Vol. XXIII No. 2 THE 3-LITRE BENTLEY February, 1947

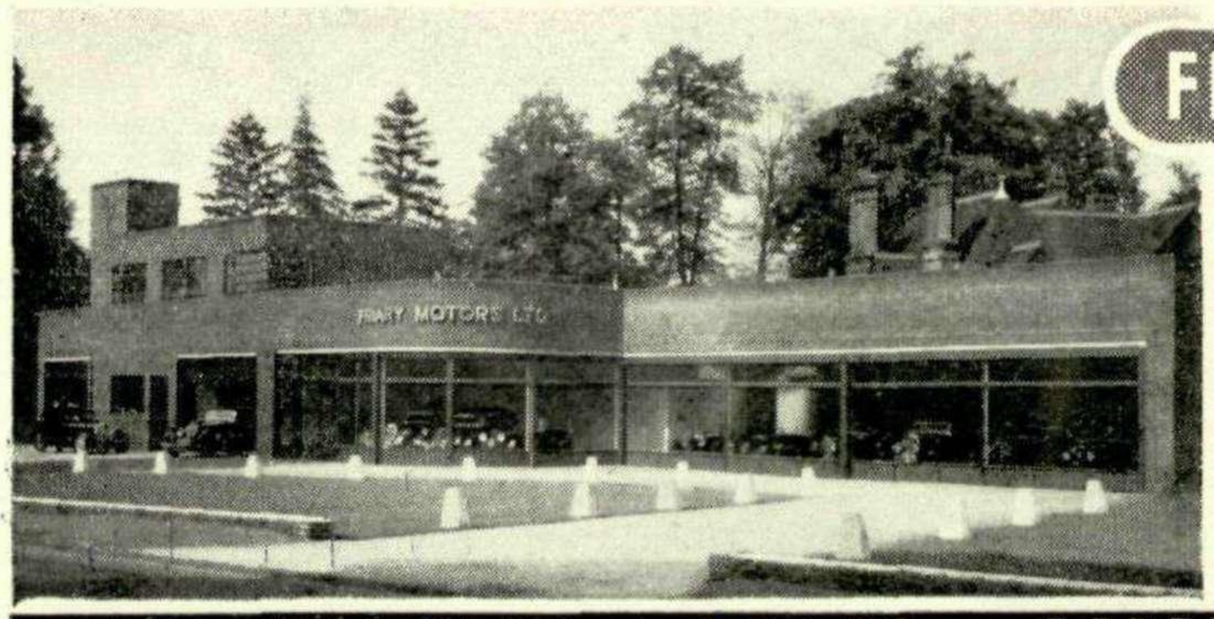
MOTOR SPORT

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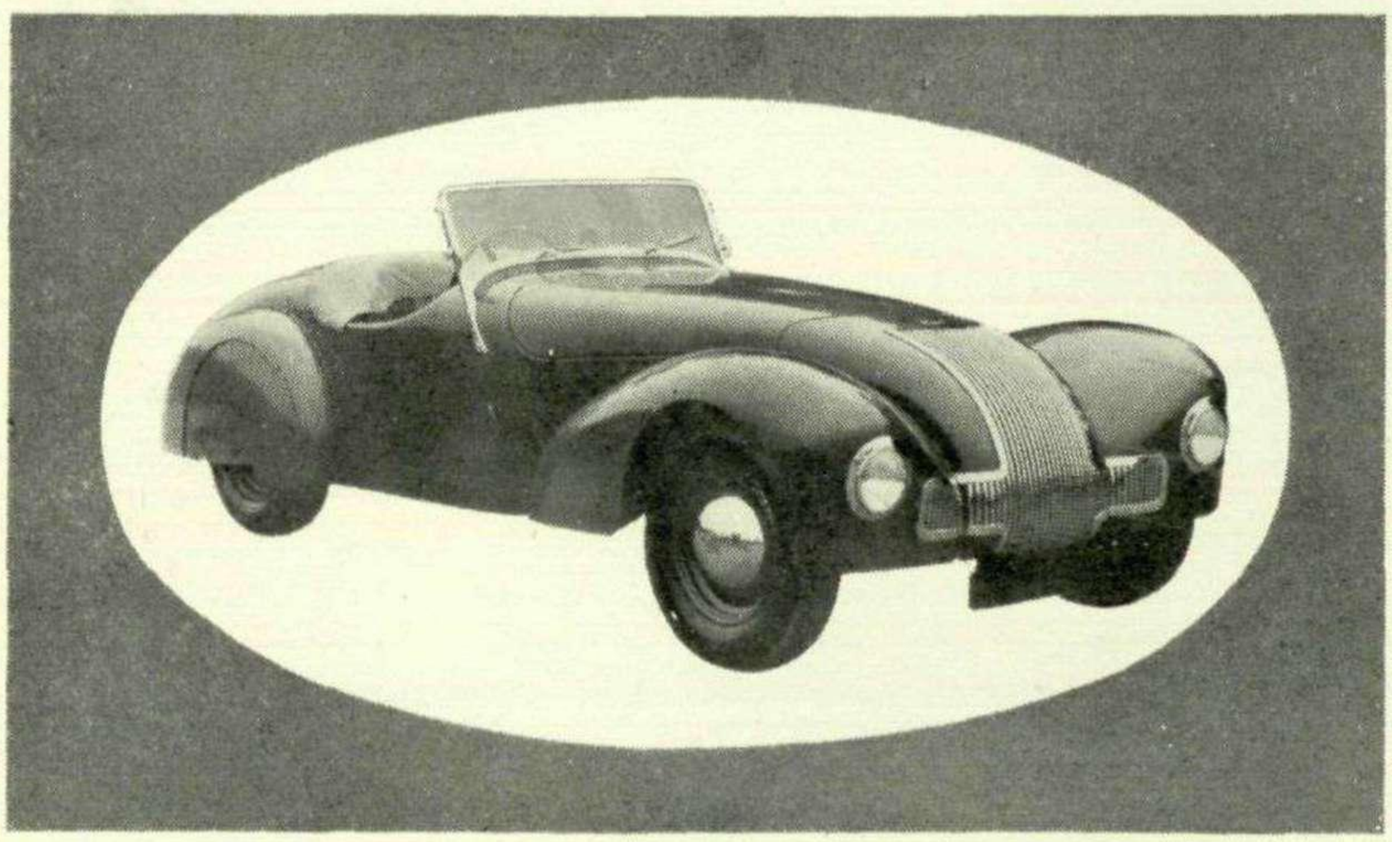
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It is a peculiar fact that Lightwater seldom appears on any map. What is more, to the best of our belief, it doesn't even appear on any of the local signposts. If you are lucky enough to find yourself on a road which you know leads to Lightwater, there is still a very good chance of motoring right past it since there is nothing at all to say that you have arrived there. Such is the modesty of the local inhabitants that even the local Post Office merely announces the fact that it is a Post Office—no mention of the fact that it is Lightwater Post Office.

