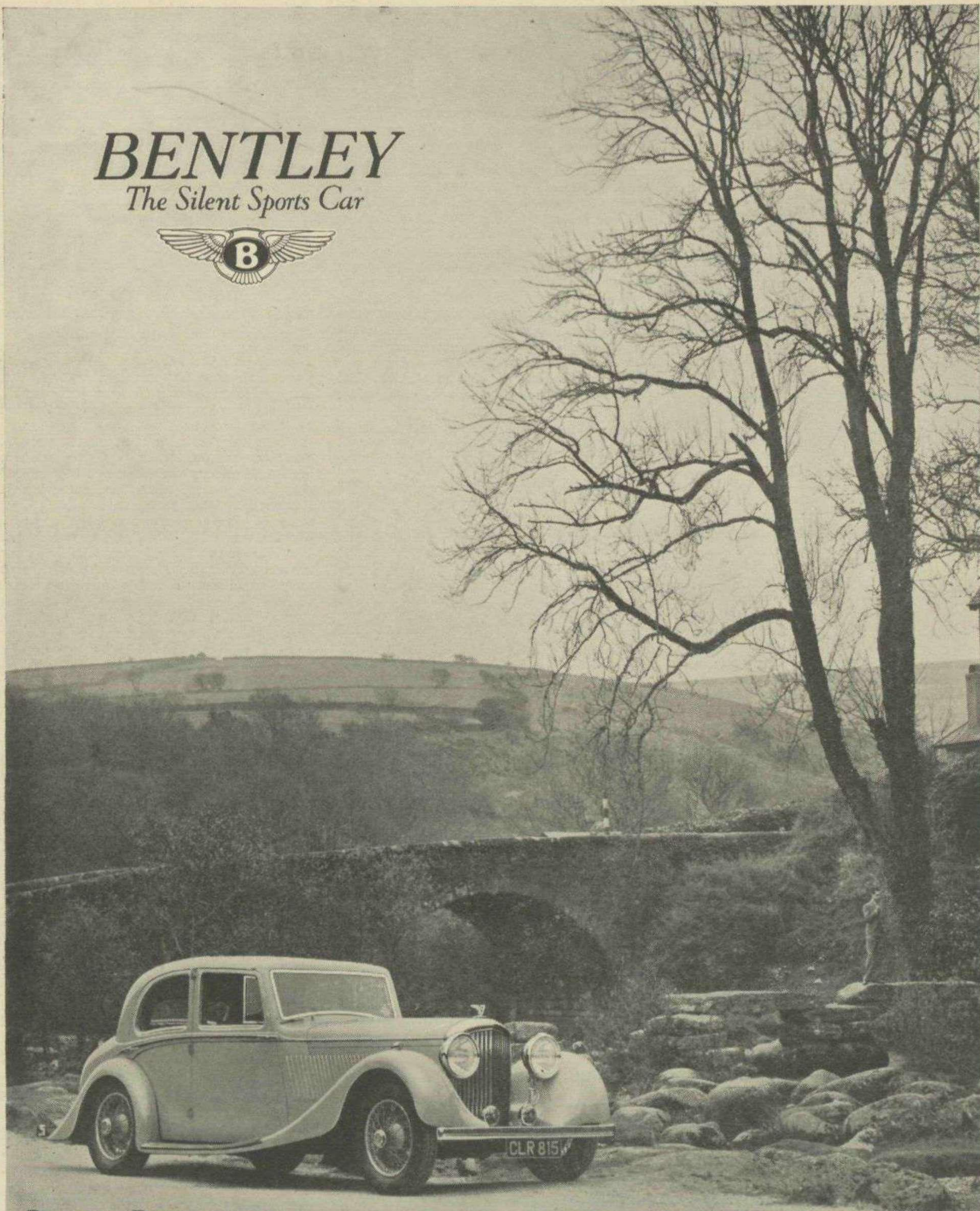
A delightfully free and easy series of speed events with some very unique features has been arranged for September 18th, 11 a.m. to 5 p.m., it is hoped as an open fixture. A course comprising road and grass sections, with eight corners and a quarter of a mile straight, with a length of about a mile, has been laid out in the grounds of Hatherop Park, nine

miles N.E. of Cirencester. Entries cost 2/6 per class, touring and saloon cars are catered for, and cash and cups provided as awards. There will also be a Concours d'Elegance for old cars, and motor-cycle classes. Organised by young enthusiasts, this meeting should provide some sound fun if the R.A.C. permits the full programme to be carried out. A unique

aspect is that practising takes place all the preceding week on application to Hatherop Park and particularly in the evenings. On September 18th cars may be parked for 1/- each and programmes bought for 3d. each. Particulars from the Secretary, C. M. Cadogan, Quenington, Fairford, Glos.

# BENTLEY

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# Club News

## N.W. LONDON MOTOR CLUB

At a recent Committee Meeting it was decided to make certain changes in the arrangements for the Fourth Annual Inter-Club Team Trial for the Sporting Life Team Trophy to be held on Saturday, the 9th October. It is felt that these changes will make the Trial more attractive and interesting to the competitors.

The start of the Trial will probably be from Dunster at or near 12 noon and the Trial is open to teams nominated by any recognised Motor Club, each team to consist of either three or four nominations. In the event of there being a fourth nomination, the performance of the best three will be counted.

The course will be divided into two sections separated by a luncheon interval. The pre-luncheon section will consist of five or six hills of average severity and the post-luncheon section will consist of at least two hills of exceptional interest and severity.

The starting order will be balloted for in the first instance and this order will be preserved through the Trial except as regards teams completing the pre-luncheon section without loss of marks. Such teams will be relegated to the later positions in the Trial and will attempt the post-luncheon observed sections in an order to be determined by the Clerk of the Course, which will be designed to form a match Trial. The object of this arrangement is to give the leading teams the opportunity of attacking the deciding hills in close proximity to one another, thus evening up the chances of ultimate success.

A copy of the final regulations will be forwarded and interested Clubs are invited to write to the Secretary of the meeting, Mr. F. H. Whittingham, 9/11, Poultry, Cheapside, E.C.2, for further particulars.

## HARROW CAR CLUB

The Harrow Car Club held its gymkhana near Radlett on Sunday, August 8th, and about thirty cars turned out for a very enjoyable afternoon's sport, favoured by brilliant weather. There were eight events. In the obstacle race high diving was at a premium when trying to retrieve an apple from a bucket of water, the biggest splashes being made by Richards and Rackham.

In the balloon race that followed there were some good exhibitions of straight line driving, notably C. W. Taylor.

Dressing Up race was next and some most antique ladies' lingerie provided some hilarious moments; Norman Lone's figure was shown to advantage in small size winter woollies.

The drawing race produced some weird and wonderful animals, including an Emu with four legs.

Teams of three cars tied together with ribbon in the next event showed some real nose to tail driving. The winners of the final completing the course without breaking the ribbon once. It is to be hoped that those with crumpled number plates and rear lights managed to evade the eye of the law on the way home.

Passengers in the Back Seat Driving, when directing their drivers who were blindfolded, found it difficult to decide which was right or left, as also did the drivers themselves.

With Spearing the Rings and Musical Chairs a full programme was completed.

### RESULTS

Obstacle Race: V. W. Baillie. Balloon Race: V. S. A. Biggs. Dressing Up Race: Miss Mitchell. Drawing Race: S. K. Foskett. Team Race: J. Leech, P. A. Richards, H. W. Johnson. Spear the Ring: Miss Mitchell. Musical Chairs: A. Clayton. Back Seat Driving: V. S. A. Biggs.

## JERSEY MOTOR-CYCLE AND LIGHT CAR CLUB

This enterprising club held another 50-mile "Grand Prix" car race on a course at St. Ouen's Bay sands. The entry must be one of the most varied on record, easily surpassing those of the Irish road-races, which we have always regarded as a pretty selection. For the Jersey race attracted such cars as J. Renouf's home-built Austin Seven, G. L. Cohen's 4½-litre Invicta, G. Goldsmith's Morgan three-wheeler, F. Le Gallais's 1½-litre Hybrid, R. Langton's 3-litre Ford, S. Logan's Austin Seven, another Austin Seven, W. B. Caldwell's Riley Nine, B. L. Stagg's 1½-litre Lancia, D. H. Wood's Chrysler, P. Wakeham's Riley, C. Benett's 3-litre Sunbeam chassis and A. P. Pool's 8-litre Isotta-Fraschini, a field of nineteen. This the organisers dealt with by way of a system of additional laps for the faster cars, the scratch men having to compete sixty-four laps of the mile course, which embraced two hairpin turns and a banked S-bend. After half-distance heavy rain attempted to spoil things. Le Gallais and Langton commenced a stern duel and Goldsmith's Morgan was well up until beset with ignition trouble and loss of the low-speed chain. Cohen's Invicta then tackled Le Gallais's special car, both drivers cornering inches only apart. Then came a compulsory pit-stop, a feature which we are inclined to think spoils a serious race

of this nature, excellent as it may be for training novice drivers and their helpers. At all events, we hope it was not as painful as the sham pit-stop at Lea Bridge the other evening, when "doodle bugs" shot brakeless into their "pits" from all directions, stayed long enough for Mercedes mechanics to have changed engines had the race been a Grand Prix, and then rejoined the track by any course the drivers deemed best suited to them. To revert to Jersey, Logan's Austin led until the rear axle gave out, and Benett then brought his stripped Sunbeam into first place until, with six laps to go, a thunderstorm flooded his magneto.

Stagg's Lancia then seized its chance, and toured round to win. Only six finished, and in blinding rain broken or abandoned cars were left all round the course. J. Renouf in Mrs. Parmentier's M.G. got stuck in loose sand when he left the course but he was still in motion at the finish. P. Wakeham turned his Riley over coming out of the S-bend and was thrown undamaged from a badly bent motor-car. Caldwell—Jersey Airway's pilot—was second, and Pool third. No speeds are given, which suggests that this happy contest was untimed.

### RESULTS

1. B. L. Stagg (1,496 c.c. Lancia).  
2. W. B. Caldwell (1,087 c.c. Riley).  
3. A. R. Pool (8-litre Isotta-Fraschini).  
Class Awards: Under 1,500 c.c.: B. L. Stagg (1,496 c.c. Lancia). Under 1,100 c.c.: W. B. Caldwell (1,087 c.c. Riley).

## DUBLIN A.C.

The Dublin Hill-Climb saw some intense rivalry between J. Smith with a blown Austin Seven, an ex-T.T. car, and A. P. MacArthur with a racing M.G. Magnette. MacArthur managed to break the Kilternan hill record by 2 secs. climbing in 44.0 secs. Smith's best time was 45.2 secs. In attempting to lower this he overturned the Austin at a bend, adding to the unfortunate total of 1937 racing accidents, but fortunately escaping with a shaking. An old Lambda Lancia won the handicap.

### RESULTS

Open Scratch Event: 1, J. Smith (747 c.c. Austin, S.), 46½s. (51.45 m.p.h.); 2, G. P. D. Colley (1,496 c.c. Frazer-Nash), 46½s. (51.23 m.p.h.); 3, A. P. MacArthur (1,087 c.c. M.G., S.), 46½s. (51.23 m.p.h.). Colley beat MacArthur in run-off for second place.  
1,500 c.c. Handicap: 1, J. Smith (747 c.c. Austin, S.), handicap 2s., 45½s. (52.13 m.p.h.); 2, A. P. MacArthur (1,087 c.c. M.G., S.), scratch, 44s. (54.38 m.p.h.); 3, G. P. D. Colley (1,496 c.c. Frazer-Nash), handicap 2s., 46½s. (51.03 m.p.h.).  
Open Handicap: 1, H. Barlee (2,120 c.c. Lancia), handicap 18s., 54s. (44.21 m.p.h.); 2, J. Smith (747 c.c. Austin, S.), handicap 2s., 45½s. (52.82 m.p.h.); 3, D. Yule (972 C.M.Y., S.), handicap 3s., 47½s. (50.58 m.p.h.).

## VETERAN C.C.

A Rally and Reliability Trial for pre-1905 cars has been arranged for September 19th. Competitors are allowed to start forty-eight hours before the rallying time, which is 12 noon, at the Royal Huts



CLUB NEWS—continued

Hotel, Hindhead, Surrey. The entry fee was 7/6. The rally counts towards awards, and after it comes a simple reliability trial ("reliability" is correct in this instance) with a route of forty-two miles for cars able to maintain a schedule speed of 20 m.p.h. and another route of 36 miles for vehicles only able to maintain 15 m.p.h. or less. Stonor Hill will be observed for both routes, and adventure should be rife. Spectators should find attendance well worth while. The Veteran C.C. does yeoman service in encouraging and preserving interest in old masters built prior to 1905. Hon. Sec.: Capt. J. H. Wylie, 38, West Cromwell Road, London, S.W.5.

M.C.C.

The very interesting and instructive M.C.C. One Hour High Speed Trials round the Brooklands Outer-Circuit will naturally figure again in the M.C.C. Brooklands Members' Day on September 25th. As before, this date clashes with that of the Brighton Speed Trials, but really keen competitors have been known to get down from Brooklands to Brighton to compete in both, no doubt doing as much "dicing" off as on the courses during this especially strenuous day. Premier, silver and bronze medals will be awarded for equalling or exceeding the following set average speeds.

	Premier m.p.h.	Silver m.p.h.	Bronze m.p.h.
Up to 850 c.c.	60.87	52.57	47.04
" 1,100 c.c.	66.40	58.10	49.80
" 1,500 c.c.	71.92	63.63	55.34
" 2,000 c.c.	As 1,500 c.c.		
Unlimited	77.41	69.16	60.87

Supercharged cars cover two laps more than unblown motors. Standard open or closed touring cars are required to do 49.8, 44.27 and 38.72 m.p.h. if under 1,100 c.c. and 55.34, 49.80 and 44.27 m.p.h. respectively if over 1,100 c.c. for the Premier, Silver or Bronze awards. Entries cost 30/- and are limited to fifty-four. Drivers who exceed an average of 100 m.p.h.—not so far recorded in this event—will get special awards. One and two lap handicaps, entry 5/- each, make up the day's motoring and after the meeting competitors may cover flying laps against the watch and obtain certificates of their speed, at a cost of 5/-, or 7/6 if no other event is tackled. Here is sensible and excellent racing offered very reasonably, though naturally confined to M.C.C. members. Details from the M.C.C., 22, Norland Square, London, W.11.

BUGATTI OWNERS' CLUB

Speed Trials were held at Lewes on September 4th, and are reported elsewhere in this issue. The next event, apart from social runs, is the Welsh Trial on October 24th. Another issue of "Bugantics" was issued this month. The Night Trial will be held on November 20th.

Hon. Sec.: E. L. Giles, 2, Queen Street, Mayfair, W.1.

VINTAGE S.C.C.

The Speed Trials held at Croydon on September 5th incorporated a special Aston-Martin Owners' handicap. The next event will comprise a Rally to

"The Pheasant," near Salisbury, when adventurous runs will be undertaken to this venue in all manner of exciting motor-cars. The date is Sunday, September 19th, and anyone will be welcomed. Membership continues to increase. R. G. J. Nash has constructed a Gladiator resembling a Paris-Madrid period racing-car. Another of the truly excellent Bulletins was issued this month.

Hon. Sec.: T. W. Carson, "The Phoenix," Hartley Wintney, Hants.

M.G. C.C.

The North-Western Centre Cockshoot Trial takes place on September 19th, and the Scottish Centre Trial on September 25th. The N.E. Centre Trial is scheduled for October 3rd, and a trip to the Paris Motor Show from October 8th to 10th. The annual Show-time dinner at the Park Lane Hotel will be held on October 15th. Sec.: F. L. M. Harris, 30, Holborn, E.C.1.

FIAT "500" CLUB

An attempt is being made to band together owners of the Type 500 baby Fiat, which has had such a rapid rise to popularity since it was shown at Olympia last year. "Bira," Brackenburg, Charles Martin, Richard Seaman, and many other famous personalities use these little cars on their lawful (and sometimes unlawful?) occasions. And we are informed that they are selling well in the Midlands, by Messrs. Cooks Garages of Peterborough, who took up the agency after reading MOTOR SPORT's impressions. These little cars can be easily tuned to exceed 60 m.p.h. and to lap Brooklands at 57 m.p.h. Particulars of the club are available from: The Beechholme Motor Co., 39, Nightingale Lane, London, S.W.12.

IMPORTANT TRIALS

The trials season will soon be upon us and the following fixtures are important: North-West London M.C. fourth annual Inter-Team Trial—October 9th.

North-West London M.C. London-Gloucester Trial—December 4th.

GENERAL NOTES

Last month I had a fine fast drive alone to Donington and back in a Vauxhall "25," instructive as to the average and cruising speeds possible with quite inexpensive, mass produced machinery. And then a journey, ordinary enough in all conscience, to see a G.N., reputed to be for sale in an obscure garage at a small South coast town. The G.N. was successfully located, our spirits rising to rosy heights when we learned that all the bits that comprise a push-rod o.h. inlet twin were available for the modest sum of 60/-. This expedition led to a meeting with a great enthusiast who not only enthuses over every queer motor-car in existence, but who has flown extensively, not only in "Moths" and ancient Avros, but in exciting lightweights like the all-metal Austin "Whippet," of tender

memory. Having been involved in a very recent and particularly unpleasant dirt-track smash we learned much that is unpublishable about Doodle "Bugging." Another member at this unconventional and cheery party was a young lady who is a great enthusiast and who hopes to run a 500 c.c. Scott-Special in sprints next year.

She proudly displayed her present mount—"Abdul-the-Damned," earliest of early Austin Sevens, still in service, but very respectable for all that, with spotless paintwork, a quite spotless and polished engine and a big Mercedes-Benz sign and a plea "Do not Crush" displayed on its rear parts. Moreover, "Abdul" still performs healthily, albeit the speedometer has long since ceased to function, so that speed and engine revs. are calculated from the ammeter reading, everyone being immensely happy if the car attains its "3 amps." without exertion. Stirred by the sun, the sea, and this abundance of enthusiasm, we set forth to examine intimately the bumps at the top of the Lewes Course. The enthusiast aforementioned produced as from a hat, an incredibly hoary, water-cooled Morgan tricar, with a curious, snub-nosed bonnet, beneath which reposed in solitary grandeur a huge, half-moon shaped fuel tank. Finding the Lewes Course well chained off must have made us restless, whereupon someone changed over the Morgan's plug leads. This naughtiness led to a healthy carburettor fire on restarting, which the owner blew out with great promptitude, while we just laughed as foolishly as any Little Audrey. Actually the Morgan's owner was really concerned, assuring us that the car could easily have been burnt out and that it had cost him a whole 30/-. The privacy of Lewes was disappointing as we had had high hopes of our Morris Eight showing up well in a Sweepstake contest up the course. So there was nothing left but to go and have tea and talk motor-cars, until even we had exhausted all our more vivid reminiscences, thereupon to return to London town, with yet another motoring memoir added to our stock.

