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MOTOR SPORT

INCORPORATING Speed

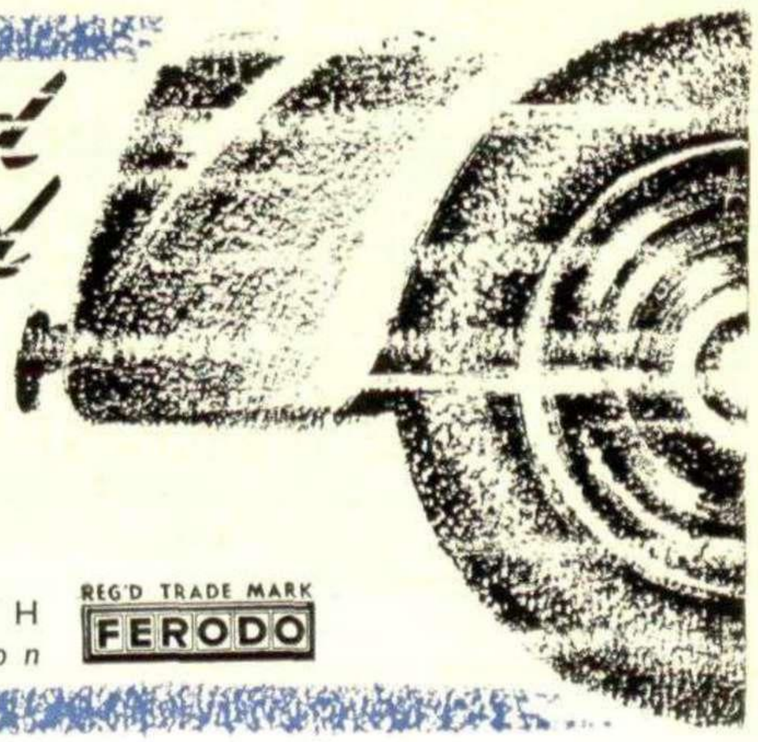
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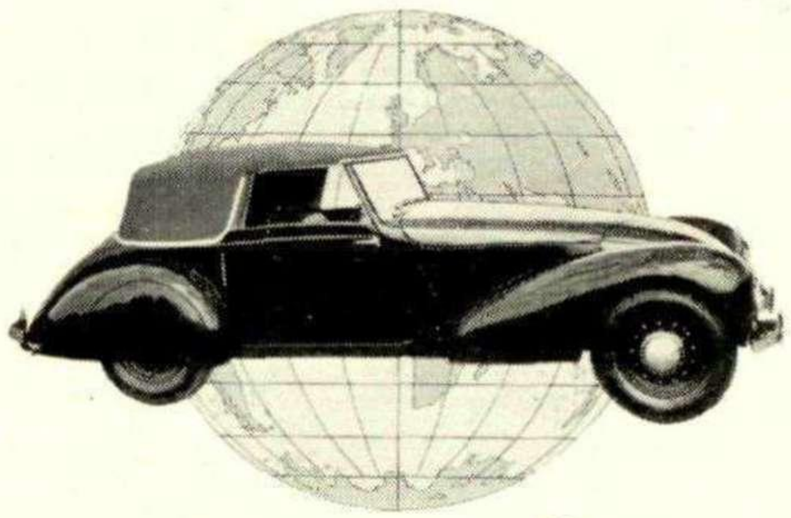
[Photo by L. Klemantaski, I.B.P.

Aerodynamically British—Peter Clark, who reviews his 1947 season in this issue, obeying the regulation "Hairpin R at end of straight" in his H.R.G. in the Manx Cup Race.

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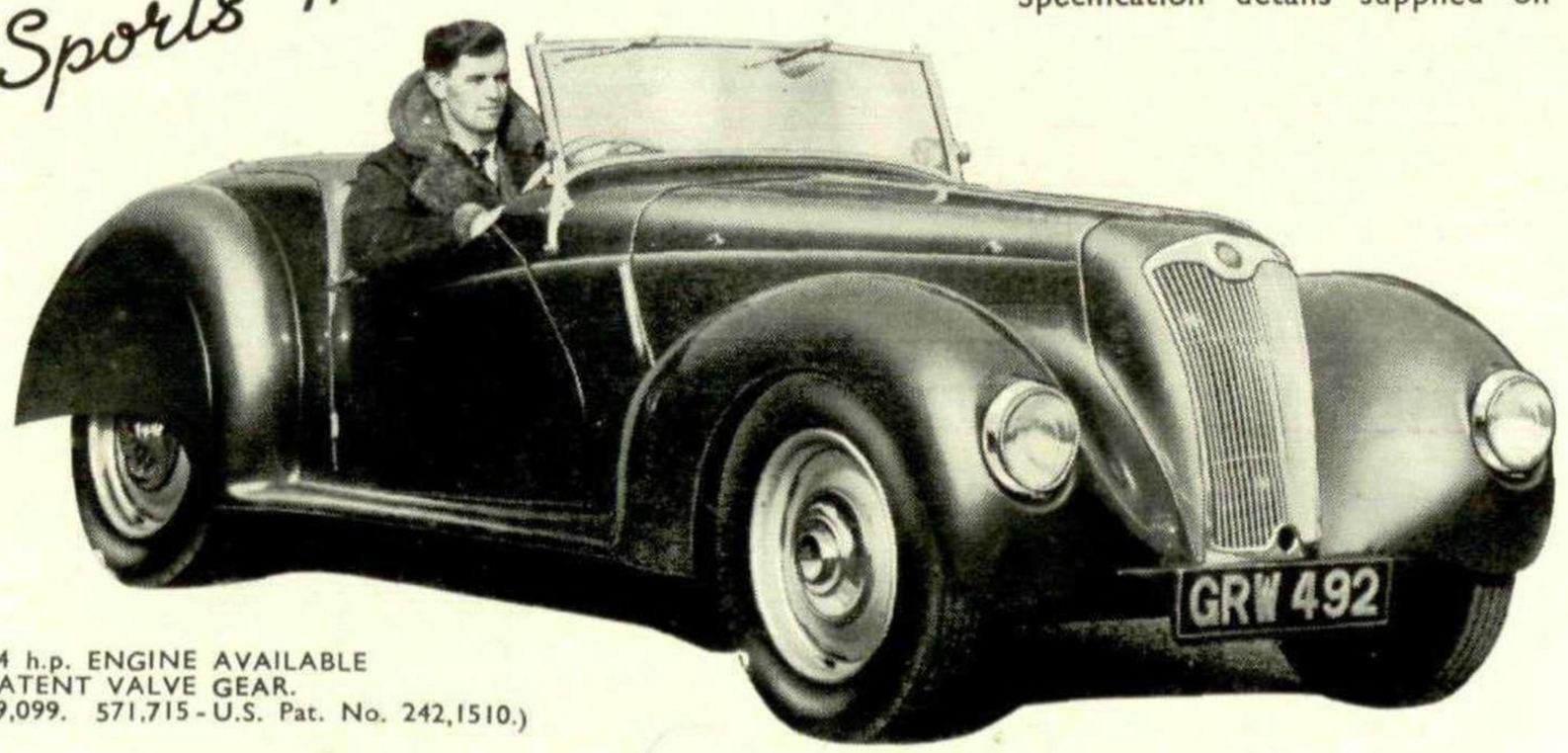
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Reflections on 1947

by

PETER CLARK

This well-known amateur driver describes his last-season experiences with H.R.G., Bugatti, Mercédès, Speed-Six Bentley and Nordec-Ford cars . . .

THE Editor has asked me to provide some notes on what he is graciously pleased to call " my versatile 1947 season." I fear it would be more accurate to say that I dabbled in a number of things and did none of them particularly well. It is also easy, when asked to write about oneself, to provide what sounds like a personal publicity boost-up instead of providing something which may be of interest or even assistance to other people. The latter is at any rate my earnest intention.

I see, on consulting my diary, that my first event in 1947 was the Hants and Berks Night Trial (Jan. 4th and 5th). This excellent event was described in detail at the time, the premium—as readers will remember—being upon good navigation, and fast, safe driving to make good the delays occasioned by navigating errors. We made two errors and a bloomer, which cost us ten minutes each, and nearly an hour, respectively, and our driving in between, if safe, was not spectacular enough to redeem any of this lost time. This was also the first of the only two competitive events in which I have ever run my blown "Nordec" Ford Ten, by which I imply no criticism of that hard-worked car, none of the " Nordec " parts of which have proved other than 100 per cent. reliable. The shortcomings of the car are really all my fault, in that I mistakenly thought I could just buy " any old " Ford Ten and recondition it as new. In point of fact I have never been able to obtain all the spare parts needed to make a real job of anything, and the gearbox and axle units have never been other than a re-shuffle of someone else's slightly less worn-out parts.

The following week-end I delivered the 1914 Mercédès to Mike Couper's showrooms in St. Albans, for his Racing Car Exhibition. I only remember that it was very cold and that the traffic lights in St. Albans must have been frozen up or something, for they kept me waiting so long that we boiled and then lost a plug or two. The cold at this time played many evil tricks. Returning one night in the " old " H.R.G. from a conference about the new one, I was so numbed and miserable that I failed to notice my own right arm was getting soaked with oil until, too late, there was no more oil within. Almost next day my wife charged headlong, in her powerful and aged 8-h.p. Ford, into a black and shiny gentleman in a—I mean a gentleman in a black and shiny Wolseley. Transport was really getting very low, and we almost had to use the Public Inconvenience.

At the end of January I was much cheered to receive, from Stuttgart, the camshaft drawings for the 1914 Mercédès, and almost immediately afterwards dismayed to receive a wire from Le Mans saying the 24-hour race was off again. The camshaft drawings settled and scrapped yet another of the myths by which that car has always been surrounded, namely, that at some period a touring cam was fitted to improve the tractability, at considerable loss of top-end urge. Yet another alibi gone west!

In the middle of February, still amid heavy snow, I went north with Pierre Maréchal, greatly admiring his sensitive handling of a vast Buick saloon, to collect my " Speed Six " Bentley van. This monstrous elephant, originally a short Park Ward saloon, had been owned before the war by my mother-in-law in the Isle of Man, and after a nasty crash in 1939 had been left to rot in a field because nobody locally would undertake the necessary repairs. On my demob. leave in 1946 I went to pay homage to the old wreck, chickens and all, and regret to say that enthusiasm altogether overcame discretion. I most unfortunately convinced myself that for a couple of hundred quid or so I could create the most wonderful Utility, which I could then sell for seven or eight hundred. I therefore had the thing swept up, almost literally with a dustpan and brush, and dumped on the mainland. I won't go into the eventual conversion cost, but nobody has so far offered me fourpence for it, so if not a wiser, certainly a poorer man am I.

Whilst these things were going on, three other things were taking shape. First, work was approaching completion on my " Aerodynamic " H.R.G., which I had decided, after taking it to the Paris Motor Show of 1946 and running it on the road for three months at home, to use only for sports-car racing and other suitable events. Secondly, I had sold my " old " H.R.G. and, wanting a vintage sports-car, obtained the ex-Bear " 3.3 " Bugatti " UV 28." Thirdly, the 1914 G.P. Mercédès was almost ready for a trial run after winter overhaul.

I drove the Bugatti to Eastbourne for the Vintage S.C.C. Rally and found it, as I have never ceased to do, most fascinating. It is a much shortened Type 44 chassis with Type 49 (full-pressure lubrication) engine and a delightful little 2-seater body—also four Solex carburetters and a tremendous urge to go backwards on wet roads. I think this is because the rear springs, originally intended for a much heavier body, make it extremely

stiff in roll, and I intend one day removing a leaf from each. I also noticed, at Gransden, that the tendency is not unique among Bugattis. Be that as it may, this particular specimen is quite outclassed, on wet English secondary roads, by a good H.R.G., as I discovered to my discomfiture when I convoyed John Wyer to the Prescott Members' Meeting.

Easter saw me " running-in " the 1914 Mercédès, with a merry little journey to St. Ives for the West Cornwall Motor Club's hill-climb event, Trengwainton. It rained almost the whole way down, we stopped only once for fuel and fodder, and I have rarely enjoyed a journey more. Somewhere near Okehampton (I think) we passed the Editor of MOTOR SPORT returning from the Land's End. His car, and a handful of others obviously from the same event, were almost the only vehicles we saw in the whole journey, and we put up a remarkable time without ever exceeding 80 m.p.h. On arrival at Trengwainton, the car went temperamental for the first time since I have known her, and on one occasion I held up the entire proceedings whilst the promoters towed me round Cornwall with their f.w.d. truck to get her started. It was, as I remarked earlier, the car's first run of the year, and rather an excessive lot of oil was coming off the valve gear. Some of this found its way into the near-side magneto, and so we lost a whole bank of plugs. Furthermore, as was discovered later, water was getting into No. 4 cylinder. It is small wonder then that the good lady went all temperamental, but at the time I must confess to feeling somewhat harassed and only hope I didn't " take it out " on the promoters, who were most helpful and charming.

Needless to say I drove abominably, the car seeming enormous and the hill minute. I seemed at all times to have at least three wheels overlapping the road, and from the photographs Jim Brymer took the car certainly was sprawling all over the place. It could scarcely have been worse placed for the corners, and as a consequence my times were appropriately disappointing. The journey home was as unpleasant as the run down had been enjoyable ; the traffic got thicker and thicker, the difficulty of keeping four cylinders firing at low speeds became increasingly acute, and eventually of course I took a wrong turning trying to avoid the traffic and stalled the engine in attempting to turn round. It is always one's innocent wife who suffers on these occasions.

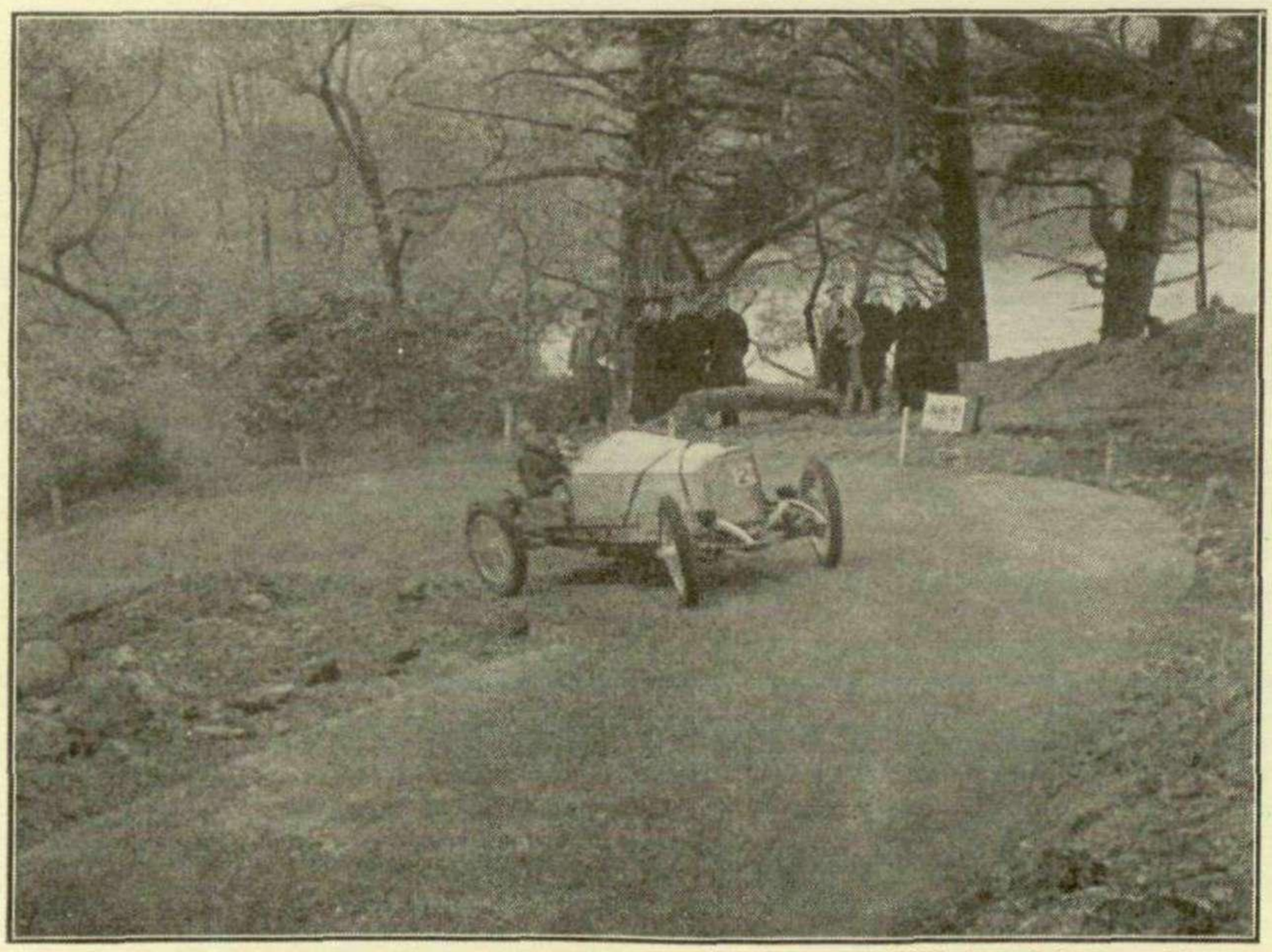
In the fullness of time the oil-soaked magneto returned from overhaul, and after the usual four hours' work getting it synchronised with the other one (you have a go), the equally usual ten-yard tow brought the machine immediately to life. Within 100 yards, however, we lost a cylinder, and so a return was made to the garage, thinking it was those * † * electrical people again. Whilst the experts were reading the instruction manual and wheeling out the sort of radar set that experts use for what you and I do with a screw-driver, the humble owner observed a fair stream of liquid issuing from the carburetter. Fearing it was his precious basic petrol (remember the days ?), he dashed to investigate and found it was only water. But his merry laugh soon faded as it dawned on him (*a*) that here was the cause of the missing cylinder and (*b*) that there must be a 'ole in a vital part. Removal of the induction manifold and carburetter soon confirmed the worst, and a remarkable feat of " soldering upside-down " was then performed by Charles Gale.

For all these reasons, I am particularly glad that the West Country journey was made. Without it the car could not possibly have been in proper fettle for the Open Prescott Meeting on May 11th, when we were successful, by a very narrow margin, in wresting the class record from Anthony Heal and the Fiat. This, and the subsequent run at Brighton when a similar improvement over 1946 times was obtained, justified all the extensive (and expensive) work done on the car meanwhile. But I don't know what to do next, for a sort of " equity " has been created whereby, all things being equal, the Mercédès gets up Prescott in about 55 seconds in the dry. I have no doubt a more inspired sprint driver than I am could knock at least a second off this, but where do we go from there ? I am equally convinced that there is more to come both from the Fiat and the Itala, so that some lively competition can be expected amongst the Edwardians when next they are allowed to meet.

The next milestone of 1947, for me, was Chimay, where the " new " H.R.G. made its debut. " Very nice but not enough of it " would be a brief summary of my reactions, and contrary to some of the gloomier forecasts no lumps fell off the new body. It was still nice and still insufficient in the Isle of Man where I obtained my first, and very valuable, experience of team management. The difficulties, be it said, rise not as to the square but the progression of the number of cars involved. Ask Walter Norton for his experiences with the " Jabberwork " trials and rally team, for his confirmation. After Chimay I went to Germany on business, taking the H.R.G., and still nothing fell off.

Shelsley, June 21st, provided the Bugatti UV 28 with her real outing of the year, and I was somewhat on my mettle because of the good times put up by Kenneth Bear with her before the war. My practice time of 46.13 sec. was, therefore, a disappointment, proving yet once again that I am no sprint driver, but on the day, in pouring rain, I was quite happy with 49.15 sec., if only because I expected to have an accident and didn't. My respect for the gentlemen who go up really quickly was enhanced on this occasion very much, for with a very modest b.h.p. available I seemed to be having wheelspin everywhere and all the time, so that obviously great delicacy of touch is called for with greater b.h.p. and lighter cars. Unfortunately, I couldn't run at Shelsley again this year, as by the time of the next meeting the Bugatti was de-crankshafted. I was also unable to run at Prescott, July 20th, as no other Edwardian entries were received and the class, therefore, had to be called off.

I did, however, run at Gransden, July 13th, and made there the fatal error of bringing too many cars. I had been particularly anxious for a try-out with the H.R.G. before the Isle of Man, but hearing the Bugatti race might not be fully supported I agreed to run in that also. Unfortunately this well-meaning effort led to the H.R.G. being scrubbed from its appropriate race and I only hope I was not excessively abusive to Tim Carson in my anxiety to have it reinstated. Even more unhappily the Bugatti broke its crankshaft in practice —entirely my own fault for persevering



[*Photograph by James Brymer*

The 1914 G.P. Mercedes " sprawling all over the road " at the Trengwainton hill-climb, April, 1947.

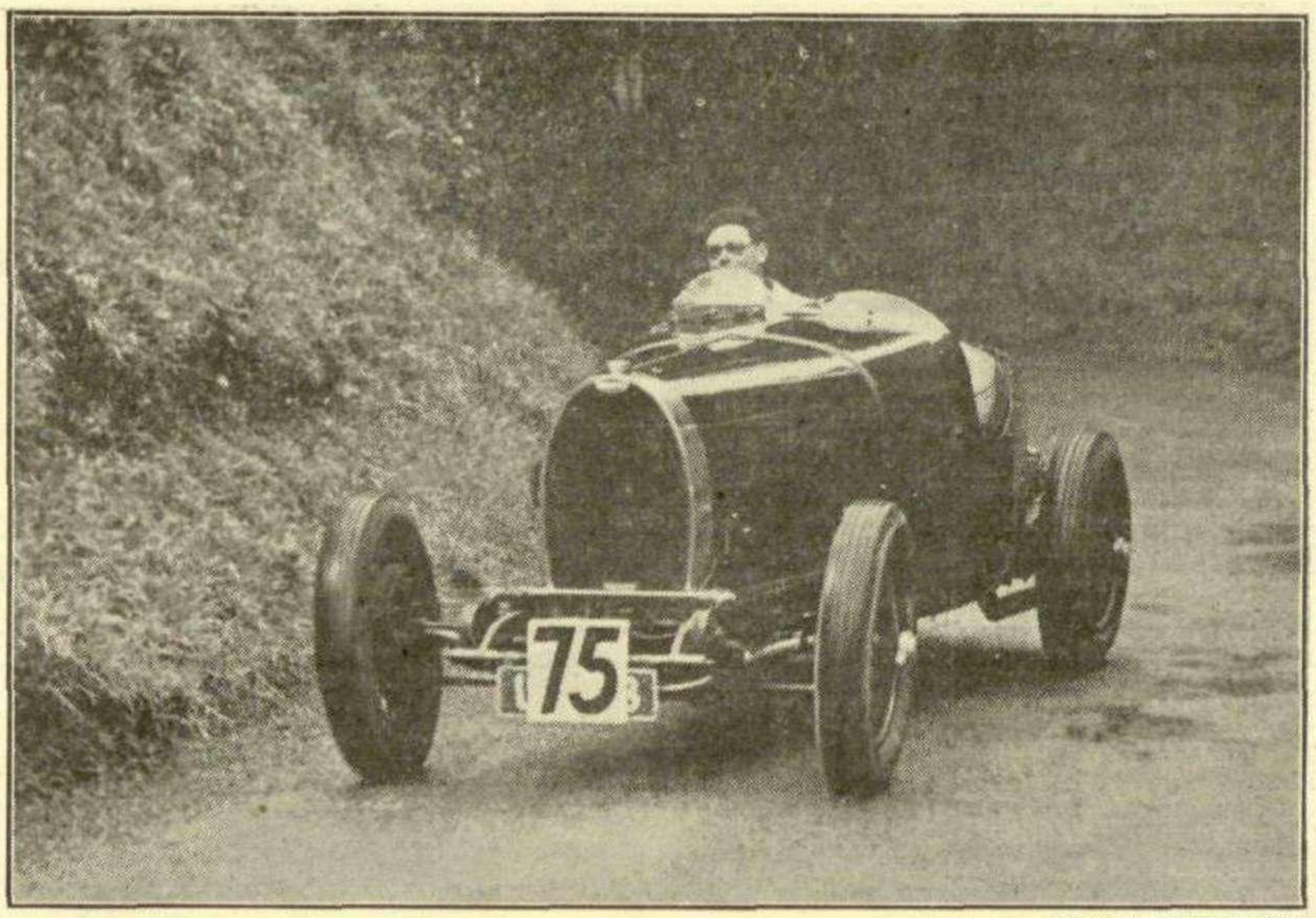
after the vibration damper flew apart—and at the eleventh hour I got, or thought I did, permission to run the H.R.G. in the first open race of the day. Apart from the fact that I was eventually disqualified, for which I bear no hard feelings whatever, the manoeuvre was a stupid one, because it meant that I had to transfer myself from the H.R.G. to the Mercédès (could two cars be more different?) literally on the starting line. As a result, lap 1 of the Edwardian race felt ham-fisted and far from happy, and if I say nothing else of any value in these notes I do say very strongly "*never* take more than one car to run in any meeting."

Was it perhaps poetic justice, for my wrangling with Tim Carson over the entry lists, that his son upset my trailer in the ditch near Royston on the sad journey home? At all events everything did at last reach home, Mercédès towing Bugatti and making light of it, Nordec towing flattened trailer, and a harassed M. Chambers in the H.R.G. dashing to and fro to shepherd his weary flock.

Next came the Manx race with the H.R.G.s, and on this occasion, having set ourselves strictly limited objectives, we had a reasonably satisfactory result. Scott's car ran at Ulster, mine at Chimay, but otherwise neither of them had raced before, and the difficulties we encountered were a direct reflection of the lack of events in which a new sports-car can be tried.

And so, after a Vintage Prescott-Brighton week-end with the Mercédès, and Prescott again just for the hell of it with the unsuitable new H.R.G., to bed—for longer than who can tell. I suppose many of us will remember 1947 as a season in which we felt a certain urgency, almost hysteria, to run in every possible event. In my own case I used three motor-cars to do so and had really a very limited amount of motoring none the less. I suppose one rushed to gorge oneself, after seven years' starvation in the war, and had indigestion as a result. Also one isn't getting any younger and there is the urge to do as much motoring as possible before one is too old. Also perhaps it didn't seem quite real to be virtually free of restrictions once again, and in one's heart of hearts one knew it was bound to be stopped too soon.

Anyway, let us hope that when motoring is again resumed in England it will be in an atmosphere of settled peace so that we can all devote ourselves quietly, each in our own way, to our particular aspects of the Sport. Meanwhile, despite every difficulty, British competitors will, I am sure, appear in some 1948 events. I hope they win.



[*Photo by Guy Griffiths*

The author's ex-Bear 3.3 Bugatti leaving the Esses at the June Shelsley Walsh meeting.

The Motor Industry Research Association

The annual report of the M.I.R.A. shows that during the past year research has been undertaken in such matters as stresses in vehicle structures, stiffness of such structures, filtration of lubricating oil, bearing materials, gears, fatigue strength of crankshafts, exhaust valve and cylinder head temperatures, leaded fuels, design and positioning of piston rings, etc. Mr. L. P. Lord has been elected President of the Association, which now hopes for an annual income of £70,000. Amongst members who are of particular interest to our readers are Aston-Martin, Ltd., Dunlop Rubber Co., Ltd., Ferodo, Ltd., Jowett Cars, Ltd., Lea-Francis Cars, Ltd., Lockheed Hydraulic Brake Co., Ltd., Lodge Plugs, Ltd., Joseph Lucas, Ltd., and the M.G. Car Co., Ltd.

Perhaps the most interesting part of the report, from our point of view, is that dealing with the prospects of a Proving Ground It reads as follows:—

"At the request of the S.M.M. & T., a special Sub-Committee, consisting mainly of technical experts from the motor industry, has, during the past year, devoted a considerable amount of time and thought to the general question of a proving ground for the motor industry—why it is necessary, what it should consist of, where it should be located, approximately what it would cost, and how it might be administered. This has involved visits of inspection to a number of sites, negotiations with various Government Departments, consultations with experts in roadway construction, exploratory discussions with a number of large manufacturers of vehicles and other potential users, etc. A comprehensive report submitted by this Sub-Committee to Council, was approved and sent to the President of the S.M.M. & T. on the 20th May, 1947.

"The plans of M.I.R.A., particularly the future location of the Laboratory, are, to a large extent, bound up with this project, and the verdict of the industry, as expressed by the S.M.M. & T., is now awaited.

"It may be mentioned here that, although there are certain difficulties involved in the establishment of a proving ground, not the least of which is the large sum of money required for its construction and maintenance, the technical side of the industry is generally in favour of such a centre and is agreed that a disused airfield provides the most satisfactory basis on which the necessary features can be built."

Such a proving ground, whether or not it provided facilities or was available for motor-racing, would fill a long-felt want amongst those whose business or pleasure has to do with the accurate testing of cars of high performance.

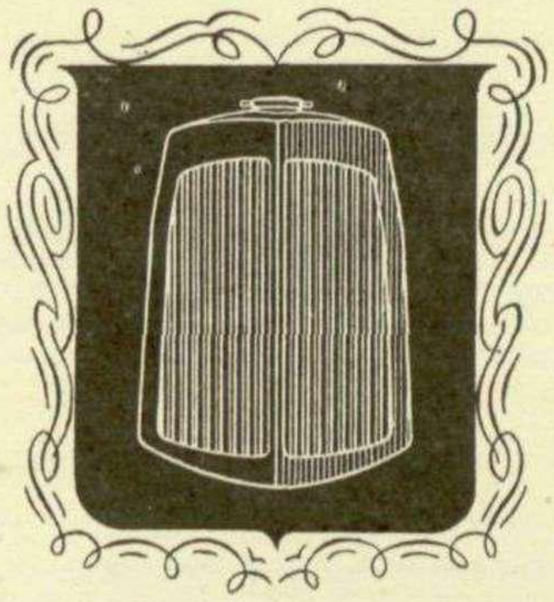
THE B.M.C.R.C. ANNUAL REUNION.

When the second post-war reunion of "Bemsee" took place at Bush House, Aldwych, Secretary Cliff Lewis had much pleasure in announcing that the membership had grown from 100 at the first post-war gathering to 301.

B.M.C.R.C. members had upheld the club's name throughout the season wherever road racing took place and the Club was proud to number amongst its members the finest riders of the present age, as well as names that have made motor-cycling history since the beginning of the century.

Everyone seemed to be present, from the Club's President, Sir A. Lee Guiness, and Chairman, E. C. E. Baragwaneth, down to the keenest amateur rider and equally keen racing spectators. In between much racing talk, wives and girl friends struggled to get the menfolk on to the dance floor, as it seemed to be the only occasion throughout the year when "the boys" hadn't got their bicycles with them.