Such a village was, of course, the obvious choice of location for Whinlands Works, 'though, mark you, even when you find Lightwater, you still haven't found Whinlands !

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Motoring enthusiasts are usually good map readers, so for their benefit, the exact location of Whinlands Works is 923619 on sheet 169 of the new popular one-inch Ordnance map. Try out your map reading with this as your target, and you should end up Down at Lightwater with

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VOL. XXIII. No. 2 FEBRUARY, 1947 PRICE ONE SHILLING

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MOTOR SPORT

OFFICIAL JOURNAL OF THE BRITISH RACING DRIVERS' CLUB

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Reports of Recent Events

N.W.L.M.C. GLOUCESTER TRIAL

The results of this classic event were as follows. We commend to other clubs the grading of awards so that cars in different capacity classes were on an equal footing.

GLOUCESTER CUP : M. Wick, 3,917-c.c. Allard.
COMMITTEE CUP : Best performance over 1,100 c.c. and under 2,000 c.c. : W. P. Uglow, 1,496-c.c. H.R.G.
THOMAS CHALLENGE CUP : Best performance by a car under 1,100 c.c. : K. Wharton, 900 c.c. Wharton "Special."
TEAM AWARD : North-west London M.C. "A" team : S. H. Allard, 3,917-c.c. Allard ; M. Wick, 3,917-c.c. Allard ; and G. L. Burroughs, 3,622-c.c. Ford.
FIRST-CLASS AWARDS : S. H. Allard, 3,917-c.c. Allard ; H. Birkett, 747-c.c. Austin ; K. C. Delingpole, 1,497-c.c. H.R.G. ; D. Murkett, 939-c.c. M.G.(S) ; K. Hutchison, 3,622-c.c. Allard ; E. J. Newton, 1,496-c.c. H.R.G.
SECOND-CLASS AWARDS : G. N. Mansell, 3,917-c.c. Allard ; E. W. K. Lund, 939-c.c. M.G.(S) ; K. J. Murton, 1,496-c.c. H.R.G. ; T. C. G. Butler, 1,991-c.c. Starkadder Special.
THIRD-CLASS AWARDS : A. M. R. Mallock, 747-c.c. Austin ; C. Yates, 1,172-c.c. Austin ; L. Parker, 4,438-c.c. Allard ; W. V. Kethro, 847-c.c. K.K. "Special" ; G. W. Best, 939-c.c. M.G.(S).

BRISTOL M.C. & L.C.C. HALF-DAY SPORTING TRIAL

The first hill, Downton Lane, was preceded by a slow-running test over a mere two feet. This caused 13 failures, small cars with fierce clutches being at a disadvantage ; most of the Allards displayed excellent docility. The three sections of Uplands were in fine fettle, but C. C. Evans' Starkadder (A.C. Six-engined 1923 G.N.-Special) went up them splendidly, as did Best's "PB" blown M.G. and Murkett's H.R.G.

Results :

BEST PERFORMANCE : G. W. Best, 939-c.c. M.G.(S).
FIRST-CLASS AWARDS : K. E. O. Burgess, Allard ; C. C. Evans, Starkadder "Special" ; C. A. N. May, Ford "Special."
SECOND-CLASS AWARDS : L. Parker, Allard ; J. H. Appleton, Allard ; K. J. Murton, H.R.G.

CHILTERN C.C. TOURIST TRIAL

This event, held regularly before the war, was arranged so that family saloons could compete fairly against sports cars. There were three special tests and a six-mile observed section over which a 17-m.p.h. average had to be maintained, in a 20-mile route. 41 entries came in, and only two non-started. Hancock's Singer won the Open-Car class from Eckett's M.G. and Taylor's M.G., while Derrick's Standard scored amongst the closed cars, beating Tett's Morris and Johnson's Triumph.