The need for something sterner resulted in a run, fast and satisfactorily fierce, to Brooklands with James Allason in his well known, short-chassis 4½-litre Bentley. In the Paddock we met Peter Robertson-Roger and his brother with their blown ex-Birkin short 4½-litre Bentley four-seater and D. Hamilton-Moore with his 1926 3-litre Bentley tourer, the latter in one piece only as a result of a night's hard labour. There followed much rapid lappery, very soul-satisfying in such exhilarating motor-cars, the only casualties consequent on the afternoon's speeding being one ruined tyre and a broken starter spring on the unblown 4½. The performance figures obtained make interesting reading and to my mind rather fling the gauntlet amongst Invicta and "30/98" enthusiasts. Thus Allason's 4½-litre, which has the compression ratio raised from 5.1 to 6 to 1 and the weight reduced from approximately 35 cwt. to 27 cwt., accelerated from 0 to 50 in 9.8 secs., 0 to 60 in 14.8 secs., 10 to 30 in top in 9.2 secs., in third in 6.4 secs., in second

## CLUB NEWS—continued

in 5.8 secs., and in bottom in 3.2 secs., did 40 to 70 m.p.h. in third in 11 secs., the standing quarter mile in 19.8 secs. and 0 to 70 in 19.4 secs. The flying lap was done at 91.38 m.p.h., the flying quarter mile at 93.75 m.p.h., and the flying half mile at 95.10 m.p.h. On the gears, 4,000 r.p.m. on first gives 40 m.p.h., 4,000 on second 64 m.p.h., 4,000 on third 80 and flat out over the half mile with the large tyres in use we held 3,300 r.p.m. These figures were taken two-up with the screen flat. In top gear this Bentley ran down to 500 r.p.m. (14 m.p.h.), it runs on road and track on the same R1 plugs, climbs the Test Hill in 10.2 secs., shows 50 lb. oil pressure at cruising speeds and did not exceed 90° to 95° water temperature during the Track tests, the radiator being rather special. As Allason is soon to be exiled for seven years in India the car is for sale, and some lucky mortal is going to get one of the distinctly better 4½-litres. The blower 4½, high-g geared, recorded 0 to 50 in 8.8 secs., 40 to 70 in second in 10.2 secs., and 10 to 80 m.p.h. in 20 secs. On second gear it did 4,000 r.p.m.=86 m.p.h. and in third 3,800=104 to 105 m.p.h. In top it appeared over geared, covering the half mile at 104.65 m.p.h. and a lap at 102.69 m.p.h., while bigger tyres only emphasised this discrepancy, the speed in third equalling that in top.

The red-label 3-litre, which has 20 lb. off the flywheel, 6 m.m. off the base of the cylinder block and twin R.A.G. carburetters, running two-up with the upper panel of the screen open, did 0 to 50 in 16.2 secs., 10 to 30 in bottom in 5.6 secs., 0 to 70 in 31 secs., and covered the flying half mile at 79.64 m.p.h. In third it would do 70 at 3,500 r.p.m. and in top it ran down to 200 to 250 r.p.m.=approximately 5 m.p.h. That afternoon at Weybridge in the August sunshine, haze shimmering from the dusty concrete, emphasised very strongly the remarkable fascination of the old Track on a non-race day, when you have real motor-cars, of potent performance, to play with. The afternoon concluded with a drive back to town with Allason, the full-throated note from the big fan-tail, that cut out abruptly as the driver made a lightning change in third or second, blending with the wind rush which, as a rise along the Fairmile lifted us from our seats, snatched the driver's hat from his head, Allason's only re-action being to don a cap and drive on faster than ever. The Bentley's acceleration was used unsparingly to negotiate gaps in the stream of utility traffic crawling up the Kingston By-Pass and that run was more than usually exciting, for the Bentley tended to snake at speed and needed a good deal of holding, while the brakes, thoroughly effective, were not particular how they slowed the car—the effect as a whole was of a first-rate, old-school motor, very fast, and safe in the hands of anyone who could *drive* (as distinct from just tickling the synchro-dogs and caressing servo-actuated stoppers). So I had every excuse for going home elated and feeling "years younger"—an expression I am reminded that I once used at the age of ten, after a ride round Surrey on the back of a certain big-twin Harley-Davidson! Next there was a journey to Lewes, sedately,

in a racing M.G.'s service van, and then another day at Brooklands, this time with an H.R.G., which again proved an excellent tonic, as did some notably quick preliminary flips up and down the undulating road to Cobham, to meet an enthusiast who had started from Seaford, almost at daybreak that morning, in a certain quite famous Austin Seven. The day passed quickly, practising starts for Lewes until tyres and clutch smelt strongly, a sports Wolseley-Hornet being soundly beaten, not unexpectedly, in the process. This H.R.G., the same car that we tested last July, seems to have lost none of its performance in spite of the very considerable hard service it has seen since, for it still held 86 to 88 along the Railway Straight and covered a lap, two-up, at 83 m.p.h.; nor did it seem to mind how brutally we punished it. Eventually we disbanded at the works at Tolworth, whither the Austin had followed us, driven by a charming Dutchman, who arrived safely in spite of a suicidal tendency to occupy the off side of British highways and, as we afterwards reflected, without that desired possession—the English driving licence.

Very obviously, the 200-Mile Race could not be missed, so we rang up Sam Green, Secretary of the E.R.A. Club, and asked for a "seat," which was at once forthcoming. We cannot suggest that such service is available to anyone, but as we had never met Mr. Green before, his prompt offer of transport does show the advantages of belonging to the E.R.A. Club, or one of their activities concerns finding transport to race-meetings for carless members. So we went to Donington in the "tonneau" of Green's 1926 3-litre Bentley, in company with the enthusiastic J. A. Driskell, who started his motoring career very early in New Zealand, and who, apart from his better known activities with Ford V8, "Dyna-charged" Ford Eight, B.N.C. and Rally cars, won one of the first races ever in New Zealand, built a Driskell-Special for trials work in this country and drove a D.F.P. in the 1923 "200." His blue helmet showed up sadly the writer's old leather one, found behind the office safe only a few weeks previously, and a spare wheel, carrying, for some unaccountable reason, a tubeless cover, did its best to cripple both of us, but we minded not at all, for were we not en route to a "big day" at Donington, cruising at seventy in a very excellent old-school Bentley? At anything over fifty that car rode like a train, prompting the thought that even if modern cars *are* safer in point of road-holding, they do not give the driver anything like the same feeling of confidence and consequently are not driven anything like as safely. We also reflected that if there is now no market for new cars of this kind, because performance and reliability can be acquired so cheaply, nevertheless the additional, not-easy-to-define qualities possessed by the old Bentleys are very definitely well worth having. It was, indeed, a Bentley day, for after the race, elated by the E.R.A. victory, another member of the E.R.A. Club gave us a most spirited run as far as Ashby, during which we passed hosts of fug-boxes and a steaming Lambda Lancia, his unblown 4½-litre—once owned

by Miss Margaret Allan—cornering beautifully and feeling so very much "all-in-one-piece" that our comparatively short lead over the 3-litre should give Green every reason for self-congratulation. In a hotel used to racing folk much time passed while motoring reminiscences were aired, in company with a noted engineer and motoring journalist, until the conversation centred around tales, which, if morally unpalatable, were technically delicious. So onto the road again, when stopping just before the Hotel-That-Is-Different closed its bar, we parked alongside yet another Bentley-owning member of the E.R.A. Club, whose Van den Plas 3-litre looks, and functions, just as if it had left the stand at the 1927 Olympia. Naturally the party had again to split up, that certain of us could appreciate the smoothness of riding and silky running of this exceptional car, whose owner also runs a Lagonda. That brought us to a coffee-shop in time to hear the last of Henry Hall. Eventually we resumed our journey, Sam Green still wearing his rather beautiful beret, and Paul Bird, in a wondrous cap, asleep in the back, Driskell and the writer asleep in front, while the remaining member of the party peered sleepily through the open screen at a very wet mist that allowed one to see little beyond the ever-rigid bar gracing the big filler-cap. Yes, race-going is great fun at any time, but in the right sort of motor-car the attraction is enhanced a hundredfold, as any other enthusiast who was out and about in a utility automobile must have reflected as his headlight beams momentarily showed up the Bentley and its crew hurriedly wending their way to London, whither we finally arrived, after running short of *essence*, at the hardly magic hour of 4 a.m. But the writer's liver (perhaps the only attribute he shares with S.C.H.D.) has almost recovered, thank you!

## THE MOTOR SHOW

Owing to  
The Motor Show,  
our October  
issue  
will be  
published on the  
9th



HE SAID: 'Six gallons of  
**NATIONAL BONUS MIXTURE**  
 please!'



HE MEANT, of course, National Benzole Mixture, but got mixed up between the Benzole and the Bonus. That is not really surprising, because it's the British Benzole that presents the motorist with a Bonus in the form of more miles per gallon. It's the British Benzole also that makes good petrol better, giving greater power and complete freedom from knock. Fill up at the 'National' pump and get your mileage Bonus!



*Benzole makes  
 good petrol  
 better*

# NATIONAL

## BENZOLE MIXTURE

**FOR MORE MILES PER GALLON**

# RECORDS AT POOLE

LARGE CROWD SEES C. E. C. MARTIN (E.R.A.) MAKE FASTEST TIME

**A**DDDED importance attached to the Poole Speed Trials this year through several well known fixtures having dropped out of the list, and further through the fact that the event had been granted an open permit. The Poole Speed Trials were first held in 1936, and an even better entry than before was received this year. Despite strong opposition, Charles Martin, with his E.R.A., secured the record for the 680-yard course with a splendid time of 22.20 secs., beating the figure of 22.82 secs. set up by G. R. Hartwell with his M.G. in 1936.

New records were also set up in every one of the racing classes, and in many of the sports and super-sports divisions as well. The sports-car record was broken by R. M. Strang, driving his Hudson Century, with a time of 25.47 secs., but the record for super-sports cars, 24.86 secs. by the Spikins-Hudson last year, remained unchallenged.

The proceeds of the event, held in Poole Park by permission of the Corporation, went to the Cornelia Hospital, Poole, and a large crowd gathered, enjoying glorious sunshine throughout the day. So strong was the sunlight that at first the ray apparatus by which the finish times were recorded needed some adjustment. The timing apparatus was that of Brigadier Loughborough, and was contained in five massive cabinets full of delicate mechanism. Each time was recorded by the chronometer on a separate sheet of cardboard, the human element being thus entirely eliminated.

In the morning the sports classes were run off, and the first record to be broken was by J. G. Clarke with his Frazer-Nash, in the 1,500 c.c. class, knocking nearly a second and a half off last year's best, and actually beating the record for unlimited sports-cars. When the big cars appeared Strang with his smart blue Hudson Century showed terrific speed, and actually cannoned off the bank at one of the bends near the finish on his first run. His second run established the sports-car record at 25.47 secs., and though J. G. Fry and H. Pelmore, with two-seater 4½-litre Bentleys, ran one another close and provided some excitement on the final curves, neither could approach Strang's time.

Supercharged P.B.-type M.G.s dominated the smaller classes of the super-sports cars, till M. W. B. May made a fine effort with his veteran Double-Twelve 2-litre Alvis, actually beating N. Lewis's Monza-type supercharged Alfa-Romeo. Best time counted in all classes entered, and thus Strang did not have another chance to attack the super-sports record. His "sports" time was narrowly beaten by K. W. Bear's "four-nine" Bugatti.

A great battle was expected among the racing-cars for the course record. It was unfortunate that H. L. Hadley's works Austin was a non-starter, but A. N. L. Maclachlan upheld the Austin reputation nobly. A startling performance was that of D. H. C. Fry's "Freikaiserwagen." This specially built sprint car has the engine amidships in the frame, behind the driver, with a streamlined petrol tank mounted above it, to give a gravity feed.

It has done well in many speed events this year, and at Poole, though its twin-cylinder Blackburne engine is only 1,100 c.c., actually made best unsupercharged time, beating G. B. C. Sumner's 10½-litre Delage, which, as usual, was really too big for the course. Sumner made several fine runs in spite of this.

Last year's record holder, G. R. Hartwell, with the 1,287 c.c. M.G. Special once owned by E. R. Hall, seemed likely to fight it out with Charles Martin after the first runs. Hartwell set up 23.12 secs., and Martin 23.37 secs. Martin, however, who had only just arrived in time by yacht from Cowes, had never driven up the course before, and was expected to go faster on his second attempt.

He certainly did. Holding the green E.R.A. through the tricky curves at the finish quite steadily but at tremendous speed, he set up a new record of 22.20 secs. Hartwell was troubled by violent

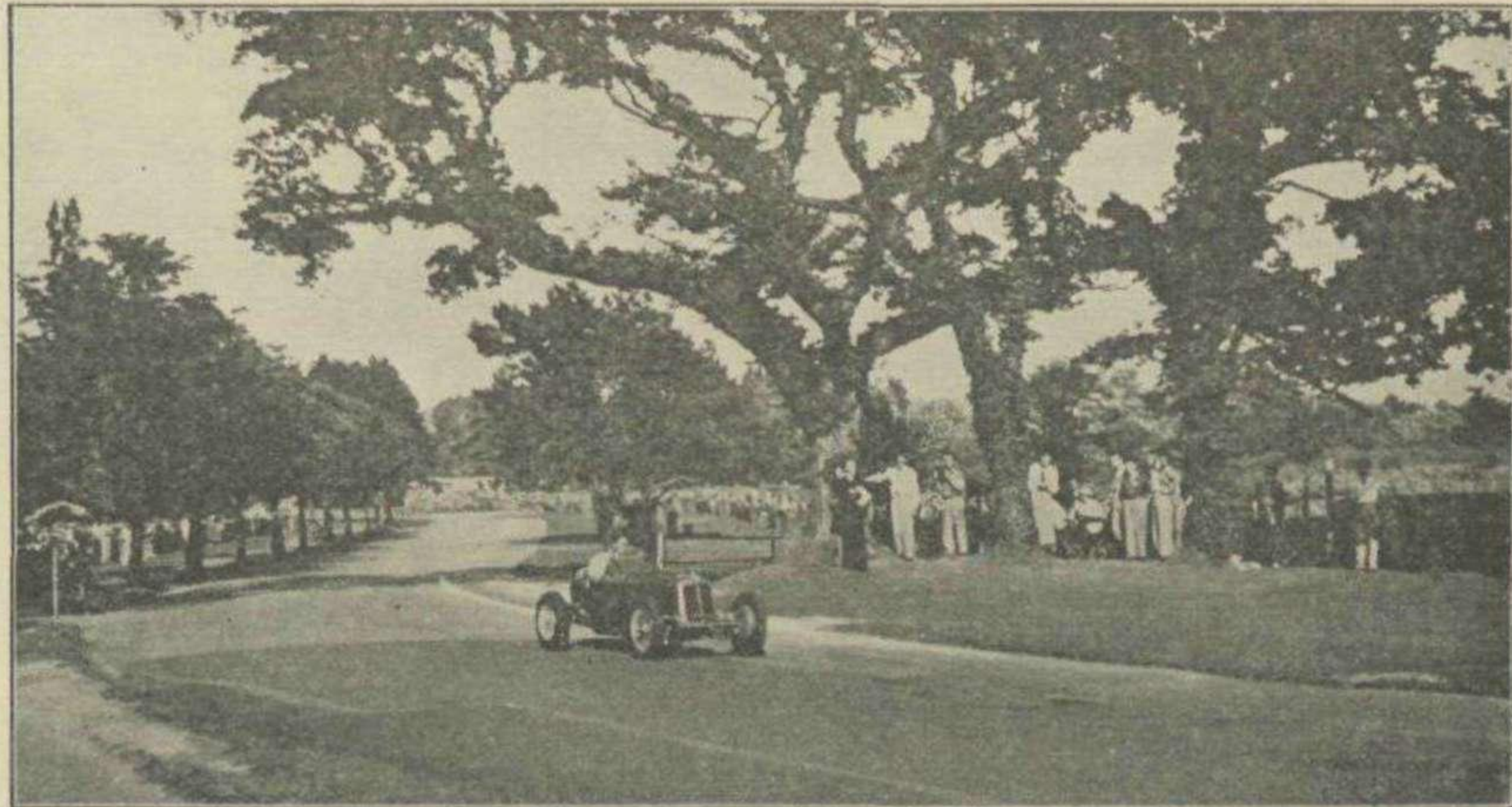
and Miss Dorothy Turner's M.G. was actually faster than Mrs. Darbishire's Bugatti, for the women driver's prize.

## RESULTS

**Poole Trophy** (fastest time): C. E. C. Martin (1,496 c.c. E.R.A., S.).  
**Sherriff's Cup** (second fastest): R. J. W. Appleton (1,089 c.c. Appleton Special, S.).  
**Hambro Cup** (fastest unsupercharged): D. H. C. Fry (1,097 c.c. Freikaiserwagen).  
**Elliott Cup** (fastest woman driver): Mrs. T. Darbishire (1,900 c.c. Bugatti, S.).  
**Bristowe Cup** (fastest sports): R. M. Strang (4,168 c.c. Hudson Century).  
**Martin Cup** (fastest super-sports): K. W. Bear (4,900 c.c. Bugatti, S.).  
**Chamber of Trade Cup** (fastest West Hants Member): G. R. Hartwell (1,287 c.c. M.G. Special, S.).

## Racing-Cars

**1,100 c.c. U/s.**: 1, D. H. C. Fry (1,097 c.c. Freikaiserwagen), 23.53s.  
**1,500 c.c. U/s, 750 c.c. S.**: 1, A. N. L. Maclachlan (747 c.c. Austin, S.), 24.48s.; 2, Miss D. Turner (747 M.G., S.), 25.88s.; 3, E. G. Brettell (747 c.c. Austin, S.), 25.97s.  
**2,000 c.c. U/s., 1,100 c.c. S.**: 1, R. J. W. Appleton (1,089 c.c. Appleton Special, S.), 22.85s.; 2, A. N. L.



C. E. C. Martin (E.R.A.) on his record breaking run.

misfiring on his next run, and a new contender sprang into the limelight, R. J. W. Appleton with his Special. The Appleton Special not only made second fastest time, but captured the "noise record," previously held by the Sumner-J.A.P. The Sumner-J.A.P. was quieter this year owing to slightly longer exhaust pipes.

A. Baron's 3.3-litre Bugatti was much admired, and seemed very fast on the course, but his 23.41 secs. was just beaten by Geoffrey Taylor's Alta, which took 23.20 secs.

Third runs were allowed for the racing-cars, and also for the twelve best sports-cars, as the organisation had been so good that there was time in hand. These runs did not count for class placings or awards, but the times would stand if any new records were established. This was not the case, as Martin was slightly slower than before, and Hartwell's car again burst into misfiring when it was going well. Geoffrey Taylor, however, with the Alta, managed to join those who had broken last year's record with a final run in 22.73 secs. In these final runs Pelmore at last got the better of Fry, in the duel between the two Bentleys,

Maclachlan (747 c.c. Austin, S.), 24.48s.; 3, Miss D. Turner (747 c.c. M.G., S.), 25.88s.

**4,000 c.c. U/s., 1,500 c.c. S.**: 1, C. E. C. Martin (1,496 c.c. E.R.A. S.), 22.20s.; 2, R. J. W. Appleton (1,089 c.c. Appleton Special, S.), 22.85s.; 3, G. R. Hartwell (1,287 c.c. M.G., S.), 23.12s.

**Unlimited U/s., 3,000 c.c. S.**: As previous class.  
**Unlimited U/s. or S.**: 1, R. J. W. Appleton (1,089 c.c. Appleton Special, S.), 22.85s.; 2, G. R. Hartwell (1,287 c.c. M.G., S.), 23.12s.; 3, G. Taylor (1,960 c.c. Alta, S.), 23.20s.

## Super-Sports Cars

**850 c.c.**: 1, H. Dunsterville (847 c.c. M.G., S.), 31.68s.

**1,100 c.c.**: 1, E. C. Haesendonck (939 c.c. M.G., S.), 26.89s.; 2, E. J. Haesendonck (939 c.c. M.G., S.), 27.08s.; 3, H. W. Burt (939 c.c. M.G., S.), 27.40s.

**1,500 c.c.**: As previous class.  
**3,000 c.c.**: 1, M. W. B. May (1,991 c.c. Alvis), 26.92 s.; 2, N. Lewis (2,366 c.c. Alfa-Romeo, S.), 27.36s.; 3, H. W. Burt (939 c.c. M.G., S.), 27.40s.

**Over 3,000 c.c.**: 1, K. W. Bear (4,900 c.c. Bugatti, S.), 25.44s.; 2, R. M. Strang (4,168 c.c. Hudson Century), 25.47s.; 3, J. G. Fry (4,400 c.c. Bentley), 26.03s.