During the interval the President presented the awards won during the past season and by the end of the evening the "mere males" appeared to have won the day for the various discussion groups completely outnumbered the dancers.—D. S. J.



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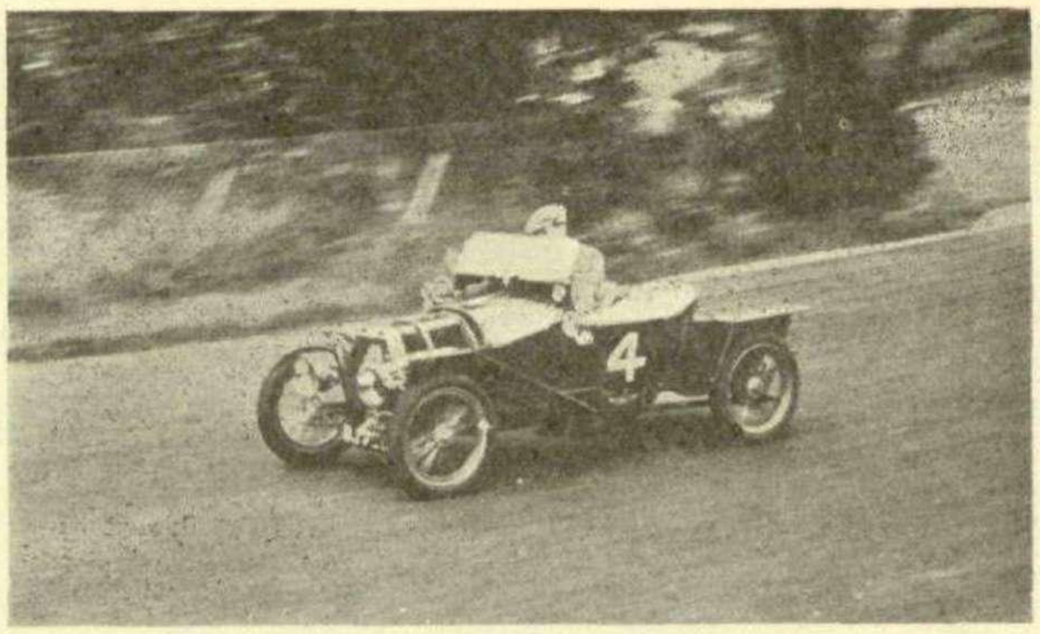
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★ VETERAN TYPES—XXXII

A 1910 TYPE 13 BUGATTI

by Cecil Clutton



IF the 1901 Mercédès was the first modern motor car the 1910 Bugatti was no less certainly the prototype of all modern, high efficiency light cars. The 1908, 3-litre "Prince Henry" Vauxhall, designed by Laurence Pomeroy, preceded the Bugatti in pioneering high crankshaft speeds as a means of attaining high power from a given engine capacity. Indeed, while the little Bugatti's 3,000 r.p.m. was regarded as distinctly daring in 1910, it looks quite modest when put beside the Vauxhall of two years earlier, which attained the same crankshaft speed with cylinders more than twice as large as those of the French car.

But, having paid this tribute to Pomeroy and Vauxhall, the Type 13 still stands out as one of the great events in motoring history; a car that is still modern in all essential particulars and performance, and displaying that supreme artistry which belongs to Bugatti alone among automobile designers down the years.

What sets the Type 13 apart from contemporary light cars is that it was a real motor car, at a time when other manufacturers were content with aircooled twins, the sketchiest of coachwork, and Heath Robinson systems of transmission and controls.

The *Voiturette* formula in the 1908 Grand Prix had already pointed the way towards the modern, multi-cylinder light car, but Bugatti was the first to make a successful example, and he was by a long way the first to put such a car into production. Having gone so far it seems strange that he did not go even further, for it is doubtful if the Type 13 developed any more power, per litre, than the "Prince Henry" Vauxhall. It seems very questionable if one of these engines could ever claim more than 20 b.h.p., although the general design makes it difficult to understand how it could have avoided producing about 28. Even so, with a modest frontal area and an unladen weight of less than 6 cwt. for the complete car, 20 h.p. was capable of giving a really useful performance, especially when coupled with the flat-topped power-curve which has characterised most Bugatti power units.

Another thing which made the Type 13 unique among its contemporaries was its high cost. At a time when no one owned a light car if he could afford anything larger, Bugatti set out to show that a small motor car was not merely a poor substitute for the real thing but that it was very much of a real car in its own right. So he lavished upon it perhaps even more craftsmanship and care than on most of his later models and sold it for the then very substantial figure of £300. And people bought the thing.

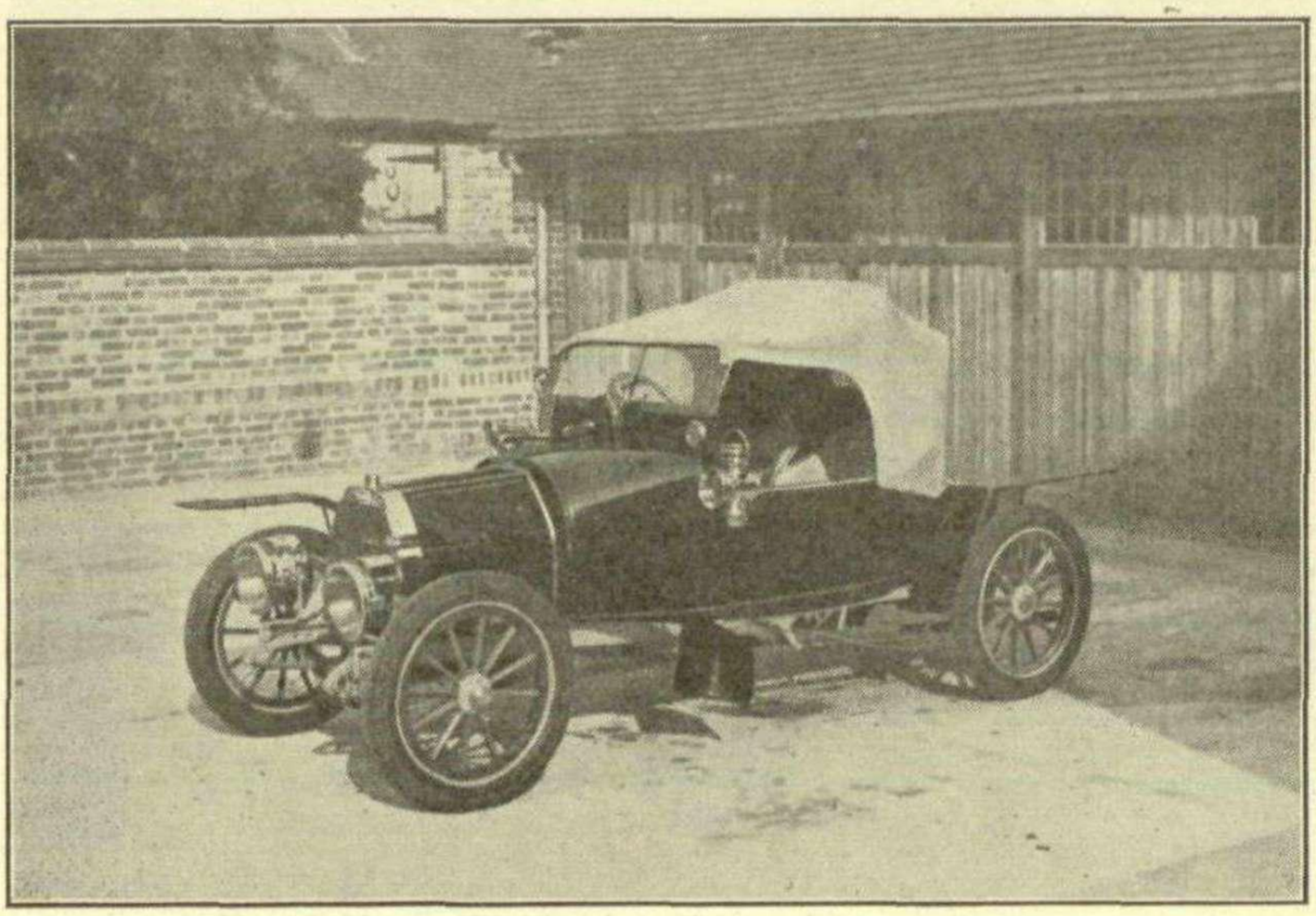
The critics were universally captivated by what Charles Faroux described as this "*boite de vitesse lilliputienne*," and the *Motor* remarked that "such a high-speed engine has only been made possible by the use of the finest and most expensive materials and the greatest care in construction."

In the light of subsequent evidence it seems doubtful if the machine shown to the Press in 1910 was the model which actually went into production, as the standard specification differs in several particulars from the contemporary descriptions. It is, therefore, not unlikely that the machine then tested was either the same that ran second in the 1910 "*formule libre*" Grand Prix, or one similar.

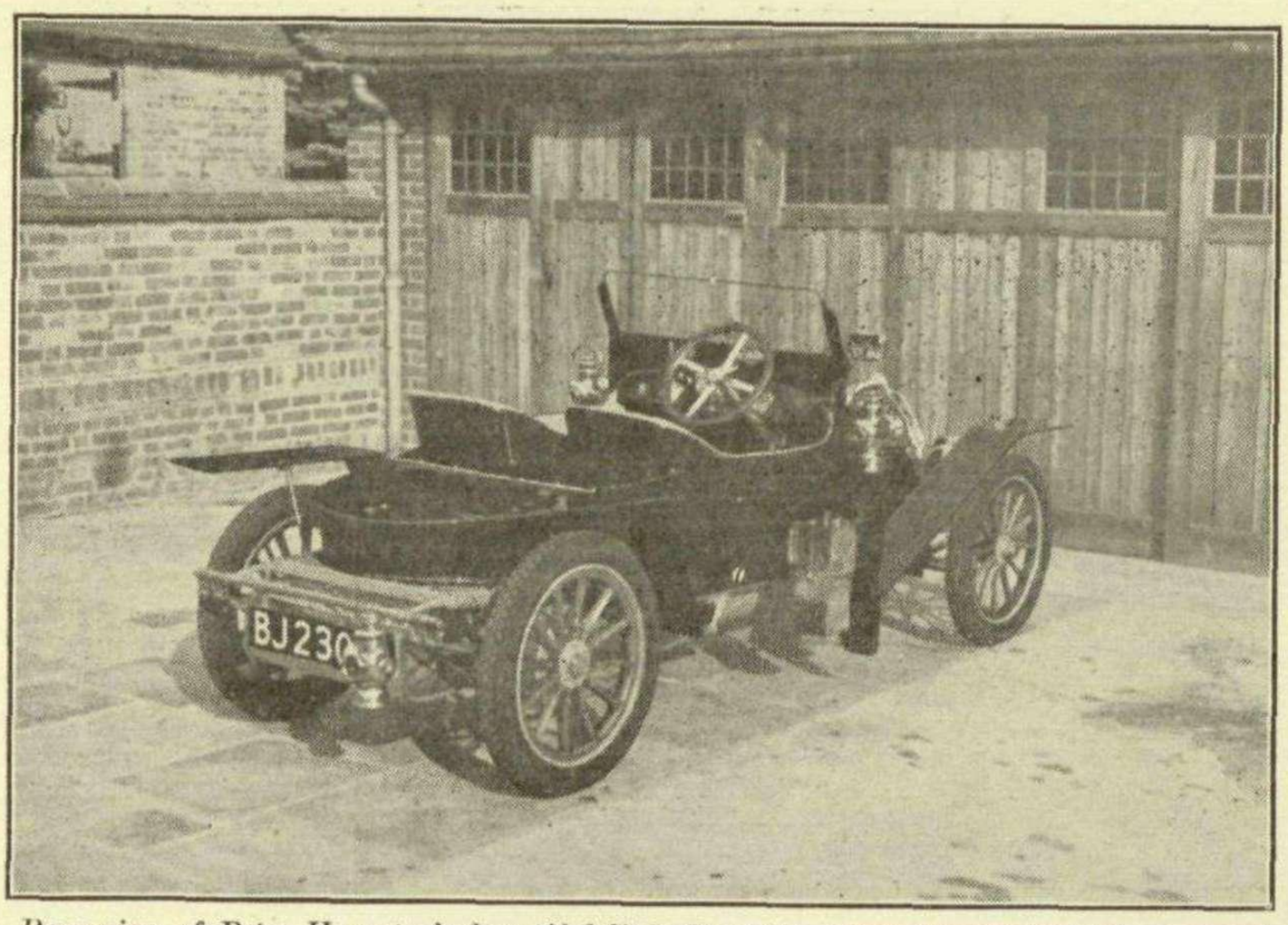
The engine dimensions were 65 by 100 mm., giving a capacity of 1,327 c.c. and, as already stated, maximum speed was put at 3,000 r.p.m., with cruising revs. at 2,300 per minute. In this connection, later catalogues vary somewhat about permitted crankshaft speeds and lower figures are sometimes mentioned, but, be that as it may, the standard car certainly proved itself capable of a safe 3,000 in practice. The crankshaft of the prototype was supported by two roller bearings (there was no centre bearing but the crank was, for that period, exceptionally stiff), but the production model had plain bronze bearings all round. The main bearings were lubricated by drip-feed and the big-ends by splash. The front and back halves of the sump were completely sealed from each other and there was no means of ascertaining the oil level in either—an embarrassing state of affairs which also exists in the 1908 G.P. Itala.

The overhead camshaft operated only two valves per cylinder through the traditional "banana-shaped" tappets, all enclosed and formed into one unit removable with the camshaft cover, the space in the top of the cover being filled with oil which lubricated the shaft by means of wicks, and had an overflow drain-pipe to the crankcase.

The amount of oil reaching the main bearings was metered at will by the



The Type 13 Bugatti with weather protection erect. It has wooden wheels and mudguards.



Rear view of Peter Hampton's beautiful little Bugatti. Note the polished copper petrol tank, and double ½-*elliptic rear suspension. The square object on the off side is the Rushmore acetylene generator.*

driver, who had two visible drip-feeds on the dash, fed from a main oil tank by air pressure. Pressure was maintained in the oil and petrol tanks by the exhaust, a not uncommon arrangement at that time, which was almost universally unsatisfactory and generally replaced by a manually operated air-pump.

The camshaft was shaft-driven from the front of the engine, the drive also operating a cross-shaft with a magneto and oil pump mounted at its two ends. The magneto advance and retard operated on the normal system, and not upon the vastly superior quick-thread arrangement which Bugatti later adopted giving maximum spark whatever the setting selected. There was, of course, a single carburetter and characteristic Bugatti four-branch exhaust manifold. There was an air "hot-spot" through the block, coming from a shielded exhaust manifold. The clutch was the customary Bugatti multi-plate pattern delivering power to a separate four-speed gearbox. The prototype seems to have had three-point mounting, which suggests that there had been trouble with cracked mountings owing to chassis movement, but on the production models the conventional Bugatti mounting for all types up to 44 was adopted. It is also doubtful if the prototype did not have closer ratios than the production boxes, being given at 1, 1.3, 1.82 and 3.2 to 1. The back-axle ratio was given as 3.43 to 1 (from a 14 by 48 crown-wheel and pinion), which, with 700 by 85 tyres, gave speeds of 23¾, 18¼, 13 and 7½ m.p.h., at 1,000 r.p.m., but the production car mostly used 12 or 13 by 45. Maximum speed was quoted at 60 m.p.h., at which speed the fuel consumption was no less than 40 m.p.g. At 2,300 r.p.m. the cruising speed was 55 m.p.h.

The prototype had a wheelbase of only 6 ft. 7 in. and a track of 3 ft. 9 in. and the all-up weight was under 6 cwt., whereas the earlier production cars had at least a 7 ft. 11 in. wheelbase and an all-up weight, with lamps, of nearly half a ton.

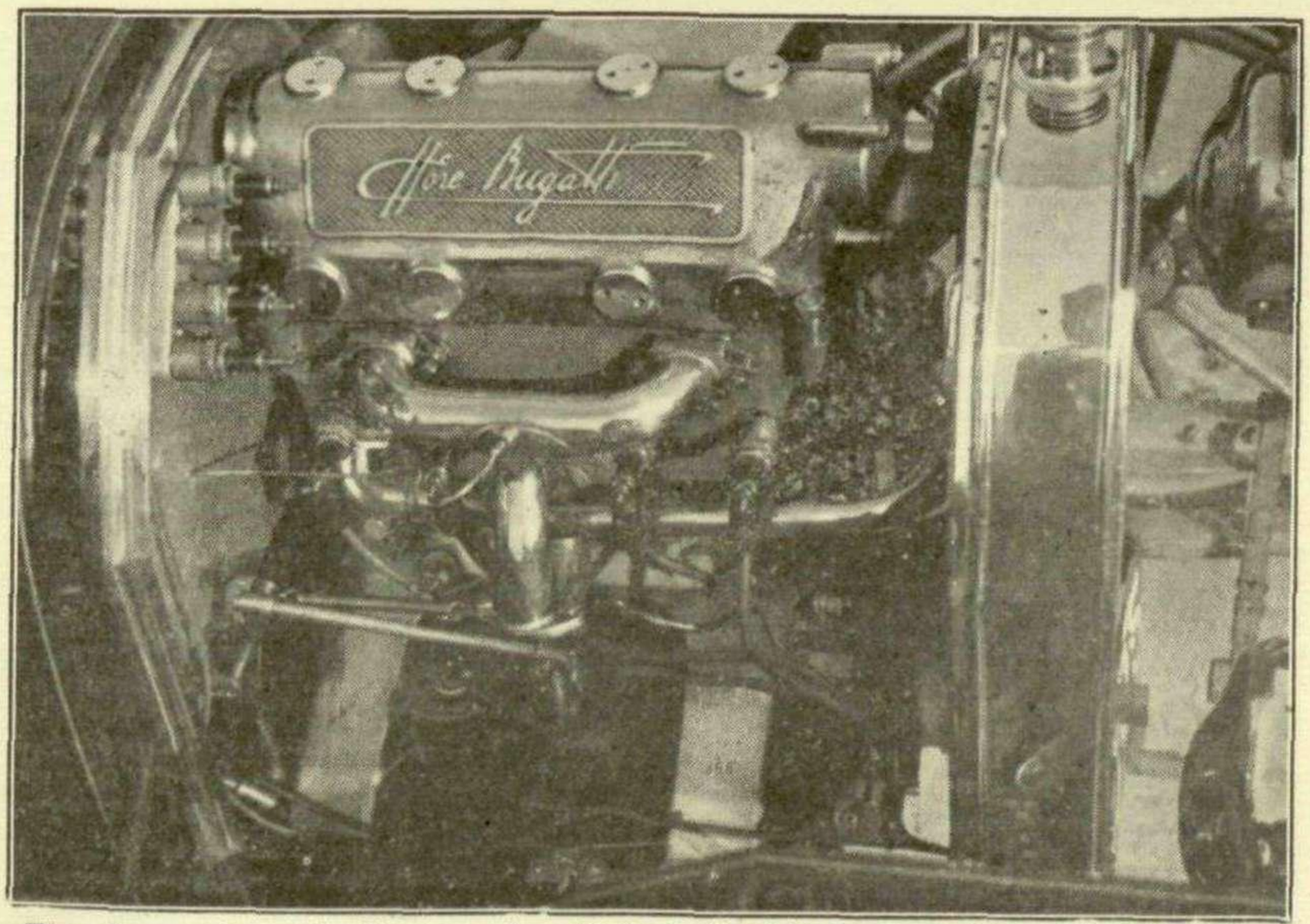
The earliest models had a quite non-Bugatti type of radiator, on which only the badge was traditional, and semi-elliptic springs all round. "Black Bess" has *twin* semi-elliptics in front, two complete sets of leaves being mounted side by side, of which M. Bugatti vouchsafed no more than the enigmatic but self-evident remark that the arrangement was "very unusual." The Type 13 had single semi-elliptics in front, but the double arrangement cropped up again behind. The rear axle and torque arm mounting were as fitted on every Bugatti up to 1940, with the exception of Types 41, 46 and 50 which had their gearboxes on the back axle.

The traditional pear-shaped Bugatti radiator and reversed quarter-elliptics behind were incorporated in the Type 13 around 1912, and it seems possible that some of the later cars went back to the 6 ft. 7 in. wheelbase; for the Type 13 continued to be listed until 1925, when the Types 22 and 23 (Brescia) and the first straight-eights were already current, and presumably it was only finally superseded with the introduction of the touring Type 40, in 1926.

Most fortunately, one of the earliest of the production cars, a 1910 model, exists today, being owned by Peter Hampton, who has restored it with all the thoroughness and artistry of finish which graces the whole of his superb collection of Bugattis. There is an unconfirmed tradition that it was once Ettore's own car, being finally sold to a Col. Dowson in this country.

"Dainty" is a disgusting word to apply to a motor car, but it is difficult to find any other epithet for a Type 13. Yet there is nothing flimsy about it. It has, indeed, all the qualities of a watch by Breguet who, making his still unsurpassed watches more than a century before Bugatti, is perhaps the only person who has brought the same ruthless unconventionality and artistic sensibility to bear upon mechanical problems as did Ettore himself. It is remarkable how much there is in common between the detail, finish and general layout of this, the earliest Bugatti, and even the latest of his products.

Hampton's car appears to have a rear axle ratio in the neighbourhood of 4.4 to 1, so that it may even have the 12 by 54 axle. The tyres now fitted are 700 by 80 mm., giving a speed of about 18½ m.p.h. per 1,000 r.p.m., and a cruising



The o.h.c. engine of the Type 13*—beautifully finished in the case of Peter Hampton's car. Note reflection of filler-cap in radiator!*

speed, at 2,300 r.p.m., of 43 m.p.h. And although 40 m.p.h. feels slightly happier, Hampton has, on occasion, kept up 45–50 m.p.h. for many miles on end. Doubtless owing to the low axle ratio, petrol consumption works out at the rather high figure of 30 m.p.g.

On the occasion when I had the privilege of driving the car it was probably not on quite its best form, but with two up, and changing into top at only 30 m.p.h., it accelerated from rest to 40 m.p.h. in 23 seconds. Pulling power on hills is altogether remarkable and the car will run smoothly at 10 m.p.h. in top gear and accelerate away briskly from that speed. Running on Hobson "Nonoil" plugs, no oiling troubles at all are experienced, the car will crawl through traffic without any difficulty. It nevertheless pays to use the gears fairly freely, and no synchromesh box could be easier to handle, as single declutch changes either up or down can be made with complete silence. One finger is sufficient to move the gear lever, and the clutch pedal operation is equally light. Except for bottom to second, when a slight pause is desirable, all upward changes are effected instantaneously. Top gear is forward in the gate, as with most early Bugattis and all racing Types, and the gears themselves are commendably silent.

Hampton's car distinguished itself considerably during the 1939 season, when it climbed Prescott in the excellent time of 82.87 sec., which gave it an easy Edwardian-Class win on the Clutton formula, and it also averaged 39.32 m.p.h. over three laps of the Crystal Palace circuit, from a standing start.

The steering has all the Bugatti magic and indeed, it may be said that the steering characteristic is the only thing common to the handling qualities of this, the smallest true Bugatti ever made, and the "Royale," with more than twice the wheelbase and ten times the engine capacity. Even if Bugatti had made cars that were in every other respect bad, they would surely have sold on the steering alone. The Type 13 steering is, naturally, light, even for a Bugatti, and the whole machine is essentially one to be controlled with the fingers and toes, rather than with the hands and feet.

Hampton's car has no shock absorbers and gives an extremely comfortable ride, the rear springs, in particular, being very flexible. With so short a wheelbase considerable pitching is set up on a bumpy surface.

Among its contemporaries it is difficult to think of any but the baby Renault which can in any way compare with the Type 13 Bugatti. And good and reliable car as the Renault was, it had only two cylinders and quadrant gearchange, and it was, in all essentials, a veteran car with an extreme maximum of 35 m.p.h. But the Bugatti was in all essentials a modern car, and a sports-car at that. Even when 37 years old, it is still a car in which one would set out cheerfully on a long journey, confident of passing a large proportion of other cars on the road. In his Type 13 Bugatti Hampton undoubtedly possesses a splendid example of one of the most historic cars ever made.

LETTERS from READERS

Sir,

I am left almost (but not quite) speechless with indignation on hearing suggestions for the inclusion of one or more foreign drivers in the final B.R.M. team.

Already, too many people in the world think we are going soft. It seems to me that hiring foreign drivers for our cars would be a very good way of confirming it.

Quite apart from that angle, it is fantastic to suggest that we cannot find half a dozen residents of the British Isles who can be entrusted with a fast car.

During the war, men were needed in thousands to master from scratch things like Hurricanes, Typhoons and Spitfires. (To say nothing of Cromwells and Churchills!) I have no recollection of any foreigners being hired to handle these machines because our chaps lacked the necessary quick reactions, skill or guts.

I am, Yours, etc.,

Horley J. E. G. FAIRMAN.

[We submitted the above letter to Mr. Raymond Mays, who replied as follows:]

Sir,

It was kind of you to write me on this matter. I must say that I do agree with Mr. Fairman's remarks and that certain English drivers, given the facilities for serious training and practice on suitable cars, should be able to hold their own against the best of the foreign opposition. The whole point is, through lack of a track and the shortage of racing cars, English drivers are at a great disadvantage at the moment, but once these can be overcome, I feel strongly that we should certainly be able to produce as good as the best elsewhere.

I also strongly feel that it is our duty to try to find "new blood" in the racing world, and as I have stated many times, nothing would give me greater pleasure than to be able to produce the facilities for choosing and training young men. At the moment this is very difficult, but I am still hoping that something on these lines will be able to be arranged before it is too late. All good wishes.

I am, Yours, etc.,

Bourne. RAYMOND MAYS.

* * *

Sir,

I was most interested to read the article in your January issue entitled "Trials Car Trend," by your contributor "D.S.J."

As the constructor and co-designer of the Fairley version of the Austin Seven-cum-Ford Ten, I would like to point out that this machine was first put on the drawing board in an Army workshop in Tavistock in 1940 and was the culmination of much discussion between four enthusiasts, Tony Smith, Bob Fisher, Roy Cleaver and myself.

A chassis was prepared for the engine and then the fortunes of war split up the quartette.

In February, 1946, the scheme was continued in the workshops of James Fairley & Sons Ltd., of Sheffield, and the first production model won its first trial in November 1946, the Autumn Sporting Trial of the North Midland Motor Club, against the fiercest opposition in the north.

The Wharton car first appeared with its Ford Ten engine for the Christmas Trial of the Sheffield & Hallamshire Motor Club of 1946.

The Fairley car is, in fact, now in production and is offered as a streamline two or three-seater or as a trials car. May I wish you the best of luck for 1948 and may all our trials be muddy ones.

I am, Yours, etc.,

H. C. W. PHILLIPS,
General Manager,
James Fairley & Sons, Ltd.

Sheffield, 2.

Sir,

Seeing your excellent magazine rush into verse lately, I wondered if you could use this: (Pause and clear throat.)

I admire the constitution of Great Britain,
And look upon our Parliament with awe.
I respect each rotund, pompous politician
Who sagaciously decides my country's law.
But by far the greatest effort of these he-men,
And of quite the greatest benefit to man,
Is the law (enforced by our great C.I.D. men)
That you must not buy your petrol in a can.

I admire the magisterial condemnation
Of the felons in the dock, who cringe and cower,
For driving, to the danger of the nation,
At thirty-point-0-½-five miles per hour.
It's the motorist who threatens us, uncaring,
A lawless man and treacherous, to boot;
Squandering our dollar stocks by daring
To drive twelve yards from his permitted route.

Occasionally you get a daytime stabbing,
But the major crimes all happen in the night.
Who cares about a simple smash-and-grabbing
While a motor-car is parked without a light?
Don't give these criminals a basic ration,
Tax them more. Suppress the selfish toads.
Look down on them with righteous indignation.
What right have they to use the ruddy roads?

"FOU DE L'ESSENCE."

BOOK REVIEWS

"GRANDS PRIX, 1934-1939," *by Rodney Walkerley* (*Motor Racing Publications, Ltd., 7s. 6d.*).

In this book Walkerley has done a job which should have been undertaken before—he has written of motor-racing so that the uninitiated shall discover what it is all about.

In forty spirally-bound pages he outlines how Grand Prix racing came into being, describes various G.P. circuits, devotes a little space to technicalities, attempts a definition of the art of G.P. driving, and captures for his reader the atmosphere of an important road race—this last "a subtle blend of pre-war Boat Race Night and Derby Day."

The settings, accessories and machines used by the man who, as the author sees it, "is not only confronted with Nature in her many moods of rain and shine, warmth and cold, but with natural forces which seek to pluck him to destruction as he skirls a corner or thunders at 200 m.p.h. down the straight," who "not only faces these enormous forces but who seeks to harness them to his will, using them to speed him on his way," have a place in "Grands Prix, 1934-1939."

To the schoolboy and the younger followers of motor-racing, I am certain this album will fill a long-felt want. Whether seasoned followers of the Sport and the technically-minded will receive it so gratefully, I do not know. It is disappointing that the actual *history* of the great races of 1934 to 1939 are covered by three pages of tabular results at the end, rather than by the text. It is disappointing, again, to find only about four-and-a-half pages devoted to the technical development of the racing cars of a period when Grand Prix racing had reached its highest peak.

Certainly the presentation of divers circuits, of classic and spectacular incidents, of accidents, and of famous victories, written in the "popular" style, is well off-set by a whole host of photographs taken by the late Robert Fellowes. The pictures are not always very clear, however, so that the use of larger blocks, slightly better reproduction and more careful "bleeding" in some instances, and more careful layout of some of the "spreads," would seem to be deserved. These photographs, of which there are 90 of various sizes if I have counted correctly, do not achieve quite as high a standard as those of the better present-day photographers.

I had hoped that "Grands Prix, 1934-1939" might have been an absorbing history of the closing period of racing before the war and, as such, a valuable reference.

I am reluctantly forced to say that this is hardly the case—indeed, the author himself admits that he has not attempted an historical or technical book. "Grands Prix, 1934-1939" is not in the same class as George Monkhouse's masterful work, "Motor Racing with Mercédès-Benz."

The chapters on "What was—and is—Grand Prix Racing?" "The Art of Grand Prix Driving" and "The Grand Prix Atmosphere" in this Scrapbook No. 2 are very well written indeed, and form an excellent introduction to the sport.