HANTS & BERKS M.C. NIGHT TRIAL

This event was notable in a number of ways. In the first place, considerable onus was placed on a good navigator, as the route could only be followed by knowledge of the grid system of location, but this enabled batches of cars to be sent along different parts of the course, so minimising delays and inconvenience and also preventing competitors from becoming completely lost, as happens with a fixed route indicated by a route card. Then a distinct attempt was made by Holland Birkett, the organiser, to amuse the customers by taking them to checks in eerie and unusual places endowed with "local colour." Thus the instructions named a 12th-century castle, the South Gate of Calleva Atrebatum, a centre of pre-historic civilisation, a railway station, a famous beauty spot a gibbet and a haunted mill with "floor unsafe for mortals." Not only did passengers have to be efficient map-readers, but they were kept busy checking in—and one hopes warm thereby—for access to one check was *via* a five-barred gate and through a field, to another along a canal tow-path and stile. The railway station had been disused for some seventeen years and competitors drove along the remains of the line and checked-in between the platforms, at a control manned by a marshall in station-master's uniform and using correct lamp and flags. The centre of historic civilisation was manned by two witches stirring a cauldron. In case it is thought that this trial resembled a comic event, it should be emphasised that there were two observed hills and a special test. Moreover, most of the controls were approached *via* difficult going which, although not observed, could make a competitor late at the next check. Failures in these areas were dealt with by other competitors who were baulked—as in the Monte Carlo Rally. The special test was an acceleration test through a long water-splash, stopping astride a line (with wet brakes). Competitors were only failed if they needed assistance after stopping in the splash, any method of self-rescue being permissible, and times were taken merely to sort out ties. An interested spectator was Colonel Sutton, who was responsible for the water-proofing of vehicles in Monty's armies during the war ! 46 entries were received, ranging from Hill's 1912 Hispano-Suiza, four-up, through a 1921 Crossley and Packman's 1927 Trojan (with full crew of B.O.A. navigators !) to modern machinery. At the finish of the 120-mile route at Fargoe Camp, where a meal was served, many tales of adventure were told, until people tended to droop into their sausages and mash. Davies sheared the fabric coupling in his Type 55 B.M.W.'s steering column, but slickly put in a spare, only to crash later. Willment's Austin Seven ran into a bank and broke a king-pin, and Park's Lancia "Lambda" got badly bogged off the route. The water-splash stopped a Ford Ten, Wadsworth's Ford V-8 "Special," Jane's shortened Lancia "Lambda," and a "12/50" Alvis. Wadsworth used his starter, the Alvis crew pushed out, but were hours restarting, the others had to be towed. Wharton, with full crew in an Austin Ten "Cambridge" saloon, was very impressive, and Welfare (Austin Seven) and an M.G. crew waterproofed their engines. Best time here was by Wharton in 15.2 sec., while Welfare, French (Austin Seven), and Urquhart (S.S.) took 16 sec., and Moore's Lancia "Aprilia" 16.2 sec. Packman's Trojan took 18.2 sec., in spite of changing up, and Hill's Hispano-Suiza 19.2 sec.

Urquhart and Moore both faltered momentarily after entering the water at speed ; average time of those who took

Continued on page **45**

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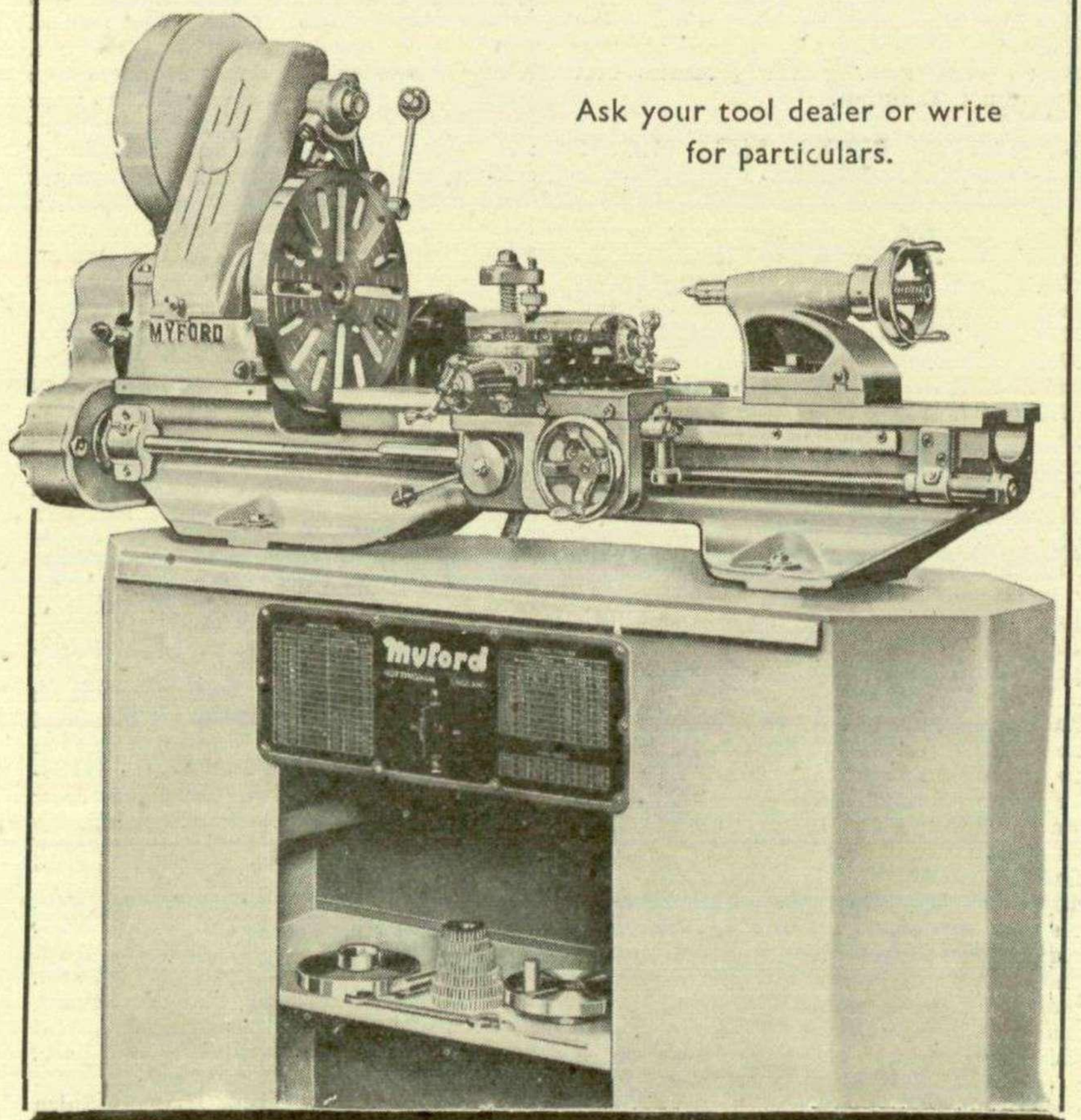
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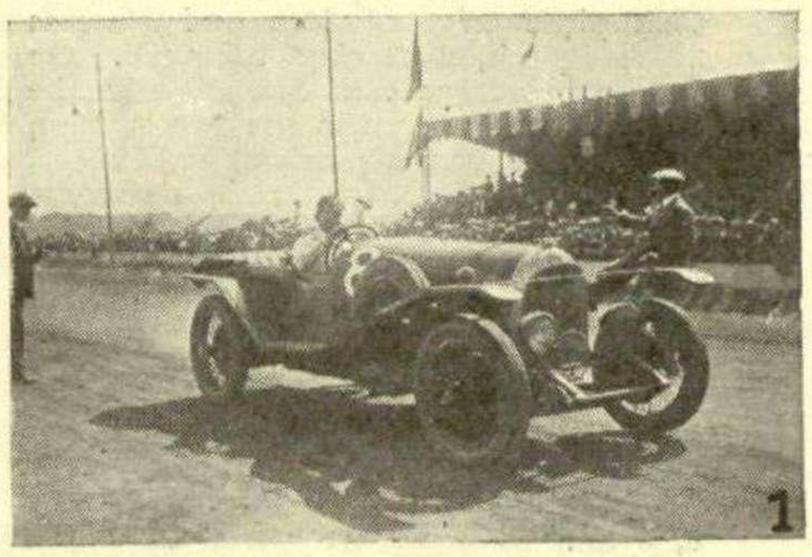
R.A.C. BRITISH HILL-CLIMB CHAMPIONSHIP