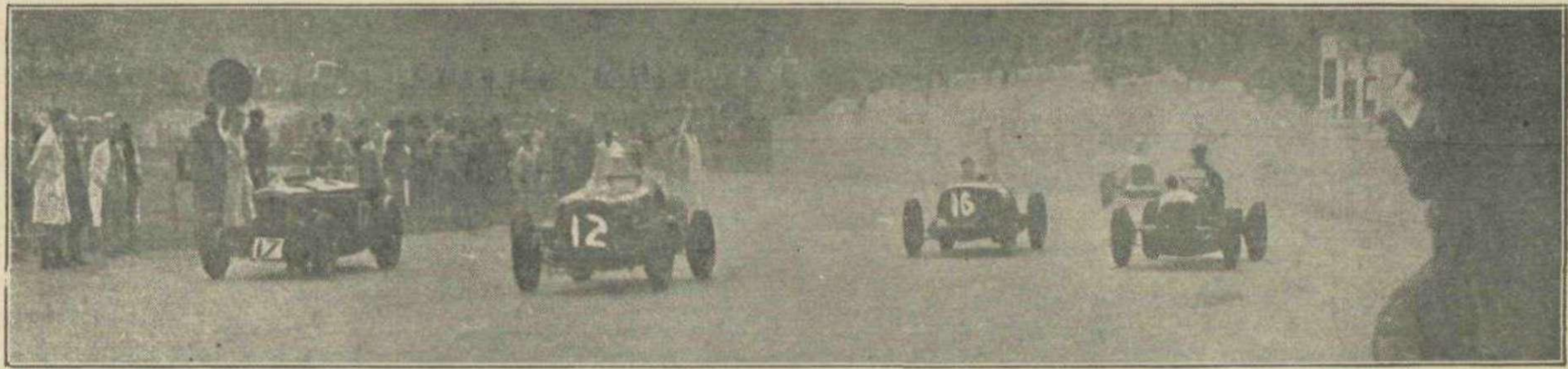
## Sports-Cars

**1,100 c.c.**: 1, R. A. Lambowin (1,087 c.c. M.G.), 32.01s.

**1,500 c.c.**: 1, J. G. Clarke (1,496 c.c. Frazer-Nash), 25.98s.; 2, W. P. Uglow (1,497 c.c. H.R.G.), 27.66s.; 3, C. Mann (1,496 c.c. Aston-Martin), 28.31s.

**3,000 c.c.**: 1, J. G. Clarke (1,496 c.c. Frazer-Nash), 25.98s.; 2, L. G. Johnson (1,911 c.c. Frazer-Nash-B.M.W.), 27.07s.; 3, C. Mann (1,496 c.c. Aston-Martin), 28.31s.

**Over 3,000 c.c.**: 1, R. M. Strang (4,168 c.c. Hudson Century), 25.47s.; 2, J. G. Fry (4,400 c.c. Bentley), 26.03s.; 3, H. Pelmore (4,500 c.c. Bentley), 26.26s.



The start of the Crystal Palace Cup.

## HADLEY WINS THE CRYSTAL PALACE CUP WITH LORD AUSTIN'S AUSTIN

### SMALL ATTENDANCE

**V**ERY dismal weather after a fortnight of summer resulted in a poor attendance at the big composite meeting at the Crystal Palace road-circuit on August 14th. Cyclists, solo motor-cyclists, sidecar-riders and car-drivers were all featured for the Great British Public, who should have turned up in huge masses and who probably would have done so but for the inept disappearance of King Sol.

In spite of the mixed grill comprising the afternoon programme, the "circus" atmosphere was dispersed by the quality of the entries and the fact that four separate races were to be contested. It is interesting that the cyclists were offered first prize valued at £10 for 10 miles racing, the solo motor-cyclists a trophy and £50 for twenty miles racing, the combination riders a vase and £7 10s. for ten miles racing, and the car drivers the Crystal Palace Cup and £100 for their thirty mile drive. The starting money, paid on completion of one lap, was: nil, £2 10/- and £5, respectively, and the respective number of entries 53, 33, 11 and 18. Thus we get some sort of a perspective, not unflattering to the car drivers.

The cyclists went off first in a long, closely-packed stream. At the first corner one rider fell off, drawing the comment from someone in the Stand that this conclusively proved that cyclists are a menace to road-users! Charles Follett gave a splendid, if unintentional demonstration of how cycle-crocodiles can baulk cars, even on a wide road, and he got past and back to the start by dint of handling his Alvis with more skill than we can hope to find displayed by John Citizen on the Brighton Road on a summer Sunday evening.

The solo motor-cycle race was devoid of less hair-raising "incident" than was expected in view of the soaked course, and the winner, M. Cann (348 c.c. Norton), averaged 46.14 m.p.h., compared with 23.8 m.p.h. of the victorious bicyclist. Then A. H. Horton (596 c.c. Norton) won his third combination race over this course, leading throughout to average 46.05 m.p.h. So to the Crystal Palace Cup race, which seemed to have far more support from the knowledgeable onlookers than the other races. The entries were up to R.R.C. standards, for "Bira" had got the 3-litre Maserati functioning

again after the International Trophy race blow-up and had tried it at Brooklands, Hadley and Mrs. K. Petre drove Lord Austin's little Austins, o.h.v. and s.v. respectively. Hanson and Aitken drove 1½-litre Maseratis and Connell represented E.R.A. with his 1½-litre car with the new twin Arnott blower layout, which has necessitated pushing the radiator and its cowl well forward. Unfortunately, the other crack runners were non-starters, A. C. Dobson (E.R.A.) and Austin Dobson (1½-litre Maserati) on account of the death of their father, A. P. Rolt (Triumph) because his motor was not ready, P. N. Whitehead because his E.R.A. had had continued piston trouble, which has affected other cars of this marque in the past. Mrs. Fisher's M.G. had broken a crankshaft and Wilson's M.G. was too sick to run. This time a new handicap was in force, giving the 1,100 c.c. cars 75 secs. start and 1,101 to 2,500 c.c. cars 15 secs. start, leaving "Bira" in solitary start on scratch. It was not raining at the time of the start, but another heavy downpour commenced, just before the finish. Hadley (Austin) led away at the fall of the flag, all cars in a tight bunch, Mrs. Petre (Austin), R. Parnell (M.G.) and F. J. Monkhouse (Amilcar Six) following, with nothing much to choose between them. Ian Connell's E.R.A. got a slight advantage when the next pack was released, with Hanson (Maserati), J. O. C. Samuel's sports Frazer-Nash-Six, now blown once more, and Percy Maclure's unblown 1½-litre Riley behind. Finally, "Bira" got away after a seemingly impossible wait, the Maserati's wheels spinning wildly. All cars were on the same lap, with fifteen laps to run. After one lap Hadley led, followed by Parnell, Mrs. Petre, Brooke (M.G.-Riley), J. N. C. Watson (R-type M.G.), Monkhouse, Connell, "Bira," Maclure, Aitken, Samuel, and Hanson, the last-named having turned round at Stadium Dip. Mrs. Petre passed Parnell, who later repassed her, and "Bira" passed Connell by the end of lap two. Hadley was driving splendidly, the Austin's engine revving beautifully in accelerating from the corners, and Mrs. Petre's car came round with shrill blower whine. From "Bira's" pit appeared Siamese signals, and by lap nine the Maserati had come right up to second place, gaining 5 secs.

a lap on the leading Austin, so that a member of the Brum. equipe stood before the pits waving Hadley to greater speeds. Poor Connell had retired with a wrecked supercharger which made the world's record "expensive noise." It appears that the Arnott suction-pressure oil feed was put out of action because the tank containing lubricant for one of the superchargers burst and let out all its oil, so that the blower promptly seized, without doing a lot of damage. The official reason for retirement was a split fuel tank! But then, entrants have every right to give any reason, or no reason at all, for retiring, and "official" merely implies the information handed out.

At nine laps Hadley led by 29 secs. Samuel's Nash, running with rear wings in place, sounded unwell, the Amilcar had plug trouble and Maclure's Riley was slower than usual.

On the last lap great excitement . . . ! "Bira," now in striking distance of the Austin, got into a slide and turned completely round at Ramp Bend. He restarted, to finish 44 secs. behind Hadley, after closing to 24 secs. on lap 10, 19 secs. on lap 11, 12 secs. on lap 12, and 1 second only on lap 13. Hadley had driven magnificently, chewing gum continually and slightly bothered by locking brakes early on, on Terrace Straight. Parnell held third position but in coming into Stadium Dip on the very last lap the M.G. slid and turned slowly round, stopping at right angles to the course, tail against the outside of the track. Mrs. Petre and Maclure got by, but Parnell kept his engine running and shot off to catch them and finish third. The Stadium Curve is a very slow bend, and has to be taken close in. Here the bare-headed Maclure was right on Mrs. Petre's tail, and as they entered the straight the Riley swung out to pass, but just missed fourth place. Hadley averaged 49.83 m.p.h. It had been an excellent race, "Bira's" slide a repetition of the ill-luck that befell A. C. Dobson at the previous meeting, and the wet state of the course had not been productive of the skidding many had expected.

Rain now fell in torrents to mar the prize giving, and the small crowd hastily dispersed, for there is little covered area from which a good view of the racing can

## THE CRYSTAL PALACE CUP—continued

be obtained, while the unfortunate pit-staffs are completely exposed. The stickiness of the enclosures rivalled that of Shelsley and Donington.

Thus we have had three car meetings at the London road-circuit. Harry Edwards is very keen to make a success of it and we notice that a prize of £5 was offered in the programme for suggestions for future races. Although not eligible for this prize we hasten to suggest a continuation of the present short races. Long-distance events would possibly prove difficult to follow on this short, slow circuit, the London-living crowds who come by bus and bicycle to spectate at the Palace probably wouldn't enjoy too long an event, and better pits would be needed. So we advise short races, say a series of scratch heats for cars of different engine capacities and a short final run on handicap, with a short sports-car race by way of a complete change.

Members of the M.C.C. or J.C.C. would no doubt gladly contribute a field for the latter and the public rejoice at seeing at speed cars looking like those they can hire purchase.

The success of these short races doubtless depends on the continued support of famous drivers with really fast cars, and that, in turn, will depend on the prize-money available next season and the dates allotted to the Road-Racing Club in the 1938 Calendar. We also feel that the future of the R.R.C. would be assisted by more frequent opening of the Crystal Palace course for testing and practice, to bring it more in line with Brooklands and Donington, and by granting free admission to race meetings to members of the club. Some idea of how the dampness on August 14th reduced speeds can be gained from "Bira's" best lap, 53.41 m.p.h. with the 3-litre Maserati, against his lap record, established with his 1½-

litre E.R.A., of 56.47 m.p.h. Only "Bira" averaged a higher speed than Hadley—51.04 m.p.h.

## RESULTS

1. H. L. Hadley (744 c.c. o.h.v. Austin), 36m. 7.5s. (49.83 m.p.h.).
2. "B. Bira" (2.9-litre Maserati), 36m. 30.8s. (51.04 m.p.h.).
3. R. Parnell (1,087 c.c. M.G. Magnette) 37m. 22s. (48.17 m.p.h.).
4. P. Maclure (1,486 c.c. Riley U/s), 37m. 22.6s. (49.48 m.p.h.).
5. Mrs. K. Petre (747 c.c. s.v. Austin) 37m. 32s. (47.96 m.p.h.).

Distance: 15 laps (30 miles).

Handicapping: 750 c.c. and 1,100 c.c., 75s. start. 1,500 c.c. and 2½-litres, 15s. start. Over 2½-litres, scratch.

First Prize: Crystal Palace Cup, presented by Sir Samuel Hill-Wood and £100.

## Flagged In

6, Hon. P. Aitken (1,500 c.c. Maserati); 7, R. Hanson (1,500 c.c. Maserati); 8, H. L. Brooke (1,100 c.c. M.G.-Riley); 9, J. N. C. Watson (R-type M.G. Midget); 10, J. O. C. Samuel (1,657 c.c. Frazer-Nash).

## Retired

I. F. Connell (E.R.A.) supercharger; F. J. Monkhouse (Amilcar) plugs.

## IRELAND DIGS OUT ITS VETERANS

Considerable interest attaches to the recent Veteran Car Competition held in Ireland by the Ulster Automobile Club at the suggestion of Mr. W. F. Ayrtton. In this country enthusiasm runs high for the veterans, but the time has been reached when the R.A.C. Brighton Run fails to attract many fresh entries, because most of the worth-while old cars that are easy to find have been unearthed and those for sale are expected to command rather prohibitive prices. Consequently it is not unlikely that enterprising members of the Veteran C.C. and Vintage S.C.C. will seek new bargains amongst the veterans unearthed in Ireland—while Ireland itself proposes to work up interest in these historic vehicles to a pitch on an equality with the enthusiasm that prevails in this sphere over here. The cars which turned out for the Irish run comprised: a 1907 four-cylinder Belsize, a 1903 M.M.C., a 1911 Renault, a 1902 bee-hive radiator, chain-driven Wolseley tonneau, a 1900 Clement single-cylinder, wheel-steered motor-carriage, a 1905 tandem-seat Riley, a 1906 Rover, a 1911 Darracq, two 1908 Chambers, a 1908 Star, a 1909

Mars, and another Renault. A Stanley steamer failed to start. This is an excellent gathering for a first endeavour and opinion inclines to the existence of many more veterans in Ireland—though Dick Nash has an equally good collection in one shed down at Brooklands.

So far as the actual run was concerned, a time-check system was in force, as on the last Brighton run, but with five controls and a secret check. Four different starting points were used, providing varying distances to the finish at Larne, the later types covering 43½ miles at 20 m.p.h. average, and the others shorter distances at 18, 15, and 10 m.p.h. respectively. The event was followed by a prize-distribution and dance, at which the Chairman of the Larne Council extended to the promoters a hearty invitation to use Larne as a venue for future events. Unfortunately towing was permitted and one of the prize-winners came in on a tow-rope. R. E. Thompson's 1907 Belsize won the road-section, averaging 18 m.p.h. as required for the 37½ mile route. W. M. D. Montgomery's 1903 M.M.C. was second and

A. R. Scott's 1911 Renault third. F. M. M'Cullagh and J. F. R. Martin experienced a cracked water jacket on their 1906 Rover. This they coped with by frequent refills and chewing gum, but the car boiled on all hills and after changing the plug and altering the ignition timing a puncture forced them to retire. They gained the prize for the most meritorious performance. J. W. Haughton made several stops to oil his Renault's tappets. Clever Robinson's 1902 Wolseley had plug trouble and was towed four miles to the finish. Only the Rover retired, and the 1900 Clement won the Appearance Prize, the '02 Wolseley being second. Many of the competitors dressed up very appropriately for the occasion. The R.A.C. frowns on this sort of thing, but we feel that either these old cars are such valuable museum-pieces that they should be seriously stored away for people to examine with reverence, or else they represent interesting and historic play-things, to be seriously used on runs of this sort, when no harm can come from a little light-hearted dressing-up for the part.

## INSTRUCTION BOOKS FOR SECONDHAND CARS

MOTOR SPORT mailbag usually contains one or two letters from motoring readers who have bought used cars and want to know where they can get the necessary official Instruction Books. In a few instances it is possible to refer them to the car manufacturers but unfortunately in the majority of cases the makers concerned do not continue issuing Instruction Books for earlier models, and are therefore unable to be of any assistance. The motorist completely without authoritative literature is confronted with the unpleasant position of not knowing what to do, and with the still more unpleasant

possibility of some serious damage being caused to the mechanism of his car through not knowing the attention required.

With considerable foresight a well known oil company has now stepped into this breach, and endeavoured to remedy the position, if not completely at any rate as far as the very important question of lubrication is concerned. Acting in collaboration with a number of car manufacturers, they have established a "Motorists' Library," consisting of a series of lubrication diagrams relating to most popular cars produced during the

last six years. The diagrams give full details of the various lubrication points on each chassis and the correct lubricants to be used. The library also includes books dealing with car lubrication and the lubrication of special components, such as the Wilson Self-Changing gear. These publications, which are free to motorists, devote attention to general running hints, and the copious illustrations form particularly useful guides. The concern responsible for this scheme is the Wakefield Castrol Company, Cheapside, London, and to them all applications for literature should be made.

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## MOTOR YACHTSMEN AHOY!

### SOME THINGS TO REMEMBER

By "PROP SHAFT"

**J**UDGING from the remarks one sometimes hears, particularly from new enthusiasts, it might be supposed that motor-boating was a comparatively new form of sport. Actually the first motor-boats made their appearance in the closing years of the last century and the development of the sport has been more or less collateral with that of the automobile. The Marine Motoring Association, which in its early days was the governing body in all matters appertaining to motor-boat racing, was formed as long ago as 1903; that body, which fulfilled the same functions for motor-boat enthusiasts as the Yacht Racing Association does for the "stick and string" brigade, drew up the rules and was responsible for the general code which still applies.

Immediately after the war there was a great development in the sport; thousands of young men who had tasted the joys of life afloat, preferring the hazards of the mine and the submarine to those of the trenches, looked around for some means of keeping up their association with the sea, and the few motor-boat clubs then in existence experienced a large and welcome addition to their memberships. The Royal Motor Yacht Club at Hythe and the British Motor Boat Club whose head quarters were in London did a great deal to foster the sport in the early days, while the Sussex Motor Boat Club at Brighton, and the Nore Yacht Club at Southend-on-Sea were other centres where motor-boat racing thrived and still thrives. The British Motor Boat Club was amalgamated with The Royal Motor Yacht Club a few years ago and the latter is now regarded more or less officially as the head quarters of the sport.

To those of us who do not aspire to go racing but are content with a speed of eight to ten knots, it is difficult to conceive such speed as that achieved by Gar Wood in America a year or two ago, or the 129.5 miles per hour which Sir Malcolm Campbell achieved in his attempt in regaining the water speed record for this country.

One of course recognises that such speeds have no commercial significance except inasmuch as they reflect the development of the marine internal combustion engine, but just as the pioneers of motor-car racing have played a great part in the development of the automobile so have the motor-boat builders and engine manufacturers profited by the achievements of the late Sir Henry Segrave, Sir Malcolm Campbell and others.

In my last article I gave some comparisons between the two-stroke and the four-stroke engines and, believing that many of those who read these notes are

new-comers to the sport, it may be of interest to develop the idea of technical talks. In considering the general principles of the internal combustion engine it may be pointed out that while the word "motor" is nowadays used almost universally to describe a petrol or paraffin engine, actually the term has a much wider meaning and in fact implies any piece of machinery capable of converting electrical, or chemical energy, into mechanical energy. In this sense it may be argued that a steam engine is just as much a "motor" as a petrol engine while of course to the electrical engineer the term "motor" implies something entirely different from a petrol engine.

This however is by the way and to those in the circles to which this journal appeals the word "motor" has a generally accepted meaning, i.e., the internal combustion engine, and as such it is necessary that all who wish to get the best out of their motor-boats should thoroughly understand and appreciate the principles which govern its working and those essentials which make for satisfactory running.

The practical management of a motor-boat falls under two heads—seamanship and the upkeep of the machinery installation. On either of these, volumes might be written, but practical experience is really the only guide to the actual handling of a boat. No man can become a good helmsman or navigator by reading books and in any case that aspect of the subject does not come within the scope of these notes.

There are hundreds, indeed thousands, of motorists who drive and have driven cars for years but who have absolutely no mechanical knowledge other than that of how to manipulate the gears, etc. When, as invariably happens sooner or later, they have a break-down the ubiquitous and ever obliging A.A. Scout may come to the rescue or the services of a garage are requisitioned. The man who takes his motor-boat out dare not proceed in this haphazard manner. There are no A.A. Scouts on the rivers and remote backwaters, neither are garages encountered on the open sea. For these reasons no one should dream of taking a motor-boat out until he has satisfied himself that his engine is in proper working order and that he possesses sufficient mechanical knowledge to maintain it in that condition.