The more technical chapters contain a number of rather obvious errors and while I appreciate how easily mistakes creep into the best books, in the interests of accuracy, I wish to take the liberty of correcting those I spotted. I cannot agree that the 1934 G.P. cars "were not so very much slower than the Land Speed Record itself." They were at least 82 m.p.h. slower. The Pescara lap record is given both as 90.76 m.p.h. and nearly 98 m.p.h., the Coppa Ciano is not mentioned, and the Donington G.P. is quoted as held for the first time in 1936 in two instances, after which the result of the *1935* race is given. The Mercédès-Benz which did 228 m.p.h. on the autobahn was the V12 record car, not the 1936 $4\frac{3}{4}$-litre straight-eight. The explanation of the need for lower geared steering on modern G.P. cars is very confusing and the 1936 Auto-Union was first 6.5-litres, at Tripoli, then 5.8-litres, not 5.9-litres rising to 6.8-litres as stated. These cars changed their long exhaust pipes for stubs in 1935; the illustration caption is correct but the text says 1936. The 2.8-litre Alfa-Romeo P3 of 1934 is something new to me, and the 2.9-litre was hardly introduced *late* in 1934. It is true the P3 rear springs were changed from $\frac{1}{2}$ to $\frac{1}{4}$-elliptic, but the significance of the latter is that they were reversed, as on a Bugatti. It is hardly true to say that a transverse rear spring was used later, as this was only done experimentally. Nor did the 3.8-litre Alfa-Romeo have torsion-bar front suspension as a picture-caption suggests. The picture actually shows a V12 car, anyway. The Type 158 Alfa-Romeo's camshafts are driven not from the *back* but from the *front*.

I cannot recall the $2\frac{1}{2}$-litre *six*-cylinder Maserati of 1934 later "enlarged to 2.9-litres." If the straight-eight engine is implied I am still puzzled, for the $2\frac{1}{2}$-litre is credited with about 270 b.h.p. at 5,800 r.p.m. and some 160 m.p.h. and the 2.9-litre with a "corresponding gain in power and speed," yet in the very excellent book which the same author compiled for the Victoria League Exhibition (an excellent two-shillings worth, with many new photographs) he quotes Prince Chula's "2.9" Maserati as giving exactly the same power, at the same r.p.m. It is further stated that the 4.6-litre V8 was put into the same chassis, which later had torsion-bar rear suspension; actually only the V8 cars had the chassis suspended thus.

Curiously, the 8CTF Maserati is disposed of in three lines. The earlier $1\frac{1}{2}$-litre Maseratis had $\frac{1}{2}$, not $\frac{1}{4}$-elliptic rear springs and the 16-valve car appeared not in 1938, but in 1939. It only had two superchargers in *experimental* form at that period of development. A photograph captioned as of the 1936 4.7-litre Bugatti shows the 1938 3-litre car of that make, which ran at Cork. The "3.3" Bugatti (that it was a 3.2-litre until the late summer of 1934 is a point new to me, although I recall the "2.8") made its first appearance at Monaco in 1934, not in the French G.P. as implied. Its mechanically-operated brakes are described as unconventional, but Alfa-Romeo had such actuation until 1935.

It would have been more accurate to say that Rosemeyer became the Auto-Union star in *two* short seasons rather than in "a few seasons." On page 31 Mercédès are quoted as having introduced "self-locking" differentials in 1936, but page 22 told us that "the Z.F. self-locking differential" was adopted in 1938. Again, page 22 says "the fuel, of course, was not petrol, but a blend including alcohol, benzole, ether, acetone and tetra-ethyl-lead . . .," but page 31 remarks, of the same cars, "nor consuming too much *petrol*!" No result is given for the 1937 Masaryk G.P., won by Caracciola, nor was the Avus track exactly "dismantled."

True, Walkerley has done an admirable job in explaining motor-racing to the beginner, and the book gains in this respect by making brief reference to racing from the earliest times and by concluding with a chapter on the 1945-47 seasons and the prospects for the future. All most useful to the uninitiated. But I wish that the author, as "Grande Vitesse" of *The Motor*, had remembered his older students.—M. C.

"THE ENDLESS QUEST FOR SPEED." *First and Second Series* (*Iliffe & Sons, Ltd., 5s. each*).

Those of our readers who recall the series of coloured plates, depicting famous racing and record-breaking episodes, which were given away with our weekly contemporary *The Autocar* many years before the war, will be interested to know that some of these have been reprinted and bound in two cardboard folders, priced at 5s. each. The first contains plates covering twelve historic events from 1899 to 1912, the second twelve plates of happenings ranging from 1913 to 1927. The pictures are reproductions of paintings by the late Gordon Crosby and are unbacked, thereby being eminently suitable for framing. S. C. H. Davis contributes a brief preface to each issue and each illustration is captioned. These folders of attractive colour prints constitute yet further additions to the many motor-racing publications that have come on the market in the last few years. Not everyone likes Crosby's style, which, certain critics say, tends to inflate even the largest cars of real life, so that, for instance, Brooklands is dwarfed in comparison. Those who are Crosby fans will consider ten shillings very well spent on these two books.

"FLOYD CLYMER'S 1947 INDIANAPOLIS RACE HISTORY" (*Clymer Motors, Los Angeles*, $1.00).

Floyd Clymer has issued a most comprehensive supplement to his main history of the Indianapolis event. It runs to 55 large pages, numbered to run on from those in the larger book, and contains all the information on last year's 500-Mile Race that anyone could want, including some interesting views of the 3-litre Mercédès-Benz, driven by Duke Nalon and re-named the Don Lee Special on arrival in America. Race rules, drivers' signatures, technical data and drawings by Laurence Pomeroy, and details of the timing apparatus, etc., add to the value of this latest Clymer scrapbook.

The Trend of Racing Car Design

THE past season's racing has certainly been an interesting one, but it is not possible to say that the trend of the design of racing cars has followed any one path ; far from it, in fact. Throughout the season there has been a tendency to dart off in numerous directions, so that it is difficult to predict exactly what the 1948 season will produce. In the Grand Prix field the tendency was to build to the two extremes of the Formula, namely, supercharged 1½-litre and unsupercharged 4½-litres. As to which was the more successful was decided to a large extent by race organisers, as all the pre-war circuits are not yet in use again and there is still a tendency to use rather slow, twisty circuits, of a temporary nature, probably in an endeavour to reduce expense. Given the right circuit the highly supercharged 1½-litre car undoubtedly holds sway, although by reason of reliability the unblown 4½-litre has always been in the picture ; however, towards the latter part of the continental season we have seen startling things accomplished by the comparatively new type of racing car, the unblown " eleven-hundred," and on circuits of the " round-the-houses " variety they are more than a match for the larger cars. Finally, the F.I.A. surprised a lot of people by announcing an additional Formula for 1948 Grand Prix racing, the first being, as already mentioned, for supercharged cars up to 1½ litres and unsupercharged up to 4½ litres, to become Formula I, and Formula II being for supercharged cars up to 500 c.c. and unsupercharged cars up to 2,000 c.c. This announcement came almost simultaneously with news of new unblown 2-litre cars from Italy, so that it looks as if the Formula II was based on fairly popular opinion.

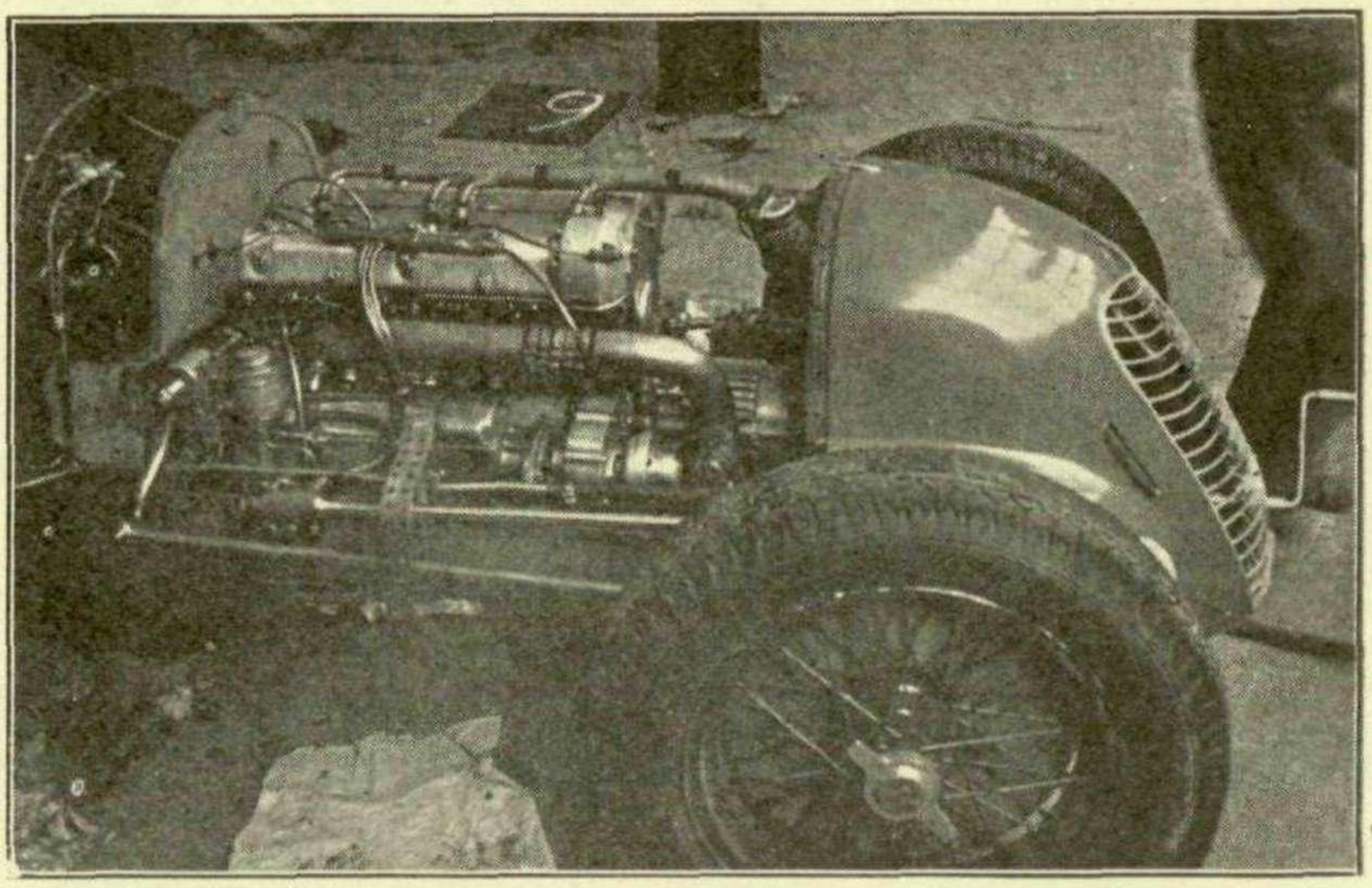
At the moment the general trend, or perhaps it should be interest, is towards the unblown 2-litre car, probably because it is relatively cheap to build and operate, compared with highly-supercharged 1½-litres, and is still capable of a satisfying performance. There is little doubt that the day of the large-engined racing car is past, and the emphasis is now on small cars, combining a reasonable power output and ultra-light weight, without undue stressing.

It is interesting to reflect that the changing trend experienced towards the end of this season is very similar to that experienced just before the war in 1939. Then, the 1½-litre blown cars were viewed as an *hors d'œuvre* to the 3-litre Grand Prix events, but in August of that year it was decisively demonstrated that they were very nearly a match for the existing 3-litre cars and interest definitely focused on the 1½-litres. Now we have a parallel in the ultra-lightweight " eleven-hundred," which is rapidly proving capable of competing with the 1½-litres under present-day racing conditions. Further, in 1938 the Formula that was introduced was aimed at making all capacities, from 3-litres supercharged and 4½-litres unsupercharged downwards, capable of racing on the same level. That it took, not counting war years, four years for this to begin to come about can be attributed mainly to the German teams, who advanced so rapidly, technically, that no one else could keep pace. Had the Germans not been excluded from Grand Prix racing the present state of affairs would never have come about. That it has come about is highly desirable and one for which many people wished, and the fact that it is now possible for the first three positions in a Grand Prix to include blown 1½-litre, unblown 4½-litre and unblown 1,100-c.c. cars, will please a great number of people, especially those who decry a sweeping one-make victory of the type so often seen before the war.

We must not forget, however, that the major contributory factor to this " motor-racing paradise " has been the short, wriggly circuit with a lap speed of 60-65 m.p.h. Is it possible that the people who have been drawing up Grand Prix Formulæ in the past have been tackling the problem from the wrong source ? Whether the existing state of affairs will last remains to be seen ; possibly it will, for quite a time, as the racing car manufacturers do not seem to have settled yet into any clearly defined channel.

That, then, is a general résumé of the many trends that exist today in the Grand Prix field ; whether one particular type of car will succeed or whether entry lists will continue to be made up of numerous types depends to a great extent on the world's economic situation, for any type of racing is expensive and the various firms will have to keep a watchful eye on their expenditure. As already mentioned the new Grand Prix class of unblown 2-litre car holds many attractions.

Taking a general view of the 1947 Grand Prix racing season we see as the outstanding item the unchallenged supremacy of the 1½-litre Alfa-Romeos. These Type 158s are virtually the same as when they were first introduced in 1938, except for improvements in the supercharger arrangements. Two-stage supercharging, first introduced by Mercédès-Benz in 1939, was for a long time breathed of as a mystic " something " that could only be considered in the highest circles ; now it is a *sine-qua-non* of the 1½-litre Grand Prix car and, apart from Alfa-Romeo, is used by Maserati on the 4 CLT, by M. Lory on the French C.T.A. Arsenal and on the new Alta, while the B.R.M. and Cowell-Aspin will doubtless include it in their specifications. It is interesting that the first practical application, on a racing car, in this country should be on a home-brewed " Special," the ingenious Emeryson. So far the E-type E.R.A. has failed to stomach a high-boost from a single-stage so that it is unlikely that it will enjoy a two-stage layout ; however, its single Zoller is capable of producing as much boost as two stages of Roots blowers. All existing examples of two-stage blowing are by means of the Roots-type of instrument, though there are " blue-print " arrangements for centrifugal layouts, with their own variable-speed gearboxes. The Type 158 uses two blowers along the near side of the block, driven from the timing gears at the front by an open shaft, the first stage and larger of the two blowers being at the rear. A casual glance under the bonnet of these cars is reminiscent of the P-3. Maserati uses two Roots-pattern blowers in front of the engine, one above the other, with the first-stage instrument in the lower position,



Although they had developed a two-stage version, Maserati continued to race their single-stage-supercharge 16-valve, 4-cylinder cars in 1947. On the two-stage cars the four water off-takes from the head, seen here, are replaced by six similar pipes, and the second-stage blower is mounted above the existing one, with a heavily finned delivery pipe. Note the torsion bar for the front i.f.s., replaced on the Sports A6G Maserati by coil springs.

and Alta uses a somewhat similar layout for its 4-cylinder, 78 by 78 mm. Grand Prix engine, only in this instance the blowers are mounted on their sides, still one above the other. The C.T.A. Arsenal uses two Roots-type blowers mounted side by side in front of its engine, while the layout on other Grand Prix projects still remains on the secret list.

Cylinder layout is undoubtedly about to undergo a radical change, and Alfa-Romeo have given us a taste in their as yet unraced Type 512, with its flat-12 arrangement, while Maserati and Cowell Aspin are both mentioned in connection with this layout, and the B.R.M. is rumoured to have a flat-16 arrangement. Alta stick rigidly to four cylinders, as have Maserati for practical purposes this season, E.R.A. to six cylinders, while the C.T.A. uses a nice conventional V8 layout. Twin o.h.c. have long been accepted practice and will probably remain so until the advent of rotary valves or two-strokes. Cooling systems have not undergone any radical changes, liquid cooling still being universal, although with the increased powers obtained from the higher boosts, detail modifications have been made. Alfa-Romeo now split the take-off pipe from the cylinder head and take the two branches direct to the radiator core, by-passing the header tank, and Maserati, on the two-stage engine, uses one take-off pipe from each pair of exhaust valves, plus an extra one at either end of the head, all six pipes merging into a neat manifold in true continental style. Alta still retains a large-bore single exit at the front of the head, while E.R.A. remains unaltered. The C.T.A. makes a break from tradition in having the header tank in the bulkhead behind the engine, with a sealed radiator placed low in the front of the car. Although this allows a low radiator cowl and good visibility it involves rather a lot of plumbing and a superfluity of hose clips.

On the question of front suspension, opinion is unanimous, it is merely a question of variations of the i.f.s. theme, using all the well-tried media plus an innovation by Alta, of the use of compressed rubber, while drawing boards show the use of oleo-pneumatics on some future world-beaters. Rear suspension is a very different matter, Alfa-Romeo, C.T.A. and Alta using fully independent, while E.R.A. and a new version of the 16-valve Maserati use de Dion, and the older-type 16-valve Maserati retains ¼-elliptic springs with conventional rear axle.

With Alfa-Romeo, C.T.A., Maserati and E-type E.R.A. already in the field, Alta, Ferrari and Bugatti at the testing stage and B.R.M. and Cowell-Aspin at the constructional stage, it will be a pity if finance necessitates a change to a gentler-type of racing car.

At the opposite end of Formula I the single-seater Talbot, of 4½-litres capacity, stands virtually alone, although it has around it a host of similar brethren in pre-war type Delahaye, Darracq and Delage; most of the latter three makes come under the heading of semi-sports or converted sports cars and are not a match for the pukka single-seater Talbot, as driven by Louis Chiron. Design here is pretty standardised; pushrod, six-cylinder engines not too highly tuned, and possessing almost absurd reliability and fuel consumption. If the two-stage supercharged, multi-cylinder, high-output 1½-litre can be likened unto the Hare then the Darracq, Delahayes and Delages are most certainly the venerable Tortoises.

Turning to the *voiturette* class of the unblown 1,100-c.c. cars, the most notable feature has been the performance of the Simca-Gordini, followed very closely by its blood brother, the Cisitalia. So far the Simca has proved victor, but as it has only once competed against "works" Cisitalias, all other occasions being against privately-owned cars, no definite conclusions can be drawn. However, the fact that *is* definite is that these unblown "eleven-hundreds," weighing under 7 cwt., can compete against all-comers on a short and relatively slow circuit, by reason of good acceleration low down, coupled with first-class road holding and cornering.

In this class the well-tried "K3" M.G. Magnette has performed well and the 328 B.M.W. in various forms has competed, although the only successful example of the latter make has been Eugene Martin's very special car. No one has bothered with cars of under 750 c.c., although there are numerous other contestants in the unblown 2-litre category, such as the Citroën-base D.B., the D'arlmat Peugeot and the Peugeot-engined Jicey. At the very end of the season interest in these unblown 2-litres was roused by the introduction of the A6G Maserati and the Ferrari Type 166. Alfa-Romeo are rumoured to be building an unblown 2-litre—not very difficult for them in view of their successes with unblown 2½-litres—and Lancia are also said to be interested in the 2-litre class.

It does look as though Formula II is going to have a big following, and it is quite possible that it may provide the major contests of 1948. Gordini is also enlarging his 1,100-c.c. cars to 1½ litres, and Cisitalia's talk of a 6-cylinder 1½-litre. Simca and Cisitalia both use engines based on the 1,100-c.c. Fiat, while the "Twelve" and "Light Fifteen" Citroëns form the basis of the D.B. Peugeot, aided by D'arlmat, produced a rapid 1,100-c.c. saloon for record-breaking, probably owing its ancestry to the "203," while the 328 B.M.W. and new Frazer-Nash all appear most suitable for this class of racing. The Ferrari, originally designed as a highly-blown 1½-litre, retains its V12 cylinder layout, with single o.h.c. and rockers on each block and a unique scheme of hairpin valve springs, and by reason of increased bore and stroke raises its capacity to 1,992 c.c. Three double-choke, downdraught carburetters are used. Maserati reverts to six cylinders and an entirely new chassis layout, using vertical coil springs for the i.f.s. and a tubular chassis. At the moment these new Italian 2-litres are termed sports cars, but as the continental idea of a sports car is what we in this country term "a thinly-disguised racing car," there is little doubt that Formula II events in 1948 will prove highly exciting.

As yet there have been no 500-c.c. cars in continental racing, and it is very unlikely that anyone will build supercharged 500s as the expense would probably be as great as that for a blown 1½-litre, if Grand Prix racing were the aim.

It would seem that the trend for Grand Prix racing is liable to follow three lines: blown 1½-litres, unblown 4-4½-litres, or unblown 1½-2-litres, with the scales heavily loaded in favour of the last-mentioned group, though whether Alfa-Romeo will be content to put the Type 158 into cold storage is a moot point. Admittedly they have had the flat-12 Type 512 in storage since 1943, but as it proved, during trials, to be so successful as to make the 158 seem obsolete, one can't imagine them keeping it hidden away for ever. What of our own B.R.M., acclaimed nationally? We can't have it left alone in the blown 1½-litre class

Whatever trend fashion decrees for 1948 and the future, the blown 1½-litre will have to be given a place, of that there must be no doubt.

British racing is still a long way behind; our only hope for circuits seems to be in our go-ahead satellite islands, but the entries are a sadly depressing collection of obsolete machinery, undoubtedly doing yeoman service and proving beyond a doubt that British goods are made to last, but that is hardly the quality needed for winning races. On our own shores there was but one race, that at Gransden Lodge, which proved to be most absorbing, especially to the writer, as it provided the satisfying spectacle of a battle between the continental white elephants, with which this country abounds, and was a perfect example of Grand Prix racing before the Germans turned it into a science.

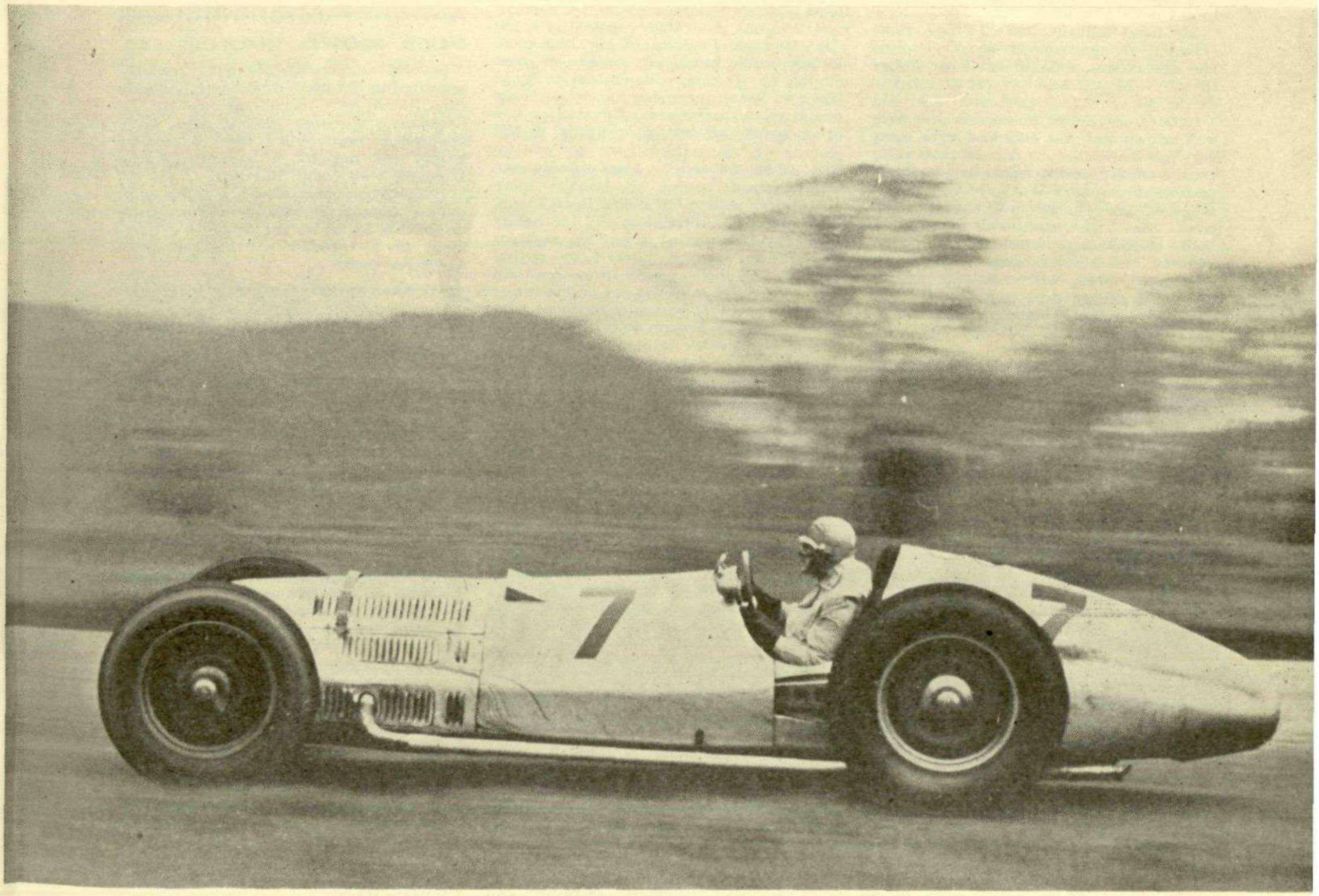
In England we have maintained an increasing advance in hill-climbing and sprints, and perhaps the most startling thing has been the progress of the 500-c.c. sprint cars. From a rather dubious and unknown beginning they have become remarkably successful, even though they have proved more expensive to build than was first envisaged. Here, design has kept to a fairly rigid plan; a motor-cycle engine to provide the power, this unit invariably being mounted behind the driver, and suspension either directly from proprietary small cars or adaptations of standard products. Among the many good things about these little cars is the fact that the constructors have, as a rule, kept a sense of proportion and have clothed their creations with some very attractive little bodies so that we have been spared the sight of the "string and wire" type of vehicle, which, though it can be accepted in certain cases as amusing, becomes a bad joke if not controlled.

Apart from a convincing demonstration that a combination of Raymond Mays and the D-type E.R.A. is unbeatable on our sprint courses, another outstanding feature this past season has been Sydney Allard's single-seater Allard. A complete break-away from tradition, he employs air-cooling, saving much weight, an important factor in sprint motoring. Using many standard components, this car has been a feature of all the major sprint events, and the V8 engine, with its eight Amal carburetters and pushrod o.h.v., appears to develop a considerable amount of power from its 3,600 c.c. Apart from the 500s and the Allard there has been little progress in the sprint world, though the Freikaiserwagen made a welcome re-appearance and showed that it had lost

none of its pre-war zest. Mostly, drivers have used ex-racing cars for sprint work and in many cases these proved remarkably effective, as witness the last Shelsley Walsh meeting, when the twelve fastest climbs were put up by thoroughbred racing cars, the first six being under the 40-second mark. Apart from the smaller club meetings, the pure sprint special seems to be disappearing rapidly, and the few constructors left appear to be turning their thoughts to the 500-c.c. class.

Before leaving the racing field, we must turn our thoughts to America for a brief moment. Indianapolis still flourishes with its 500-mile race, and the Americans are still progressing with great strides. Whereas at one time the Indianapolis car appeared to be somewhat of a freak and no match for a good European Grand Prix car, that is not so any longer, and since the late thirties their cars have been turning towards the Grand Prix type and are very little, if at all, behind latest European designs. Indeed, such cars as the Novi-Governor, the Fageol and the Blue Crown "Specials" are no longer quaint track cars but are closely akin to Grand Prix cars in such things as engine, suspension and roadholding and low-drag bodywork. Whether the 3-litre Maserati that swept the board in 1939 and 1940 put them on the right track is not known, but it is no longer unbeatable, and the 1939 Grand Prix Mercédès that competed this year, and which was predicted by many to make the Americans look silly, did just the reverse. Possibly Mr. Lee and Duke Nalon had not found all the Nazi answers to their box of tricks, but whilst motoring it was very effective but at the same time was not alone, although the ride was said to be a lot steadier than that given by the American cars. When one thinks back to the 1936 and 1937 Vanderbilt Cup races one must realise just how rapidly the Americans are progressing, and as there is a possibility of two of the more successful Indianapolis machines visiting the continent this coming season the future has much of interest in store for the keen follower of racing.

Finally, we come to the record-breaking sphere. Not many records have been broken but those that have have been most meritorious and in almost all cases with existing pre-war machines, suitably modified. It would be true to say that at present there is no trend of design in record breaking, design as such being stagnant. Notwithstanding this, detail work has been exceptional, and it is difficult to decide whether John Cobb's 400 m.p.h. in the Railton or Count Lurani's 105 m.p.h. with his 250-c.c.-engined "Nibbio" is the more meritorious, while Gardner's feats with the 500-c.c. Gardner Special (*nee* M.G.) must not be overlooked. The Railton has remained virtually unchanged, while Gardner has made changes in the carburation and supercharging departments, now using a Shorrock-designed Clyde supercharger, and has also made modifications to the bodywork of his M.G.-Gardner Special. "Nibbio" remains much as before except that power is now supplied by a 250-c.c. Guzzi motor-cycle engine, which gave sufficient power to take 350-c.c. records, the lowest capacity recognised by the F.I.A. The American Novi-Governor Special, with its blown 3-litre engine, has broken the International 3-litre class records for 5 and 10 miles at 177 m.p.h. In its record-breaking form it was endowed with the neatest enclosed cockpit and head-fairing and was duly termed a Mobil-Special.—D. S. J.



"From 1934 to 1939 no one could keep pace with the technical development of the German cars." A fine Donington shot by Major Shattock, whose Atalanta-Special was described in MOTOR SPORT *last December.*

Obituary

LOUIS DELAGE

M. Louis Delage died last December, sadly enough in poverty, at the age of 74. He commenced building cars in 1905, after having attained the position of chief draughtsman at Peugeot. At first he used de Dion engines, later Ballot, but he went over to his own engines in 1912, when the Courbevoie factory was opened. There is little need to state that Delage enjoyed numerous racing successes. From initial victory in the Coupe de *l'Auto* event, Delage evolved Grand Prix cars, those for 1911 having push-rod operated horizontal valves. His 1913 G.P. cars finished 1st and 3rd at Indianapolis in 1914, Rene Thomas winning at 82.47 m.p.h. After the war the V12 2-litre car of 1924 led to the famous 1½-litre straight-eight Lory-designed Delage racing cars which swept all before them in 1925 and 1926, and which Seaman rendered immortal by being almost as successful in 1½-litre racing ten years later with one of these cars. It is worth recording that the B.B.C. paid tribute to this aspect of Louis Delage's career in a recent news broadcast.