One of the more interesting features of the coming season will be the British Hill-Climb Championship organised by the R.A.C. The conditions governing this contest are as follows :—

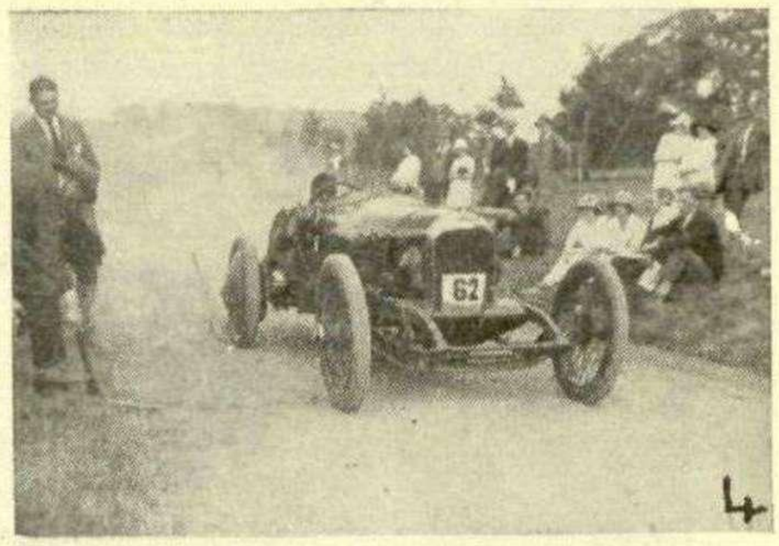
1. The R.A.C. British Hill-Climb Championship (hereinafter termed The Championship) shall be competed for annually.
2. The Championship whall be open to any individual driver of British nationality driving cars of the same make, category and class and holding an International Competition Licence issued by the R.A.C.
3. The winner shall hold the R.A.C. Trophy for twelve months, as from January 1st following the year of competition. He shall hold the title of British Hill-Climb Champion for the year ; and will receive a plaque or other souvenir. In addition he will receive one-half of the Registration Fees. (See Condition No. 10).
4. Drivers and cars must conform in all respects to the Supplementary Regulations governing each Hill Climb, including the qualifying clause applicable at any such Meeting.
5. One event only at each venue will be selected yearly by the R.A.C. for the purpose of this Championship.
6. For 1947 the following five hills and dates have been approved for Championship Meetings.

Bo'ness.	Scotland.	May 17th.
Shelsley Walsh.	England.	May 24th (or April 19th).
Bouley Bay.	Jersey.	July 24th.
Craigantlet.	Ulster.	August 30th.
Prescott.	England.	September 14th.

7. For 1947 the marks obtained in *any four* Championship Meetings only shall count towards the Trophy. In the event of a registered championship competitor taking part in all five meetings, the best four performances shall count.
8. The system of marking will be as follows :—
   (*a*) The fastest time of the day, irrespective of whether the driver is registered for the Championship or not, will be taken as a basic-speed for that event.
   (*b*) Registered championship competitors will be debited with the time, in one-fifths of a second, by which they fail to attain this basic speed ; e.g. the fastest time of the day is 14⅘ seconds, and the fastest time put up by a registered championship competitor is 14⅘ seconds. He is thus debited with 2 marks. The next fastest time put up by a registered championship driver is 15⅕ seconds, and this driver is debited with 4 marks, and so on down to 10 places of registered competitors.
   (*c*) On completion of the Championship Meetings these marks will be totalled—see Condition No. 7—and the registered championship competitor debited with the fewest marks will be adjudged the British Hill-Climb Champion for the year. (See Condition No. 2.)
9. In the event of a tie for the Trophy, the competitor who has, in the opinion of the competitions committee, put up the most meritorious performance, shall be adjudged the winner.
10. *Registration for the Championship shall be made to the R.A.C. and must be accompanied by a registration fee of* £2 2s. 0d. (This is independent of and additional to entries made for participation in any Championship Hill Climb.) *Registrations will be received up to 30 days before the first Championship event in which the entrant proposes to take part.*
11. Protests and Appeals against the results of any Championship Meeting shall be made in accordance with the provisions of the General Competition Rules and Supplementary Regulations governing the event and no other protest or appeal will be considered.
12. Entrants are bound by the G.C.Rs. ; these conditions : and the supplementary regulations of each Championship Meeting.
13. Promoters shall as soon as possible after a Championship Meeting, forward to the R.A.C. a list giving the fastest time of the day and of each registered competitor ; such times to be certified by the official timekeeper.
14. The R.A.C. reserves the right to cancel or postpone the Championship if the number of entries is, in its opinion, inadequate : or for any other reason which it may deem to be sufficient.
    In the event of cancellation or postponement the registration fee will be returned, but under no other circumstances.
15. The R.A.C. reserves the right to alter any or all of these conditions for future years.