The first and most important question is lubrication; this applies equally to out-board and in-board engines. Neglect of other matters may or may not lead to trouble, but if you fail to keep the engine properly lubricated it will inevitably land you in trouble and possible disaster. Neglect of this elementary precaution means excessive wear of the bearings and

MOTOR YACHTSMEN AHOY!—continued

eventually expensive replacements. An even more probable result is that one of the bearings will seize up or some important part fracture, bringing your boat to an immediate stop, and, should you be on the open sea, leaving you and your craft to the mercy of the waves.

In the case of out-board motors special care and attention is necessary; in this case the mixture of oil and petrol should be prepared in a separate can according to the formula recommended by the manufacturers of the particular engine in use. Never, under any circumstances, pour clear petrol or oil into the motor tank. Important as it is to see to the lubrication before taking your boat out, a little attention after you return from your run will lengthen the life of your engine and make for more satisfactory results. The best out-board engines are just about as corrosive-proof as the resources of metallurgical science can make them but after a day in salt water it will be found advisable to wash the exterior of the engine, afterwards, rotating the fly-wheel while the lower part is immersed in a bucket of fresh water. If it is possible to run the motor in a tank of fresh water this will be even more effective as that will clear out the salt from the interior parts. The motor should then be carefully dried and wiped over with an oily rag.

To return to the general principle of lubrication, the first step should be to go over the whole of the machinery equipment with an oil can and grease can; make sure that the engine, gear-box and shaft have an adequate

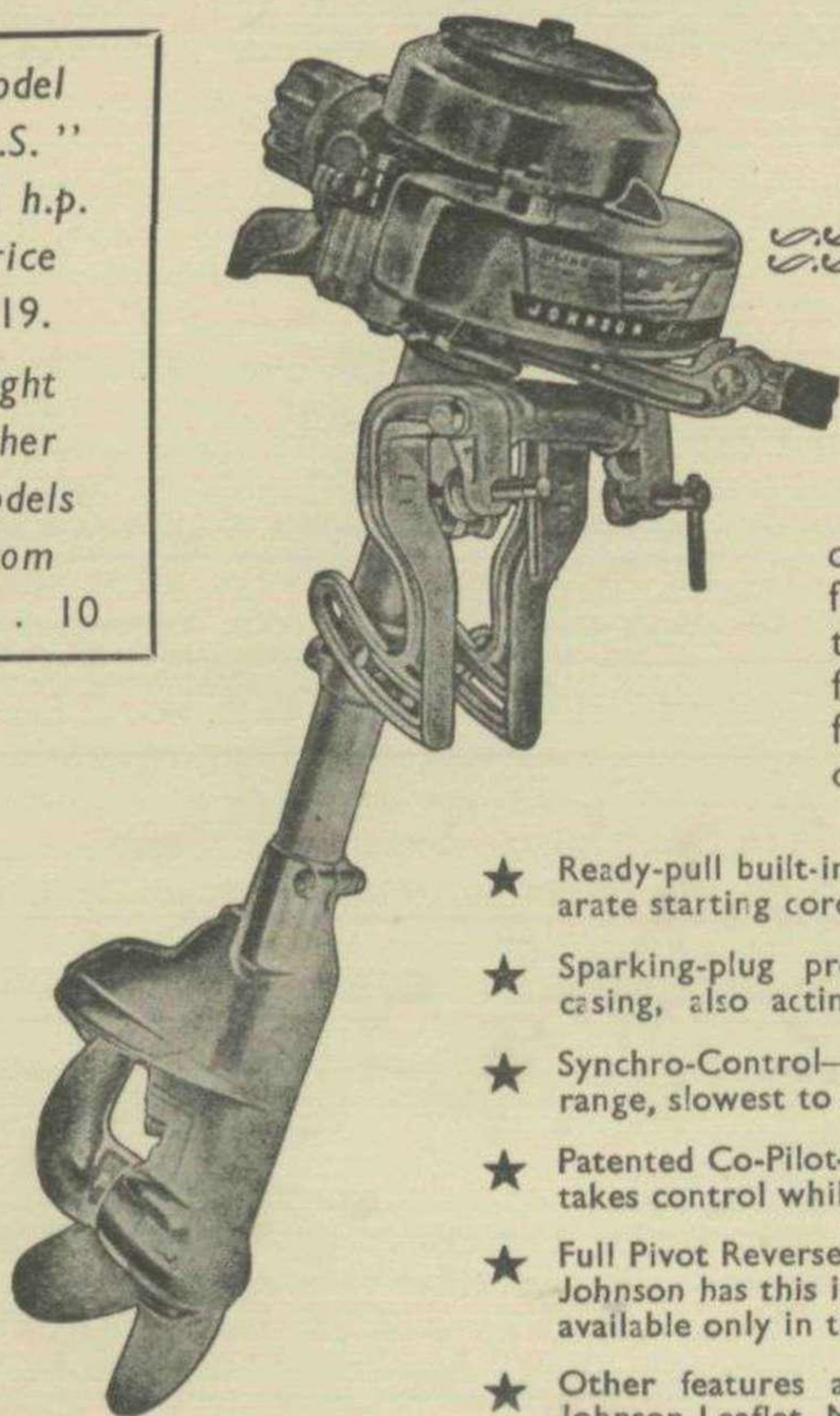
supply of oil. On the question of oil it is poor economy to use a cheap oil as such is apt to lose its lubricating value and while the gauge may indicate the right level, the value as a lubricant may have evaporated. In this case the cost of renewing a broken connecting rod or a fractured crank-case will prove a heavy penalty to pay for the sake of saving a possible shilling or so on a gallon of oil.

Again, do not hesitate to wash all the old oil out of the engine with paraffin occasionally and fill up with a fresh supply. This may seem elementary advice but it is surprising how many even of the keenest motor-yachtsmen neglect this simple precaution.

All being well with the lubrication the next step is to start up the engine. Having done so give a look immediately to make sure that the water circulation system is properly functioning. Pumps have a nasty habit of failing when least expected and it is as well to make a habit of glancing at the water outlet immediately the engine is started up. One owner of the writer's acquaintance used to detail one of his crew to keep an eye on this and when racing or cruising he used, periodically, to call out "How's the water?" This became quite a joke with his fellow club-men but it will be found something far from a joke if the intake well becomes choked with weeds or mud.

For this reason it is advisable not to keep the engine running when the boat is at rest in very shallow water as there is a danger of the cylinder jackets becoming choked up with mud.

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# THE TENTH INTERNATIONAL 200-MILE RACE OF THE J.C.C.

A GREAT E.R.A. VICTORY—ARTHUR DOBSON WINS AT 69.67 M.P.H.

Once again the Junior Car Club's great classic has been won by a 1½-litre car, in spite of it being run for the second time as a scratch contest open to all sizes or cars. Last year, when the "200" was revived at Donington under this new ruling, Richard Seaman ran away from the big fellows to win easily in his 1½-litre Delage at 69.28 m.p.h. This year Arthur Dobson brought the works 1½-litre E.R.A. in first 39.6 secs. ahead of "Bira's" 3-litre Maserati.

\* \* \*

In practice Hans Ruesch's lap record with the 3.8-litre Alfa-Romeo was broken by Dobson (E.R.A.) at 73.76 m.p.h., and then by Raymond Mays (E.R.A.) at 74.31 m.p.h., which is an improvement of .82 m.p.h. and a very fine achievement. Percy Maclure got the unblown 2½-litre Riley Six round at 71.21 m.p.h., "Bira" only managed 72.33 m.p.h. and Earl Howe, driving for the first time since his crash at Brooklands last May, lapped in his smartly-finished E.R.A. at 2 mins. 7.6 secs., or .6 of a second slower than "Bira."

On August 28th an overcast sky descended to clear as the big crowd of spectators forgathered at Donington and the sun shone brightly for the start and during most of the afternoon. The seventeen starters were lined up before the pits in an atmosphere as expectant as ever—Mays (E.R.A.), Dobson (E.R.A.), "Bira" (Maserati) and Howe (E.R.A.) in the front row, Maclure (Riley), Whitehead (E.R.A.), Austin Dobson (1½-litre Maserati) in row two, Reggie Tongue (E.R.A.), Wakefield (Maserati), Powys-Lybbe (Alfa-Romeo), K. D. Evans (Alfa-Romeo) in row three, Parnell

Maserati with lubrication trouble and Brooke's M.G.-Riley. Powys-Lybbe drove his own 2.3, normally-suspended Alfa-Romeo and not Ashby's 3.2-litre car.

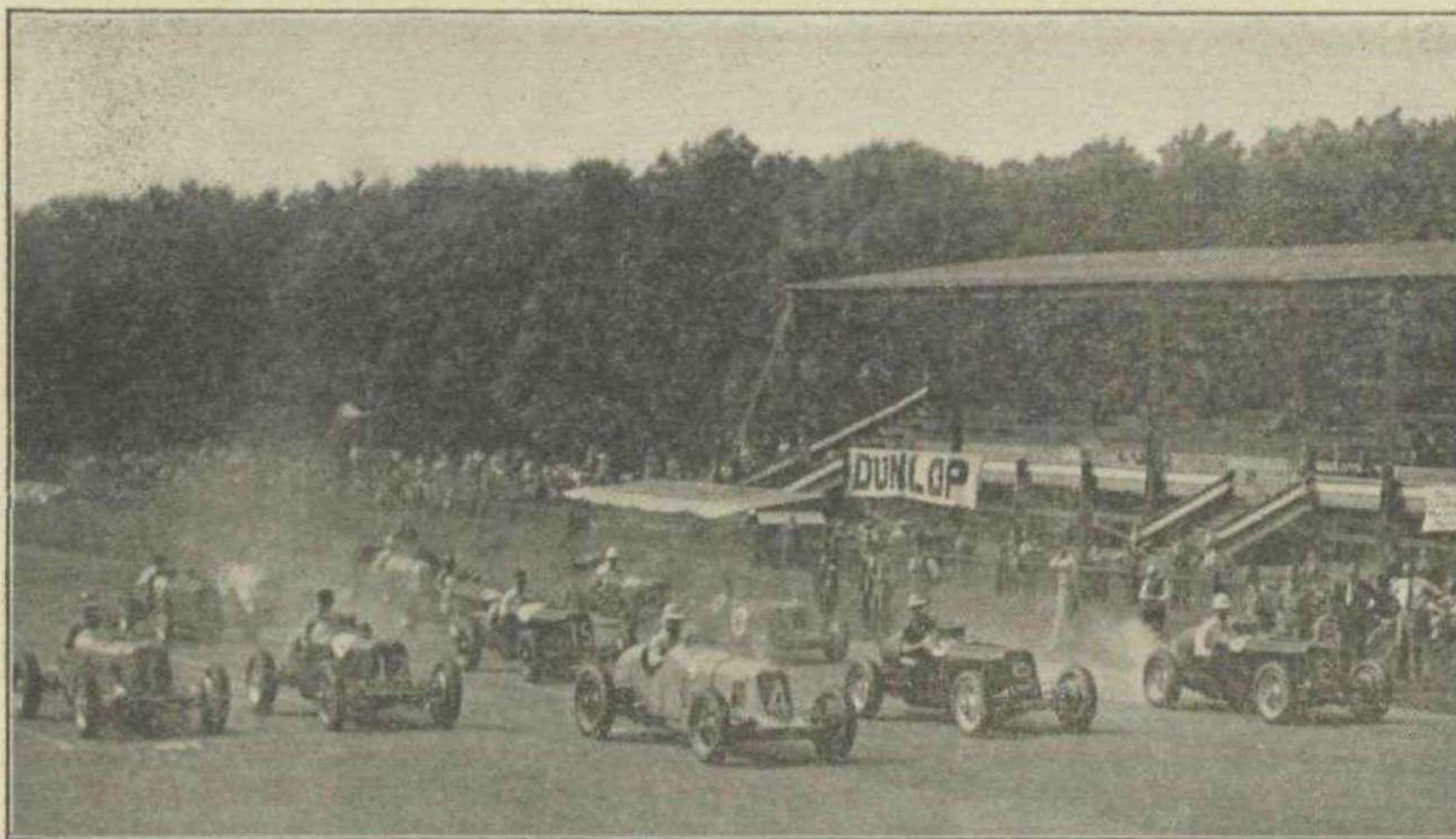
the car was pushed off the jack and it was withdrawn there and then with gearbox trouble—one E.R.A. out before a lap was over. At the end of lap one the or l:



The drivers in a semi-circle receiving their instructions from Secretary Morgan before the start. A. C. Dobson, the winner, is second from the right.

As zero hour approached Aitken's Maserati was being frantically push-started and it just got going as Charles Follett dropped the flag. In the exciting initial rush "Bira" had a slight advantage, Mays on his tail and Whitehead

was:—"Bira" (Maserati), Mays (E.R.A.), Whitehead (E.R.A.), Austin Dobson (Maserati), A. C. Dobson (E.R.A.), Wakefield (Maserati), Howe (E.R.A.), Brackenbury (E.R.A.), Parnell (M.G.), Tongue (E.R.A.), Maclure (Riley), Powys-Lybbe (2.3 Alfa-Romeo), Evans (2.9 Alfa-Romeo), Connell (E.R.A.), Hanson (Maserati), and Rolt (Triumph). By the end of the next lap smoke was showing from Connell's cockpit. "Bira" had averaged 70.66 m.p.h. for the first lap, leading Mays by 3 secs. Brackenbury spun round at Red Gate Corner and lost his position on lap 4 and after ten laps "Bira" led at 70.44 m.p.h. by 1½ secs., with Mays second, A. C. Dobson third, Whitehead fourth and Howe fifth. On lap 12 Kenneth Evans came slowly in with the monoposto Alfa's engine dead, parking on the grass before the pits and retiring. The gear casing behind the gearbox (see "Rumblings" last month) had had to be welded in practice and had given way when Evans was running in seventh place. Wakefield ran close to his pits on one lap, shouting a message without stopping, and Maclure was driving with his goggles on his forehead. Tongue came several times to his pit, and he retired the E.R.A. on lap 12 with engine maladies, after work on the front of the unit.



The start of the 200-Mile Race. "Bira" in the lead with R. Mays (E.R.A.) on the extreme right and Earl Howe (E.R.A.) on the left.

(M.G.), Brackenbury (Dobson's white E.R.A.), Hanson (Maserati), Rolt (Dolomite 2.4-litre Triumph) in row four and Connell (Arnott-blown E.R.A.) alone, behind this pack. The non-starters were Hans Ruesch's 3.8-litre Alfa-Romeo which cracked its cylinder-block at Berne, Chiappini's Maserati, Peter Aitken's small

momentarily third. Connell was last and poor Charles Martin, who had had difficulty in getting the E.R.A.'s engine running, stalled. Four helpers pushed desperately and eventually the car was jacked up, the rear tyres almost alight as the spinning wheels flirted with the road, but the engine again stalled as

On lap 13, amid vast excitement—imagine it!—Mays got past "Bira," and on the next round A. C. Dobson on the other Zoller-blown independently sprung works 1½-litre E.R.A. also passed the blue Maserati, while Earl Howe, driving splendidly, pipped Whitehead for fourth place. Mays did his passing by taking Starkey's in a wide slide and

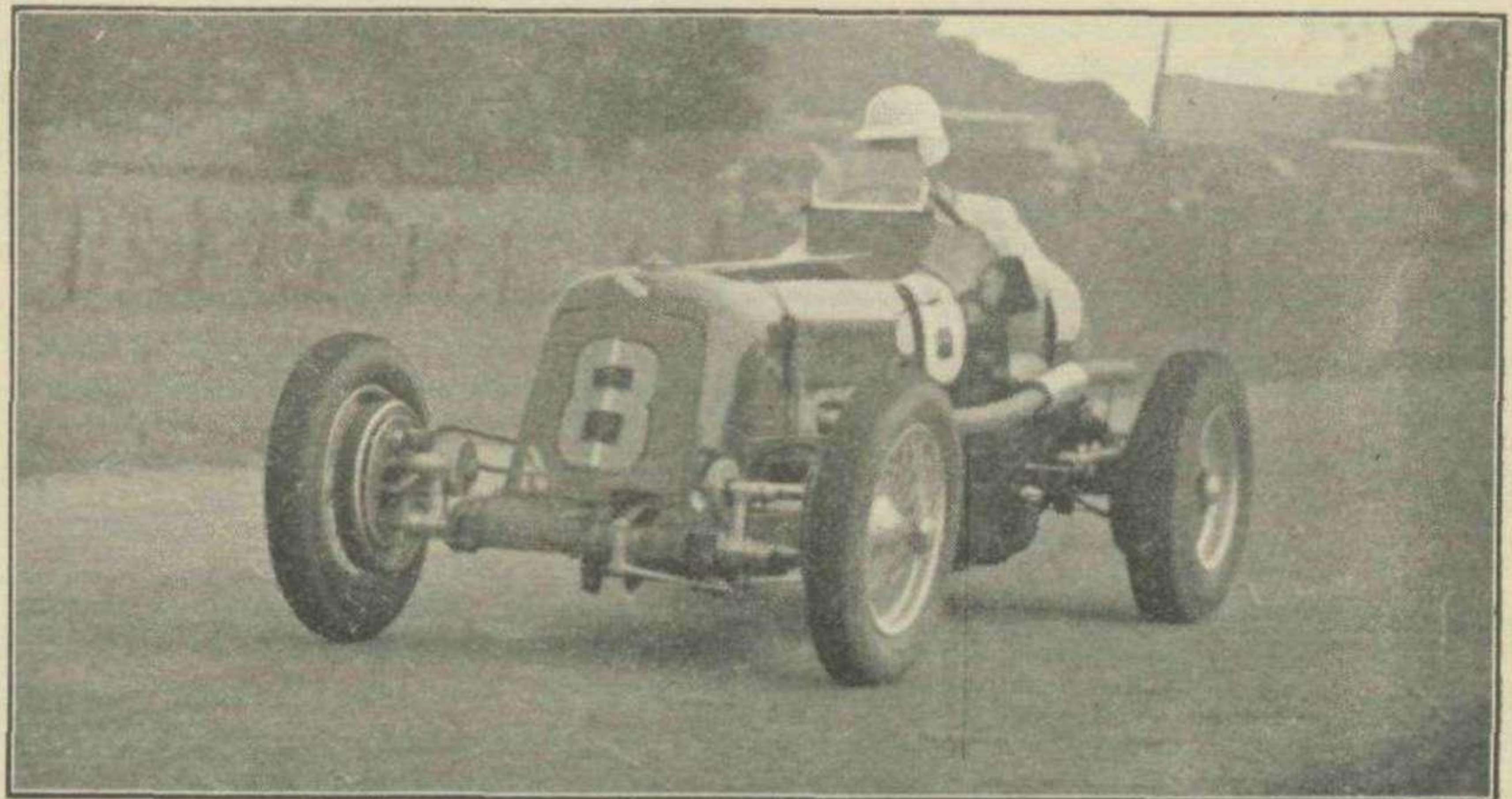
## THE J.C.C. 200-MILE RACE—continued

accelerating furiously before Red Gate, where "Bira" followed him through, but Dobson had to take third place, right on the Maser's tail. Frequently "Bira" signalled "turn left" at this corner when followed closely by another car.