In this country the 11-h.p. four-cylinder Delage proved a very sound and deservedly popular small car before the 1914–18 war and several are still in existence. In the post-war era the "14/40" 4-cylinder model became very well known and was endowed with some very handsome bodywork. In later years Delage carried on his reputation for high-performance quality cars with an elaborate range of six-cylinder and straight-eight cars. Alas, the slump hit Delage so badly in 1936 that he sold out to Walter Watney and his cars were built at the Delahaye works, where, at the age of 62, Louis Delage accepted a position as a minor employee, selling all he had to pay his creditors.

We have also received the following appreciation of M. Delage from our contributor "Baladeur":—

Assuredly 1947 will go down as a mournful year in motoring history, and for more reasons than one. As if it was not enough to lose Ettore Bugatti, before the year was out his death had been followed by that of the other great champion of France in the 1920's—Louis Delage. Of the great names among the builders of racing cars, few indeed are left.

Delage's career provides a sharp contrast to that of Bugatti. He was somewhat the older of the two, having been born in 1874, Bugatti not until 1881; but whereas Bugatti was designing cars, or at least tricycles, before the end of the nineteenth century, the first Delage did not appear until 1905 or 1906. And yet while Bugatti had to wait until after the Kaiser War for his real racing successes, Delage had secured second place in the Coupe de *l'Auto* in 1906 and won the Grand Prix des Voiturettes in 1908, the year in which the first genuine Bugattis emerged from the Molsheim factory.

While Bugatti, in his early years, expended much of his energy in designing cars for other makers such as De Dietrich, Mathis, Hermes and Peugeot, Delage, on the contrary, was content to let others build engines for him. The successes of 1906, 1907 and 1908 were achieved by Delage cars with one and two-cylinder de Dion engines, and were celebrated in 1909 by the abandonment of these primitive power-units in favour of 4-cylinder engines made by Ballot. By the time that Delage scored his next outstanding success, however, which was in the Coupe de *l'Auto* of 1911, he was building his own engines and making his characteristic contribution to engine design in the shape of horizontal valves. Narrowly beaten by Peugeot in the Grand Prix in 1913, he had the satisfaction of beating Mercedès in the Grand Prix de France later in the year, and of winning the Indianapolis "500" in 1914.

His adoption of positively-closed valves for the Grand Prix that same year may have contributed to the famous Mercédès victory—in any case, it was an experiment that was not repeated—and further success had to await the brilliant racers designed by Lory, the 12-cylinder 2-litre of 1924-25 and the 1,500-c.c. straight-eight of 1926-27. After their victories, Delage was content to leave the racing field to Bugatti.

There was a strange contrast, too, in the economic fortunes of the two men. Delage, while producing a series of most eligible sports-cars, was content to build them on less enterprising lines than those employed in his racers. Bugatti, on the other hand, adhered most firmly to the formula of "we sell what we race and we race what we sell." Undoubtedly the latter would appear to be the more speculative policy, but it was Delage who, in 1936, was overtaken by economic disaster. Determined to pay his creditors in full, he reduced himself to virtual penury, and died as poor or poorer than he had been when he set out on his career 40 years ago. It was a dismal end to a great figure in French motoring circles; and it would seem no more than a fitting gesture if Lory's new production were allowed to drop its clumsy title of CTA Arsenal and adopt the time-honoured name of Delage.

* * *

BERTRAM RONALD MARTIN

Members of the Chain Gang and the many other readers of Motor Sport who knew him will be very sorry to hear of the death of Mr. B. R. Martin, which occurred on December 5th, 1947, after a short illness.

Martin was 36 years old. He was educated at Windsor Grammar School and graduated B.Sc. from King's College, London. He was a senior member of the Scientific Staff of the G.P.O. Research Station, where he did important work during the late war. Latterly he had contributed largely to technical developments involved in outside television broadcasting. He was an associate member of the Institute of Electrical Engineers.

Martin was a great "Nash" enthusiast. He was responsible to a large extent for the Register of Frazer-Nash cars, and he was a member of the temporary committee of the recently formed "Nash" Section of the V.S.C.C. He was a very competent engineer and had a great store of technical and historical knowledge concerning "Nashes" from which he gave freely to all who consulted him.

His charming and modest manner, and the wise counsel which came from his first-class mind will be greatly missed by everyone who knew him. He leaves a widow and young daughter to whom we extend our sincerest sympathy in their great loss.—R. J.

AN AMBITIOUS 500-c.c. ENGINE

We understand that R. W. Foster Pegg completed recently an ambitious 500-c.c. racing-car engine, conceived, incidentally, before the 500 Club's unblown formula was announced. This engine is likely to be tested on a home-made dynamotor in the near future and, if it survives, may be put into a car. The engine is a water-cooled four-stroke, 4-cylinder of 2.165 ins. by 2.064 ins., with two crankshafts, two superchargers, and the valves operated by o.h. camshafts. Block, heads, crankshafts, etc., are of Mr. Pegg's own design, but some 1936 Ariel "Square Four" parts are incorporated. 55 b.h.p. at 8,000 r.p.m. at 18 lb./sq. in. boost is hoped for.

DAVID BROWN TRACTORS LTD.

Several announcements have recently appeared in the press concerning Lagonda cars which have been contrary to the Company's present policy and have apparently been culled from a circular letter sent out by a member of the Lagonda Staff some time ago.

Information concerning the above companies cannot be considered authentic unless it is issued by the publicity department or a member of the Company's executive staff.

Course de Cote Sierre-Montana

NOTABLE BRITISH SUCCESSES

Forty-three entries were received for the Coupe de Noel hill-climb of December 21st last. The course, surfaced with beaten snow, was nine miles in length, embracing 22 hairpin bends. British cars secured an outstanding victory, Patthey's Marshall-Nordec supercharged "TC" M.G. making f.t.d. in 15 min. 2.8 sec., while Onslow-Bartlett's Mercury-Special was runner-up, in 15 min. 14.6 sec. Against this, note, Marty's 3.5-litre Delahaye took 15 min. 41.8 sec., Taruffi's Cisitalia 15 min. 59.4 sec., de Graffenried's 16-valve Maserati, obviously hampered by the snow, 16 min. 19.5 sec., and Ruggeri's Maserati 17 min. 34.2 sec. Bartlett won the prize for the most outstanding performance and also won the over-1,500-c.c. sports-car class. As a Continental report has it: "*Felicitons egalement l'Anglais Bartlett sur Mercury-Special sport de 4 litres, qui fit des prodiges dans les virages.*" Patthey's M.G. used a normal Marshall-Nordec blower installation but was otherwise in standard trim. We are glad to announce that North Downs Engineering Co. are now receiving enquiries from all over the world and are exporting many installations with complete success.

OVER TO AUSTRALIA . . . . .

Now that Great Britain is completely without private motoring, we turn to Australia—and report Speed Hill-Climb and Race Meetings of the L.C.C. of Melbourne.

THE Light Car Club of Australia, Melbourne, Victoria, is unique in being the only Australian motor sport organisation to have its own club-rooms. Although its members number little more than 350, the club also owns a hill-climb track of 760 yards of macadam surface. The climb is shaped roughly like a reversed letter S. From the start is a gentle right-hand curve for about 150 yards, then a deceptive right-hand corner, still uphill for a further 80 yards, then down over a spillway, with a dam 80 feet deep on the left. After this the track rises rapidly for 200 yards—so steeply the driver sees only blue sky ahead. A very, very tricky left-hand corner leads into the finishing straight, which conceals a reverse-cambered, left-hand bend.

At this venue the Australian Hill-Climb Championships were decided on November 2nd, 1947.

In Australia, what with exchange rates, import licences and general conditions one either drives an old car, buys an M.G. (these are now practically unobtainable), or builds a "special." In spite of this, the L.C.C.A. put 55 starters over the line at this meeting; 3,000 spectators went through the gate and 2,000-3,000 went over the fence.

Proceedings started on the tick of midday with the only "500" so far completed in Victoria—Bill Lowe driving a motor-cycle-engined machine to the top in 42.18 sec. Between that time and 4 30 p.m., no fewer than 134 climbs were recorded.

Because of previous disputes as to the definition, no "stock-standard" class was run; "sports" and "racing" being designated. A new storm arose as A.I.A.C.R. regulations were regarded by many as being too restricted for Australia. However, Peter Dale, as scrutineer, sorted the classes out to the satisfaction of most, and the results give an indication of the classification.

The hill is a little too severe for the less potent vehicles to provide any spectacular moments, but Len Phillips, in the very pretty "Ulster" Austin, did a neat climb in 39.48 sec. George Webber induced his vintage Derby chassis to record 45.04 sec., while Bill Patterson, 36.84 sec., beat Graham-Austin, 38.55 sec., both driving "TC" M.G.s. In this class Tony Gaze, newly-returned from England, did a quiet cruise in his "Aerodynamic" H.R.G., to run third. Most regrettably his Alta did not arrive until a fortnight after this meeting.

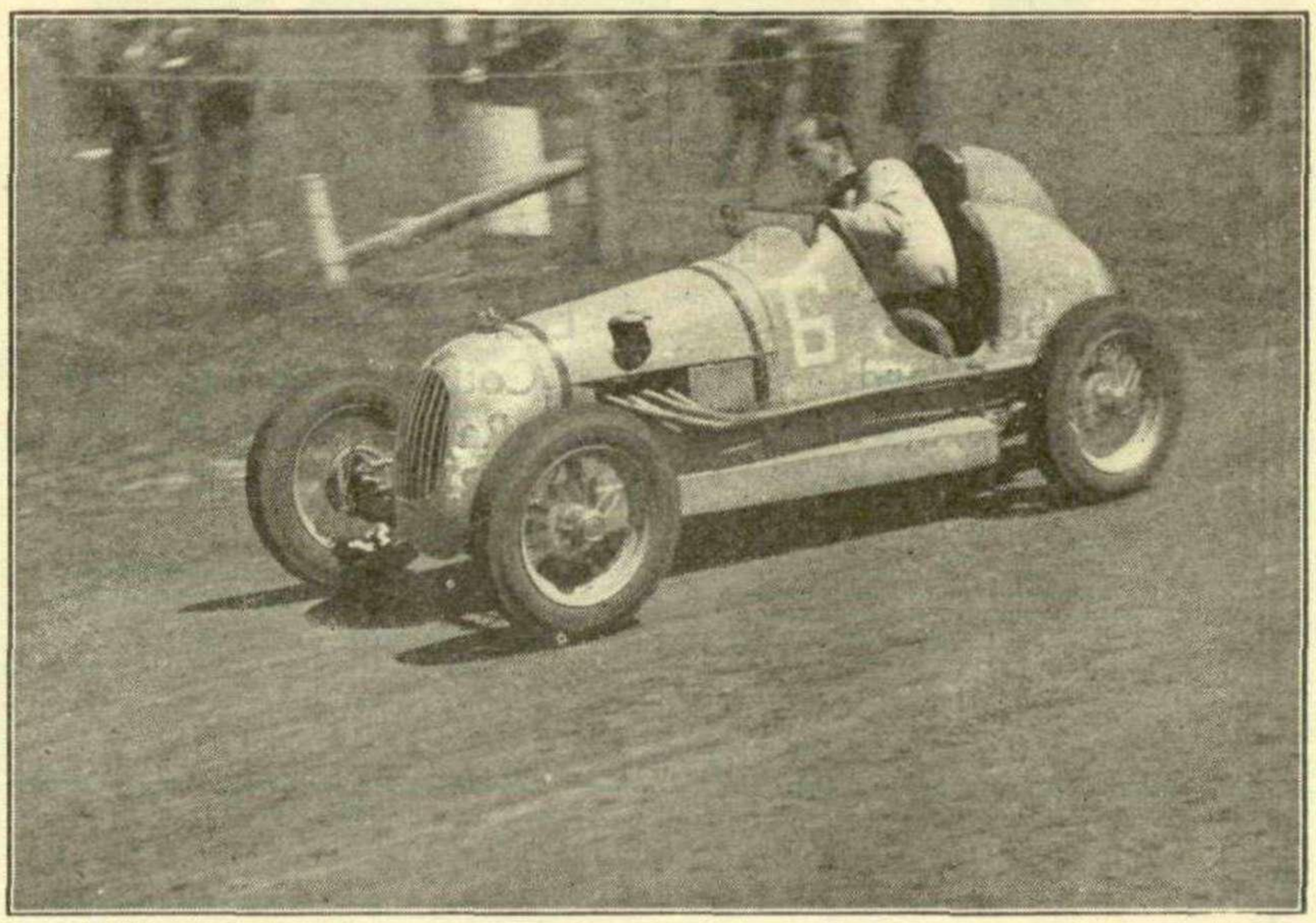
As the 1,500-c.c. racing car class came on, so speeds went up. Arthur Rizzo, a visitor from New South Wales, won the class in 33.00 sec., climbing cleanly with a beautiful crackle from his Riley, which has a 1,500-c.c. engine in a very short chassis, and a shapely body built mainly of fibre belly-tanks. John Barraclough came next, 33.37 sec., in an "Ulster" NE M.G. Magnette, while Lindon Duckett, with his Anzani-Bugatti followed, in 33.51 sec. Other "pukka" machinery in this class was Herb. Ford's original Type 37 Bugatti and Bill Lowe's Lombard. Harry Hawker ran out of gearbox after one run, so the amazing Chamberlain-Special did not show to advantage. This car was entirely designed and built in Melbourne. It has front-drive of a unique type, an interesting chassis, and a blown 1,096-c.c., four-cylinder, two-stroke engine with eight pistons.

The big cars then enlivened proceedings. McDonogh (Hudson Eight Special) clocked 34.47 sec. in a car completed only a week prior to event, but which handled well in spite of awe-inspiring wheelspin away from the line. Whiteford, a driver of wide experience, clocked 31.22 sec. in his Lea-Francis chassis with Lincoln "Zephyr" power plant. George Reed, Frank Kleinig and Norm Andrews, all New South Welshmen, ran next. George, driving a lowered model-A Ford with Mercury engine, went smoothly and quietly in 33.26 sec. Frank (M.G. Magnette with 4-carburetter Hudson Eight engine) clocked 30.48 sec., power sliding most of the way and using grass as well as macadam. Norm was quite as spectacular in a "special" built round an Austin truck engine, reputed to give 140 b.h.p., but the car was not altogether suitable to the hill and clocked only 32.48 sec.

Another M.G. chassis, in which Ross Davidson had installed a Mercury engine, very neatly clocked 33.17 sec., and Charlie Dean then ran up in 31.19 sec. with no trouble at all. His mount was a home-made, tubular frame car with i.f.s., powered with a 3.7-litre Maybach armoured-car engine. This was its first outing, and it was most impressive in performance and road-holding.

Reg. Nutt, driving Cooper's "special" built round a 40-h.p. Cadillac engine, clocked 30.51 sec., but in his last run ran out of road, his gyrations making spectators run from both sides of the course. The same fate befell Ern Seeliger in Denniston's very special *monoposto* Itala fitted with bored-out Mercury engine and a super-streamlined body; after removing a danger sign many feet from the track the body was in such a state that it had to be left behind, but on the stripped chassis Seeliger recorded 30.78 sec.

Arthur Wylie, designer, builder and driver of an extraordinary little contraption, running on baby Fiat wheels and weighing about 8 cwt., but powered with a model-A Ford souped up to deliver 96 b.h.p., made f.t.d. and a course record. Arthur, an ex-dirt-track driver who held the previous record of 29.47 sec., clocked 29.18 sec. in spite of being air-borne most of the way. After this effort everyone else seemed rather tame, except for

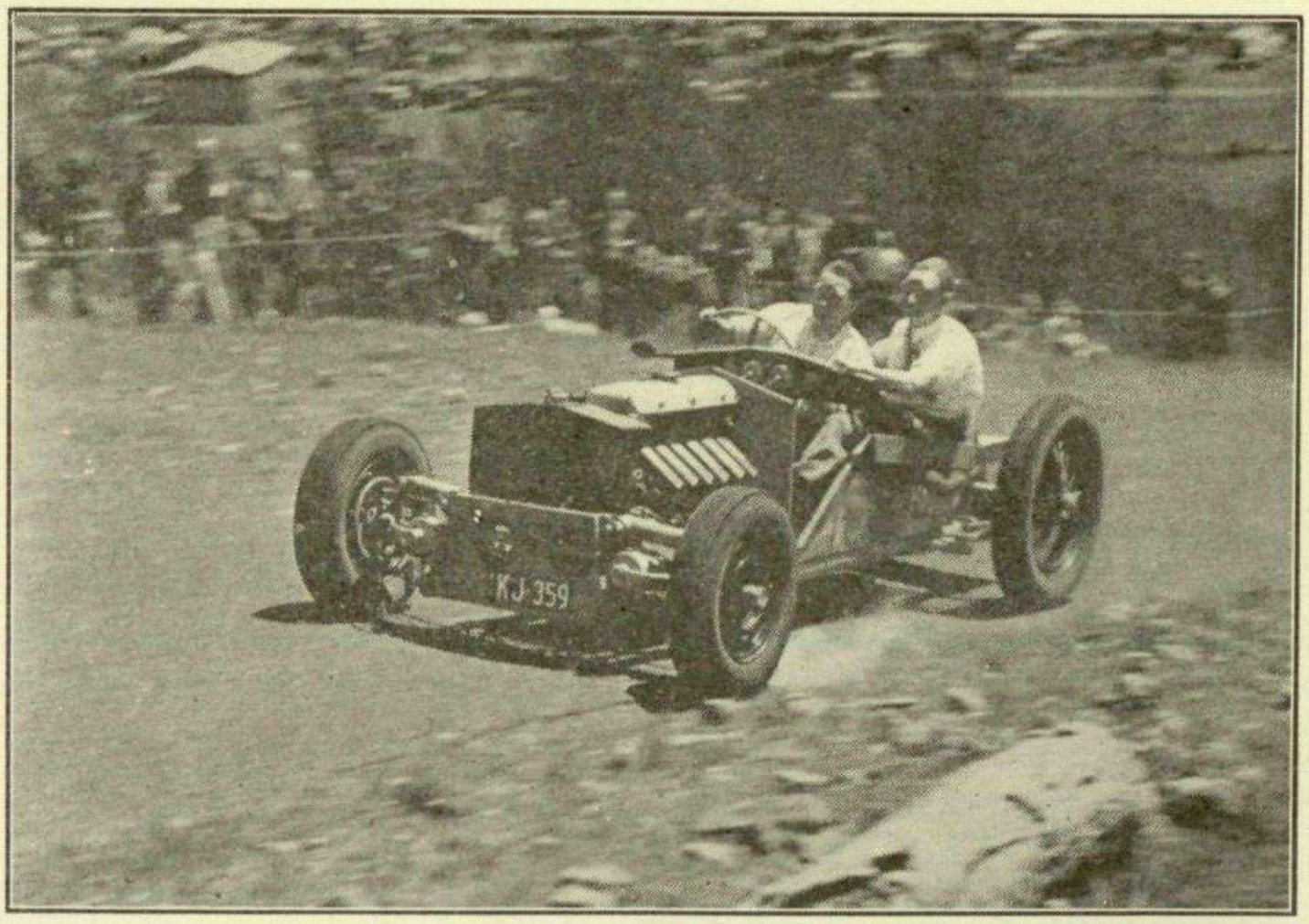


Len Phillips' "Ulster" Austin Seven, with very well finished monoposto body which, incidentally, weighs only 39 lb., competing in the Rob Roy hill-climb.

Lindon Duckett, who ambled up in 33.80 sec. in his 1908 Mercédès—the 18-litre engine reaching almost 900 r.p.m.

Three weeks later the same club ran a surprisingly successful race meeting on a nine-furlong oval grass-track at Nar-nargoon, a township 40 miles from Melbourne. Owing to doubtful weather practically no publicity was given this meeting, but about 3,000 spectators and 30 competitors turned up. On the wet grass, many competitors had incidents during the time trials that preceded the races, spinning with great abandon on one corner in particular. However, no damage was sustained and, by the time the races started, the track had dried out. It was decided to run four handicaps, each of two or three heats, and a final. At first only four cars were put on simultaneously, but later it was found to be safe for six. Finishes were very close and spectators were treated to eighteen 5-lap events. The L.C.C. of A. prides itself on organisation; at this meeting the average period between finishing one race and starting the next was less than five minutes.

The L.C.C. of A., in conjunction with another club, drew 35,000 spectators to a race meeting 70 miles from Melbourne in January, 1947. This was on an aerodrome not at all suitable for spectacular racing, and prize money was under £500. The club has now been granted sole permission to run on another aerodrome, much superior in every way, and only 12 miles from Melbourne. Prize money will probably be £1,500, and, in spite of drastic cuts in fuel rations, an attendance of 70,000-80,000 is confidently expected. An air display is to accompany the racing, and it does not seem unduly optimistic to hope that this meeting will do much to establish motor racing as a recognised sport in this country.



H. C. Dean at the Rob Roy hill-climb in a car consisting of a 3.7-litre Maybach engine from an Afrika Korps captured scout car, now with six Amal carburetters, in a tubular chassis with Studebaker i.f.s.

FAMOUS INTERNATIONAL DRIVERS

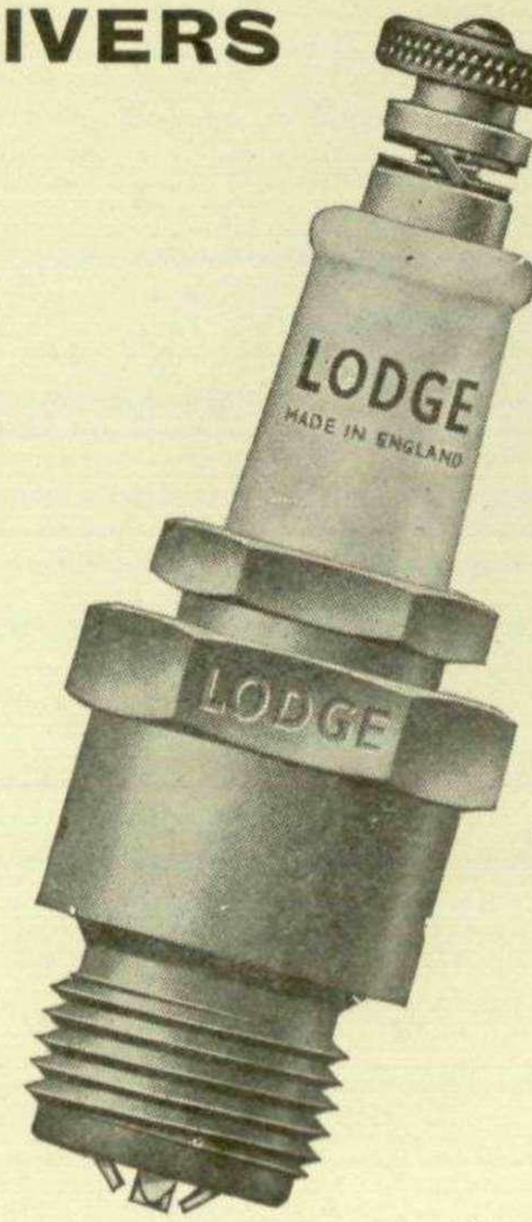
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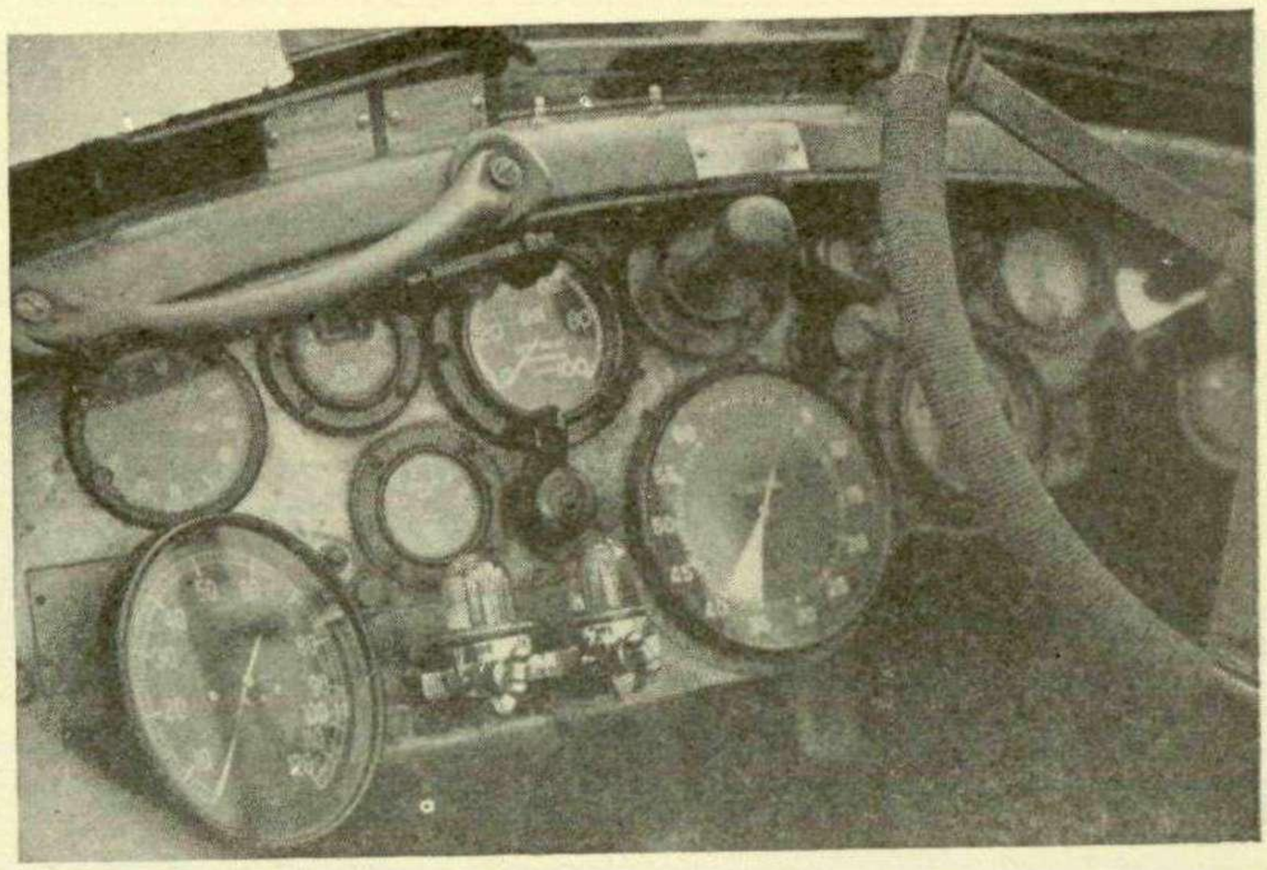
G. Abecassis
S. H. Allard
R. E. Ansell
K. W. Bear
B. Bira
H. L. Brooke
F. R. Gerard
Lt.-Col. "Goldie" Gardner
K. Hutchison
Leslie Johnson
Count "Johnny" Lurani
Raymond Mays
P. R. Monkhouse
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P. N. Whitehead
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Write for special Racing Plug leaflet to Lodge Plugs Ltd., Rugby



THE 4½-LITRE BENTLEY

[Exactly a year ago we published an authoritative and much-appreciated article on the famous 3-litre Bentley car, which was compiled at our request by the Bentley Drivers Club. So popular did it prove that it was even translated into Norwegian for publication in the official motor paper of Norway. Consequently we have much pleasure in presenting similar data on the 3-litre's immediate successor, the 4½-litre. This article is also the work of the B.D.C. and certain of their members who were closely associated with these cars, both in unblown and "blower" form, have kindly "vetted" the manuscript and have provided between them much inside information.—ED.]



WHEN the article dealing with the 3-litre Bentley, contributed by the Bentley Drivers Club, appeared in the February, 1947, issue of this journal, it was visualised that it would be followed by another article similar in character covering the development of its big brother, the 4½-litre. Much research has resulted in the compilation of the following information, which may be regarded as authoritative.

The principal reasons for the entry of the world-famous 4½-litre Bentley into the motoring world of 1927 were twofold :—

1. An ever-increasing demand by the "Bentley-minded" motoring public for just that extra reserve of everything which they had come to value so highly when driving the three-litre.

2. It was considered that the ever-increasing pressure experienced in the field of International Competition would extend the three-litre beyond its capacity and render it less capable of dealing with its opponents; or that, in attempting to do so, the great reserve and reliability for which the marque was even at that time world-renowned, would of necessity be sacrificed.

The first 4½-litre car to be produced was the famous old No. 1 "team" chassis, ST 3001, immortalised in motoring history as a participant in the epic crash at White House Corner on the Sarthe Circuit in the course of the Grand Prix d'Endurance at Le Mans in 1927. It will be remembered that hopes of a runaway victory, on this occasion, were dashed to the ground by the unfortunate triple crash involving the entire Bentley team.

Incidentally, some confusion has arisen due to the similarity of the radiator of this particular 4½ to that of the standard three-litre and, indeed, the radiator-shell from trunnions to filler-cap was, for all practical purposes, identical in shape and contour to its predecessor. The difference was to be found in the overall length of the shell, the design of the mounting, and the capacity of the matrix. The first nine chassis produced had radiators the filler-caps of which were smaller in diameter than those later standardised, although nearly all of them were subsequently modified.