The 3-Litre BENTLEY



[To many people the 3-litre which was evolved by W. O. Bentley just after the Kaiser War and which remained in production for six years, represents the finest sports car in the world. Amongst members of the Bentley Drivers' Club there are still 200 of these fine cars in use, practically all of them maintained in a condition such as should gladden the eyes even of Mobile Policemen. In spite of this remarkable popularity of a car which has been out of production for some twenty years, confusion still exists over matters of detail. Consequently, we are delighted to be able to publish this article, written by members of the Bentley Drivers' Club at our request, in which the development of this classic car is explained, the different models sorted out and some of the makes racing successes outlined. Not only will this exclusive data provide pleasurable reading to those who own or otherwise advocate the 3-litre Bentley, but it will also be of interest to those who wish to enhance their academic knowledge of vintage types. More particularly, this carefully compiled article will be of inestimable value to persons who are about to purchase these cars, and who wish to check on facts presented by vendors, and to those seeking information about converting their existing cars in various ways. We were indeed fortunate in being able to draw on the pooled resources of one of the most vigorous and successful one-make Clubs, in order to provide our readers with comprehensive and accurate facts about a very real motor-car.—ED.]

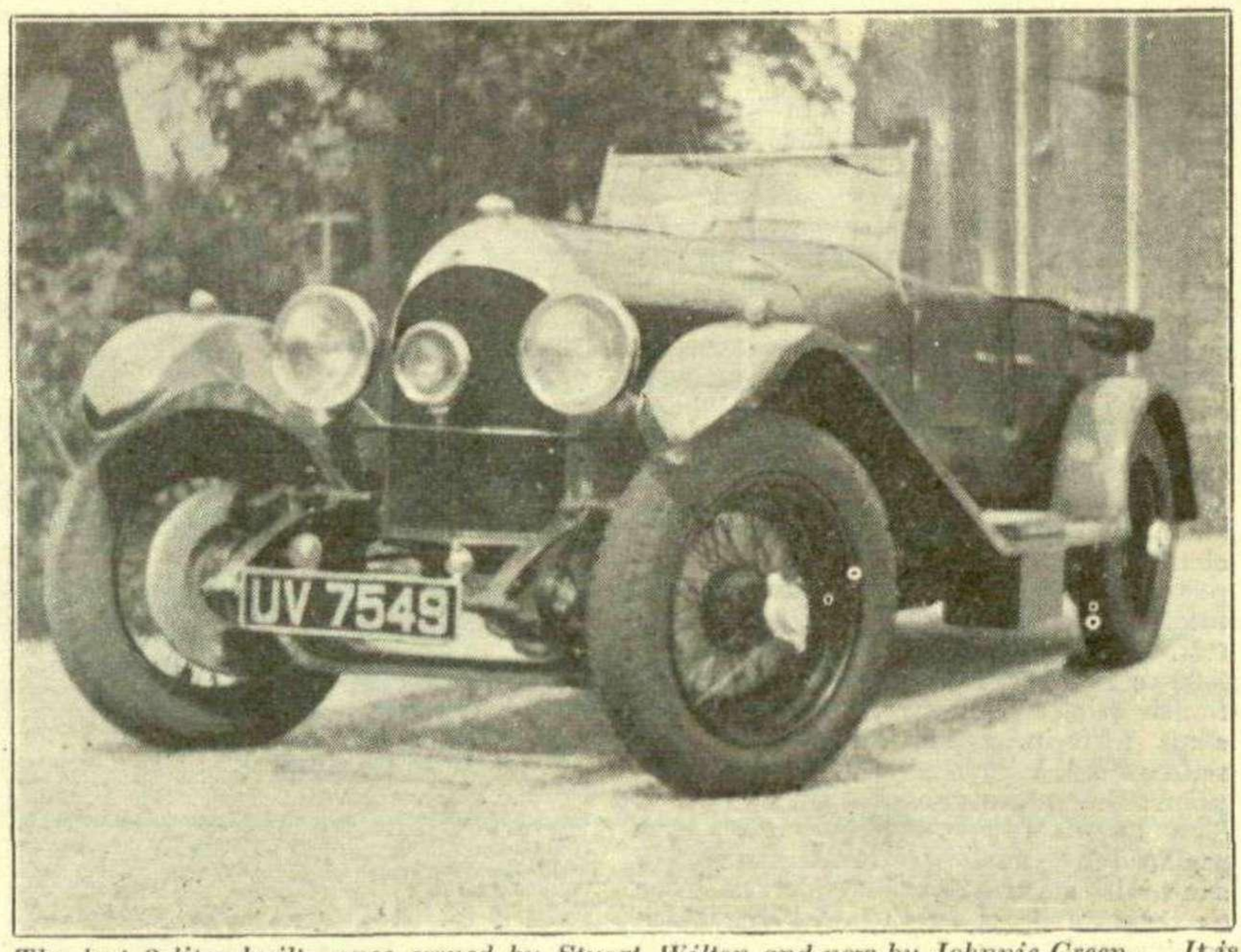
IT was with great pleasure that the Bentley Drivers' Club received a request from the Editor of MOTOR SPORT for an article on the 3-litre Bentley, and no effort has been spared to ensure that these notes are accurate and correct in detail.