At twenty laps Mays led Dobson by 1½ secs., and "Bira" was 9½ secs. behind Mays, the average being 70.62 m.p.h. Wakefield came in with the little red Maserati, taking on fresh goggles after an examination of the driving-seat, the car re-starting notably easily. Our watch showed Mays to be lapping now at about 2 mins. 9 secs., Dobson at the same speed and "Bira" and Howe at around 2 mins. 10.2 secs. Austin Dobson seemed worried about vision, frequently wiping his visor with his arm. By thirty laps Mays led by 1½ secs. at 70.63 m.p.h. with "Bira" still third, 19½ secs. behind the leading E.R.A., which sounded as healthy as ever. Wakefield indulged in a wild power-slide at Starkey's one round, Whitehead showed some tendency to go a trifle wild and Dobson's Maserati came in for two mechanics to attend it. The leaders were naturally holding most of the attention and Powys-Lybbe carefully took his Alfa—now looking very spick and span—wide at Starkey's, waving A. C. Dobson through in his pursuit of Mays. Our watch now made "Bira" about ¼ secs. slower than before and Howe quite a bit slower, though odd timings are no concrete guide. On lap 37 Howe came in for brake adjustment and Brackenbury also suffered weakening brakes. Howe's stop occupied 1 min. 45 secs. and he lost fourth place to Whitehead, until Whitehead took 1 min. 40 secs. to refuel. Austin Dobson retired with a broken water-pipe and Parnell, whose twin-cam M.G. had for some laps shown an ominous and increasing trail of smoke from the cockpit, came in for a slowish pit-stop, fuel, water and plugs being put in, while Parnell got out for a breather. "Bira" found his rear shock-absorbers slackening, so that the big Maser. started to dance on the Donington undulations, but still it was handled with perfect precision and never an indication that all was not going as Prince Chula had hoped. Maclure's Riley sounded much rougher than usual, possibly due to the overlap timing, and it occasionally had severe rear-axle judder on braking before Red Gate. Howe's stop for fuel had been exciting, the engine being kept in action until officials requested its stoppage. Front and back brakes were taken up, the engine turned on the handle as another mechanic pumped up pressure and the blue E.R.A. push-started, Lybbe glancing anxiously at the scene as he passed by. Rumours now circulated freely. A. C. Dobson could not win because if he did there would be no "boni" from the oil people. Both E.R.A.s would re-fuel and "Bira" knew it. And so on. Two nice bits of pit-work were noted. Peter Whitehead came in for fuel. Three mechanics worked hard, the fuel cans being slung away when empty by Wuyts, oil poured into the chassis tank from a big jug, the funnel dropped onto the road, the engine cranked, and the car pushed off. No splash cover had been used. Wake-

field's stop for fuel was also rapidly dealt with. By fifty laps Mays led by 3 secs. from Dobson and 46½ secs. from "Bira" and he had eased to 70.53 m.p.h. On lap 52, Howe, brakes useless, turned round and, restarting, shot very nastily off the road going into Starkey's hairpin, bringing the E.R.A. to rest in a 90° slide. He retired there and then, consoled by us all, after a very spirited exhibition of polished, sporting driving. Hanson's Maserati had retired with engine seizure, coasting to his pit, and Whitehead again came in for fuel, oil and water, leaving in 27 secs. Hanson's stop for fuel saw the Maser. come in fast and much fuel spilt. Rolt took his time, the Triumph being given oil for its dumb-iron tank from a gallon can and the driver leaving his seat. Observation at Starkey's showed Mays to come close in to the grass and slide out; "Bira" to corner with precision and some floating and bouncing; Powys-Lybbe to go wide, even onto the new leg of the course where it rejoins the old road, in leaving the turn; Brackenbury to hold a clean, central course; Howe and Rolt to keep close in.

. . . After a great run the E.R.A. had had an attack of its old trouble and split a rear axle driving shaft. Pistons, brakes and now axles seem the E.R.A.s weak spot. But Dobson responded at once, while mystic Siamese sigus appeared from "Bira's" depot. "Bira" leaned from his seat to read them, gave the "O.K." and did we imagine that the Maser's rear tyres were smoking as it left Starkey's on the next lap? Excitement grew intense. On lap 64 Mays fell out. Thereafter we timed the gap between Dobson and "Bira" as follows:—  
48 secs., 46, 48, 51½, 49½, 47, 43½, 42½, 41, 41 . . . no, the Maserati could not do it. The works E.R.A.s no longer re-fuel in 200 miles and Dobson driving the race of his life, ran on unchallenged, to win by 39.6 secs. at 69.67 m.p.h. "Bira" was second, Whitehead a very well-deserved third and Wakefield, on the 1½-litre Maserati with modified rear springing, fourth. Powys-Lybbe brought his Alfa-Romeo in fifth after a very steady drive, and during the closing stages Brackenbury, in A. C. Dobson's high-tailed E.R.A. (that had been driven for a few laps by



A fine speed study of R. Mays, with his E.R.A.

Maclure came in to refuel and have the brakes taken up, and the Riley would not re-start. Three mechanics tried a push-start, two marshals helped, but to no avail. It is a serious shortcoming that at Donington the pits nearer to Starkey's corner involves a much greater slope up which to push a car than those nearer Red Gate. Eventually Maclure himself pushed, leaping to his seat as the engine fired, a feat loudly clapped from the line of pits. A lap later poor Percy was in again and out of the car. Hereabouts someone came right out on the road with a board-signal for Lybbe, thus invoking the wrath of an R.A.C. steward.

Came sensation! Mays passed his pit patting his helmet. He is coming in to refuel, we said, for funnel and churns were prominent on the pit counter. Hardly had the black E.R.A. cleared the pits next lap when there came a horrible noise, Mays revved up the engine, and appeared only to coast round Red Gate and out of sight. Mechanics started to leave his pit. It was the end

Pintacuda), caught Maclure on the 69th lap, in spite of being almost literally brakeless, only to be caught and repassed on the 72nd lap. There were no other finishers, apart from Rolt and Parnell, both of whom were flagged off. Parnell had had a good, quick stop to refuel, but at the very end he was badly delayed by trouble which necessitated removal of the bonnet and radiator cowl. It had been a truly excellent race for which the Junior Car Club deserves warm congratulations and, indeed, many persons made a point of congratulating Secretary Morgan in person afterwards. E.R.A. has now added its name to the winners of this classic race, just as it is doing in so many other big International contests, at home and abroad. The happy smile of Humphrey Cook's was reflected in the faces of the occupants of the E.R.A. Club's special enclosure. Raymond Mays was taking his defeat well, signing autographs afterwards, Earl Howe, too, was seen to give away his signature. E.R.A.s have gained reliability and found more



*THE J.C.C. 200-MILE RACE—contd.*

speed and the winning of a scratch contest for cars of unlimited capacity and the shattering of the lap record in practice is a truly fine show. What a race will result next year especially if, as rumour has it, Seaman returns to this country, and, perhaps, re-acquires his old Delage, to show that it can still motor.

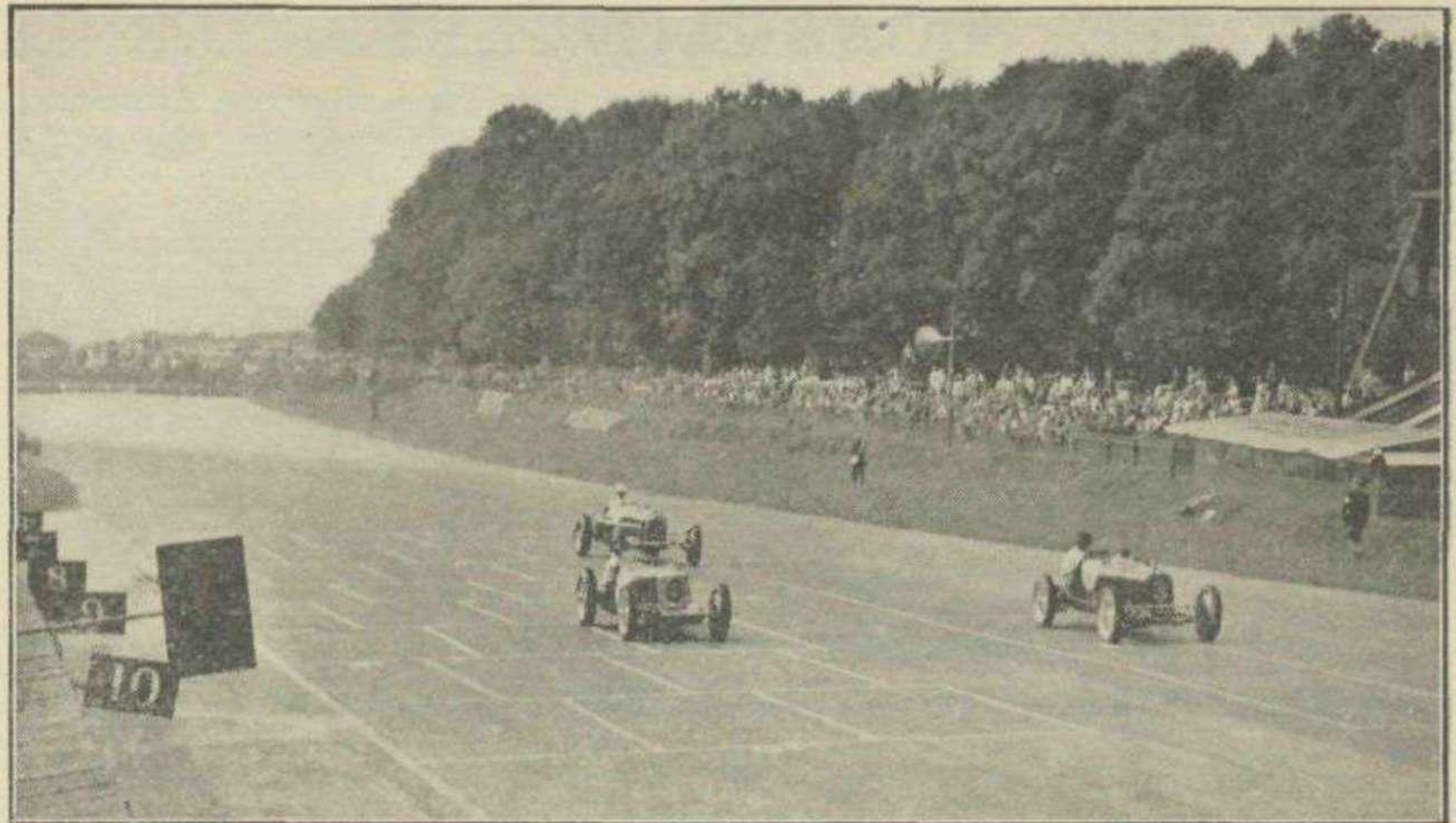
**RESULTS**

1. A. C. Dobson (1½-litre E.R.A.), 2h. 49m. 12.4s. 69.67 m.p.h.
2. "B. Bira" (2.9-litre Maserati), 2h. 49m. 52s. 69.40 m.p.h.
3. P. N. Whitehead (1½-litre E.R.A.), 2h. 54m. 45s. 67.46 m.p.h.
4. J. P. Wakefield (1½-litre Maserati), 2h. 56m. 36s. 66.76 m.p.h.
5. A. Powys-Lybbe (2.3-litre Alfa-Romeo), 2h. 57m. 56s. 66.25 m.p.h.
6. P. Maclure (2½-litre Riley unsupercharged), 2h. 58m. 34s. 66.02 m.p.h.
7. C. Brackenbury (1½-litre E.R.A.), 3h. 1m. 16s. 65.04 m.p.h.

**Still Running at Close of Race**

A. P. R. Roit (2.4-litre Triumph Dolomite) covered 72 of the 77 laps in 2h. 59m. 53s. R. Parnell (1½-litre M.G.) covered 73 of the 77 laps in 3h. and 19s.

**1,500 c.c. Results:** 1, A. C. Dobson (E.R.A.); 2, P. N. Whitehead (E.R.A.); 3, J. P. Wakefield (Maserati).



*Passing the pits. P. Maclure (Riley), Powys-Lybbe and K. Evans with their Alfa-Romeos.*

*TUNING THE BENTLEY—continued from page 370*

obviate plug troubles, by fitting a compression-plate. Afterwards suitable plugs were found and the compression-ratio raised to the former ratio. The output was in the region of 175 b.h.p., and the standard 10 ft. 10 in. wheelbase 1930 four-seater did about 98 m.p.h. The special short-chassis four-seater raced by Birkin gave about 240 b.h.p., the port areas being increased and larger valves used. Robertson-Roger, the present owner, is using a standard cylinder-block, but these blocks can be modified in the manner described without recourse to fresh casting. This four-seater could do about 130 m.p.h., while it is common knowledge that the famous blower single-seater was capable of speeds approaching 150 m.p.h., taking the Brooklands Lap Record in 1932 at 137.96 m.p.h.

**The Sixes**

The Standard Big Six 100 x 140 m.m. 6½-litre model was introduced at the end of 1926 and went out of production in 1929. With single-carburettor it gave 130 b.h.p., the compression-ratio being very low. Tuning may be carried out on almost identical lines to that of the 4½-litre. If the block is milled to

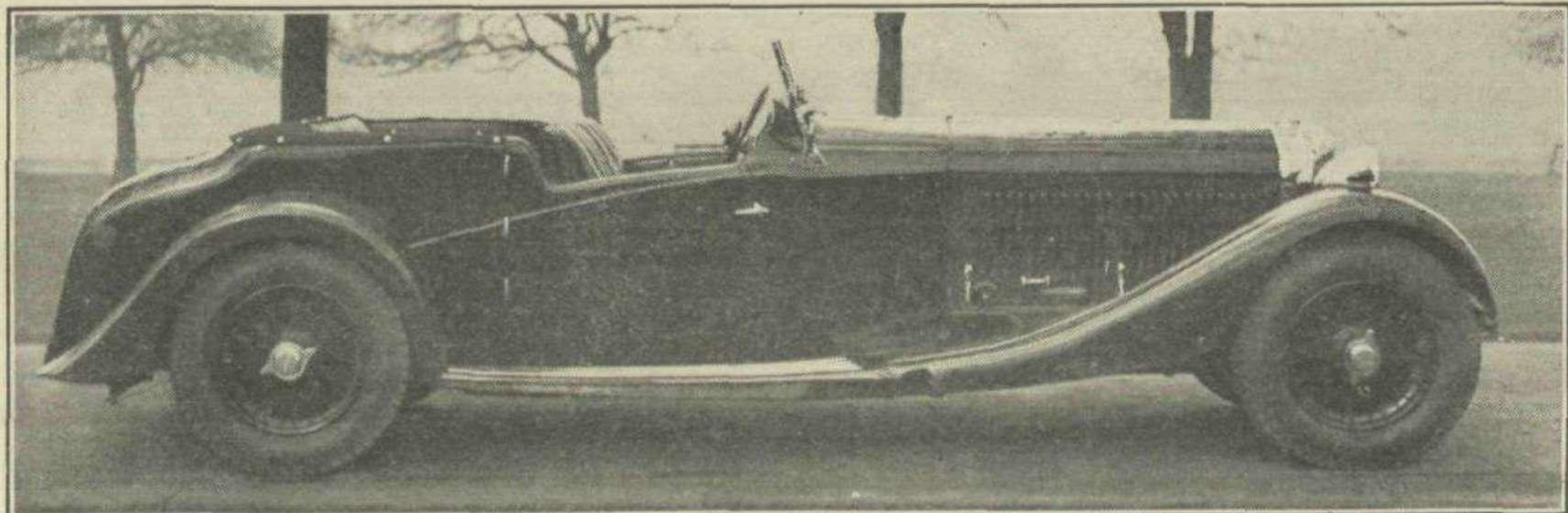
put up the compression-ratio it may be necessary to re-adjust the triple-throw system of camshaft drive. With 1929 standard modifications these engines gave 140 b.h.p. at 3,200 r.p.m., and by raising the compression-ratio and fitting twin or triple S.U. carburettors the output can be brought into line with that of the Speed Six (175 b.h.p.) which was first produced late in 1928 and continued to 1931, most of the sales being Speed Sixes for the later period. The Speed Six has achieved over 130 m.p.h. on Brooklands in racing form, and the Barnato-Hassan-Special with the 8-litre engine held the Lap Record for a time at 142.6 m.p.h.

Three chassis lengths of the Standard Six were made. 1930 models had larger inlet ports than the earlier cars, friction shock-absorbers at the front and hydraulic at the rear and dual in place of double magneto ignition. Also larger fuel tanks. The normal top gear was 4.16 to 1, and the speed about 85 m.p.h. and weight with open body 45 cwt. The Speed Six had a top-gear ratio of 3.53 to 1, a chassis weight of 34 cwt. and a speed of about 90 m.p.h. The 8-litre six-cylinder could exceed 100 m.p.h. in standard trim. The top-gear ratio was 3.53 to 1, and rev.

limit 3,500 r.p.m. Some of Mr. McKenzie's tuning operations on the latter type were described last February. The compression-ratio may be raised from 5.1 to 5.6 to 1, and the axle-ratio raised to 3.3 to 1. With balanced crankshaft and con-rods, lighter pistons and a better exhaust system 4,300 r.p.m. may be realised. Twin Delco coils will give easier starting and better low speed running than dual ignition, besides being easier to synchronise.

**The Ricardo o.h. Inlet Engine**

About fifty of these 4-litre cars were produced after the o.h. camshaft Bentleys had gone out of production. The bottom half of the engine is beautifully made and would permit of a greatly increased output. The head design does not allow any increase of compression-ratio and increasing the port areas and fitting triple carburettors only results in an output of 150 b.h.p. against the standard output of 120 b.h.p. Supercharging is the most likely development, but Mr. McKenzie installs 6½-litre old-type engines in the 4-litre chassis for clients who require improved running while retaining the advantages possessed by the later chassis.



*The 8-litre Bentley.*

## THE BUGATTI OWNERS' CLUB LEWES MEETING

In beautiful weather the Bugatti Owners' Club staged, very efficiently, their annual Speed Trials at Lewes on September 4th.

Arthur Baron, driving his newly-acquired 3.3-litre Bugatti, did two runs, in 18.7 secs. and 18.4 secs. respectively, which beats the record set up at the previous meeting by G. Taylor's Alta. J. Lemon-Burton did a very fine run on a 2.3-litre Bugatti in 20.1 secs. and another in 20.3 secs. and J. K. W. Baines, on a snaking and wheel-spinning R-type M.G. Midget, did 21.7 and 22.1 secs.

Craig's type 55 sports Bugatti was outstanding, winning the medium sports class and the novices' class, while J. G. Crowther's blown 4.9-litre Bugatti, a most business-like motor with a vast exhaust system, beat two 4½-litre Invictas and Mrs. Garstin's 6½-litre Bentley in the large sports category. R. G. J. Nash had the veteran class to himself and put up a truly astonishing show with the 1912 15-litre Lorraine-Dietrich, which is becoming a striking force in modern sprint events. "Old Charles," in a great cloud of soot and smoke, clocked 26.6 secs., all the more remarkable as his mechanic assures us that he is still

not functioning perfectly. Another run took 26.7 secs. The touring class went to Pattenden's 1½-litre Bugatti. In the 1½-litre sports category G. A. T. Weldon's 1½-litre blown Atalanta was easily the victor, with Rupert Pitchford's Frazer-Nash third and W. Boddy, driving the original H.R.G., third. The last-named coped with a sticking clutch by very determined ratio-shifts and engaged top gear almost at the finish at about 4,300 r.p.m.

John Smyth ran a beautifully turned-out Brescia Bugatti, minus front wings, which it had shed excitingly on the drive down, but a fierce clutch action spoilt his getaway.

A. F. Walsham's 2.3-litre Type 43 Bugatti sounded really beautiful and Miss Wilby put up some good showing with her Frazer-Nash, winning the handicap class.

K. Gormly brought down a 175 c.c. Villiers-engined toy on the roof of his Invicta, in which he subsequently swayed up the course in 53.8 secs. We hope we are not in for an epidemic of this kind of thing, especially as the public treats motor competitions with too much levity as it is. But we can assure readers that

Baron's entry of a 330 c.c. Bugatti was definitely a printer's error in the programme!

### RESULTS

**Veteran Cars:** R. G. J. Nash (Lorraine-Dietrich) 26.6s.

**Touring Cars:** 1, R. E. Pattenden (1½-litre Bugatti) 27.8s.; 2, Mrs. Garstin (6½-litre Bentley), 28.2s.; 3, D. Monro (4½-litre Invicta), 28.3s.