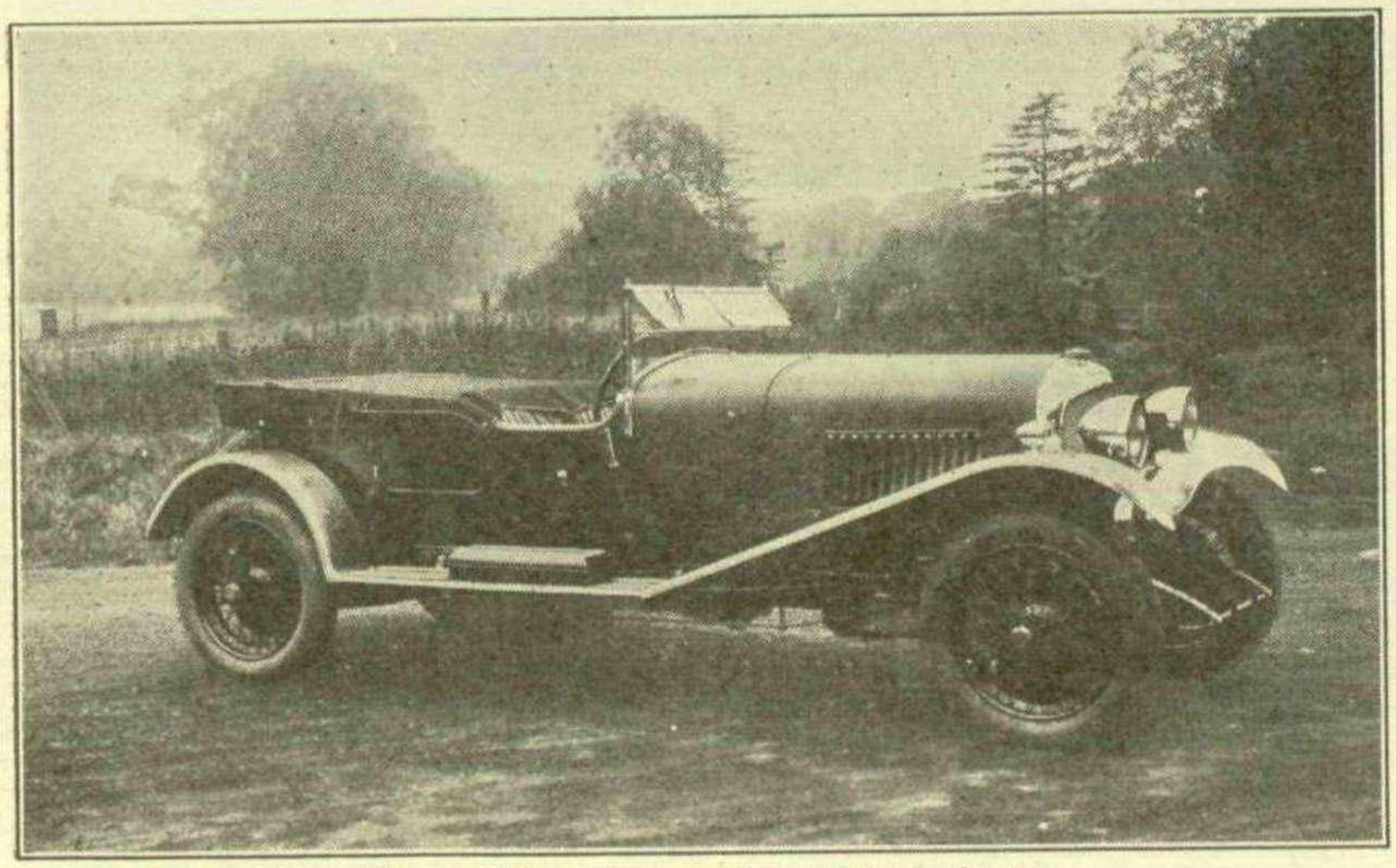
Development of the 4½-litre followed the development of the new six-cylinder 6½-litre model, the latter then being in full production, and as might be expected, the two chassis have many features in common, with the result that such components as pistons, connecting-rods, valve-rockers, valves, valve-stem collars, valve-springs, etc., were interchangeable.

A noteworthy point is that pistons which gave a 4.4 : 1 compression ratio as employed in the 6½-litre resulted in a compression ratio of 4.8 : 1, if fitted to a 4½-litre. This increase was due to a difference of 8 mm. in the dimension combustion head to cylinder foot of the two cylinder-blocks concerned (6½-litre : 270 mm., 4½-litre : 262 mm.). A word of timely advice to enthusiasts with plans for machining large quantities of metal from the block in search of extra horses. A reduction of 3 mm., *i.e.*, a dimension of 259 mm., is the absolute safety limit to which the mean height of the dimension combustion head to cylinder foot should be reduced. The effect of this reduction is that the cylinder foot thickness is reduced to an average thickness of 9 mm., below which it is inadvisable to go.

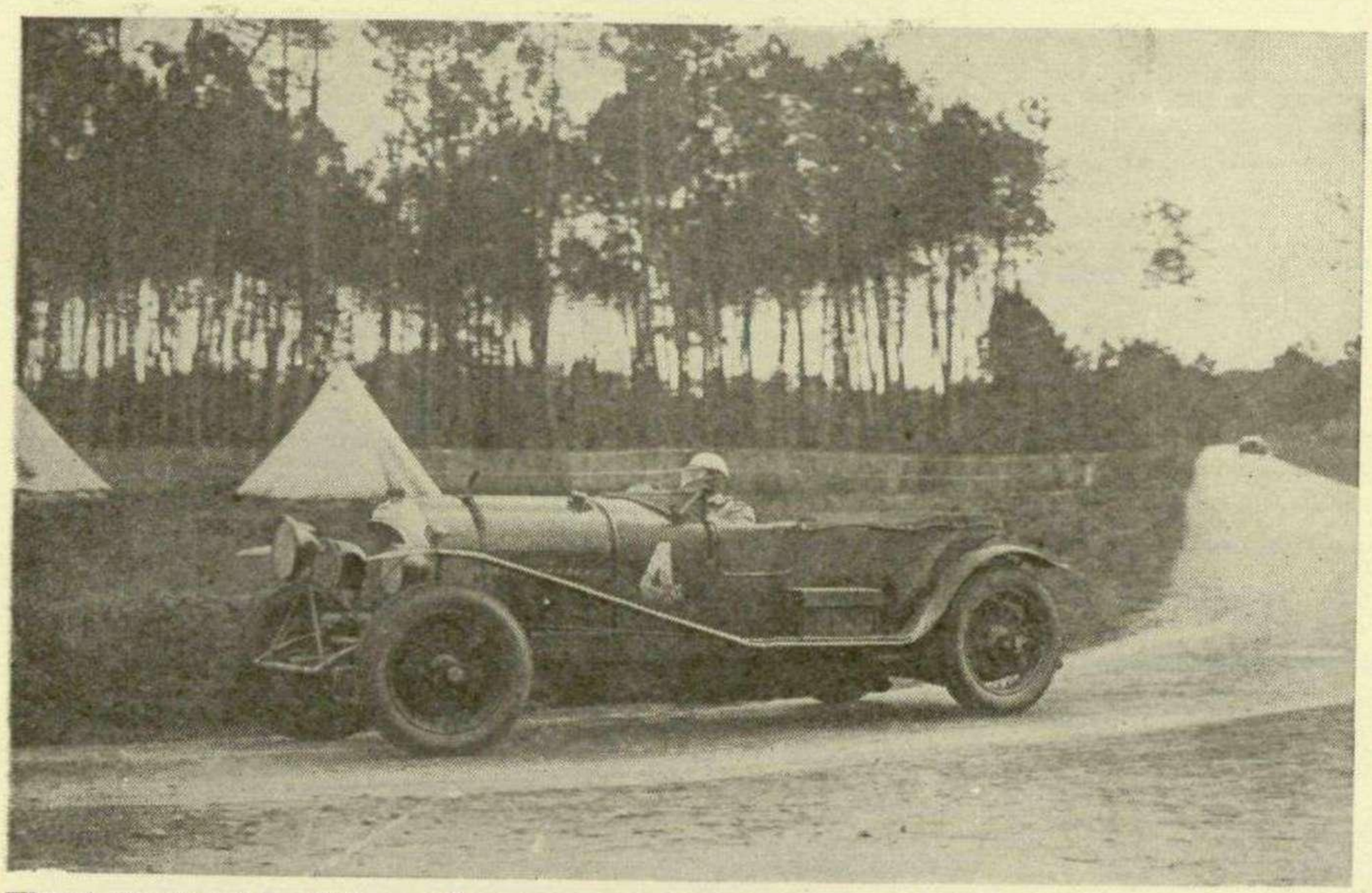
From a general design point of view, the 4½-litre was similar in character to the 3-litre. Valve gear, magneto and water pump drive, also sump design, were basically the same, differing only in dimensional detail.

A brief specification of the 1927 standard 4½-litre chassis may, therefore, prove of interest :—

Bore 100 mm. Stroke 140 mm. Cu. cap. 4398.24-c.c. Direct metalled con. rods type G.5. Twin S.U. sloping carburetters. Duralumin rockers. Belt-driven fan. Rear axle ratio 3.53 : 1. Wheelbase 10 ft. 10 ins. Hobson "Telegauge" petrol level indicator. Calculated road speed at 3,500 r.p.m. with 3.53 axle and 5.25 by 21 ins. tyres 92 m.p.h. B.H.B. pistons. Compression ratio 4.8 : 1. Ball-end tappet adjusters. Cone clutch. Well-base rims; 16 gallon petrol tank. Smith double-pole lighting and starting system. "C" type gearbox. Tyres 5 25 by 21 ins. Low-geared worm and worm wheel steering. Autovac fuel feed.



The 4½-litre Bentley in standard form.



The 4½-litre Bentley which won at Le Mans in 1928, driven by Barnato and Rubin. The resemblance of the radiator to that of a 3-litre will be apparent.

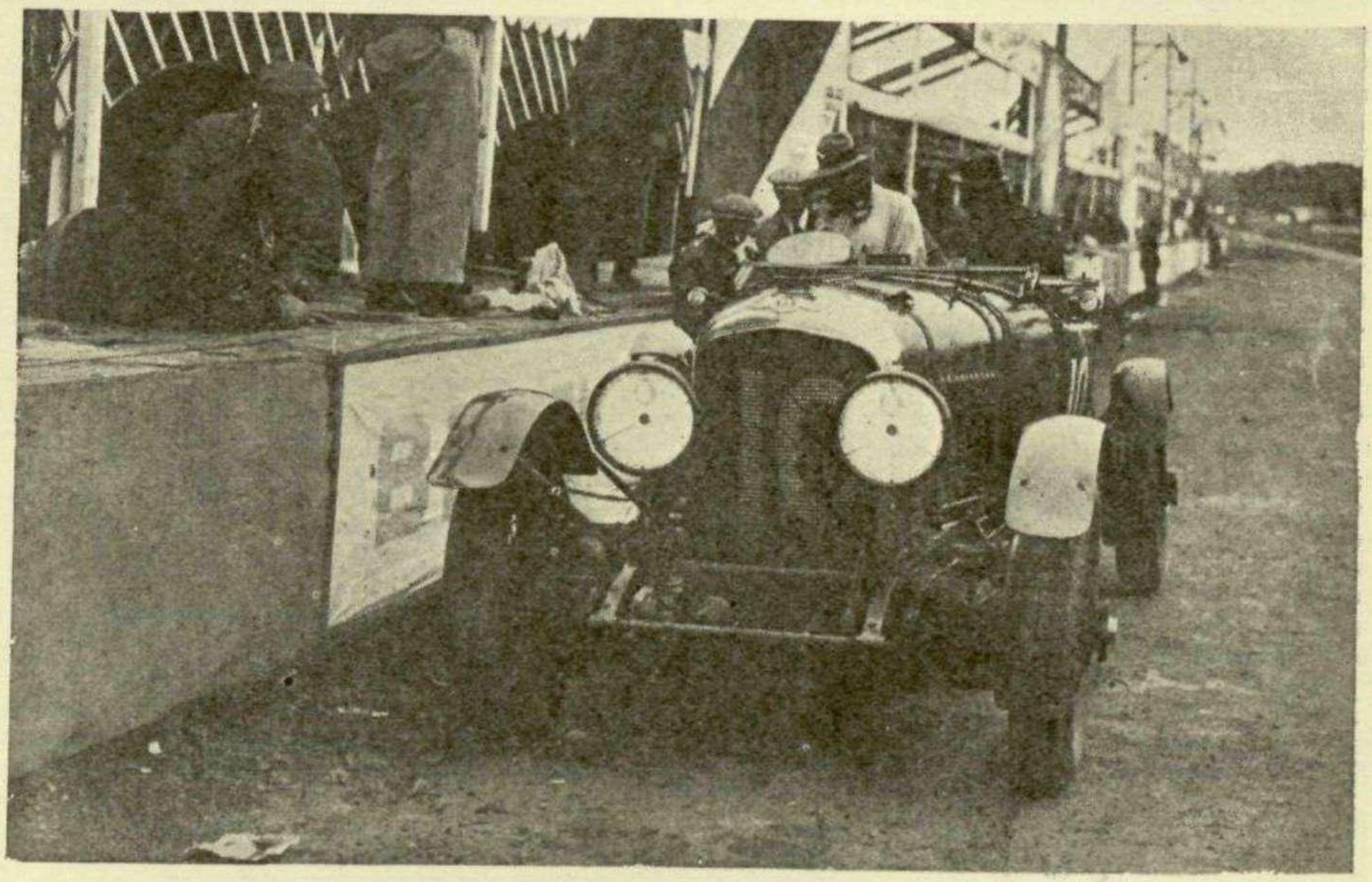
Incidentally, although the 10 ft. 10 ins. wheelbase was adopted as standard, eight chassis were built with a wheelbase of 9 ft. 9½ ins., these being to special order.

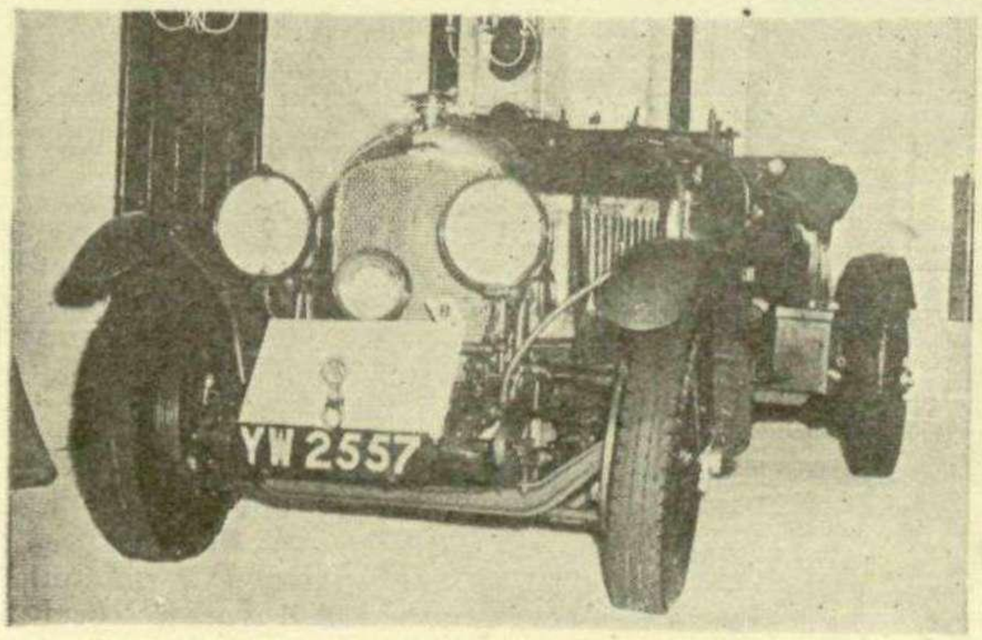
The first modification of any importance made to the chassis was the incorporation of thermostatic water temperature control in the late autumn of 1927 (at chassis No. SL 3071). This was followed by the change over from the rigid spoke type steering wheel to the spring wheel which had proved so effective under rigorous competitions (at chassis No. RN 3035).

1927 saw the 4½-litre Bentley entering international competition in no uncertain manner. "Old Number 1" was entered, as previously mentioned, at Le Mans in 1927 and shortly before the crash gained the lap record at 73.40 m.p.h. It was driven on that occasion by Clement and Callingham. It appeared again at the Grand Prix de Paris on August 19th and despite extremely bad weather conditions, won the race at 52.50 m.p.h., handled on this occasion by Clement and Duller.

The winter of 1927-28 saw the adoption of the Ki-gass injector and the long range type E.R.4 M.L. magneto as standard equipment. These two improvements considerably reduced the bogey of difficult starting and the consequent drain on batteries, usually experienced with large bore engines. These changes in specification became standard at the end of February, 1928 (at chassis No. HF 3192).

In an endeavour to reduce the lubrication problems of owner-drivers and, at the same time, to reduce the wear and tear experienced with the "plunging joint" type of cardan or propellor shaft with its blocks and slippers, much development work — the direct result of high speed track experience—resulted in the adoption of the enclosed type, balanced splined propellor shaft as standard for all models. All chassis from No. NT 3131 were fitted with the Hardy Spicer propellor shafts.





Now used daily by L. Rose, this 4½-litre retired at Le Mans in 1928, but was 6th in the 6-hours race, and in 1929 finished 2nd in the "Double Twelve" at 81.39 m.p.h., driven by Davis and Gunter—

—the same car as it is today.

The next real step in the development of the 4½-litre chassis was the design, development, and production of the now famous "D" type close ratio gearbox. Up to this time all chassis had been fitted with the "C" type general purpose gearbox, giving the following ratios :—

	Gearbox Ratio	Overall Ratio with 3.53 Axle
Top ...	1	3.53
3rd ...	1.357	4.794
2nd ...	1.823	6.44
1st & reverse	3.364	11.885

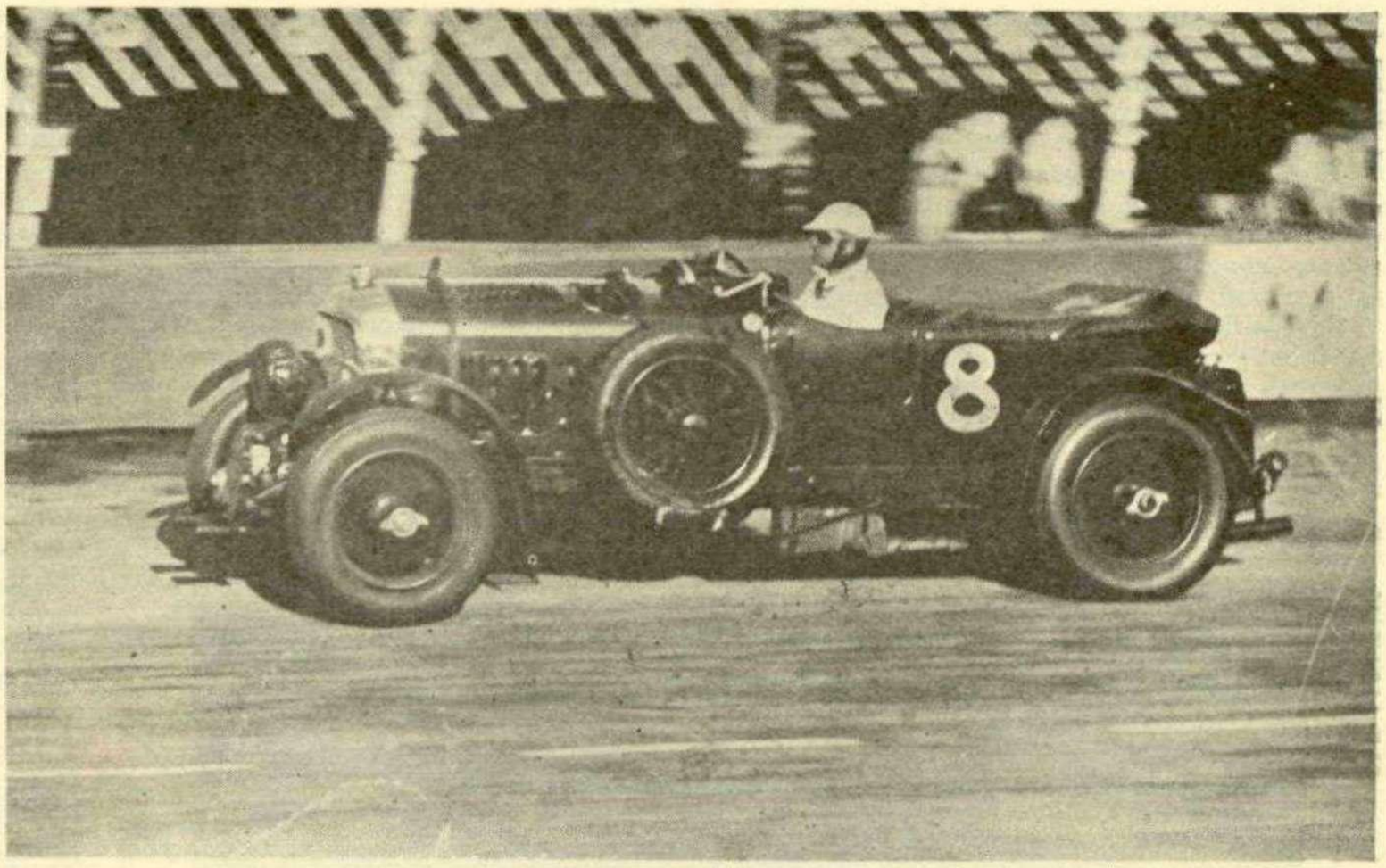
In view of the popularity of the close ratio "A" type box as fitted to the 3-litre speed model and the absolute necessity

for these ratios in competition work, an altogether new design of gearbox made its appearance. This, of course, was the "D" type and although completely re-designed to cope with the increased torque of the 4½-litre engine, it retained the well-tried indirects of the "A" type box, whilst eliminating those danger points which had given trouble from time to time in the form of rapid wear in gears, main shaft keys, speedometer drives, etc.

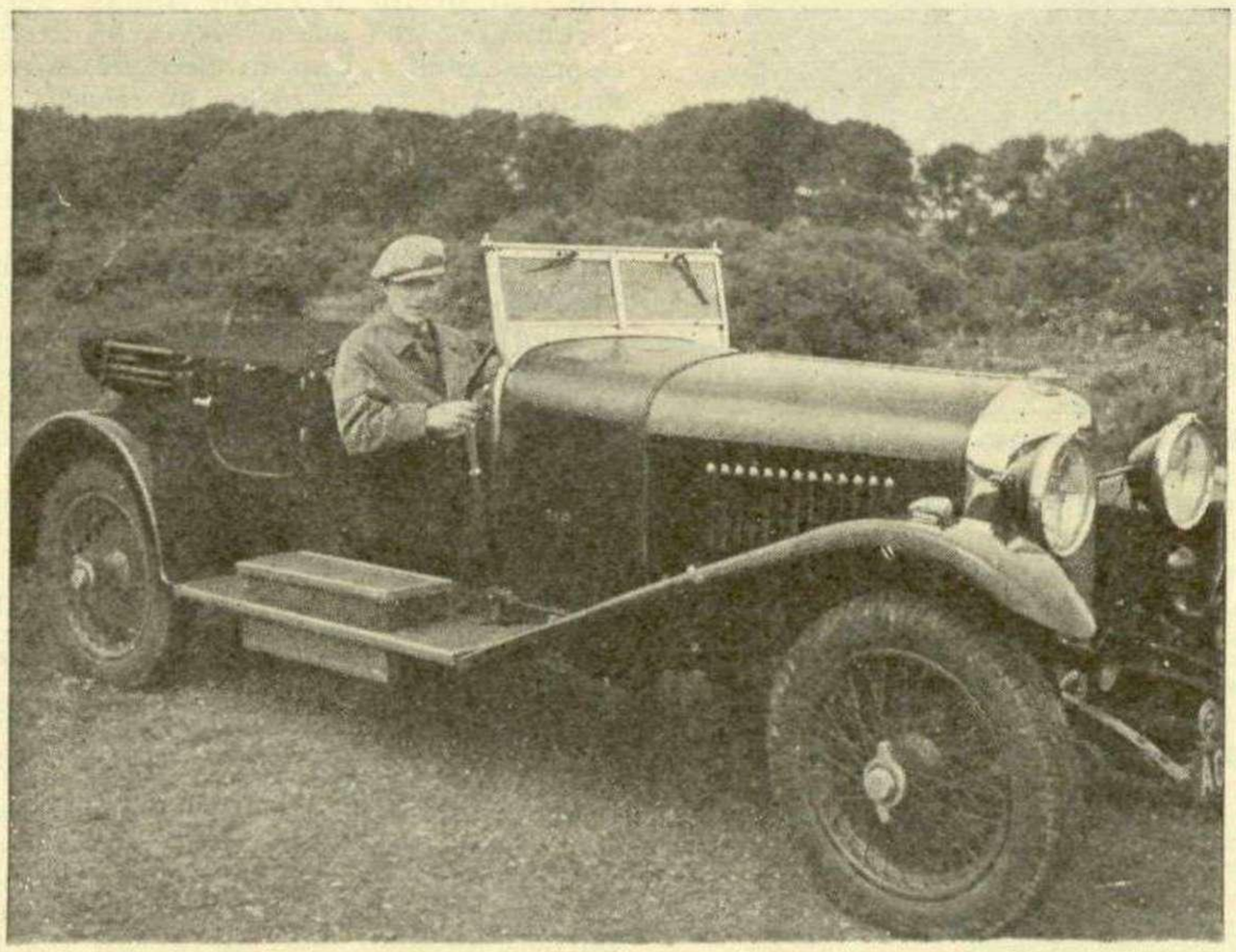
It is a noteworthy tribute to the foresight and skill of the designers of the first truly sporting car to be produced after the 1914-18 war that the ratios calculated to be correct for the first 3-litres were re-introduced in 1928; these are as follows:—

	Gearbox Ratio	Overall Ratio with 3.53 Axle
Top ...	1	3.53
3rd ...	1.33	4.70
2nd ...	1.63	5.76
1st & reverse	2.64	9.33

In the "D"-type gearbox the 7 pitch



One of the Paget "blower" team. Dr. Benjafield coming into the pits during the Le Mans race of 1930.



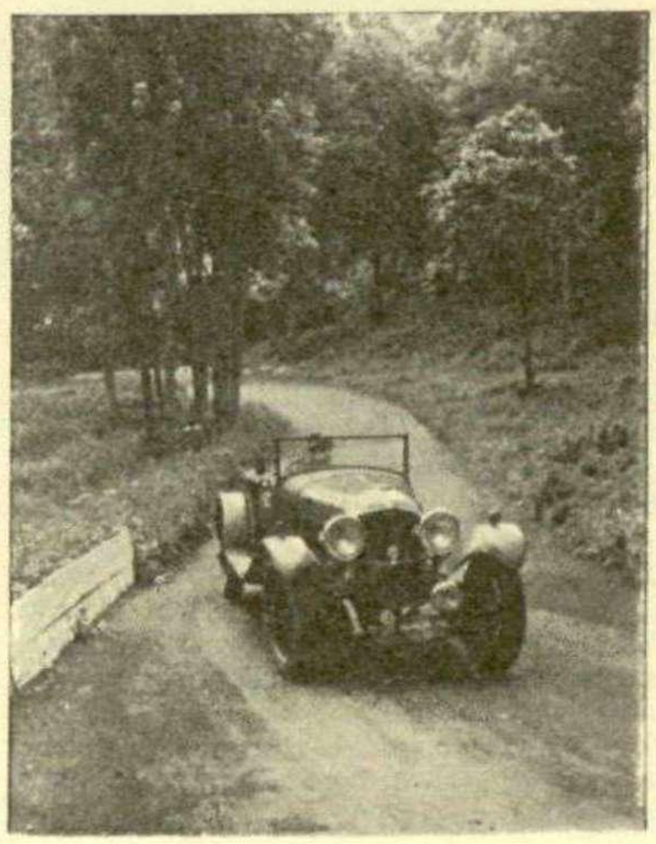
The late Richard Seaman in a 4½-litre Bentley belonging to his friend George Monkhouse, a keen member of the B.D.C.

gear superseded the 7/9 stub-toothed gear of its prototype—the "A" type box; 5 pitch gears may be found on a few "A" type boxes and 5 pitch gears were also used in the Birkin Blower 4½-litres. These special purpose gears were few in number, the standard 7 pitch gear being used in the majority of cars for competition work and for all standard chassis incorporating this box. Other features of the "D" type box were a ribbed casing of sturdy construction, multi-splined main and lay shafts of reduced overall length to avoid distortion under maximum loads, a speedometer drive re-designed and located similarly to the "C" type box, on the near side of the casing, and an external oil filler.

The whole design proved itself in practice to be most reliable and, for a "crash type" or non-synchromesh box, retained its silence in operation under competition conditions for extremely long periods, being absolutely trouble-free as a unit throughout its history. Chassis No. HF 3196 inaugurated the "D" type gearbox as a standard unit for all 4½-litre chassis.

Around this period several minor alterations in design were introduced, amongst which were the adoption of the .44 carbon steel brake drums in place of the hitherto standard low carbon steel units, in an endeavour to increase the wear-resisting properties of the drum against the loads imposed upon them by braking from high speeds.

Gudgeon-pins of the floating type were superseded by circlip-secured pins, but in view of the trouble experienced with scored cylinder-bores by reason of the clips coming adrift, an early return was made to the original design of floating type pins. Incidentally, the whole secret of success with the type of gudgeon-pin that employs the conical aluminium alloy pad method of location—apart from the use of the correct alloy for the pad—lies in the maintenance of point-contact with the cylinder wall by the conical pad. As soon as the area of contact with the cylinder wall exceeds for all practical purposes "point-contact," there is a tendency for the pad to rotate in the gudgeon-pin bore with disastrous results to the cylinder walls—as many amateurs experienced to their cost. It is, therefore, of paramount importance in design that the angle of the conical buffer or rubbing pad is such that it precludes the possibility of the outer edges of the cone coming into contact

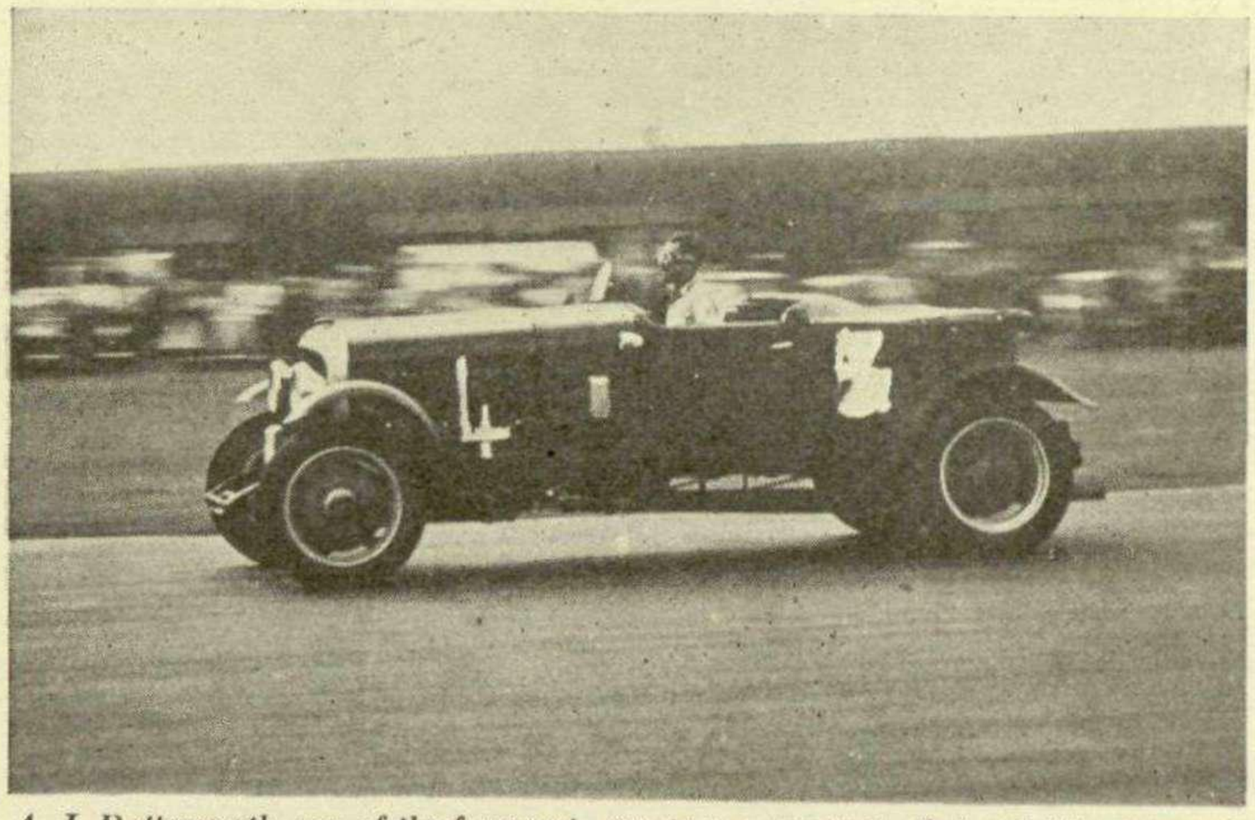


C. J. L. Mertens not only uses his car for daily travel but also uses it effectively at speed events.

with the cylinder walls, until the wear-factor on the tip of the cone is such that replacement of the pad becomes essential. Further points worthy of note, if readers fit replacements, are :—

1. A small air-release hole should be drilled in one pad to prevent pressure-generation in the tubular gudgeon-pin and a consequent forcing from position of the pad.