The general conception of the 3-litre Bentley was forming in the mind of its creator before the end of World War I. "W.O.'s" idea was to produce a very fast motor-car, on the principle of a racing-car detuned as it were, by building into it enough strength and weight to ensure reliability and durability in the hands of private owners, as opposed to "hotting-up" an ordinary car to the point where it became unreliable.

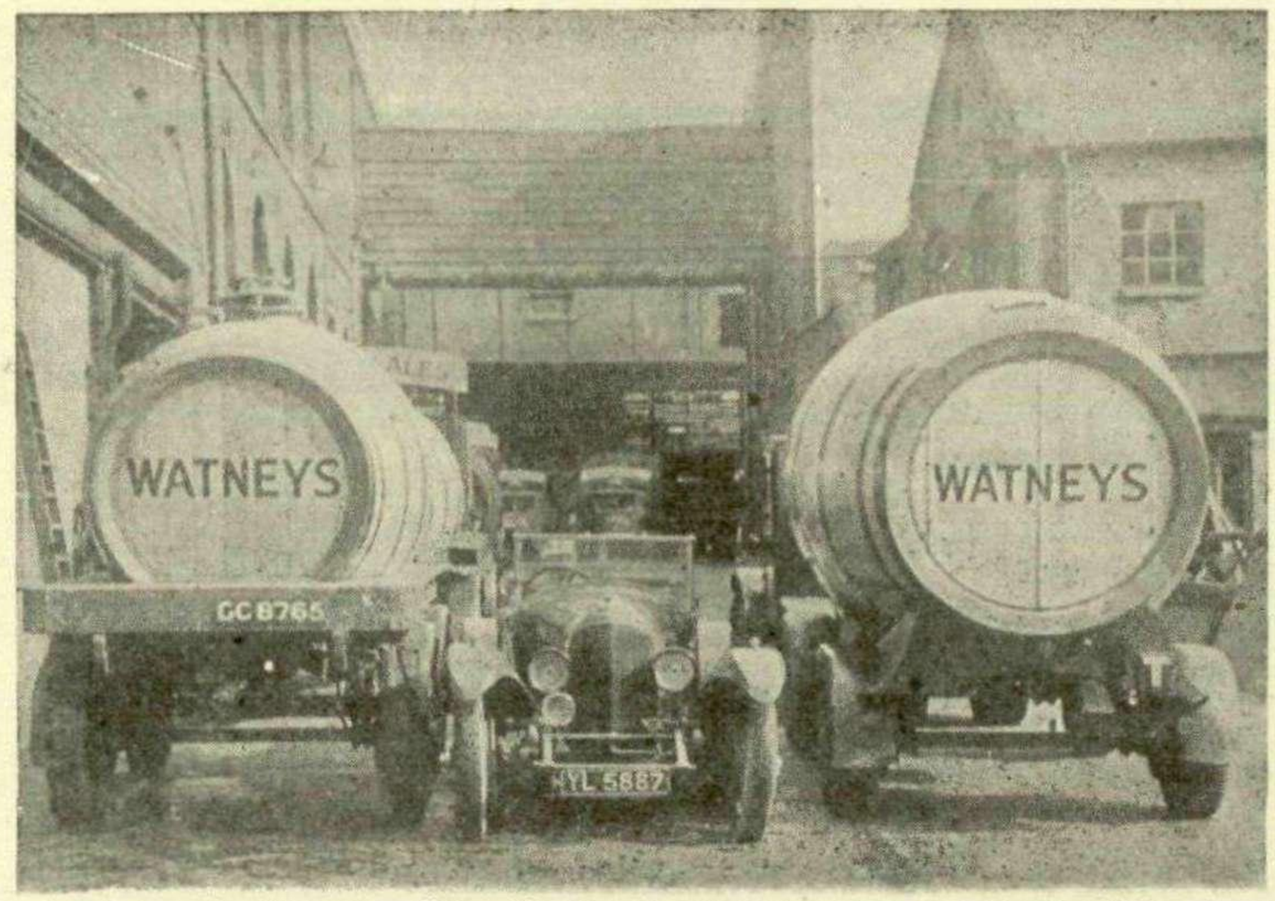
The original experimental 3-litre chassis was erected in the autumn of 1919 in the stable of a Baker Street mews. The engine was assembled upstairs and the chassis downstairs. A nursing-home stood next door and a few minutes after the starting-up of the engine for the first time on the test-bed, the Matron arrived upon the scene. It appeared that a patient was about to shuffle off this mortal coil and she thought that the engine should be switched-off forthwith, that his departure might be more peaceful. This the three operators manifestly dared not do, and it is recorded that the inmate died to the thunder of the first Bentley exhaust. The more rabid enthusiast might acclaim it a fine death.

The engine had to be partially dismantled to allow its removal from the loft to the floor below and, when the chassis was completed, it was fitted with an open-touring body, and road tests commenced during December, 1919.