**Sports-Cars under 1½-litres:** 1, G. A. T. Weldon (1½-litre Atalanta, s.) 26.4s.; 2, R. Pitchford (1½-litre Frazer-Nash), 27.0s.; 3, W. Boddy (1½-litre H.R.G.), 27.6s.

**Sports-Cars 1½-3½ litres:** 1, Craig (2.3 Bugatti, s.) 24.5s.; 2, D. N. Leon (2-litre B.M.W.), 25.8s.; 3, A. F. Walsham (2.3 Bugatti, s.), 26.9s.

**Sports-Cars over 3½-litres:** 1, J. G. Crowther (4.9 Bugatti, s.), 24.2s.; 2, R. M. Blomfield (4½-litre Invicta) 25.8s.; 3, Mrs. L. Garstin (6½-litre Bentley) 28.0s.

**Racing-Cars under 1½-litres:** 1, J. K. W. Baines (750 c.c. M.G., s.), 21.7s.; 2, K. Gormly (175 c.c. Gormly), 53.8s.

**Racing-Cars over 2-litres:** 1, A. Baron (3.3 Bugatti, s.) 18.4s.; 2, J. Lemon-Burton (2.3 Bugatti, s.) 20.1s.; 3, Craig (2.3 Bugatti, s.) 24.3s.

**Handicap Class:** 1, Miss M. Wilby (Frazer-Nash); 2, G. A. T. Weldon (Atalanta)

**Novices' Class:** 1, Craig (2.3 Bugatti, s.) 24.9s.; 2, A. F. Walsham (2.3 Bugatti, s.) 26.4s.; 3, W. Boddy (1½-litre H.R.G.) 27.4s.

**Fastest Time of the Day and Course Record (Percy Fawcett Cup):** A. Baron (3.3 Bugatti, s.) 18.4s.

**Bachelier Cup:** J. G. Crowther (4.9 Bugatti, s.) 24.2s.

## VINTAGE S.C.C. SPEED TRIALS AT CROYDON

The Vintage S.C.C. had a very excellent entry for their speed trials at the Autodrome Driving School at Croydon, so that the rather "circus-like" nature of the course was all the more regrettable. The finish was marked by an apparently genuine Belisha beacon and the short straight, tackled twice as the cars had to negotiate a roundabout at one end, was called Railway Straight South. Enthusiasm ran high and the Paddock presented many odd spectacles, notably that of M. Chambers's skeleton Austin being commenced by vigorous twirling of a jacked-up back wheel. Be-trousered girls were much in evidence, and one young thing even wore a tummy-belt (racing), but Sam Clutton dispensed with much of his clothing before counting the gate money—about £8 in half-crowns.

Timing was by hand but the event was hardly a serious enough affair for this to cause anxiety—this fixture should not be allowed to eclipse Littlestone, where motors can really motor. John Bolster, after a really epic tussle, kept "Mary" to the narrow if not straight course, to record fastest time in 32.2 secs. L. Giron, with a blown 2.3-litre G.P. Bugatti, managed 34 secs., Sumner 35 secs. with the Sumner J.A.P., which went very wild on one run, and Arthur Baron 35.2 secs. with the 2.3 Bugatti which killed poor Mervyn White. Michael

May was masterly with his 2-litre Alvis, J. F. Parker held long slides in his Lambda Lancia and Heal and Windsor-Richards did great things with 30/98 Vauxhalls. Many drivers smote banks, Kirkman bumping every possible obstacle in his comic, cut-down 12-50 Alvis, while Waddy rammed the bank hard with the Fuzzi but pulled away unaided. Most cars had more power than could be used round the roundabout, notably Stedall's very rapid Batten-Special and Eason-Gibson's monoposto Ford Ten—a racer in all save its hub-caps. Lind-Walker, in full racing attire, introduced the Molsheim exhaust note with his 1½-litre G.P. Bugatti, and amongst the specials were the Emeryson, now with 2-litre A.C. engine and M.G. radiator, and a Ford V8 with special radiator, huge body and Type 40 Bugatti tail. Interesting were H. H. Walker's 14/40 Delage, A. P. Southon's 2-litre H.E. and Johnson-Ferguson's well known, side-valve Aston-Martin, vintage 1925. The Aston-Martin Club had a special handicap class, the results not yet known, though out of thirteen runners C. M. Anthony's special 2-litre was by far the fastest.

In the smaller sports classes modern cars beat the vintagers, but the real veterans had their own class. The formula result is not yet known, but Nash and the Lorraine took 40.2 secs., Clutton and his

Itala 41.4 secs., A. A. F. Mills, on a 1911 8 h.p. Renault that cornered so rapidly as to throw its driver under the dash and which threatened to lose a rear wheel, 57.6 secs., and Lt.-Col. Clutton's 1909 Fafnir 65 secs.—the onlookers just loved it. Giron had the worst slide of the afternoon, recovering neatly, and Johnson's B.M.W. liked the hedge. Bolster kept the taps wide open in spite of slides, "Mary" slinging away chunks of mould as she regained the straight.

### RESULTS

**1,100 c.c. Sports:** E. P. Wells (Singer) 41.6s.

**1,100 c.c. Super-sports:** V. H. Tuson (Fiat) 38s.

**1,100 c.c. Racing:** R. A. C. Sumner (Sumner J.A.P.) 35.0s.†

**1,101-1,500 c.c. Sports:** A. A. F. Mills (M.G.) 38.2s.

**1,101-1,500 c.c. Super-sports:** J. G. Clarke (Frazer-Nash) 35.6s.†

**1,101-1,500 c.c. Racing:** J. G. Clarke (Frazer-Nash) 35.6s.†

**1,501-3,000 c.c. Sports:** C. M. Anthony (Aston-Martin) 37.0s.

**1,501-3,000 c.c. Super-sports:** M. May (Alvis) 36.2s.†

**1,501-3,000 c.c. Racing:** J. Bolster (Bolster-Special) 32.2s.†

**3,001-Unlimited, Sports:** J. E. Bowens (30/98 Vauxhall) 40.2s.†

**3,0 1-Unlimited, Super-sports:** G. A. Stedall (Batten-Special) 35.8s.

**3,021-Unlimited, Racing:** A. S. Heal (30/98 Vauxhall) 37.4s.†

**Ladies' Class:** Miss M. Wilby (Frazer-Nash) 37.8s.

**All-Comers:** J. Bolster (Bolster-Special) 32.2s.†  
† (Vintage motor, i.e., prior to 1931).

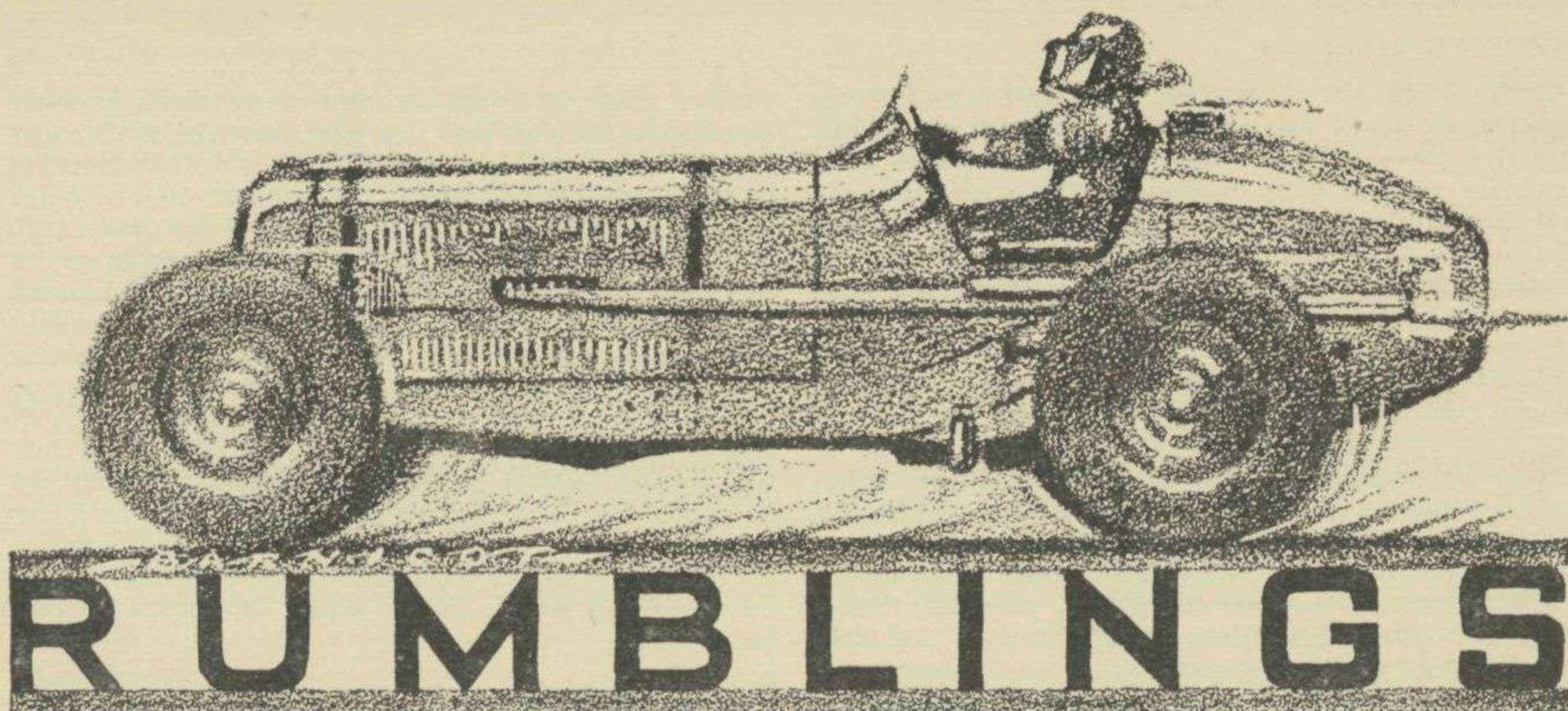
## SPEED RECORD PICTURES

Sir Malcolm Campbell's Water Speed Record has been made the subject for the first attempt to provide the public with animated news pictures in pocket form.

While the "Bluebird" was skimming across Lake Maggiore the news-reel men on the bank were filming the run. A

number of the best "stills" from this film have been incorporated into an ingenious little book or "flicker." Based on a well known principle, this will provide a short moving picture showing Sir Malcolm Campbell's boat travelling at 129 m.p.h.

This novelty is now being printed for C. C. Wakefield & Co., Ltd., of Cheapside, London, who expect to have supplies ready for distribution in a few days' time. A number of them have been reserved for MOTOR SPORT readers and will be sent free to those who write at once for copies.



### The Noise Nuisance

Local inhabitants are wont to complain of unusual noises that they do not like and which they think ought to be stopped. Sometimes they have reason, and sometimes not. I believe that the Crystal Palace road-circuit would gain increased revenue if it were to be opened every week-day for testing and practice, as is the case at Brooklands. But as soon as racing commenced at the London road-circuit complaints were circulated from residents of neighbouring houses about the noise nuisance, and we believe that these complaints, while they have, very fortunately, not had any effect on Mr. Edwards's racing programmes, may have had quite a lot to do with the long periods of enforced inactivity at Sydenham. Naturally, all motoring enthusiasts will sympathise with the Road-Racing Club, but sympathy is not a cure. Brooklands opened in July 1907 and racing and testing went on regularly, Sundays included, until August 1914. Motor work was resumed in May 1921, and yet it was not until the middle of the 1924 season that residents in the Weybridge district lodged their complaint against the noise nuisance which led to the enforcement of official expansion-boxes on all racing motor-cycles and cars using the Track—after straight-through exhausts had been permitted for seventeen years. The strike of motor-cycle riders which greeted this enforcement was only a temporary distress, but I wonder how much revenue Brooklands has forfeited because record-breakers went to Montlhéry and how much prestige British cars have lost on account of this silencer ruling? When the official silencer was originally imposed it was estimated to dock a car of five or even ten m.p.h. of its maximum speed and, apart from this important consideration, it is quite impossible to estimate the number of buckled exhaust valves that have fallen onto pistons, the number of overheated pistons and, indeed, the divers retirements that must be attributed to exhaust back-pressure set up by Brooklands official expansion-boxes during the thirteen seasons they have been in use. It may be that the rising rate of racing engine operation, on account of the rapid development of the small car, was to blame in 1924 for evoking action on the part of householders over a noise that is sweet music to you and me. The

fact is there was a fuss, in spite of most of the householders having taken up residence after 1907, when Brooklands opened. Silencers were enforced, though 1,000 h.p. R.A.F. aircraft still shatter the peace of Weybridge and Byfleet inhabitants, unmolested. People living near Croydon Aerodrome complain, folk living by R.A.F. stations fret and fume, and have to grin and bear things or get out. But no Government will ever realise the value to prestige and research of motor-racing, and consequently we advise Mr. Edwards to watch very carefully the manifestations of these Sydenham residents who have delicate ears. It would seem that at all events they have a stronger case than the noise-nagged householders of Weybridge. After which solid observation let us recall the sporting action of a racing-driver who brought his 1½-litre Delage from afar, very keen to run it at a Chalfont hill-climb, when, hearing that the racing was proving bad for a near-by invalid, and knowing his car to be the noisiest present, he declined his runs . . .

### Britain First

Although America has eaten eagerly into our Australian market, news is to hand that the Chief Commissioner of Police in the State of Victoria has chosen three 4.3-litre Alvis cars for high-speed patrol work. Which reminds one that one of the most striking of the 1938 sports-cars so far announced is the new short-chassis 4.3-litre Alvis.

British enthusiasts have a decided weakness for really big-engined cars and at the last show the 4.3-litre Alvis was hailed as a welcome new-comer. In closed form it would do 92 m.p.h. Now we are offered the special short-chassis sports tourer, priced at £995. The 4.3-litre chassis has improved suspension, better brakes, increased cooling and a quieter exhaust system for next season. It should be a remarkable proposition for enthusiastic sportsmen.

### The 1938 Models

Apart from the new Alvis just mentioned, very few new sports-cars have yet been released to intrigue fast drivers into parting with their existing cars. But we expect that this year's show at the new Earl's Court

*RUMBLINGS—continued*

will hold plenty of interest to enthusiasts. Years ago the sports-car was so far removed from the utility car that developments and innovations in the latter category were of little moment to those who thought only in terms of speed and acceleration. To-day the position is very different. For one thing, competition work no longer necessarily involves an incursion into the realm of the racing-car. Clubs cater for the owners of normal, even closed, motor-cars, so that the circle of sportsmen is much larger than it once was. Then the utility car itself has taken on much of the driving appeal of its more rapid brethren. Perhaps this is hardly the case with the very cheapest "just transport" cars, but it very definitely does apply to the growing range of semi-sporting cars, with low-slung frames, remote gear-control, good seating positions, lively engines, and smart coachwork, of which M.G., Riley, S.S., British-Salmson, Rover, Triumph and Talbot list representative examples. The point-to-point average speed, the convenience, and the dependability of such cars combine to render them extremely desirable possessions. Then there are other cars, still not exactly sports-cars, that possess high performance, driving appeal and the individuality which higher price commands, like the Lancia Aprilia, Frazer-Nash-B.M.W., A.C., Daimler, Alvis, Armstrong-Siddeley, Autovia, and Hotchkiss. So that there are really very few stands at the Show which will not appeal, even though only nineteen of them can be said to bear the names of truly sporting marques. These nineteen stands, where true sports-cars will be shown, apart from other models, are those to which readers of this paper would go naturally if they had very limited time in which to see the exhibits. They comprise: Morgan, Railton, A.C., S.S., M.G., Talbot, Alvis, Riley, Rolls-Royce, Delahaye, Aston-Martin, B.S.A., Bentley, Lagonda, Mercedes-Benz, Frazer-Nash-B.M.W., Lancia, British-Salmson and Bugatti. Their order is that in which they would be seen by entering at the main entrance, walking to the right of the first row and then walking along a diagonal line of stands and back along the next.

**Bravo, G. P. H.-N.**

G. P. Harvey-Noble put in continual, almost daily practice at Brooklands with his special-bodied super-charged 746 c.c. M.G. Midget, before going out on August 6th and officially capturing the Class H outer-circuit lap-record at 122.4 m.p.h. The previous holder was Charlie Dodson (Austin) at 121.2 m.p.h. Harvey-Noble should be a useful driver for the B.R.D.C. "500," for he must know the outer-circuit intimately. And those who scoff at the thought of Brooklands driving should recall how much Parry Thomas's success was attributed to his constant practice "round the outside." Other activities at Brooklands have included a prolonged oil-consumption test conducted by the Rover people with one of their 1938 Twelves and other consumption tests with a Vauxhall. We should be sadder and less wise men without the Weybridge Track.

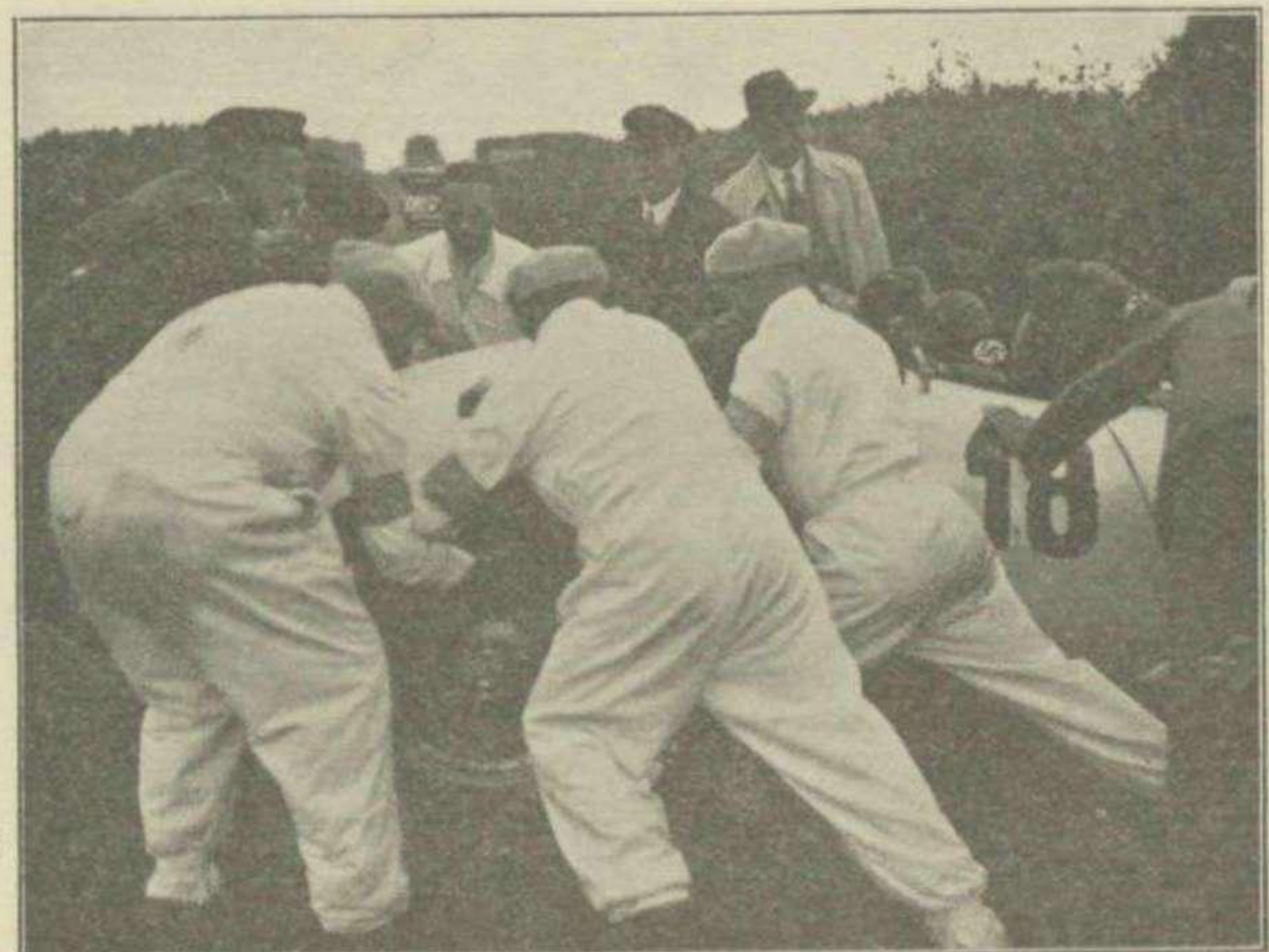
**Eyston Away**

About three weeks ago Capt. G. E. T. Eyston left this country to take a look at the Utah salt-lake

course, preparatory to attempting to reach at least 350 m.p.h. thereon with his new six-wheeled twenty-four cylinder 4,800 h.p. record-breaker. Few attempts on the "Land Speed Record" have been kept so quiet as this latest venture of Eyston's. Some years ago it was the correct thing for onlookers in racing circles to gently remind the active members of our community that it is better to do the deed first and seek fame and fortune afterwards than to reverse this order of things. Applied to starting money in racing this doctrine is not so logical! However, the fact remains that Capt. Eyston has said almost "nothing to no one" about the biggest exploit he has yet tackled, so that we all wish him sportsmen's luck at Utah and we shall all be able to sympathise readily if for any reason his new car—as yet, still unnamed—does not realise the aimed-at speed on its initial attempts. Good luck, Sir!