2. The bore of the gudgeon-pin should be most carefully finished to ensure the correct interference fit between pad diameter and gudgeon-pin bore.



A. J. Butterworth, one of the foremost amateur exponents of the 4½-litre in post-war competitions, seen in action at Gransden.

3. The interference fit should not be excessive if distortion and local swelling of the ends of the gudgeon-pins is to be avoided.

4. The length of the plain portion of the pad should not be less than 15 mm. for this diameter gudgeon-pin.

Le Mans 1928 heralded the re-appearance of the old veteran chassis No. ST 3001, victim of the White House crash in the previous year, this time driven by Barnato and Rubin, but supported by two new 4½-litre chassis Nos. KM 3077 and KM 3088. These were fitted with distinctive Vanden Plas bodies designed to conform to the stringent Le Mans body regulations in force at the time. They were easily recognisable by the position of the tank and spare wheel carrier at the rear of the body—and were to become international celebrities during the course of their racing careers. It was No. KM 3077 in which Tim Birkin, in partnership with the veteran Jean Chassagne, experienced the burst tyre episode which relegated them to the fifth place in this event ; there was nevertheless a degree of consolation in the fact that they broke the lap record with the creditable speed of 79.73 m.p.h.

KM 3088, driven by Clement and Benjafield, retired through a water leak. It is not generally known, however, that the chassis frame was broken and this, if not the direct cause, was a contributory factor in the elimination of the car from the race because of a split or displaced hose joint.

ST 3001 won the race at an average speed of 69.11 m.p.h. This car, too, had a broken frame and covered the last lap without water, a hose having pulled off ! Heavier frames were incorporated the following year.

A brief specification of these cars will accordingly be of interest and was as follows :—

Compression ratio 6.1 : 1. Hour-glass pistons. 3 mm. removed from foot of block. BM-3480 camshaft. .019 tappet clearance. Twin S.U. carburetters. Cone clutches in two chassis, plate-clutch in KM 3088. Close ratio gearboxes. Direct-metalled, heavy-section con-rods : rear axle ratio, 3.3 : 1. Straight-tooth gears. 31 ins. by 5.35 Dunlop road racing covers and tubes. Road-speed at 3,500 r.p.m. with 3.3 : 1 rear end ratio and 31 ins. by 5.35 tyres, 100 m.p.h.

The following important changes in design received their baptism of fire during the 1928 racing season :—

(*a*) The self-energising front-brake shoes, commonly known as "servo-shoes."

(*b*) The single-plate clutch.

(*c*) The vertical type S.U. carburetter, Type HV G.5.

These units were the outcome of development over a considerable period, carried out in order to cope with the exacting conditions of international competition.

It was during the 1928 season, too, that the reinforced H-section front axle-beam was introduced. The sectional thickness between spring-pad and swivel-pin eye, in this axle, was increased in order to counteract the increased brake-torque occasioned by the new servo-shoes. These re-designed axles did not, however, become standardised until May 1928, at chassis No. KM 3092.

Three 4½-litre Bentleys were entered for the Six Hours Race at Brooklands on May 18th that year. Their race-numbers were 4, 5 and 6, and they took eighth, third and sixth places respectively, carrying off the Team Prize in the process. No. 4 (Old No. 1) was driven by Barnato and Clement and, despite some brake trouble, finished at 70.29 m.p.h., No. 5 by Tim Birkin (72.27 m.p.h.) and No. 6 by Benjafield and Rubin (71.26 m.p.h.). Some aspects of Le Mans 1928 have already been discussed and it will additionally be recalled that Barnato and Rubin brought "Old No. 1" over the line in first place at 4 p.m. on June 18th.

Up to this period the compression ratio of the standard engine had been set at 4.8 : 1 but, with the introduction of the BM 3622 piston at engine No. KM 3081, this was raised to 5.3 : 1. By employing a 13 S.W.G. compression plate, however, this ratio could be reduced to 5 : 1, thus providing readily available alternative ratios.

The plate clutch, servo-type front brakes and vertical S.U.s were not standardised until the advent of the XR series chassis at No. XR 3332 during the autumn of 1928.

The policy of regarding the race-track as the most suitable test-bench possible was pursued with greater intensity than ever and two 4½s, in the hands of Tim Birkin and H. Cook, finished 5th and 7th in the T.T. on August 23rd. Birkin appeared again with a 4½ in the Georges Boillot Cup in September and finished 5th, after beating all records for the race with a speed of 73.16 m.p.h. He even took one to Nurburg, a course to which it was by no means suited, and yet managed to achieve 8th place after a drive which drew much applause and favourable comment from those present.

Another modification introduced about this time, was the use of stainless steel in place of aluminium sheet for the cylinder water-jacket plate. This modification, coupled with the use of a corrosion-resisting aluminium alloy for the water pump body, reduced to a very great extent the sludge content of the radiator matrix, which consisted, for the greater part, of the products of decomposed aluminium. The hitherto prevalent bogey of the perforated water-jacket plate was thus eliminated.

In the early autumn of 1928, it was evident that the demand would persist for a 4½-litre chassis fitted with closed coachwork and it was therefore necessary to revert to the "C" type or general purpose gearbox and to fit an "anti-boom" type double silencer to these chassis. Another feature was also inaugurated with the installation of a single-pole wiring layout and this was duly standardised in time for the Motor Show.

Early in 1929, the magnesium alloy known as "Electron" made its debut and replaced, at intervals through the year, components formerly manufactured with the standard aluminium alloys.

Throughout the spring of 1929 various minor modifications were standardised, culminating in the preparation for Le Mans, wherein heavier section frames made their initial appearance.

This preparation followed very much the same line as in the previous year. The engines used flat-topped inlet valves in conjunction with stronger valve-springs.

The remainder of the specification was substantially the same as for 1928.

The 4½-litre cars entered were :—

Race No.	*Chassis No.*	*Eng. No.*	*Drivers*	*Reg. No.*
8	TX 3246	PM 3275	Clement and Chassagne	YW 5758
9	ST 3001	ST 3001	Kidston and Dunfee (J)	YH 3196
10	KM 3088	MF 3175	Benjafield and d'Erlanger	YW 2557
11	KM 3077	KM 3096	Howe and Rubin	YV 7263

The latter two cars were added to the team to cover the withdrawal of the supercharged cars and they received somewhat hurried preparation. Work on KM 3088 was carried out by night and day in England and was watched over by the eagle eye of "T.K.W." (now Major T. K. Williams), who was personally responsible for its delivery at the start on time. KM 3077, however, was transferred straight from Montlhèry, where it had just broken the International Class "C" records for 24 hours, 3,000 kms, and 2,000 miles in the able hands of Mrs. Victor Bruce, and it was taken to Le Mans without any major preparations whatsoever.

The first "Speed Six," incidentally, won this race. It was handled by Tim Birkin and Woolf Barnato—and its speed was 73.62 m.p.h., but to digress further upon this point would be to go outside the province of this article.

It was during this race that a degree of trouble was experienced with the headlamp bulb-holders and focusing device.

The finish of Le Mans 1929 provided the finest spectacle in British motor-racing history to date as four green Bentleys thundered triumphantly past the chequered flag in the first four places, and the 4½s came 2nd, 3rd and 4th (9, 10 and 8). Clement lost valuable time during the course of the race owing to his lead ballast shifting.

This was contained in steel tubes and, when it became displaced (owing to the stretching of the security-bolts) it distorted the body-frame and fouled part of the front brake-operating mechanism. Kidston's oil-filler overflow-gear came adrift but, apart from that, he had a clear run, while Benjafield experienced electrical trouble when the inter-cell connecting lug fractured on the off-side 6-volt battery. The 4½ allotted to Howe and Rubin very obviously resented the apparent lack of gratitude for her excellent performance at Montlhèry, evidenced by the lack of pre-race attention to her various needs and requirements, and stripped the fibre distributor-gear on one of her mags. When the magneto was duly replaced, however, a certain oil-retaining paper gasket was omitted and that was too much; so in high dudgeon she seized up her magneto cross-shaft and broke it—and that was that.

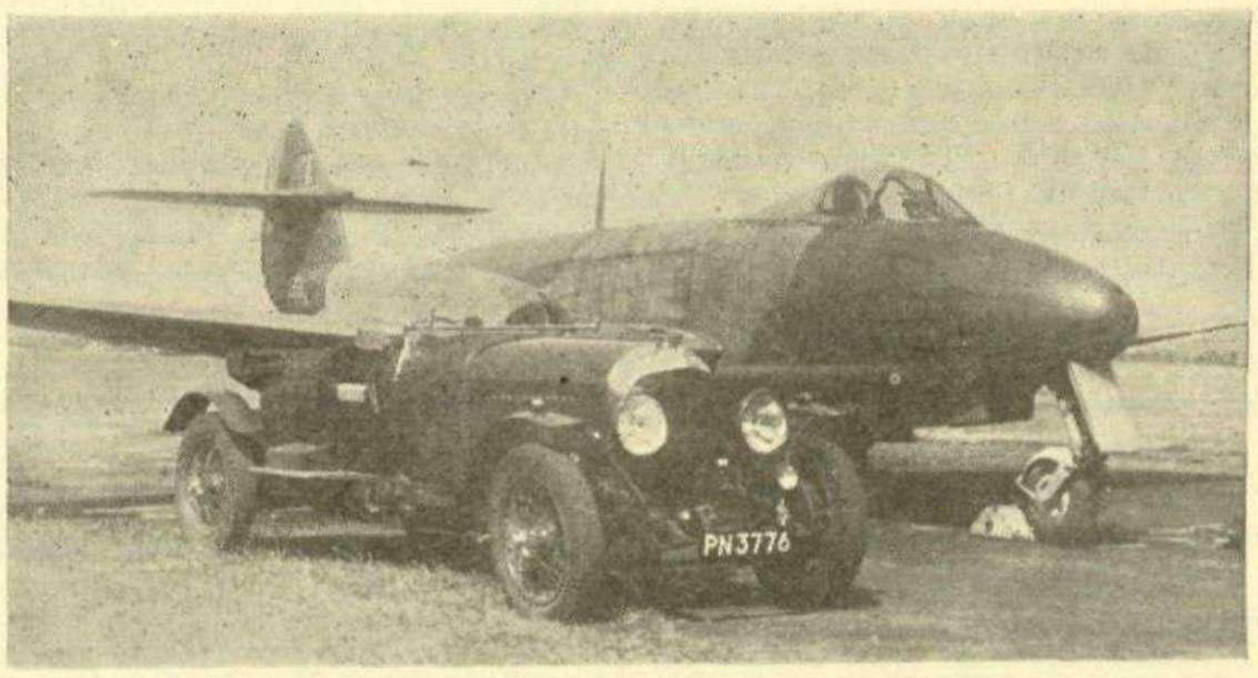
Available records reveal the interesting fact that oil-pressures (hot) which at the start of the race stood at 40-45 lb. per sq. in., had dropped, after 20 hours, to between 10 and 15 lb. at 3,500 r.p.m. —some indication of the gruelling nature of a race of this description. Valve-rocker failures, roller-trouble and valve-spring breakage were conspicuous by their complete absence.

From a competition point of view, it can be noted that "cavitation" whilst cornering due to low sump oil level was experienced in all 4½-litre cars precisely 2 hours 30 minutes after refuelling—although the reserve oil-tanks covered this contingency with plenty in hand.

Towards the close of the race KM 3088 suffered from a bad water leak from the pump-gland when the engine was stationary at refuelling stops. Much time would have been saved at the pits had it been realised that the leak would have been very considerably reduced—if not entirely sealed off—by the action of the pump thrust when the engine was running.

Although worn down to reline limit, with the special brake adjuster used to its limit of travel, "anchors" on all cars were still effective at the conclusion of the event.

Despite these sundry oddments which caused irritation during the race, the Bentley team, by a performance unparalleled in the history of the motor industry, blazed its way into the Valhalla of motoring on June 15/16th, 1929 . . . Nor should the other competition activities of the 4½-litre Bentleys in that year be overlooked. Davis and Gunter finished 2nd in the Double-12 at 81.39 m.p.h., while Cook finished 3rd in the Six Hours Race at Brooklands. They roared over the line 3rd, 4th, 5th, 7th and 8th in the Irish Grand Prix, in the hands of Birkin, Wood, Cook, Scott and Rubin (those of Birkin and Rubin, however, being blown versions) and they were 1st and 5th in the classic "500" at Brooklands on October 12th, the winning car being driven by Clement and Barclay at the creditable speed of 107.32 m.p.h.



John Crampton's 4½-litre beside his other form of transport.

This article would not be complete without reference to "W.O." riding as Tim Birkin's mechanic in the T.T. of this year. It was caused by a certain amount of nattering among the mechanics who considered that the course was a very dangerous one and in order to give a lead "W.O." decided to go as Tim's mechanic. This gesture symbolises the whole spirit which went into the original Bentley make-up.

Thus finished a memorable racing season, full of high hopes, disappointments in profusion, but above all, an invincible emergence into prominence.

During the summer of 1929, considerable modifications were made to the standard chassis. These included connecting-rods using separate steel shell white metal-lined big-end bearings (from engine No. NX 3456 in June). These connecting rods were designed and developed in an endeavour to arrest the tendency to cracking of the white metal, a fault evident in the direct metalled rods. In this Bentleys were entirely successful, but many racing enthusiasts to this day prefer the direct metalled rod with the .010 inch to .015 inch white metal lining.

Main bearing lubrication was modified as a result of experience gained in the field of competition—and the rocker-casing was altered to oil-bath the rocker-rollers.

The Pulswell silencer replaced the double silencer at chassis No. XF 3514 in October, 1929, and the re-designed and strengthened half-shafts became standard at the same chassis.

It was not until the autumn of 1929 that electron castings completely replaced the somewhat weightier but hitherto successful aluminium alloys as standard practice—the KL and PB series engines incorporating these change-overs.

One final major alteration in design, a direct result of the development of the supercharged 4½ engine, became standardised during February, 1930, in the adoption of the heavier blower-type crankshaft with its attendant crankcase and cylinder-block at engine No. AD 3651.

The autumn of 1930 saw the introduction of .55 carbon drums at chassis No. FS 3602: reinforced electron sump at engine No. FS 3611 and reinforced crankcase at engine No. XT 3267.

In 1930, the 4½ was still acquitting itself creditably in competitions. Kensington Moir was 11th, and won his class, in the Tourist Trophy, at 68.78, and Eddie Hall was 12th at 68.36 m.p.h.

The Supercharged 4½-litre

Fifty of these were produced as standard chassis, but several had their blowers removed at a later date.

The supercharger was the Amherst-Villiers Mk VI Roots-type with double-walls, situated between the front

dumb-irons and driven at engine speed off the front end of the crankshaft. The radiator was re-designed to accommodate the blower. The lubrication system of the engine fed the gear-wheels. Two S.U. carburetters were fitted on the off side of the supercharger and a series of spring-loaded safety-valves were arranged in the inlet pipes to safeguard against damage should a blow-back occur.

The blower gave a pressure of 10 lb. per sq. in. from 25 m.p.h. in top gear and did not exceed 11 lb. per sq. in. at the highest engine speed.

Various modifications were incorporated from time to time :—

At chassis No. SM 3906 : Steel alloy diff. centres (BM 5423). At chassis No. SM 3919 : Reinforced sump. At chassis No. SM 3920 : One side location of mag. cross-shaft. At chassis No. SM 3921 : Reinforced crankcase. At chassis No. MS 3926 : Ribbed rotor-casing 4773 in lieu of double walls, and .55 carbon steel brake-drums. At chassis No. MS 3941 : 25 gallon fuel-tank.

These chassis gave excellent service in practice within the limits of the blown engine under traffic conditions. The greatest fault was the tendency of the mixture control to become stiff in operation by reason of its situation in relation to the instrument board control and also owing to its proximity to road-grit, etc. Apart from this one point, which would doubtless have been overcome by logical development had the marque continued in existence, its performance was absolutely trouble free. These blower 4½'s behaved with complete normality and for their power were docile to a degree which had to be experienced to be believed.

Thus concluded the development of a world-famous chassis which ceased production in the early months of 1931. At this time it is interesting to note the standard 4½-litre chassis cost £1,050, and fitted with a four-seater open sports body, cost £1,295. The supercharged version cost £100 more in each case.

It is not proposed to deal in this article with the special Birkin Blower 4½s which he built at the Welwyn Garden works. These were developed entirely with a view to racing, and, though on the basis of standard blower cars, incorporated many features beyond the scope of ordinary production requirements. They were, however, most successful and added further laurels to British motor-racing prestige.

This year saw one of the finest performances standing to the credit of the marque and, incidentally, one of the high-lights of Tim Birkin's career, when he finished 2nd in the French Grand Prix at Pau in a stripped blown 4½-litre Bentley touring car against the official Bugatti team and other racing cars. Two other noteworthy successes in 1930 were Birkin's 4th place in the Irish Grand Prix and Benjafield and Hall's 2nd place in the " 500 " at 112.12 m.p.h.—both these being supercharged cars.

The single-seater 4½-litre supercharged Bentley in the hands of Tim Birkin twice held the Brooklands Outer Circuit Lap Record and eventually held it in 1932 at 137.89 m.p.h. (This particular car is now being rebuilt as a road-car by Shortt for Peter Robertson-Rodger who has designed a new two-seater body not unlike the single-seater.)

In all 662 4½-litre Bentleys were produced, of which 8 had a wheelbase of 9 ft. 9½ ins., the remainder being 10 ft. 10 ins. Two of the latter were supplied to Birkin for supercharging (HB 3402 and HB 3403). In addition, there were the 50 supercharged chassis and Birkin built 2 supercharged cars (HP 3976 and HR 3977).

Six further 4½-litre chassis were built in the early thirties by Bentley Motors (1931), Ltd., from parts taken over from the old company.

Class " C " records held by 4½-litre Bentleys

Year	*Record*	*Driver*	*Speed*
1928	One hour	Froy	115.50 m.p.h.
1928	100 miles	Froy	115.52 m.p.h.
1928	200 kms.	Froy	111.60 m.p.h.
1928	200 miles	Froy	110.26 m.p.h.
1929	24 hours	Mrs. Bruce	89.57 m.p.h.
1929	3,000 kms.	Mrs. Bruce	89.08 m.p.h.
1929	2,000 miles	Mrs. Bruce	89.15 m.p.h.
1930	12 hour	Froy/Field	96.38 m.p.h.
1930	24 hour	Froy/Field	91.05 m.p.h.
1930	2,000 kms.	Froy/Field	96.40 m.p.h.
1930	3,000 kms.	Froy/Field	95.16 m.p.h.
1931	12 hour	Stewart/Norton	97.81 m.p.h.
1931	24 hour	Froy/Raphael	93.42 m.p.h.
1931	2,000 kms.	Froy/Raphael	98.03 m.p.h.
1931	1,000 miles	Froy/Raphael	97.76 m.p.h.
1931	2,000 miles	Froy/Raphael	96.68 m.p.h.
1931	3,000 kms.	Froy/Raphael	96.97 m.p.h.

Two World's Records held by 4½-litre Bentleys

Year	*Record*	*Driver*	*Speed*
1928	200 kms.	Froy	111.60 m.p.h.
1928	200 miles	Froy	110.26 m.p.h.

[*The Bentley Drivers Club asks us to place on record its deep appreciation to Mr. R. A. Clarke, who was with the old Bentley Company throughout its life and has been with the present Company since its formation, for the tremendous amount of research work he has done to provide information for this article. Thanks are also due to Bentley Motors* (1931), *Ltd., who have placed contemporary records at the Club's disposal and to several other knowledgeable persons whose help has been unstinted.*]

BOOK REVIEW

" THE 'MOTOR SPORT' RACING CAR REVIEW," *by D. S. Jenkinson* (*Grenville Publishing Co., Ltd.*, 15-17, *City Road, London, E.C.*1, 7*s.* 6*d.*).

This book, beautifully illustrated, fulfils a long-felt want, because, however much one knows about those racing cars which figured prominently in pre-1939 racing and are met with in today's races and sprints, details of their specifications and detail differences between individual examples cannot readily be carried in one's memory.

This book sets out to show how cars such as the 1½- and 3-litre Mercédès-Benz, 3-litre Auto-Union, 1½-litre Delage, 1937 and 1939 Altas, " 3.3 " Bugatti and the various types of E.R.A., Maserati, Alfa-Romeo, etc., twin-cam Austin, R-type M.G., etc , originated, how they were developed, who drove them, and what became of cars sold outside official teams. The author has a happy knack of giving plenty of technical information without making heavy weather of his explanations and of showing just how each of the famous racing cars that he chooses to describe fitted into racing history.

Each car is illustrated with a full-page photograph which shows clearly technically-significant aspects, and the book is right up to date in covering the Cisitalia, a host of which are shown issuing from the assembly line.

The book contains a wealth of data and very few apparent errors. The Type No. of the 1½-litre Mercédès-Benz is incorrectly given in the caption to its picture, but this is being corrected in later editions. Nothing quite like this book, which puts in proper perspective most of the great racing cars of our time, has happened before. No wonder one authority has said that it will soon be accepted as a standard work of reference and that the publishers have been praised by no less a person than Raymond Mays himself. With a Foreword by the Editor of MOTOR SPORT, " Racing Car Review " runs to 121 landscape pages, is bound in blue cloth with gilt lettering and has a pictorial dust-jacket. At 7s. 6d. it is really good value and should be re-issued at intervals, as racing car trends justify new editions.

M. C.

RUMBLINGS

Although it is becoming problematical whether we shall ever see racing cars in action again in this country, there are a few outlets remaining to us.

Exhibition On January 3rd we witnessed the racing of driverless cars up to 10-c.c. capacity at the Horticultural Hall, and at the Schoolboys' Exhibition we found John Cobb's 400-m.p.h. Railton Mobil Special and Reg. Parnell's E-type E.R.A., with the latest front-end, advancing the cause of caution on the road. And on January 5th we attended the pre-view of the Victoria League's Exhibition of static racing cars at Henly Hall. The Rt. Hon. The Earl Howe, P.C., C.B.E., made a very effective speech in opening the latter show—it certainly is not his fault that we have no racing in this country, and the thanks of every single person who has the interest of the Sport in any way at heart should go out to his Lordship for his repeated efforts to obtain a square deal for British motoring sport.

The daily Pressmen were at the pre-view in force, and much should by now have been published about the show, which embraced 43 exhibits and was a very fine thing indeed. So we will content ourselves with giving you the result of interesting matters discovered in the course of a stand-to-stand "snoop."

L. Rose showed his 1929 Le Mans 4½-litre Bentley, with its significant twin rear lamps, a brake adjuster in the cockpit, which "cockpit," by the way, was of pleasingly robust construction, and such items as rev.-counter reading to 6,000 r.p.m., fire-extinguisher, quick-action door catch, etc. J. D. Percy's 1930 "Speed Six" Le Mans Bentley has the usual two S.U. carburetters, a rev.-counter reaching to 4,500 r.p.m., and an Autovac-like tank under the bonnet on the near side, able to feed extra oil to the sump *via* a breather when a facia control was operated, this tank being replenished by a quick-action filler on the scuttle. The Bentley exhibits, arranged by the B.D.C., were completed by J. P. Emon's 1929 Le Mans 4½-litre.

Next to attract our attention was a 5-stud dirt-track J.A.P. motor-cycle engine with twin-float, remote-needle Amal carburetter and special d.t. B.T.H. racing magneto. Beside it was one of the 500-c.c. Cooper-Specials, which were so successful last year, and on which a grateful Government now imposes a purchase tax of 62 per cent. The cockpit contains only one dial, the 7,000 r.p.m. rev.-counter, and the engine is an identical 5-stud J.A.P., with 16½ to 1 compression-ratio, and a *standard* T.T. Amal carburetter.

Another 500-c.c. car was the Strang-Special. Its H.R.D. engine uses an ordinary twin-float T.T. Amal carburetter and a 6½-in. by 21-in. exhaust megaphone. The magneto is a T.T. B.T.H. and oil is carried in a normal quart oilcan beside the machinery. Again the only dial is that of the rev.-counter, reading to 8,000 r.p.m. in this instance, and on the left is the Bowden ignition lever, on the right the air-control lever. The hand-brake is an 8-in. motor-cycle lever, arranged to pull up, on the near side of the car.

While motor-cycle-engine minded we inspected Noel Pope's 998-c.c. blown Brough-Superior, which holds the solo Brooklands lap-record at 125 m.p.h. The blower is ahead of the V-twin J.A.P. engine, driven by chain; all the chains on this bicycle are exposed on the near side. The valve rockers are beautifully machined and have single-coil hairpin return springs, which bear on drilled extension pieces on the rocker posts. Alloy plates were noticed under the cylinder barrels and each cast-iron cylinder head has two 14-mm. plugs, one on each side. Two racing magnetos are used, driven at right-angles from the oil-pump drive on the off side, the rear magneto feeding the plugs of the rear "pot," the front magneto those of the front cylinder. The blower feeds through a long, chromium-plated pipe which tapers slightly as it nears the rear cylinder, the off-take to the front cylinder containing a priming tap to facilitate starting. The carburation arrangements live in a cowling below the supercharger; 3½-in. by 10-in. exhaust megaphones suffice in this instance. Other items of Pope's fine machine—the bungee, springless saddle (round Brooklands he took most of his weight on the footrests), cowling over the top of the forks, 3-speed gearbox with rocking foot-change, and frame-bracing near the rear wheel on the off side to combat transmission torque, *a la* Baragwaneth. A front brake is fitted—useful at Brighton—and the sidecar lugs were still in place. The Brooklands sidecar lap-record also belongs to Pope, at 107 m.p.h.

Reverting to the cars, there was the 1908 G.P. Austin, its T-head, six-cylinder engine with a plug over each valve, apparently all fired from a single magneto, and two horizontal carburetters feeding, downdraught-fashion, into two 3-branch manifolds *via* beautifully-polished, bulbous water-heated chambers.

K. W. Bear's twin-cam 2.3-litre G.P. Bugatti appeared standard save for rust and a small rear lamp. Interesting, however, is the use of 4.75 by 19 twin rear tyres, of which the outer are the latest-pattern treaded Dunlops, while the inner tyres are pre-war S-tread Dunlops. E. C. Pool showed his unblown 2-litre G.P. Bugatti, with twin triple-diffuser Zenith carburetters. Non-standard features are the large fuel-filter in the fuel line on the engine side of the dash, the air-pump transferred to the outside of the cockpit by the driver, and 6.50 by 16 racing Dunlops on the rear wheels. Bear's ex-Abecassis "3.3" Bugatti interested us by reason of the wonderful rear wheels, with four sets of spokes, two sets arranged radially, to enable twin rear tyres to be used with the Bugatti brake drums, the double-action Luvax-Girling rear shock-absorbers, and the accommodation of the H.T. leads from facia-mounted magneto to plugs within aircraft flexible hosing. We noticed that the front-brake leverage has been increased by 2-in. extensions, and that a Bluemel mother-of-pearl steering wheel is used.

Salvadori's ex-Evans' "2.9" Alfa-Romeo was looking exceedingly smart in a new coat of black paint, together with new upholstery, the bonnet retaining the Ferrari

insignia and its owner's blue-and-white "flash," the front axle and steering connections polished, and a new radiator stoneguard with slot-less beading being fitted.

Peter Hampton's Type 13 Bugatti and Rodney Clarke's Bugatti "Black Bess," both exceedingly well known to our readers, certainly showed up two of the G.P. Bugattis by the immaculate way in which they were turned-out.

H.R.H. Prince Chula of Siam, G.C.V.O., showed the E.R.A. "Romulus," its successes displayed on a card before it. The riveted two-piece tail with its central rib and the Lockheed-Girling front brakes as on the i.f.s. cars, are modifications to this famous E.R.A.; de Ram and friction shock-absorbers are used at the rear, de Ram only, mounted as Hartfords would be, at the front. Daubs of coloured paint on the gear-lever quadrant facilitate gear selection and the engine used the cranked outlet to its 2-branch breather manifold. The facia is endowed with tiny badges of the clubs and places where the car has raced, a representative one reading, "Monaco, 1936, 1st, 1,500 c.c."

John Bolster's "Bloody Mary" was wearing a party appearance for the occasion. The S.U. carburetters for the two J.A.P. engines are neatly controlled by Bowden cables. Its front brakes are Austin Seven, but operated by substantial rods, and the single G.N.-like rear brake is also rod-operated. The wooden chassis, dating from single-engine days, is stayed by rods, and in the centre a G.N.-type radius arm locates the rear axle. Friction shock-absorbers high up at the rear are coupled to the axle by drilled arms and further friction shock-absorbers are incorporated in the outer radius members. Incidentally, John does not sit amid whirling chains, as is popularly supposed, as these are all on the near side. Nor does he really trail along the ground as he sits in "Mary"—the underneath of his wooden seat is five inches clear.

From "Mary's" twin J.A.P.s we passed to the engine from the 1905 200-h.p. V8 Darracq. A single central camshaft operated the o.h. valves *via* immense push-rods, fork-jointed to huge rockers. The inlet valves and springs are completely sunk from view within the water jackets, but the exhaust valves are normally located. The cylinders are in four blocks of two, and two carburetters between the "vee" feed to them through a 2-branch manifold on each block. The water-pump is at the front, delivering through a long central pipe with an off-take to each block.