The experimental chassis, although basically the same, differed from the production model in certain details, the main ones being: The camshaft-housing was a one-piece aluminium casting, the bearings being of the split-bush type, requiring assembly upon the camshaft. This assembly was inserted in the bearing-housings from the front of the casing. Two tappet-covers were situated at 45° to the standard half-cover and the rockers were threaded on to the ground-and-hardened steel rods forming rocker bearings. These were inserted from the rear end of the casing and were held in position by an end-cover, in the centre of which was located the rev.-counter-drive coupling. The camshaft ran in the opposite direction to that of the production model and had two cams per cylinder, as against the three of the production model. The rockers were of steel and one exhaust rocker operated two valves. The magneto cross-shaft drove one magneto on the off-side, and the water-pump on the near side, but provision was made in the cylinder-block for the subsequent use of two plugs per cylinder, it being foreseen that developments would inevitably lead in that direction. In fact, a double-spark magneto was used to develop this system prior to the adoption of twin magnetos as standard equipment. Dry-sump lubrication was used on the experimental cars, necessitating a scavenge pump and an oil-return tank, the latter being secured beneath the scuttle. Excess oil from the overhead-valve gear was drained back to the sump by external oil drains leading into two large breathers in the crankcase. Pistons were of hour-glass type, in aluminium alloy to Specification L.8.



The last 3-litre built—once owned by Stuart Wilton and now by Johnnie Green. It is McKenzie-tuned, with h.c. pistons, balanced crankshaft and 26 lb. off the flywheel. It averaged 77.21 m.p.h. in the B.D.C. Brookland's race in 1935.



In good company—the car is Stanley Sedgewick's 1925 Vanden Plas "Red Label."

The cone clutch was a 9-degree plain-ring type and the gearbox the prototype "A"-type with five-pitch gears. The rear-axle ratio, using 820 by 120 tyres, was 3.53 to 1 (53/15). Brakes were on the rear wheels only, but were fully compensated, employing an ingenious double-bevel-type compensator for hand and foot brakes, the cross-shafts of which were fitted concentrically and mounted at each end in self-aligning bearings, so as to nullify the effect of chassis distortion. Several different types of Claudel-Hobson carburetters were used, usually type-G.Z.P., but 48-R.A. Zeniths were also tried. The "80-bore" 4-cylinder engine was, of course, of 80 by 149 mm. (2,996 c.c.). 65 h.p. was claimed at 2,500 r.p.m.

Further experimental chassis were constructed at Cricklewood in the early months of 1920, one of which, in the skilful hands of Frank Clement, gained the first of the Bentley's many victories at Brooklands and elsewhere.

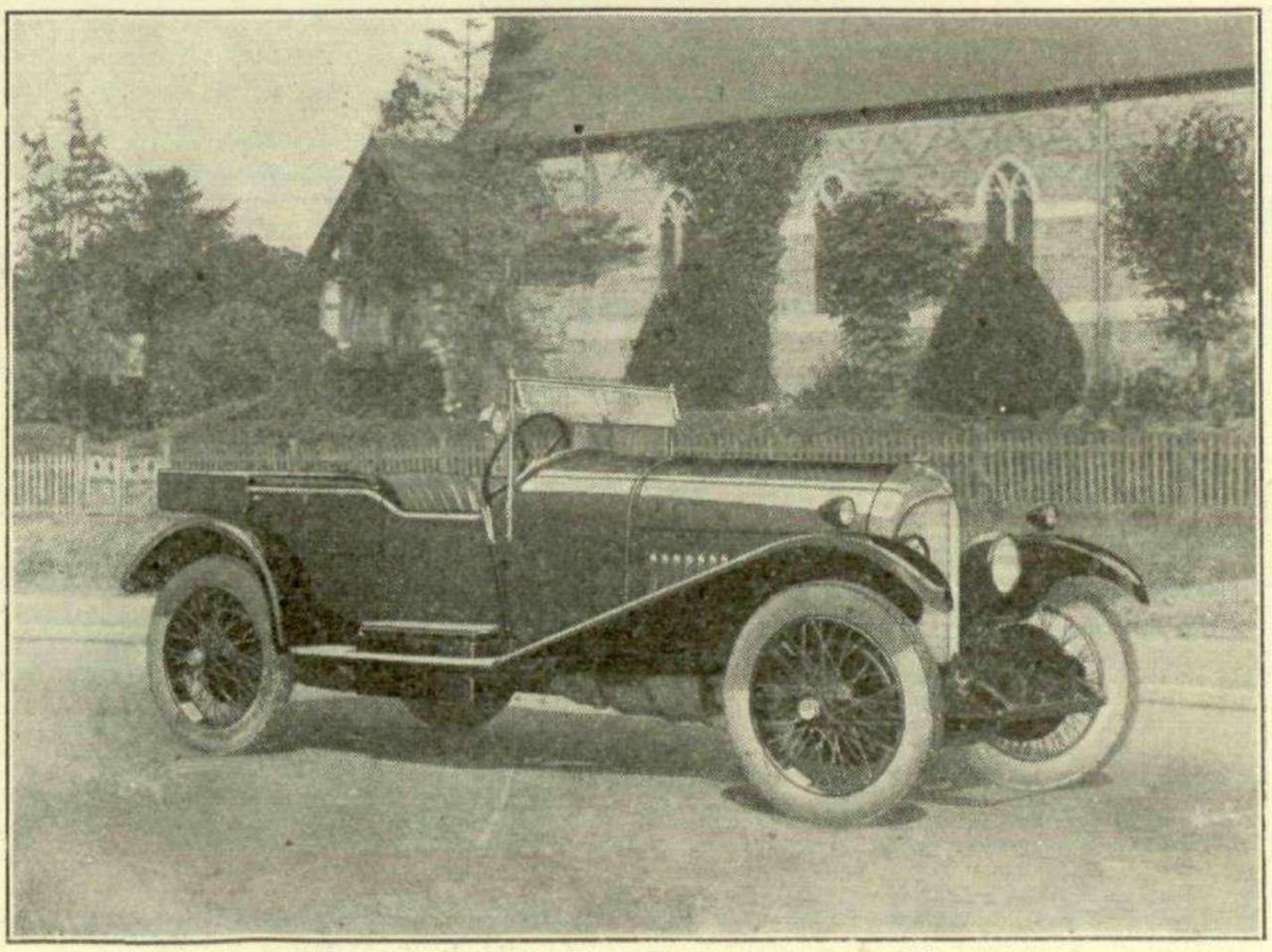
Development work proceeded apace during 1920 and 1921 and as a result one of the first elements of the early design was discarded, wet-sump lubrication superseding the original dry-sump system. A redesigned sump with cast-in air-flow cooling tubes was used, as it had been found that excessive "frothing" of the scavenged oil gave rise to various lubrication problems.