**Ratio-Shifting**

Gear-changing has always been one of the factors in car-driving over which the enthusiast has been proud to display a *finesse* above that of the ordinary car-owner. Or, at least, that was the state of things until the arrival in perfected, commercialised form of the Wilson pre-selector aroused gearbox designs to greater efforts and synchro-mesh became universal. Far be it from me to suggest that this form of change is unwanted on sports-type cars. For do not Bentley, Alvis, Lagonda, M.G., and the rest of the best make use of it? Yet the fact remains that some synchro-mesh systems will not permit of double-declutching changes, others only give slow changes and cannot be hurried, others work at times and not at others, and very many have a tendency to stick in one position of the lever. And even when double declutching is possible, there is no indication whether more work is not being imposed on the friction-clutch-mechanism than is the case by just making a straight-through change. A driver who does not profess to be an expert rather put the matter in a nutshell, I thought, when he said that while he often thanks his stars for synchro-mesh when he has it, somehow he always



R. J. B. Seaman had a lucky escape in the German G.P. Here mechanics are pushing the Mercedes-Benz back on to the road.

## RUMBLINGS—continued

seems to manage a rapid change-down with a plain box when occasion arises. Incidentally, which do you consider the world's most tricky gear-change? My friends seem to vote about equally for Leyland lorry (circa 1920), Bean and early sports Lagonda. It is interesting that those modern manufacturers who hand their clients the compliment of giving them plain gearboxes comprise Bugatti, B.S.A., Bianchi, Lancia and H.R.G.

**Great News**

We understand that there will be coming over from Germany, teams from both Mercédès-Benz and Auto-Union for the Donington Grand Prix on October 2nd.

We presume that the Mercédès-Benz team will be piloted by Seaman, Caracciola, Lang and Von Brauchitsch and Auto-Union by Rosemeyer, Stuck and Hasse.

**Odd Spots**

Billy Cotton has acquired Manby-Colegrave's E.R.A.—the ex-Seaman car. Humphreys now has Fairfield's E.R.A. with both the 1,100 c.c. and 1½-litre engines.

\* \* \*

H. P. Bowler asks us to correct the statement made in the July issue that he is building the Bowler-Hofman-Special. This Bentley engined, outer-circuit type car is actually a child of Edward Bowler of Messrs. E. Bowler and Co. of Alperton. Harry Bowler has no

connection with them, although, curiously enough, his 3-litre Bentley is prepared by them for racing. This Bentley is regularly used on the road in the ordinary way between races.

\* \* \*

The Vintage S.C.C. will hold a Rally on September 19th. A big gathering of interesting cars is expected, and doubtless some enthralling adventures will be had by some of the participants.

\* \* \*

We hear many expressions of appreciation of present-day Germany. Forrest Lycett, writing before returning for a holiday there, says he is going back because he has just come from Germany and had such a good time. He adds: "The Germans are extraordinarily affable. The Frankfurt-Heidelberg Autobahn is a wonderful road and makes quite fast cars appear slow."

\* \* \*

H. G. Symmons, well known in competition at the wheel of Frazer-Nash-B.M.W. cars, has ordered an Allard Special V8 similar to that described in MOTOR SPORT in the July issue.

\* \* \*

The Horton-Special has turned up again. It ran at the Bristol Hill-Climb as Borborygmus (medical term for a belly-rumble). It has an Alta engine.

**BRIGHTON SPEED TRIAL PROSPECTS**

Once again, on September 25th, the speed trials over the famous Madeira Drive at Brighton will be staged, in morning and afternoon sessions. The course, which was used for sprint meetings in the very early days of the sport, measures half a mile in length, has an excellent surface and ample pull-up space. Add to that the fact that it is wide enough to permit two cars to start at a time and that it is flanked by overhead terraces from which a first-class view of the racing can be obtained, with ozone from the sea to temper the scent of Castrol "R," and it is easy to see why everyone who is anyone in our world goes to the famous

South Coast town on September 25th. The entry will be representative of the finest and most potent sports and racing-cars in this country and the half-mile unrestricted course favours cars with sensational maximum speeds allied with good accelerative qualities. One of the finest speed impressions the writer has ever had was Shuttleworth finishing a run at Brighton on his 2.3 litre Bugatti, a sight only equalled by Eric Fernihough's shattering record run on the blown, solo Brough. Motor-cycles will be running again this year. Especially interesting is the class for pre-1915 cars, in which Clutton's 1907 "60" Itala, Nash's 1912

15-litre Lorraine-Dietrich, John Morris's 1914 22-litre Benz, Anthony Heal's 1912 10-litre Fiat and Chambers's 1907 Renault are expected to compete, besides interesting, if smaller veterans. These old cars will be really fast, moreover. Brighton stages the foremost speed-trial of the season, a fitting conclusion to an active year of sprint endeavour. You should book Brighton on September 25th no matter what other engagements you had. For you will have no other reason to go there until the Veteran Car Run in November. Details of the Speed Trials are available from S. W. Chandler, Sec., Brighton and Hove M.C., 24 Market Street, Brighton.

**A SUGGESTION**

Writing in a contemporary, R. A. Macdermid, the well known M.G. trials driver, makes the suggestion that normal readings of important instrument dials should be arranged so that the needles would all lie vertically when everything was in order, to permit easier reading. We had thought of this one ourselves, and heartily endorse it. A narrow racing cockpit may be confronted by a panel containing air, oil and blower pressure-gauges, water and oil thermometers, telecontrol settings, rev.-counter, sump-contents indicator, fuel-gauge, etc. If each needle lay in the same plane with everything normal, the driver's task in knowing when, and what, changes were taking place in the machinery would be vastly simplified and race-successes enhanced with a reduction in "expensive-

noises." Another idea is that the aircraft bank-and-turn indicator in modified form might find a place in certain racing-car cockpits. Excellent as modern tyres are, they can still give anxiety under certain conditions, such as in ultra-long-distance record attempts or during the hour record attack when extremely high speeds are maintained for the whole period. Unless a car is placed exactly right on the Brooklands or Monthèry bankings the tyres are subjected to severe side thrusts and scrubbing action. Most cars will find their own course, but that course cannot always be held indefinitely, nor can a driver get the car accurately on its course immediately on entering a banking, so that a bank and turn type of "correct-course" instrument might be useful on long record runs, or races,

to save the tyres to the uttermost. Such an instrument might also be valuable on the Karussel corner of the Nürburg circuit and particularly on the steep banking of the new Avus track. We do not suggest that drivers would have much opportunity during a race to consult the meter, but in practice it might be of assistance in indicating the ideal positioning, both from the viewpoint of conserving tyres and realising the minimum of speed-loss from tyre friction. If the driver cannot take his eyes from the road, the meter might be made to record like a "maximum-and-minimum" thermometer, for Herr Naubauer to consult after each man's practice run. Perhaps instrument makers and experienced track-drivers will comment on this idea?

# MOTOR RACING IN 1911

By

BALADEUR

## The Real Days

"The real days of racing are over." That is a remark which is frequently made to-day, and as a matter of fact it has been made at not infrequent intervals ever since racing started. They said it in 1903, after Paris-Madrid, when there were to be no more town-to-town races; in 1905 when the race for the Gordon Bennett Cup was run for the last time; in 1908 when its successor, the French Grand Prix, was abandoned; in 1925 when this same race deserted the road for the track; and in the late nineteenth-twenties, when the building of special racing-cars had virtually ceased.

They were saying it freely in 1911; and to the contemporary critic there must have seemed to be a lot of truth in it. For three years there had been no Grand Prix; the Tourist Trophy had been abandoned for an equal period; and none of the big makers were showing the slightest interest in building racing-cars. Yet how wrong they were! The very next year, in 1912, was to be run the greatest Grand Prix that had ever been, and when the war broke in 1914, the Grand Prix, the Tourist Trophy and the Voiturette Races had reached the zenith of their careers.

## V-Twins

But in 1911 there was little sign of all this. Only the Grand Prix des Voiturettes showed a really healthy entry list and Voiturettes were still of small account among the admirers of the monsters of the past. What were Peugeot, Hispano-Suiza, Delage and Sizaire-Naudin to those who thought in terms of Renault, Lorraine-Dietrich, Fiat and Mercédès?

Not that these Voiturettes were such small cars by the standards of to-day. The 1911 race which was run at Boulogne a few days after King George V was crowned, was indeed for 3-litre cars. The organisers, moreover, shocked by the monstrous V-twins with extravagant strokes produced by the limited bore, unlimited stroke regulations, decreed that only four-cylinder engines would be admitted. Moreover, not content with abandoning the bore limit in favour of a maximum capacity rule, they ordained that the stroke-bore ratio must not exceed two to one.

## New Rules

It must have been a bitter blow for the House of Peugeot, for it was this marque which had pre-eminently carried the old rules to their logical conclusion. Having won the race in 1909 with a single-cylinder engine with a bore and stroke of 100 x 250 m.m., Peugeot had gone one better in 1910 with a V-twin of 80 x 280 m.m., the driver having to peer round the side of it. Now they had to make the best of the new rules, and to show their disapproval of them built a four-cylinder engine with the cylinders arranged in a V, and worked out the bore and stroke to give the maximum permitted ratio with dimensions of 78 x 156 m.m. Overhead valves were used as before, but their interest

still being centred on engines, they employed final drive by side-chains, although, having possibly lost the race the year before through using fixed wheels, they had gone over to Rudge-Whitworths.

Hispano-Suiza, the winner of the race the year before, was not present at the starting line. Marc Birkigt, presented with the problem of a limited cylinder capacity, had decided that the most important thing to do was to fill that capacity with gas. Even at 2,000 to 3,000 r.p.m. he realised that cylinders were not getting amply filled, and the most fruitful way to get more power from a mere three litres was obviously to put engine speeds up still further. He thereupon designed an engine with four working cylinders and two others which were to be employed on pumping the mixture to their brethren. It was rather a complicated business and on 25th June, 1911, Marc Birkigt was wise enough to realise that his engine was not ready. How the House of Fiat must have wished that it had realised the same thing in time when it introduced supercharging to Grand Prix racing in 1923!

## A New Team of Racers

To make up for this abstention, however, there was the very welcome return of another former victor of the race. In 1908 Louis Delage had won it with a car driven by Guyot and fitted with a single-cylinder De Dion Bouton motor of 100 x 150 m.m. bore and stroke. In 1909 and 1910 he had rested on his laurels, but now he returned with a most up-to-date team of racers. The four-cylinder engines had a bore and stroke of 80 x 149 m.m. (Bentley Boys please note). The valves were arranged horizontally, operated by rockers, and Delage thus early had got onto his idea of five speeds with direct drive on the fourth. A propeller shaft, too, for Louis Delage had never had much to do with side-chains.

Great Britain was much better represented than usual in a French race. An event for the super racing cars of the day has always rather repelled manufacturers in this country; but give them a Voiturette race before the War, or a "touring car" race since it, and they will flock to it. Sunbeam in this year 1911 was putting out a feeler which was to result in the firm's grand slam victory of 1912. For the present the firm was content to run an almost standard chassis with a four-cylinder side-valve engine of 80 x 148 m.m. bore and stroke, and a curious attempt at a streamline body, sloping sharply downwards fore and aft of the cock-pit. There was a rather similar Vauxhall, its bore also 80 m.m., but the stroke I think rather shorter than the Sunbeam's, and a fierce V radiator. The Calthorpes (alas the

name has faded from the motoring world), of which there were three, also had a sharply pointed radiator and were I think rather more "special." Their designer had fixed on the round figure of 150 m.m. for the stroke and so had had to put up with an untidy bore of 79.5 m.m. in order to keep within the limit. Reminiscent of larger and earlier cars, the third of the four speeds gave direct drive. The remaining British representatives were a team of practically standard 15.9 h.p. Arrol-Johnstons, with Sankey wheels and Renault-type bonnets, a team which was to distinguish itself in the race.

The rest of the field consisted of some Grégories, Cotes, F.I.F. and Auyons, a team of Excelsiors from Belgium and a Mathis, driven by its maker to represent Germany, or at least Alsace.

## The Course

The race was over a course about thirty-two miles long, which had to be covered twelve times, giving a total distance of 387 miles. Boillot on the Peugeot took the lead at the start, but it is interesting to note that at the end of the first lap Burgess on one of the Calthorpes was lying second. On the second round however, Bablot with the first Delage had come up into second place and the Peugeot—Delage duel was on. Half-way through the race Bablot had taken the lead, but when they started on their last lap Boillet was only a minute and a half behind him. The excitement was intense, but try as he might even the great Georges Boillot could not catch the leader, and Louis Delage won the Coupe des Voiturettes for the second time. Boillot and his Peugeot were to have many compensations before the last overwhelming disappointment of 1914. Delage, however, confirmed his victory by taking third and fourth places as well. The English cars did not do badly, Burgess with the Calthorpe which had started so well gaining sixth place, while the Arrol-Johnston team finished complete.

## The Grand Prix de France

In this year 1911 the Automobile Club de France again decided against organising its Grand Prix. But the enterprising Automobile Club de l'Ouest, which later was to be responsible for the 24-hour races at Le Mans, organised a race which it called the Grand Prix de France. There was nothing really wrong in that, because the great event has always been the Grand Prix de l'Automobile Club de France; but motoring historians have fallen over each other into the pitfall for all that.

The race of course was run at Le Mans, its date being July 23rd. The distance was very similar to that of the Voiturette race, the length of the course being about 33½ miles and the number of laps a dozen to give a total distance of 402 miles. The race was open to all comers, but French manufacturers were still hanging back from supporting anything in the way of a race for big cars. Only one firm indeed built special cars for it

MOTOR RACING IN 1911—continued

and that was Rolland-Pilain of Touss, destined to be a faithful supporter of the Grand Prix proper in later years. With a free field to choose from the firm had decided upon a four-cylinder engine with the cylinders cast in pairs, and a bore and stroke of 110×160 m.m. giving a capacity of 6,082 c.c. The four valves per cylinder were operated by an overhead camshaft, driven by a vertical shaft, at the front of the engine, and in spite of these modernities and a streamlined tail, their final drive was by side-chains. Gabriel, the winner of Paris-Madrid in 1903, was engaged to drive one of them. Rigal, who had also handled a Mars in that epic event, was entrusted with another while Fanquet, an amateur, was at the wheel of the third.

The forerunner of the Brescia

The participants of the Coupe des Voiturettes race were well represented. There was the team of three two-stroke Cotes, two driven by De Vere and Ollier as before, the third now handled by Leduc; one of the Alcyons, with Barriaux at the wheel, and Rivierre's Excelsior. But the rest of the field was rather a scratch collection.

There seems to be a joke in Alsace, which consists of running a very small car in a race intended for bigger ones. Monsieur Mathis kept this up until 1921 when he ran a 1,500 c.c. car in the Grand Prix race for 3-litre machines. Ten years before it was Ettore Bugatti who was playing the same act. For this Grand Prix de France he entered a car with a four-cylinder engine of 65×110 m.m. bore and stroke (1,456 c.c.)—a sort of forerunner of the Brescia. He had kept the weight down to six cwt., and everyone regarded it as a toy car. Unfortunately in his efforts he had omitted to make any provision for carrying a spare wheel, with the result that the wretched mechanic had to hug it throughout the race. The car was driven by one Friedrich,

whose fame in Bugatti's racing department was to grow in post-war days.

The rest of the drivers had collected old racing-car or modern touring chassis for the occasion. Auray, who must have had one of the longest racing careers on record, for he too drove in the Paris-Madrid race, and he was still racing only a few years ago, was there with a Lorraine-Dietrich built for the 1906 Grand Prix. I suppose a 1932 racing-car does not sound very old now, but there had been great strides in design between 1906 and 1911. While Peugeot was cramped by a stroke-bore ratio of 2 to 1, the old Lorraine-Dietrich had a bore of 190 and a stroke of only 160 m.m. Its capacity of 21,346 c.c. must have given Friedrich something of a David and Goliath feeling.

Maurice Fournier, a younger brother of that Henri, who had won the Paris-Berlin race of 1901 had collected a Corre-La Licorne, which had been built for the 1907 Grand Prix. A year younger than the Lorraine-Dietrich, it was also by comparison a pygmy, for it had a square engine of 150×150 m.m. bore and stroke (10,603 c.c.). One year younger again was a survivor of the 1908 Grand Prix in the shape of a Porthos. This musketeer was sufficiently unconventional to have a six-cylinder engine. The cylinders were cast in pairs, and this was also a square engine, its dimensions being 125×125 m.m., giving a capacity of 9,204 c.c. This car was driven by Anthony who was afterwards to become a manufacturer.

A most extraordinary Race

Finally there was Deydier on a touring Cottin et Desgouttes and Hémerly, the sailor who had won fame on his light Darracq in the town-to-town races, finishing fourth of the class in Paris-Madrid, and who was still taking part in Grand Prix racing after the War. In this race he drove a touring Fiat chassis which had been intended for a limousine body and fitted accordingly with extra-heavy springs and an almost vertical

steering column. Its intended purchaser, however, the proprietor of a big Paris café, had refused to take it on account of late delivery, and here it was, suddenly a racing-car.

Such was the motley collection which was sent off at minute intervals, nearly twenty-six years ago. It was to prove a most extraordinary race. From the first trouble was the order of the day. De Vere's Cote did not finish the first round, which was led by the Cottin et Desgouttes, which forthwith broke its steering gear, and disappeared. The second round also accounted for another Cote as well as the Porthos, which cracked a cylinder. More serious, the Rolland-Pilain developed a defect in their front axles, Rigal and Faugnet's both breaking. More serious still Maurice Fournier's Corre La Licorne was stricken with the same trouble, the car overturned and both the driver and his mechanic killed.

Such was Racing

Still the race went on under the blazing sun of a record hot summer. Continual tyre troubles slowed down the competitors. Auray was leading with the veteran monster Lorraine-Dietrich, behind him came Hémerly with the Fiat which had nearly been a limousine. The Alcyon and the Excelsior dropped out, and then the Lorraine-Dietrich broke its aged differential and the race was Hémerly's. He finished at half past three, having averaged 56½ m.p.h. Half an hour later the roads were reopened to traffic and nobody else had finished. Far behind Friedrich scuttled round in the Baby Bugatti, Gabriel laboured with magneto troubles on his Rolland Pilain (and perhaps kept a wary eye on his front axle) and Leduc's Cote limped on. Only Hémerly finished the race.

Such was racing in 1911. Perhaps it seems more glamorous in retrospect than it did at the time. Who can tell with what romance they may surround the events of 1937 in the year 1963?