Of the remainder of the exhibits, Maclachlan has himself described his single-seater s.v. Austin Seven in these pages, the Twin-Cam Austin was there in the form in which it was so well known to all of us, likewise Heath's 2-litre sports Alta, Gilby's "2.6" Alfa-Romeo, Tony Crook's Mille Miglia "2.9" Alfa-Romeo, and Carrington's cream "328" B.M.W. The Appleton-Special has a neat three-pane Perspex wind deflector, and Peter Clark's "Aerodynamic" H.R.G. an additional fuel tank in the tail, a queer gauze screen ahead of two mica aero-screens, an additional air aperture at the front and delightful 12-in., longitudinally-placed straps for the "alligator" bonnet. There was a tiny lap-scorer on the facia, but we were horrified to find that the remote gear-control had entirely vanished! The scuttle "hump" and passenger's seat fairings used for racing were not in evidence, but a notice proclaimed this H.R.G. able to run 500 miles between pit-stops in sports-car races. Prince Chula's "2.9" Maserati was as good looking a racing car as any present, although its cockpit was filled by "Bira's" special cushion. The front-brake pipe lines were missing from this car.

Heath's 6C Maserati has a square-type aero-screen and the rear extremities of the front torsion bars protrude from the side cowling, as on all these cars. Harrison showed his sports 2-litre Riley, with six Amal carburetters, an oil tank in the scuttle with motor-cycle filler cap, I-section light-alloy arms linking the front friction shock-absorbers to the axle, and a torque cable running back to the chassis from the top of each king-pin. A big fuel tank occupies the tail and rods brace the rear-axle banjo casing to the torque tube. All that was shown of the E-type E.R.A. were miscellaneous components scattered about the floor.

Veteran and vintage racing cars were well represented, and of them Heal's 1922 T.T. Sunbeam, with immense polished copper fuel tank and authentic wings will feature in a forthcoming "Veteran Types" article in MOTOR SPORT, while his 1924 G.P. Sunbeam, with auxiliary fuel tank in the cockpit and the instruction "To Undo →," perhaps mindful of Divo's fiasco at Tours in 1923, on its radiator filler cap, Ariel Clark's 1914 Mercédès, the 1910 Fiat, the 1908 Hutton and Abbott's 1904 Mercédès, have so featured in past issues. Pratley's 350-h.p. V12 Sunbeam in Brooklands guise, the Gardner M.G., the Monaco flat-four and other aeroplane engines, etc., were amongst the exhibits, and, of the motor-cycles, Daniell's 499-c.c. Norton and Foster's 350-c.c. Velocette stood proudly by their 1947 Tourist Trophies. (For the sake of those burglars who have any petrol left we would emphasise that the exhibition has been over for some time!) Those who set store by exhaust megaphones may care to know that the Norton has one of $5\frac{1}{4}$ in. by 15 in., adjustable for position on the pipe, the Velocette one measuring $4\frac{3}{4}$ in. by 13 in., while the 498-c.c. Triumph with which Whitworth won five Continental road-races for Britain last season, has two, each of $3\frac{3}{4}$ in. by 22 in.

Paper control permitting, we could tell you a lot more about this absorbing exhibition. We hope it did the Victoria League so much good that it will become a regular fixture.

* * *

Odd Spots

Major Vaughan is shortening the wheelbase of the Fane-Nash.

* * *

R. C. Rowland tried the ex-Harry Noble Q-type M.G. single-seater and Charles Mortimer the rebuilt ex-Rayson Maserati on a Hampshire airfield recently.

* * *

G. M. Watson has purchased Cowell's single-seater Alta.

* * *

Gigi Villoresi, using Lodge plugs in his 16-valve Maserati, made fastest lap and won the Buenos Aires Grand Prix on January 17th.

Club News

WE HEAR

A Bangor garage apparently has in hand a 500-c.c. "Special" with d.t. Douglas engine and Austin Seven transmission. W. A. Wiseman has a 1920 D-type "23/60" Vauxhall (with an absolutely unchipped starter ring, incidentally!), and he hopes to restore it to very good order indeed. In 1946 he bought a 1927 Armstrong-Siddeley Fifteen tourer for £45 and in 10,000 miles the only trouble experienced was cured by the purchase of a nut and a split-pin, to secure part of the transmission. Last summer this car took four people, camping kit and a 12-gallon water tank for a 2,000-mile Continental tour, averaging 28 m.p.g. Apart from eight punctures no trouble was experienced, although the car boiled up every hill (including the Grinsell Pass), went over a certain cable bridge where automobiles are *verboten*, punctured in the main square of Lucerne and did 20 miles with the front wheels badly out of true after hitting a telegraph pole. Yet another Sunbeam Twenty, a tourer of 1927 vintage, has turned up in Edinburgh; it has only run 30,000 miles, having been licensed three months a year throughout its life.

Oliver Sear has acquired the "Ulster" Aston-Martin once owned by Prince "Bira," and Bill Harris has a supercharged Salmson engine out in Australia which he believes came from the Bartlett-Special. He seeks information about it, believing that the original camshafts may have been changed for others. He intends to install this engine in an i.f.s. chassis. On the subject of Salmsons, K. C. Radburn, who owns four push-rod and "G.P. Special" models, volunteers the information that the valve-timing of the latter is: inlet opens 20° b.t.d.c., exhaust valve closes 20° a.t.d.c., with ignition setting marked on flywheel, and tappet clearances .006-in. inlet, .008-in. exhaust, set cold. He believes the only external difference between a "Grand Prix" and a "G.P. Special" Salmson is the position of the oil filter, at the front of the engine on the former, but at the centre of the sump cover-plate on the latter. Dr. Ward, of Leeds, who once owned an Aston-Martin with six-cylinder Scott two-stroke engine, has acquired an ex-Ellis s.v. Aston-Martin from Alton Garage. J. Fawcett is having the wheelbase of an old Lancia shortened by two feet. The work is being undertaken by F. H. Hambling, whose prototype V8 sports car is nearing completion. F. Wright earnestly seeks an instruction book for a 1933 o.h.c. Wolseley Twelve. D. Michael, who reports that a standard Big Six Bentley is mouldering in his district—Chelmsford—hopes soon to acquire a V-twin Morgan. He mentions that he has two Scott motor-cycles at present, of 1928 and 1931 vintage. His family's cars have included an Omega 3-wheeler, which he recalls as having semi-elliptic springs, an I-section front axle, an 8/10-h.p. J.A.P. engine under the bonnet and Morgan-style two-speed transmission. Are any Omegas still on the road, he asks? Shaws Motors, of Morecambe, are rebuilding the old Emeryson Special for Kirby of "Sunbac." This car consists of a 1926 Frazer-Nash, originally with Anzani engine but now endowed with a 4 ED Meadows, which is to be given a Shorrock supercharger. Kirby intends to use the car in future trials and speed events in place of the Jeep he ran last season. Major Dove has had to lay up both his ex-Dawkins 1914 Rolls-Royce and his 1928 "12/40" Lea-Francis, due to the petrol cut. An Austrian Gräf and Stift, resembling a typical American car of the early nineteen-thirties, has been seen in Slough.

Arrived in Kenya, Victor Axel Berg has acquired a very beautiful 1935 2.3-litre Alfa-Romeo "Zagato" with only 25,000 miles to its credit. It is the only "2.3" in Kenya, apparently, and Axel Berg knows of only one other car of this make, a blown 1¾-litre. He admits that American automobiles serve very well on the bad roads encountered, but says he is lucky in having a farm only four miles from the one good tarmac road. Any hints on how to lubricate the blower, whether an aluminium head is standard and the correct jet settings for an altitude of 6,070 ft. above sea level should be directed to the proud owner at Box 50, Nakaru, Kenya Colony. Steam car topics seem to crop up in these offices in regular cycles and so A. S. Wadsworth asks, hasn't the high-pressure flash steam generator and, say, a triple-expansion all-enclosed steam engine the makings of a very effective sports-car power plant? Has it? We wouldn't know. C. Burton has installed a 17-h.p. Hudson engine in a 1933 open S.S. In America, George C. Caswell is using a B.N.C. endowed with a Ford V8 engine and also possesses a 1921 3-litre racing Ballot which possessed a Model-A Ford engine when acquired. It is believed that the car was sent over for the 1922 Indianapolis race and all parts are stamped No. 3. If a Ballot straight-eight engine cannot be found, a Duesenberg or similar American power unit will be installed for S.C.C. of A. events.

Costin L. Densham, together with S/Ldr. B. H. Moir Winslett, A.R.Ae.S., has formed Wade Engineering at Gatwick in order to start production on a range of superchargers really suited to the modern racing car and its derivatives. He has with him on the staff Messrs. Roberts, Green and Young. Incidentally, besides his Brighton-age Raleighette tricar and his "14/40" Sunbeam, Densham is restoring to good order a 1914 Calcott 2-seater. R. E. Aickin has recently acquired a 1924 "Red Label" 3-litre Bentley.

N. R. Culpan, motor-cyclist, has a Healey chassis which he has endowed with a light sports body with a view to racing it this year.

Arising out of recent mention of a 1924 Lanchester Forty, J. G. Peter and Michael Taylor have, respectively, 1925 and 1929 23-h.p. cars of this make, while Keith Alderton still runs *his* 1924 23-h.p. open tourer. Geoffrey Frank now has in his stable a Rolls-Royce "Phantom II" coupé, 1911 "Silver Ghost" Rolls-Royce, 1912 "Silver Ghost" Rolls-Royce, 1912 Daimler, 1914 Sunbeam, "12/60" Alvis, 2-litre A.C. Competition 2-seater and Austin Ten cars, and is in pursuit of another 1911 Rolls-Royce. Gordon and Frank Nevill have rebuilt a 1934 M.G. L-type Magna and a 1936 Singer "Le Mans Special." The registration numbers are LJ 7715 and HF 5096, and previous owners are invited to contact the Nevill brothers. We know of a Chrysler engine and other spares if any "special" builder is interested.

NOTICE TO SUBSCRIBERS

It is announced that as from February 1st, 1948, the MOTOR SPORT subscription will be 15s. annually or 7s. 6d. for 6 months.

ALSO, changes of address must be notified *before* the 25th of the month to ensure correct delivery of the next issue.

Failure to renew subscriptions promptly may result in the loss of your copy.

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EDWARDIAN TRIBUTE

In a recent article in *The Motor* by D. B. Tubbs, describing his motoring experiences in 1947, and covering some of the best cars from England, America, France, Italy and Germany, it seemed evident to us that he enthused most over the Clutton/Ewen 1908 G.P. Itala. He certainly reminded us that its standing-start ¼-mile time comes mid-way between that of a modern Mk. VI Bentley and a 2½-litre Riley.

★

J.C.C.

The Oct.-Dec. issue of the "Gazette" contains reports of recent social events and news of members' activities. One hundred and seventy-one new members have joined the club since last March—further proof that motoring increases in popularity no matter to what Authority subjects it. The J.C.C. Council has made a grant of £725 from its British Motor Sport Fund towards the expenses of last year's Jersey race.

KENTISH BORDER C.C.

This once active club has every intention of carrying on with social events during the period of "no-basic," or drought. Hon. secretary, K. P. W. Shackel, 15, Rowan Walk, Bromley Common, Kent.

★

V.C.C.

The Veteran Car Club's "Gazette" for December last contained the concluding instalment of St. John Nixon's article "The Romance of Panhard and Levassor," some notes on J. A. Holder's "Forty" Mercédès depicted on the front cover, a brief account and an excellent photograph of Cecil Clutton's 1908 "Sixty" Itala, and all the usual features, together with a survey of America's interest in veteran cars. Hon. secretary, St. J. C. Nixon, 46, North Row, Oxford Street, London, W.1 (Mayfair 6749).

★

500 CLUB

The 500 Club expects it members to be very fully occupied in their workshops during the no-motoring-for-us era. The November issue of its journal "Iota" contained a list of members, with addresses, the total membership now standing at over 500. Of these members, 73 have cars or are known to be building. The issue was enlivened by some splendid pictures of 500-c.c. cars in action, taken by Guy Griffiths. Secretary, J. O. H. Siddall, Milford House, Lansdown, Bath.

★

S.C.C. of A.

The Sept.-Oct. edition of "Sports Car," the official magazine of the Sports Car Club of America, contained a long account of the experiences of Bill Milliken when he competed in last year's Pike's Peak Hill Climb in his Bugatti Special, reports of recent events, an article on the 1940 Packard-Darrin, for which 108 m.p.h. and 0-60 in 11 sec. is claimed, another article on sports cars, in which a Canadian "hot-rod" Ford is claimed to have bettered the Lycett 8-litre Bentley's best s.s. mile by 4 m.p.h.[!], and a blurb from an Englishman about his V16 Maserati. The Rolls-Royce section of Grant's book "British Sports Cars" is quoted in full, but a query is raised as to whether the author is correct in saying that early "Silver Ghosts" had four-speed gearboxes. Actually the original "Silver Ghost" had a geared-up fourth speed, but this was dropped in 1910 and later pre-1914 "Ghosts" had three-speed boxes, with the exception of the "London-Edinburgh" model introduced in 1912. The magazine also has an account by Milliken of Cobb's runs at Utah and its news of members' cars under make-heading. In the latter section Pratley's Austin Seven and V12 Sunbeam in England are mentioned.

There seems to be a growing interest in America in Mercédès cars and the *Sports Car* for November-December last contained a history of the early racing career of this make by Alec Ulmann, pictures of the "Sixty" Mercédès engine and a cover photograph of Briggs Cunningham's SSK, of which there are about three in the United States. Other articles covered a 1928 Mercédès-Benz rebuild and a description of the "38/250" model. The "Cutout" feature continues news of members' cars make by make and from it we learn that Wes Cunningham now owns the Caswell 1921 racing Ballot and hopes to fit a Model A Duesenberg engine. Other makes covered include Alfa-Romeo, Bentley, B.N.C., Bugatti, Invicta, Lancia, M.G., S.S., and the Tornax Special based on the D.K.W. Indeed, the only American makes are Stutz, Mercer and Kissel, so if you are due to go to the U.S.A. you need not anticipate too much homesickness. New members include David Scott-Moncrieff from Scotland and owners in the States of 1922 Amilcar, Auburn and M.G. cars. President, R. G. Sceli, 317, Asylum Street, Hartford, 3, Conn., U.S.A.

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C.S.M.A.

It is interesting to note that the Civil Service Motoring Association, the membership of which was 31,410 at the end of last October and its investments over £37,841, is protesting as bitterly as any other motoring organisation about the abolition of "basic" petrol. Secretary, E. T. S. Salmon, 4, Norris Street, Haymarket, London, S.W.1.

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CHRISTMAS

Not the least of the pleasure the Editor derived from the numerous Christmas cards and calendars which readers kindly sent him was the sight of friends and relatives picking these up in the time-honoured manner to ascertain from whom they came and to read the nice verses therein, only to be confronted with an odd-shaped motor vehicle, frequently travelling at an unquestionably illegal velocity. For example, there was Martin Brunt's Hooker-Thomas-Special, the Bugatti-cum-Fiat card from the Whincops, the R. C. Roland Motors' Cisitalia coupé, C. R. Abbott's 1904 Mercédès in action at Prescott, the Alton Garage Alvis and B.D.C. cards from the Sedgwicks and J. Bradley Hunt. Others, much appreciated, included the Scuderia Impecuniosa Talbot flat-out at Gransden, a card from the committee of the Brighton & Hove M.C., a Healey from R. A. Funnell, Leonard Potter and his passenger on a trials-hill in the Allard, Dr. and Mrs. J. R. Edisbury's amusing interpretation of an I.A.E. ideal, that "a car should wear out simultaneously in all parts," Heal's 1924 G.P. Sunbeam at Shelsley Walsh with Wyer in attendance, Laurence and Mrs. Pomeroy in the "Prince Henry" Vauxhall, Bunny and Mrs. Tubbs in their Citroën above Sion, an aerodynamic H.R.G. miscellany from Ariel and Peter Clark, Rivers Fletcher in his racing M.G., Hutchison in action in his P3 Alfa-Romeo, a fine calendar from Edward Hyde, and cards from the Editor and staff of the *Light Car*, Mr. and Mrs. Holland Birkett, Norman Routledge, Dudley Coram, W. Husband, Mr. and Mrs. S. J. Gilbey, P. Quiggin, Car Mart, the Veteran Car Club, Harold Biggs, Jim Kentish of the Sunbeam M.C.C., and Mr. and Mrs. Allen of the Vintage M.C.C. Then there was Raymond Mays' E.R.A., a very fine view of a 57 SC Bugatti coupé from Rodney Clark and Mike Oliver, "Bloody Mary" from John and Betty Bolster, a humorous folder from Nina and Goff Imhof, and cards from the Cheltenham M.C., D. W. Price & Son, Ltd., J. K. Budleigh, John S. Dixon-Spain, John Costle, Donald C. Pitt (with M.G.), the S.S. Mercédès-Benz of R. H. Johnson, and a useful calendar from the Antone Company, headed by an appropriate Brockbank cartoon, another calendar from Davies Motors, Ltd., and cards from Mr. and Mrs. Morton, John Morgan of the J.C.C., Basil Davenport, Mr. and Mrs. Anning of the W.E.M.C., S. H. Allard, Billie North of the B.D.C., Dick Packman, Mr. and Mrs. Jack M. Reiss, Recules, Ramela y Cia, Ltd., Harry C. Shaw of Joseph Lucas, Ltd., J. B. Th. Hugenholtz of Ammerstol, Julian Fall, Mr. and Mrs. Inman Hunter, Mr. and Mrs. S. J. Humphries, and Floyd Clymer, not forgetting excellent calendars from T. P. Breen, Ltd., the Bristol Aeroplane Co., Ltd., Ronald Loader, and Monaco, Ltd. To all these well-wishers we sincerely reciprocate their good wishes and hope their motoring this year will not be too diluted.

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MORGAN 3-WHEELER CLUB

In future this club's Midland Group will meet at 3 p.m. at the Winter Garden Restaurant, Broad Street, Birmingham, on the second Sunday each month.

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G.N. REUNION LUNCHEON

Arrangements have now been made for this meeting of old-time drivers of twin-cylinder G.N.s to take place at the Connaught Rooms, Great Queen Street, Kingsway, London, W.C.2, on Thursday, February 26th, at 12.30 p.m., for lunch at 1 p.m. The luncheon (excluding service) will cost 14s., including coffee, but not wines.

Both the "G" and the "N" of the famous cyclecar will be there. F. J. (Eric) Findon, Editor of *The Light Car*, Bowling Green Lane, London, E.C.1, to whom all inquiries should be addressed, stresses the fact that ladies, either as G.N. drivers, or as the guests of G.N. drivers, will be welcome.

★

ULSTER A.C.

The December issue of "The Ulster Motoring Review" contained seasonal greetings to the Ulster A.C. from The Rt. Hon. the Earl Howe, P.C., C.B.E., S. C. H. Davis, F. J. Findon, W. Boddy, George Abecassis, S. H. Allard, J. V. Bolster, K. W. Bear, A. J. Butterworth, F. R. Gerard, T. C. Harrison, Raymond Mays, K. Hutchison, P. R. Monkhouse, Oscar Moore, D. C. Pitt and P. de F. C. Pycroft. This journal seems to include something for everyone, even to a particularly good report of the dresses worn by the ladies at the annual supper dance, held at the Grand Central Hotel, Belfast. Club awards for 1947 were as follows: Victor Ferguson Trophy, for best performance in reliability trials: C. S. Porter. Montgomery Cup, for the most successful lady member in competitions: Mrs. J. L. Dowling. Ex-Service Members' Cup, for most successful serving member of R.A.F., Army, Navy or Merchant Navy Service:

N. S. Robb. Miss Sydney Brice-Smith is now full-time secretary.

★

V.M.C.C.

The Vintage Motor Cycle Club is determined to maintain the enthusiasm of its members during "the drought." Its last Bulletin was in seasonal form, with goodwill messages from W. Boddy, M. F. Walker and Mr. and Mrs. Allen. New members listed numbered ten, with between them three Scott Squirrels, 1921 New Imperial J.A.P., 1913 Humber, 1913 Levis, 1926 Triumph, 1923 Rudge, 1930 Sunbeam, 1924 Triumph and 1929 Brough-Superior. Incidentally, in connection with Press work for the Royal Wedding, Allen covered 94 miles on his Brough at an average of over 50 m.p.h. The club arranged a visit to the Science Museum last month.

★

QUIZ SOLUTION

The Quiz picture in the January issue was correctly solved by P. R. Monkhouse, of Watford; A. T. Rawlinson, of Llandudno; H. L. Biggs, of Enfield; J. V. Lewis, of Ilford; A. Thomson, of New Malden; G. E. Templar, of Cobham; Sqdn-Ldr. J. Breese, R.A.F.; R. Hutt, of Kenilworth; F. L. Steers, of Belfast; R. M. Rambaut, of Carlisle; J. D. Scheel, of Copenhagen; R. D. Bate, of Manchester; T. V. Brettell, of Alresford; C. Posthumus, of Sunbury; Dr. J. D. F. Thornton, of Macclesfield; Paul Frère, of Brussels; H. Pringsheim, of Ilford; V. Barlow, of Elmdon; R. Buxton, of Enfield Wash: D. H. Mateer, of Kingston; K. N. Teasdale, of Birmingham; J. K. Hall, of Tulse Hill; L, Tallis, of Coventry; T. A S. O Mathieson, of London, W.1; and Tom H. Brahmer of Sweden.

Actually we showed Manfred von Brauchitsch winning the Avus Grand Prix in May, 1932 (many readers voted it 1938) with a specially-streamlined SSKL "38-250" Mercédès-Benz—the car with the large "elephant" supercharger.

Not all these people got the driver correctly, Caracciola being a favourite, but we deem a solution correct if make and type of car are right. Apart from the driver, not everyone got their race result correct and one reader mistook the car for a more streamlined version of the later 3-litre cars. The incorrect solutions were Paul's 3-litre Delage of 1939, Benz and the streamlined 3 2-litre Alfa-Romeo.

Another "Quiz-picture" will appear next month—after we have pulled up our socks and looked to our laurels.

★

THE 1948 REMBRANDT

The sixteenth "Rembrandt" Saturday, February 14th, commencing 12 noon. Cocktail party and Exhibition of motor racing photographs, followed by buffet luncheon. Chairman The Rt. Hon. The Earl Howe, P.C. In the afternoon there will be "question time"—a brains trust feature with Rodney Walkerley as Question Master, and a team of eight experts to answer your questions on any matter relating to motoring sport. Tickets price 21s. each. Please apply early from A. F. Rivers Fletcher, "Noddings," 4, Eversleigh Road, New Barnet, Herts. Questions can be put to the Question Master on the day, or if you prefer it, can be sent in writing to A. F. Rivers Fletcher beforehand.

★

NORTH-WEST LONDON M.C.

The Annual Dinner and Dance will take place at Chez Auguste, Old Compton Street, W.1, on Thursday, February 19th, 1948. Evening dress optional. Tickets at £1 each are obtainable from the Hon. Secretary, J. H. Appleton, 99, Goldhawk Road, W.12.

★

LAGONDA C.C. SOCIAL

The Lagonda Car Club held its first social event since its formation, in the form of a Buffet-Dance at the Dorchester Hotel last month. It was most gratifying to the organisers to have an attendance of some one hundred people, in view of the prevailing transport problems. Speeches were impromptu, but the Chairman said a few words, as did Major Ainsworth, while W. H. Oates, who raced the 11.9-h.p. Lagonda at Brooklands in the early twenties, was also present and recalled that his Lagonda associations date back to about 1905, when he owned a 3-wheeled vehicle of that make. The dance organisation was a credit to the Committee and to Mrs. V. I. Davies, the Club's Hon. Secretary, and the atmosphere of the whole evening was one of comfort and pre-war enthusiasm, so that the members and guests finally dispersed, looking forward with great keenness to the next Lagonda Car Club social.

★

VULCANIZATION

Stenor Ltd., of Kewfoot Road, Richmond, Surrey, have issued an interesting booklet dealing with their vulcanizers, containing hints on getting the best results. Copies are available free on mention of MOTOR SPORT.

FICTION

It is a long time since we have read a detective novel, but we must confess to having recently finished just such a story, entitled "N.7." The reason? Because it features Rolls-Royce, Bentley, Renault, Ford and Benz cars—indeed, there is an exciting chase of a criminal, driven by a pre-1914 racing driver in a 1925 "40/50" Rolls-Royce limousine, by the hero and detectives in a Bentley and a "Phantom" Rolls-Royce, respectively. There is also reference to Brooklands trophies and the 1914 French Grand Prix, and to Gordon Crosby's painting of the latter, showing "the P.L.M. express crossing the bridge at Givors, and, below, Boillot, driving like a demon, fourteen seconds behind and chasing the German on that last lap, which Boillot was destined never to finish." This would have surprised us very much had not the book been sent to us by G. R. N. Minchin, whose experience with 149 personal cars was described in MOTOR SPORT last month. Minchin, as you may have guessed, was the author, dedicating his book to "R., thanks to whose genius I had so many pleasant journeys in Rolls-Royce cars on Route Nationale Number 7 . . ." It is a good, straightforward mystery story, with accurate motoring references; in fact, one of the clues embraces a most subtle feature of a Rolls-Royce's minor controls. Over and above that, those who know France and the Riviera will enjoy the descriptions of famous towns and hotels, and of the route along N.7.

"N.7" is, we believe, out of print, but those who collect motoring books and who deign to include fiction—and there have been some good motoring novels, such as "All Out" and "Sicilian Circuit," by Cottenham, "Christopher Strong," by Gilbert Frankau, the "Lightning Conductor" and other stories centering round early motoring by the Williamsons, and Pierre Frondaie's "L'Homme à l'Hispano"—in their libraries, will find it worth while to search for a copy of Minchin's mystery, which was published in 1930 by Arthur H. Stockwell, Ltd., of London.—W. B.

THE "MOTOR SPORT" BROOKLANDS FUND

A Steady Improvement

The Fund started by MOTOR SPORT as a tribute to the late Mr. H. F. Locke-King who gave Brooklands Motor Course to the nation, is gaining momentum, and we hope something really worthwhile will eventually be the outcome. We propose to leave the Fund open for some considerable time, as doubtless many overseas enthusiasts will wish to contribute.

Dr. and Mrs. Edisbury, in sending their donation, say: "Herewith a small tribute to a great man. To my wife and me, the Fund will be a reminder of the world's most glorious 'blind' round the dear old track during our honeymoon."

George Bance, on behalf of the North London E.C.C., says his Club feels that it should express appreciation of those who served the Sport in years gone by, and that the present generation owes a debt of gratitude to Mr. Locke-King; the N.L.E.C.C. is well aware of the good Brooklands did in the past.

We hope a useful trophy, or perhaps something more imposing, may be possible if the Fund continues to grow. The Trustees are Mr. J. A. Masters, of the M.C.C., and Mr. W. J. Tee, of MOTOR SPORT. Space permitting, a full list of donations will be given in the near future. Meanwhile, the position to date is:—

	£	s.	d.
Brought forward	32	17	0
Dr. and Mrs. Edisbury, of Hooton	2	2	0
F. J. Jeans, of Leyton ...	1	0	0
G. Bance, on behalf of the North London E.C.C. ...	5	5	0
R. Taylor, of Alcester ...	1	1	0
	£42	5	0

MORE LETTERS from READERS

Sir,

I have just finished reading "The Meeting of the Clubs" in the January issue of MOTOR SPORT and am in wholehearted agreement with your bracketed remarks about fighting for unrationed petrol instead of all this "basic" talk.

The motor industry has a right to a respected place in the well-being of the country and has established that right in the successful supplying of the numerous components which were vital to the defence of the country, therefore let all motoring journals combine to achieve the recognition of this right; the usual answers will, no doubt, be given, but personally as far as dollars go I am sure that the present issue of trashy films can only be described as poor value for money and certainly does not justify the deprival of a section of the populace of a clean, healthy sport.

I am, Yours, etc.,
Darlington B. W. LYTH.

* * *

Sir,

After reading "Without Comment" and "Also Without Comment" in recent editions of MOTOR SPORT, drawing attention to the existence of a basic petrol ration for British motorists in Germany, I would like, if you will allow me, to add a few of the comments which your contributor omits:

(*a*) The ration is not 16 gallons per month. The highest rate (for cars of 20 h.p. or over) is 70 litres (15½ gallons) per month. For smaller cars it is less.

(*b*) There are no public bus services here.

(*c*) In most places there are no taxis.

(*d*) German trains are so overcrowded that British people are requested to use only military trains, which are exceedingly few in number.

(*e*) No household requirement of any significance whatever can be purchased except from the N.A.A.F.I. (or C.C.G. shop), and no meal can be obtained out except at a British Club. Many families are stationed at a considerable distance from the nearest N.A.A.F.I. or Club.

(*f*) There are considerably less than 10,000 British private vehicles registered in the Zone.

(*g*) Although a W.D. vehicle can be obtained (when available) "on repayment," it must always be driven by its appointed driver. It is, therefore, most undesirable to use a W.D. vehicle for any private journey involving long periods of waiting, particularly late at night.

Please do not think that I deprecate any effort that is calculated to restore "basic" in the U.K. Your observations imply, however, that to abolish the basic ration in B.A.O.R. would tend to accelerate its return at home. Owing to the very small quantity of petrol consumed by British motorists out here I do not think that is so, and I also feel that the different circumstances prevailing in B.A.O.R. justify the retention of a basic ration here. I hope I shall feel the same if I am posted to U.K. before the "basic" does return!

German motorists receive petrol only for essential purposes, but the decision as to what constitutes an essential purpose rests with the German Administration. Judging solely from the number of German cars seen on the roads I would imagine that it is not too difficult to find an essential purpose.

May MOTOR SPORT, the journal, continue to flourish even while motoring sport itself is dormant, and may the reawakening of the latter be not long delayed.

I am, yours, etc.,
K. G. BEAUCHAMP
B.A.O.R. (Major, R.A.S.C.).

[We are glad to publish this letter, but would say that it was never our hope that the "basic" ration to Britishers in Germany should be withdrawn. We merely wished to emphasise how unfair is the present system of petrol rationing to British subjects as a whole; which apparently extends to the method whereby Germans obtain their supplementary allowances.—ED.]

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vide MOTOR SPORT, *August*, 1947

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FOR sale.—Mercury and Ford V8 special builders, engines, gearboxes, chassis, front axles, rear axles, etc., for sale from stock. Colin & Leslie Ltd., Wharfdale Garage, Wharfdale Road, Bournemouth. Tel. : Westbourne 64497.

TWIN S.U. petrol pressure pump, 12-volt, brand new, £4 2s. 6d. each., or 55s. plus your single-type pressure pump—postage paid and on 7 days' approval against cash. Clare's Motor Works, 254, Brixton Hill, London, S.W.2. Tulse Hill 3483.

M.G. 1½-litre 1938 Tourer. Rebored, crank reground, new Hartford shockers, S.U. carb. to each cylinder, compression raised slightly. Tyres good, spare covers. New king-pins, bushes, track rod ends, new carpet. In showroom condition. Tuned by Ruse. 3,000 since rebuild. Nearest £750. Middleton, Staveley, Grove Road, Ilkley, Yorks.

M.G. MAGNA 1932 sports coupé. Excellent engine, chassis, battery, etc., bodywork fair. £95. Oliver, 229 Stanstead Road, Forest Hill, S.E.23. Tel. For 5592.

FOR sale.—Two 450 by 19 covers fair, take retread. One 4.50 by 19 in. tube, new. One 5.00 by 16 tube. One 5.25 by 16 tube. One 6-in. Notek spot-lamp. Twin windhorns with switch. Moderate prices. Advertiser, 41, Oakmead Road, Balham, S.W.12. S.A.E. please.

DIRECT from America, yearly rates : *American Automobile*, 17s. 6d. ; *Automobile Topics*, 32s. 6d. ; *Automobile Trailer Travel*, 10s. ; *Automotive News*, 50s. ; *Motor News*, 12s. 6d. Stamp for list of 500 American magazines. Johnstone, 65, Curling Vale, Guildford.

ENTHUSIAST wishes exchange 14/45 (1930) 2-door Talbot sports-saloon, in really exceptional condition, for open 2- or 4-seater sports. One needing repair might suit. Gibson, 8, Welsby Court, Ealing, W.5.

FRAZER-NASH Spares—Bevel box swivel plate, under-scuttle fuel-oil tank. Two rear brake shoes. Four Rudge hub caps (chrome, 42 mm.). One 42-mm. Rudge wheel. Various lengths s/h chain. Meadows Engines Spares "4ED."—Three push rods (new). Four gudgeon pins (large dia., new), 4-cyl. anti-clock Bosch magneto. Four serviceable .060-in. oversize h/c pistons. Starter motor. Two light alloy con. rods. Exh. manifold (cast). Compression plate. Cyl. head gasket s/h. Everything reasonable. Chalet Cottage, Farnham Royal, Bucks. S.A.E. please.

FIAT 1940 (May) 1,100 pillarless saloon. Colour, steel dust. Superb condition after A-Z overhaul. Duty paid Eire. Many extras. Fuller " gen." on application. £630. Atkinson, 17, Sandys Street, Newry, N. Ireland.

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FOR SALE—*continued*

£110—1928 Morgan J.A.P., 1,100 c.c., o.h.v. water cooled. Two speed. Stays to tops of sliding axles. Has been rebuilt by enthusiast. Engine overhauled by makers. Radiator rebuilt, new sprockets, chains, tyres, exhausts, battery, lamps, and wiring. Fitted Mag-dyno. Cycle type wings. Cellulosed maroon. Also 1934 Austin Seven in very healthy condition, £120. 113, Bad Bargain Lane, Burnholme, Yorks. Tel. 54408.

1929 FIAT 8-h.p. saloon, two owners, very clean inside, ditto body, very good tyres, new batteries, mechanically sound and ready to drive away, owner desirous of exchanging for a sports open 2- or 4-seater, but would sell for cash. Also 1927 Austin Seven saloon, fair condition interior and exterior, mechanically sound, good tyres, owner desires to exchange for open sports but would sell. Also 1931 ditto, but considerably smarter, open sports wanted but would sell. 1948 Swallow Gadabout, new, £103 1s. 10d. List price. Reliance Auto Sales & Service, Ltd., Drummond Road Depot, Skegness, Lincs. Tel. 1051.

1933 LE MANS Aston-Martin 4-door saloon. Good condition throughout including all tyres. Price £300. New Centric s/charger, Type 260, suitable 1½-litre, no accessories. Price £25. Five Rudge Whitworth triple-spoked wheels, size 5.25 by 21 in. Suitable Sunbeam, Lagonda, etc. Any offers. J. C. H. Kramer, 208, Lichfield Court, Richmond, Surrey. Tel. Ric 2797.

D.I.S. DELAGE 1927, 4-seater Kelsh body, S.U. carburetter, P.100 lamps, new hood, tonneau cover. Spare engine, back axle, gearbox. Sell or exchange, around £200. Gibson, Court Street, Moretonhampstead, Devon. 'Phone 225.

ALSO Riley Lynx 1934. All spares. Spring, Court Street, Moretonhampstead, Devon. 'Phone 225.

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FOR SALE—*continued*

ASTON-MARTIN 2-litre long chassis 1937 for sale. Would exchange for Aston " Ulster " or similar sports car. Napier, Victoria Place, Airdrie, Lanarkshire.

1937 (JULY) Riley Lynx 12-h.p. 4-str. tourer. One owner. Reconditioned pre-selector gear-box. Sell or exchange saloon. Cook's Garage, 39, London Road, Peterborough. Tel. 3021.

FOR Sale.—Freehold modern Garage & Service Station in S.W. London district (late Bellevue Garage & Service Stations, Ltd.) Multiple petrol pump, 6 petrol tanks of 500 gallons capacity each. Showrooms, offices, etc. 2 occupied flats. Main road position. Total floor area excluding forecourts about 4,350 sq. ft. Vacant possession except flats. Apply Edwin Evans & Sons, Chartered Surveyors, 251/253, Lavender Hill, S.W.11. Tel. Bat 0050.

SINGLE-SEATER all-alloy body, suit 1,100–1,500. Complete with 30-gall tank, pointed tail as E.R.A. cowl and built-in mirror. One aero screen. £50. Crown wheel and pinion for Riley Nine. Also axle shafts k.o. Crown wheel and pinion Austin Seven and Ford Eight. 1,880 M.G. rad., good chrome. Write, Sparrowe, Northbourne, Bournemouth.

1929 RILEY Nine Monaco. Fabric saloon. Thoroughly sound and reliable mechanically. Steering and brakes, etc., first-class. Body in excellent condition for its age, especially inside. New windscreen. Very friendly car. Owner needs garage space, and will accept reasonable offer, loaded free on rail Wakefield. Write or 'phone Swann, Beechwood Grove, Horbury, Yorks. Tel. 398.

FOR sale. 1927 D.I.S. Delage. Mahogany-decked " Kelsch " boat-bodied four-seater. Whole car rebuilt. Engine details include : New valves and springs, modified rocker gear, new bearings throughout, modified water system, clutch re-lined and modified, new rings. Chassis : Brakes re-lined and new bearings fitted, new wheel bearing fitted, gear-box overhauled, transmission overhauled, rewired throughout, wheels rebuilt, excellent tyres. The body is recellulosed and has new hood and envelope. 2nd Class award at Madresfield and 3rd Class at Bisley. Reason for sale, owner going abroad. £350. J. Sanderson, 38, Orchard Way, Sutton, Surrey.

FOR SALE. Almost unused 4 ED Meadows 1½-litre engine complete with carburetters, mag., starter, etc. Offers. Box No. 349, MOTOR SPORT, 15, City Road, E.C.1.

PRIVATE Owner offers the following one owner cars : M.G. 1946 11-h.p. TC model sports. Marshall super charger. 9,000 miles. H.M.V. Radiomobile. Outside exhaust. £750. Morgan 1946 10-h.p. Le Mans 2-str. sports. Arnott supercharger. 5,000 miles. Outside exhaust. £750. Would consider, although not desired, a part exchange of either or both cars for a modern saloon car with cash adjustment. G. M. Symons, Devonshire House, Boutport Street, Barnstaple, N. Devon. 'Phone 2282.

FOR sale. One recond. Luvax vane-type shock absorber, unused, for TA M.G. 30s. Set four ZN inflatable model race car wheels 3½ ins. diam., unused, £3 15s. Wormald, 25, Park Drive, N. Harrow, Middlesex. Pinner 1683.

A.V. MONOCAR, complete. Twin cylinder engine at rear, four new tyres. Needs clean up after long storage. Interesting relic of the past. Offers but prefer to exchange for 1½-litre, six cylinder racing or sports Riley bits and pieces likely to suit Riley M.P.H. Also specially built Speed 20 Alvis, only one ever made, fitted streamlined Lancefield all aluminium saloon body, Carnolly hide upholstery, servo brakes, built in jacks, radio, new batteries, 62,000 miles and one owner since new in 1934. Needs some mechanical attention after storage. Body and interior excellent. Details on request. £700. Lister Listerdale, nr. Rotherham.

1937 (10/7/37) Singer Le Mans 9-h.p. 4-seater tourer, newly rebored, steering rebushed. Mileage 30,000, lovely condition. Green. £350. 1934 (10/9/34) Singer 10.5 h.p. Saloon, fluid flywheel good condition inc. tyres (Spare tyres, but spare wheel damaged) £150 or nearest. Greenwood, Dunkirk House, Halifax. 'Phone 61359.

FAMILY man wishes to dispose of Riley Monaco 9 1935. Refinered, new bearings and bushes. New tyres (all bills shown). Body good. Would exchange for Vintage or open Sports and cash. Write Major H. Woolford, R.E.M.E., 44, Durlston Road, Kingston-on-Thames, Surrey.

1932 (LATE) Riley " Gamecock " sports 2-seater, 8,000 miles since mechanical re-fit. New tyres, battery, lights. 200 gns. L. N. Boyd, 80, Whitwell Road, Southsea, Hants.

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M.G. type TA Crankshaft, requires regrinding, 40 thous. under size. Also con-rods and main bearings which require re-metalling. J. H. Elt, 230, Malvern Road, Worcester.

KEN Wharton offers his 750-c.c. sprint car, together with many spares. This car has climbed Prescott in 51.04 sec., Shelsley 43.68, Standing kilo 69.71. Further details. Ken Wharton, Hume Street, Smethwick, Birmingham.

FRAZER-NASH B.M.W. late 1937 type 40, only 5,000 miles since complete overhaul costing £140. 1½-litre three carburettor engine, had engine reground, bearings remetalled, cylinders sleeved, etc., 2-seater streamline body being recellulosed. Owner taken delivery of larger car, room required. Offers, Batten, Rushlake Green, Heathfield, Sussex.

FOR sale. MOTOR SPORT 1930/31/32 complete. 1933 eleven copies. 1934/35 ten copies each. All good condition. Offers to Box No. 350, MOTOR SPORT, 15, City Road, E.C.1.

1927 DELAGE 14 h.p. D.I.S. Saloon. Timing chains, main bearings require attention, otherwise sound. No petrol. Nearest £100. Kensey House, St. Stephens Hill, Launceston, Cornwall.

RILEY Nine '31-32 Starter, overhauled. Prop. shaft speedo drive. Gearbox and clutch housing less top shaft, also horn. Lt. Chambers, R.N.A.S., St. Merryn, Cornwall.

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FOR SALE—*continued*

TIGER 100. Triumph late 1939 model. Good condition, 7,800 miles. With scarcely used aluminium and red Steil Sidecar, requiring a little re-chroming. £180 or near offers. Would consider separating. Box No. 351, MOTOR SPORT, 15, City Road, E.C.1.

ONE P.100 circa 1932 Lucas headlamp, all chrome. £9., or would exchange for pair of Lucas P.L. 40 lamps as fitted to 1934 Sport Rovers as head-lamps and to Rolls Royce, Daimler, etc., as pass lights. Also 1 pair unused Bosch headlamps, black and chrome, in exchange for pair Lucas P.L. 40 lamps. C. Barker, Mount House, Brasted, Sevenoaks, Kent.

SPARE parts for sale. Austin Seven dropped axle and spring sets to undersling chassis, part exchange system. Wedges to lower steering rake to sports. Complete "Nippy" exhaust and induction lay-out, "Nippy" induction and S.U. Carb. Ulster wedge type petrol tank. New main bearings in stock. Alloy cylinder head for sports B.M.W. unused. S/H sports camshaft and 6 pistons for type 40 B.M.W. New aero screens. New large capacity oil pump for 2-litre B.M.W. Stamp reply. Cambridge Engineering, Cambridge Road, Kew Green, Surrey. Richmond 2126.

1937 AUSTIN Nippy, pressure crank, superb condition, fitted rev. counter, all new 475 by 16 tyres, new hood and screens, approx. £100 worth of spares, include gearbox, valves, guides, C.W. & P. radius arms, rad. shell, bearings, steering parts, etc., £450, or would consider late Fiat 500 in similar condition in exchange. Youngs, 31, Smithambottom Lane, Purley, Surrey.

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TWIN S.U.s, 1⅜ in. bore, Lagonda 3 and 3½-litre. Fully reconditioned, new jets, needles, shafts, etc., £6 10s. Anglo-American Carburetter Service. Tul. 3520. Specialists in Sports car tuning and Carb. overhauls.

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AUSTIN SEVEN 1932 chassis frame bare £3 10s., E.N.V. preselector gearbox ex-Crossley Regis, dismantled but complete with new parts, £12 10s. M.G. Mark I crown wheel and pinion 12/51, second-hand, £4. Riley 1934 torque tube and drive shaft, £3. Bland, 27, Southfields Road, S.W.18. Putney 1612.

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FOR SALE—*continued*

RILEY NINE Monaco saloon, 1929; 1932 engine, 6 tyres, 3 new; new rad., battery. £106 spent on reconditioning 1945. Stoneguard, spotlight. One of the best of its class. Enthusiast wishes make fair exchange any interesting open sports. Davies, 39, Norton Road, Wembley, Middlesex.

ALVIS "12/50," 1929, Cross & Ellis drophead coupé. New tyres, recovered drophead. £135. Miles, Sunnydale, Victoria Road, Sutton Coldfield.

AUSTIN Seven special, 1937, long chassis, 500/17 rear wheels, Hardy Spicer transmission, 4-speed gearbox. Ricardo head, downdraught carb., 4-branch exhaust. Light aluminium 4-seater body, hood and fold-flat windscreen. Built and registered 1946. £165 or nearest offer. 28, Ambassador Close, Hounslow W., Middlesex. Hounslow 4714.

1,087-C.C. single-seater racing 6-cylinder M.G. in very good condition throughout, ready for racing. K-type Magnette engine, has only done 2,000 miles since new; Brooklands lap speed 96 m.p.h., unblown, with E.N.V. pre-selector gearbox ("K3"). Full details on request. Major Money, R.E. Mess, Aldershot. Tel., 1607.

FOR sale.—M.G. "J2" body complete with hood, side and wind screens, seats, bonnet fairings, petrol tank, etc.; L-type saloon body complete with bonnet, wings, etc.; "F" or "J1" O.S. frong wing, new; two 500 by 18-in. M.G. wheels; "NS" door; "TA," "N," "P" and "J" front axles; "L" camshaft; 1 pair Multiplex Hartfords for rear of P-type, new; pair of "P" rear wings; "J2" flywheel, rear main bearing flange, oil sump, exhaust and inlet manifolds, steering column, brake parts, etc.; pair "J2" chassis side-members, new, ditto "TC"; "J" and "L" front hubs and stub axles; "P" exhaust manifold, bucket seat, front fairing; set of new "Q" con.-rods; Wolf flexible shaft polisher, as new. H. Lester, M.G. Car Specialist, Station Road, Knebworth, Herts. Knebworth 2138.

PAIR 18-in. wheels, unused, suit M.G.; also Scintilla magneto, N.V.4. Vincent, 191, Banbury Road, Oxford. 'Phone 5668.

FOR SALE—*continued*

M.G. 1935 "PA" 4-seater, registered 1940 by present owner. Unused 3½ years. Chassis overhauled as new, new tyres, battery and concealed hood. £260. Passmore, 33, Brook Hey Avenue, Bolton, Lancs.

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1931 RILEY Nine spares. Two bucket seats, set of wings; 12-volt battery, as new; Rolls-Royce single, fully-sprung front seat. All in good condition. Garrett, 211, Goldstone Crescent, Hove, Sussex.

RICHARD BROS. offer the following: Riley 9-h.p. engine and gearbox, complete with mag., carb., starter and dynamo, and in good running order. M.G. "KN" Magnette pillarless saloon, less than 1,000 miles since complete overhaul. R.L.F. special; constructed mainly of Lea-Francis parts in shortened Leaf chassis, and has proved itself to be a successful trials vehicle. Many spares. Selling because another special planned. Details on request. Richard Bros., Motor Engineers, High Street, Walton-on-Naze, Essex. 'Phone 268.

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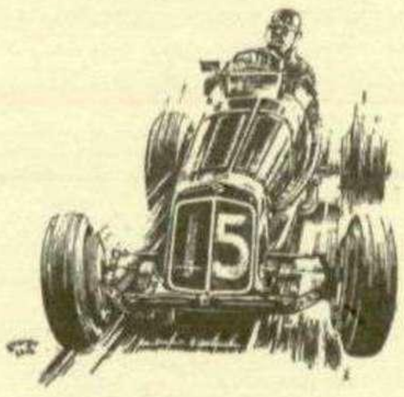
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AUSTIN Seven spares. R. W. Phillips offers spares of every description, including electrical. James Fairley, John Street, Sheffield, 2. 'Phone 22876.

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EXCHANGE 1½-litre 1938 M.G. *drophead coupé* fitted Romac radio, excellent condition throughout for good 3 or 4 litre Bentley and cash, or sell £650. Meriden Garage, Coventry Road, Meriden, Warwickshire. 'Phone Meriden 285.

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14 H.P. Lea Francis 6-cyl. twin o.h.c. engine, completely restored and warmed, fitted twin S.U.s. Chassis stripped, reconditioned. New alloy 2/4-str. body, racing green. Fold-flat screen. Outside handbrake. Outstanding performance. £150 or near offer. 30, Somerset Close, New Malden, Surrey.

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1932 24-H.P. Ford chassis, complete except carburetter, offers after 6 p.m. Marshall, 264, Fieldend Road, Eastcote, Ruislip, Middsx.

SELL or exchange for saloon suitable for business, a *special Jensen-Ford Eight* h.p. open sports, 2/4 str. Value approx. £250. P. Weaver, 33, High Street, Melton Mowbray. Tel. 214.

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£45—BULL-NOSE Oxford, 1926 tourer, original condition, everything working, drive away. Barnes, 36a, Leigham Avenue, Streatham, S.W.16.

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SPECIALS. 500-c.c. or other types built to order and customer's own ideas; details on demand. On hand at the moment, 500-c.c. special with E.S.2 Norton engine, only body needed to finish. £95. Apply Don Palmer, Morley Road, Boscombe, Bournemouth. 'Phone, Southbourne 2711.

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CHROMIUM-PLATED fold-flat windscreen, fitted Triplex. Pre-war. Brand new and unmarked. Suit Bentley or similar car. £15, no offers. Box No. 360, MOTOR SPORT, 15, City Road, E.C.1.

INVICTA 1½-litre 12-h.p., 6-cyl. engine, complete with dyno., starter, distributor, new Solex carb., and spare cylinder head (brand new), block cracked and overhead gear worn, bottom half good. Crank *just reground*. Suitable spares. Offers invited. Box No. 361, MOTOR SPORT, 15, City Road, E.C.1.

1933 FRAZER-NASH T.T. Replica, rebuilt 1946, Gough engine, £475. Offers, exchanges. Advertiser, 48, Seabank Road, Wallasey, Cheshire.

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LATE 1935 M.G. Magnette 2-seater, completely stripped for overhaul and painting. First reasonable offer accepted. Seen Yorkshire. Box No. 363, MOTOR SPORT, 15, City Road, E.C.1.

TWO-SEATER unblown Austin Special racing body, pointed tail, remote control to gearbox. Ulster rear axle, special frame and springing, spring steering wheel, fuel pressure pump, first registered 1939, run one month only. M.L. Mag. Spare Nippy carburetter and four-speed gearbox. Nearest to £150. Warne and Blackwell, 73, Bargates, Christchurch, Hants.

AN unusual car with a very fine performance; 21-h.p. 3-litre Sunbeam, 1926 model, twin O.H.C. Grand Prix 4-str. New hood, hood bag, tonneau cover and battery, also twin S.U. fuel pumps, 6 very good tyres and wheels, body and paintwork excellent, and mechanical order first class throughout. This car has a speedo reading of 51,000, and was laid up 14 years, having had only two owners prior to being put back on the road in August '47. Price £210. C. J. Bendall, The Rookery, Walsworth Road, Hitchin, Herts.

SUPERCHARGED "Leaf" engine complete with Cozette blower. Never used since rebore. Spare gearbox, half shaft. Racing oil cooler, spare head, new fly-wheel, clutch, pump, etc., £65 the lot. R. H. A. Coombs, "Greenacre," Beaconsfield, Bucks.

FOR SALE.—David Brown Roots Supercharger, suitable for 1/2-litre engine, no fittings. Also 2 carburetters, 26 mm. downdraught Solex and manifold for Singer "Le Mans." R. A. Sidney, 65, Arnold Avenue, Coventry.

SUNBEAM 7-seater saloon, 25 h.p. One owner, 45,000 miles only, stored last 11 years, recently driven from Liverpool. 1927. Price £250. Can be seen at Kingston-on-Thames. Make ideal hire car. Box No. 378, MOTOR SPORT, 15, City Road, E.C.1.

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WANTED. Gear-box for 1928 2-litre Lagonda or any spare pinions for same. Smith, 40, Avondale Road, Ipswich, Suffolk.

WANTED. Tonneau cover with centre zipp fastener for PA type M.G. Midget. Urgent. Eldridge, Hazeldine, Kathleen Drive, Leigh-on-Sea, Essex.

WANTED. 450 by 19 tyres new or retread, also 45 deg. overlap camshaft for Hornet Special. Keen, 99, Charlton Road, Blackheath, London.

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WANTED—*continued*

WANTED.—Austin dropped front axle complete with radius rods for conversion. Wilcoxon, 77, Repton Road, Orpington, Kent.

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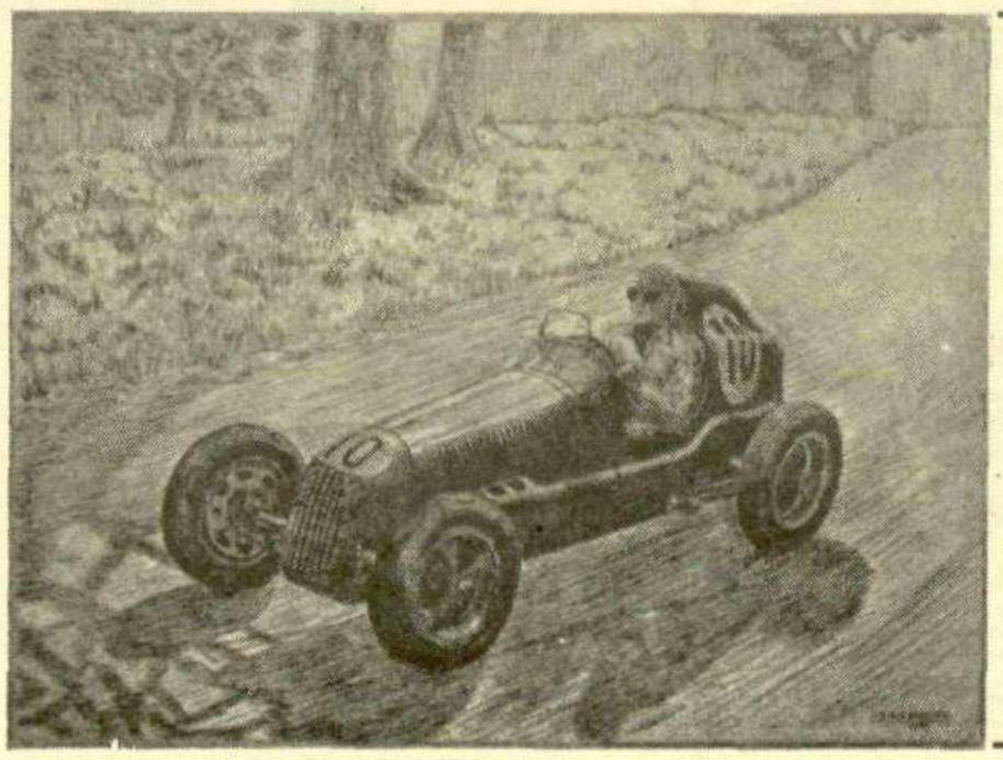
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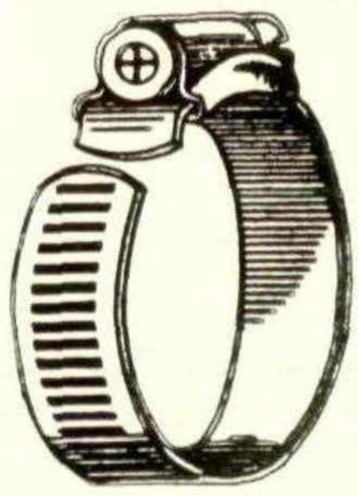
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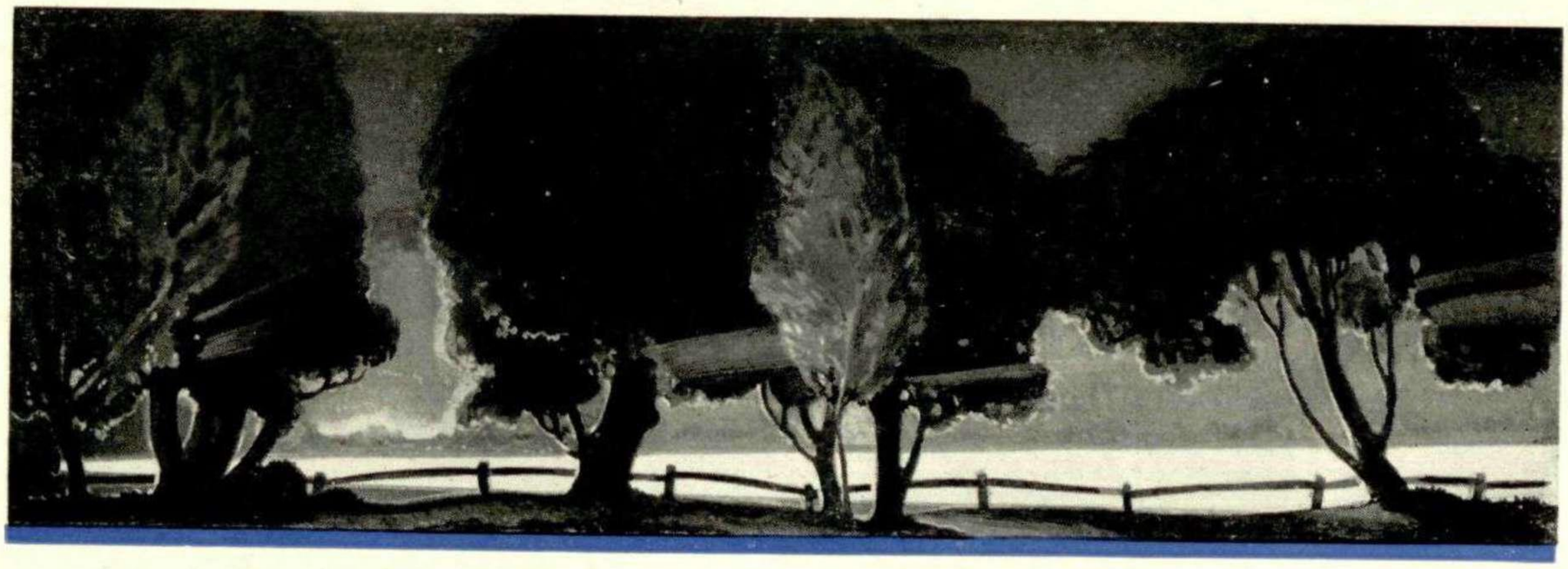
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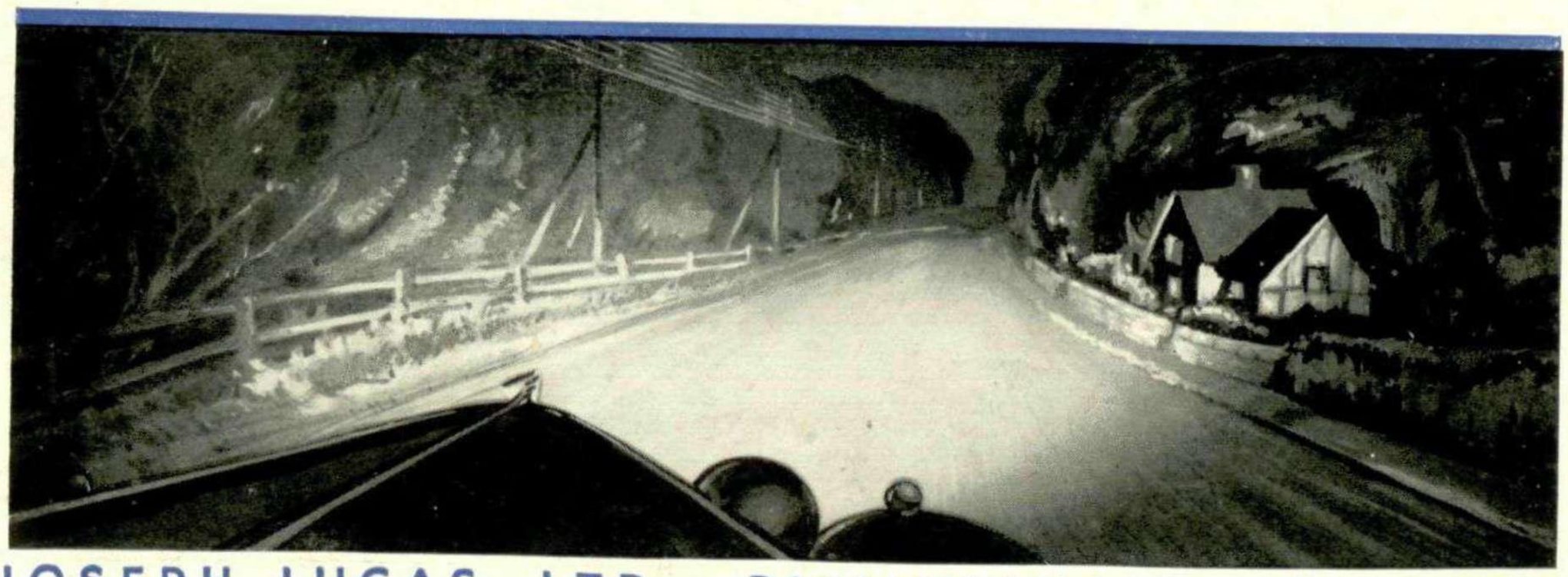
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