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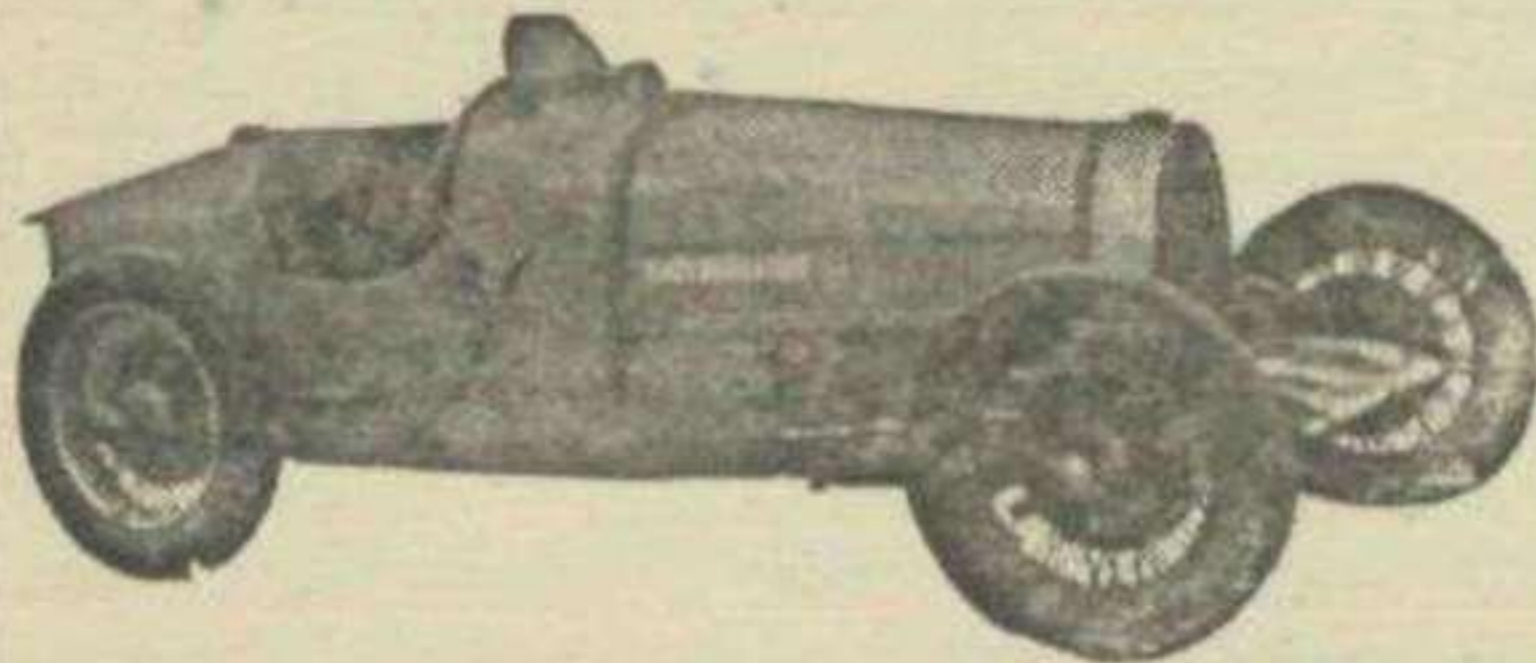
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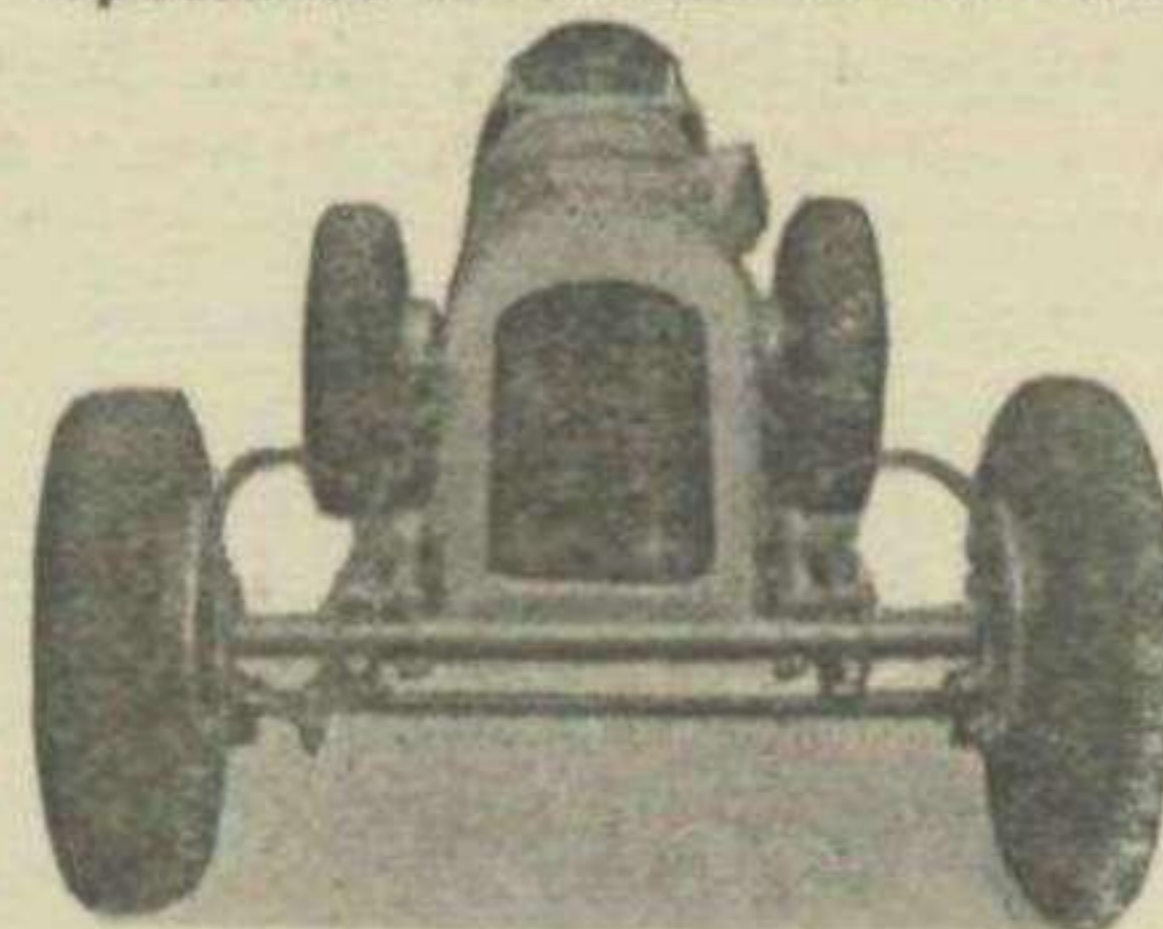
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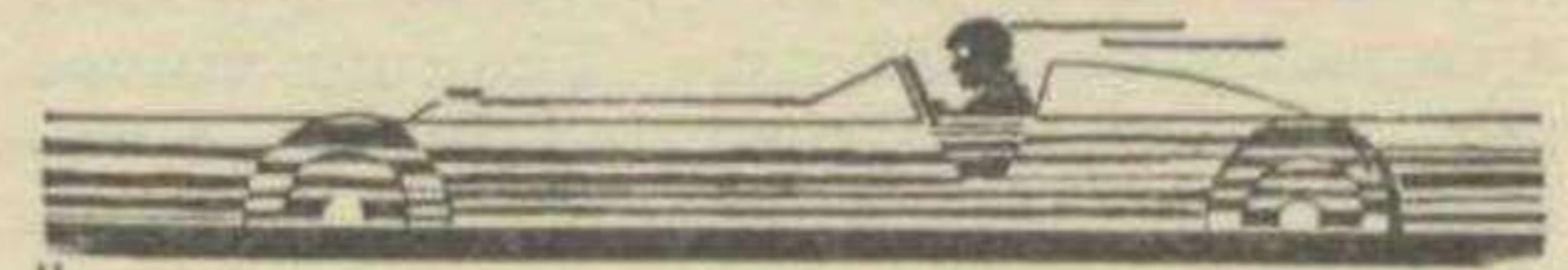
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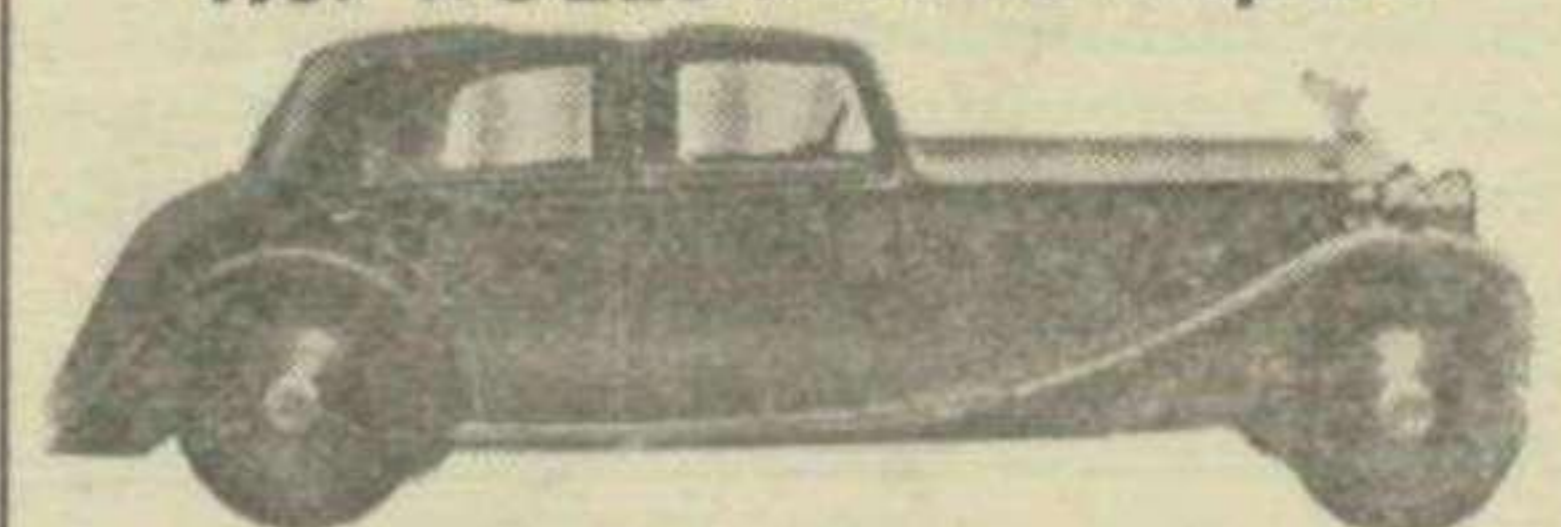
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Make of Car	Issue	Make of Car	Issue	Make of Car	Issue
ALFA-ROMEO 22.90 h.p. 6-cyl. (push-rod) super sports test chassis	April 1927	Bugatti 2.3-litre 8-cyl., Type 55, supercharged, 2-seater.....	July 1932	O.M. 2-litre, 6-cyl., 4-seater.....	Aug. 1926
Alfa-Romeo 1½-litre supercharged 6-cyl. Charles 2-seater (1929).....	March 1934	Bugatti 2.3-litre, 8-cyl., Type 43, supercharged 4-seater (1930).....	Dec. 1932	O.M. 6-cyl., 2-litre, 4-seater.....	Oct.-Nov. 1928
Alfa-Romeo 1½-litre supercharged 8-cyl. "Zagato" 2-seater (1932)	July 1934	Bugatti 2.3-litre 8-cyl., Type 43, supercharged 4-seater.....	May 1930	<b>RILEY NINE</b> "Gamecock" 2-seater	March 1932
Alfa-Romeo 2.3-litre supercharged 8-cyl. "Zagato" 2-seater (1933)	Aug. 1936	Bugatti 3-litre 8-cyl., Type 44, saloon	July 1928	Riley Nine "Monaco-Special," two-carb. saloon .....	March 1931
Alfa-Romeo 2.3-litre supercharged 8-cyl., 4-seater (1931).....	Aug. 1932	<b>FRAZER - NASH - B.M.W.</b> , 2-litre, Type 45, saloon .....	Feb. 1937	Riley Nine, 4-seater.....	June 1931
Alvis 11.9 h.p., 4-cyl., "Firefly" saloon .....	Feb. 1933	Frazer-Nash-B.M.W., 2-litre Type 55, 2-seater .....	Nov. 1935	Riley Nine "Monaco-Special" saloon.....	July 1930
Alvis 4-cyl., 12.60 h.p., 2-seater.....	July 1931	Frazer-Nash Anzani s.v. super-sports, 4-seater.....	Feb. 1927	Riley Nine "Brooklands" racing 2-seater .....	July 1930
Alvis 4-cyl., 12.50 h.p., super-sports 2-seater .....	April 1925	Frazer-Nash 6-cyl., 1½-litre (Blackburn) 2-seater .....	July 1933	Riley Nine "Brooklands" Speed model 2-seater .....	June 1929
Alvis 6-cyl., "Silver Eagle" 4-seater coupe (1929) .....	Aug. 1931	Frazer-Nash 4-cyl., 1½-litre push-rod o.h.v. "Interceptor" 3-4-seater .....	Jan. 1931	<b>SALMSON</b> 1,100 c.c. o.h.c., Grand Sports 2-seater .....	Jan. 1926 & Dec. 1926
Alvis 6-cyl., "Silver Eagle" 4-seater	June 1930	Frazer-Nash 4-cyl., 1½-litre T.T. Replica push-rod o.h.v. 2-3-seater	Nov. 1931	Salmson 4-cyl., twin o.h.c. Grand Sports 2-seater (1928).....	April 1931
Alvis 3½-litre saloon.....	Feb. 1936	<b>LANCIA AUGUSTA</b> 11.9 h.p., saloon	Sept. 1934	Singer 1½-litre, 6-cyl., Le Mans 2-str.	March 1935
Alvis Speed Twenty Vanden Plas saloon.....	Feb. 1935	Lancia Astura, 25 h.p., 8-cyl., James Young saloon.....	Nov. 1932	Singer Nine, 4-seater.....	March 1933
Alvis Speed Twenty Charlesworth saloon.....	Feb. 1934	Lancia Dilambda 31 h.p., 8-cyl., saloon.....	Dec. 1930	Squire 1½-litre, 4-cyl., 2-seater.....	Aug. 1935
Alvis Speed Twenty 4-seater.....	June 1932	Lea-Francis 1½-litre supercharged T.T. 2-seater (1929).....	June 1934	<b>TALBOT</b> "90" Brooklands-bodied 2-4-seater .....	April 1931
Amilcar 4-cyl. 1,100 c.c. "Grand Sports" 2-seater July 1927 & May 1925	1926 & Jan. 1925	Lea-Francis 1½-litre supercharged special T.T. 2-seater.....	Sept. 1933	Talbot "105" sports saloon.....	April 1934
Ansaldo 2-litre, 4-cyl. o.h.c., 4-str....	Sept. 1924	Lea-Francis 1½-litre supercharged "Hyper" 4-seater.....	Aug. 1930	Talbot 3½-litre saloon.....	March 1936
Armstrong-Siddeley 20 h.p., 6-cyl., 4-seater .....	July 1933	Lea-Francis 2-litre 6-cyl., "Ace-of-Spades" saloon.....	Nov. 1930	Talbot Ten "Rally" 4-str. ....	Oct.-Nov. 1936
Aston-Martin Mark II, 11.9 h.p., 2-4-seater .....	Jan. 1935	<b>MERCEDES-BENZ</b> Type 540K, 5.4-litre, 8-cyl., supercharged 2-str....	April 1937	Talbot "105" Vanden Plas 4-str....	Nov. 1932
Aston-Martin Ulster 11.9 h.p., T.T., 2-seater .....	Oct. 1935	Mercedes-Benz Type 500, 5-litre, 8-cyl., supercharged, 2-seater.....	Nov. 1934	Talbot "90" 4-seater.....	Nov. 1930
Aston-Martin Le Mans 11.9 h.p., 2-4-seater .....	June 1935	Mercedes-Benz 12.40 h.p., supercharged 2-seater.....	June 1925	Tatra 4-cyl., 1,154 c.c., coupe.....	Dec. 1932
Aston-Martin International 11.9 h.p., 4-seater .....	Aug. 1932	Mercedes-Benz 36.220 h.p. supercharged, 2-4-seater.....	April 1928	Terraplane, 8-cyl., 29 h.p., 4-str....	July 1935
Aston-Martin T.T., 11.9 h.p. racing 2-seater .....	Dec. 1931	Mercedes-Benz 38.250 h.p., supercharged, 2-4-seater.....	Nov. 1929	Tracta 1½-litre, f.w.d., 2-seater.....	March 1930
Aston-Martin 11.9 h.p. 2-seater.....	Jan. 1930	Mercedes-Benz 33.180 h.p., supercharged, 4-seater.....	Aug. 1927	Triumph 2-litre "Vitesse Six" saloon.....	April 1935
Auburn 30 h.p., 8-cyl. supercharged 2-seater .....	June 1935	M.G., 6-cyl., Mark I, 4-seater.....	May 1931	Triumph 10 h.p. "Gloria Southern Cross" 2-seater.....	June 1935
Austin Seven Boyd Carpenter 2-str.	Sept. 1930	M.G. Midget Jarvis 3-4-seater.....	Jan. 1931	Triumph 10 h.p. "Gloria" saloon	Jan. 1934
Austin Seven "65" 2-seater.....	Jan. 1934	M.G. Magna, 12 h.p. Abbey 4-seater	Feb. 1932	Triumph Nine "Southern Cross" 4-seater .....	June 1932
Austin Seven sports 2-seater.....	July 1930	M.G. Magna "L" 2-seater.....	Nov. 1933	Triumph Eight "Gnat" 2-seater...	Aug. 1931
Austin Seven "Brooklands" 2-seater	Feb. 1925	M.G. Midget "P" 2-seater.....	Aug. 1934	Triumph Eight, supercharged 2-str.	Dec. 1929
<b>BENTLEY</b> 3-litre, 4-cyl., speed-model, 4-seater.....	July 1924	M.G. Midget "J3" supercharged, 2-seater .....	May 1933	<b>VALE-SPECIAL</b> 832 c.c. 2-seater...	Aug. 1933
Bentley 3-litre, 4-cyl., 4-seater (1927)	Jan. 1932	M.G. Midget 750 c.c. Montlhery supercharged 2-seater (1931).....	May 1932	Vauxhall 30/98 O.E. 4-seater.....	Sept. 1925
Bentley 3½-litre, 6-cyl., Vanden Plas, 4-seater .....	Nov. 1933	M.G. Six Mark I, saloon.....	Aug. 1930	Vauxhall 30/98 O.E. 4-seater (1925)	Jan. 1936
Bentley 4½-litre, 6-cyl., Park Ward saloon.....	June 1936	M.G. Midget Double-Twelve racing 2-seater.....	June 1930 & Aug. 1930	Vauxhall 30/98 O.E. 4-seater (1924)	Dec. 1930
Bentley 4½-litre, 4-cyl., supercharged 4-seater .....	Jan. 1931	M.G. Midget "J1" 850 c.c. 2-str....	Sept. 1932	Vauxhall 20/60 h.p. "Velox" saloon	May 1929
Bentley 6½-litre, 6-cyl., long-chassis saloon (1928).....	Dec. 1936	M.G. Magnette "N" 4-seater.....	Feb. 1935	Vauxhall 20/60 h.p. "Hurlingham" 2-seater .....	Feb. 1930
Bentley 6½-litre, 6-cyl., special 2-str. (1934).....	May 1935	M.G. Midget "PB" 2-seater.....	April 1936	Vauxhall 17 h.p., 6-cyl., "Cadet" saloon.....	Sept. 1931
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