On September 15th, 1921, production chassis No. 1, engine No. 3, was completed and delivered to the public, the brief specification of which was as follows: 9 ft. 9½ in. wheelbase, "A" type gearbox, 3.92 to 1 rear-axle ratio, 820 by 120 tyres, Smith 5-jet carburetter, BM 1800 camshaft (.019-in. tappet clearance). This represented a considerable improvement upon the prototype described earlier. The two-cam per cylinder shaft was replaced by the now familiar triple-cam shaft with separate exhaust-rockers. The external oil drain tubes had given place to internal ones, leading through the water-jackets. Two M.L. magnetos were standardised, the water-pump being driven by a skew-gear from the magneto cross-shaft and occupying its existing position in front of the engine. Smith double-pole lighting and starting was fitted and the dynamo was gear-driven from the rear end of the camshaft, geared-up in speed and smaller in size than in later models. The air-flow cooled sump had given way to a unit with a separate oil-tank, practice having shown that the original air-ducts became clogged up with mud and road-grit after a time and were thus rendered useless. This particular 3-litre is still on the road and is in the loving care of R. W. T. Shaw, a member of the Club.

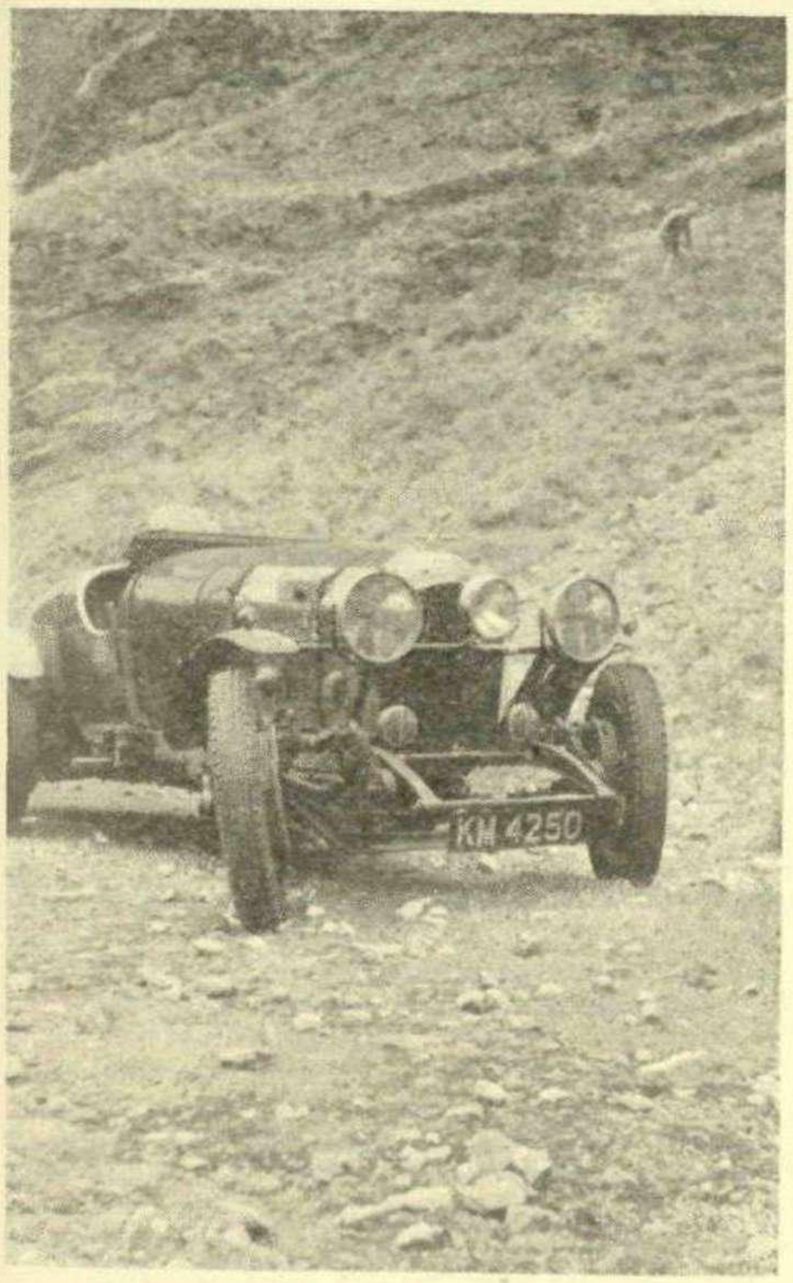
In 1922 Bentleys entered the lists of International Competition, when Douglas Hawkes took one out to Indianapolis for the "Five-Century Grind." The race took place on May 30th and Hawkes finished 20th, averaging 80 m.p.h. On June 22nd three cars competed in the Tourish Trophy race in the Isle of Man, numbered 3, 6, and 9, driven by Clement, Hawkes and W. O. Bentley, respectively, they finished 2nd, 5th and 4th. Clement's average speed was 55.21 m.p.h. (No. 6 was the Indianapolis car.) These Bentleys are notable for having been equipped with flat-fronted radiators, giving reduced frontal area and greatly altered appearance. On 27/28th September, at Brooklands, a 3-litre, driven by Duff, took the following International Class D records: 3, 6 and 12 hours, at 88.74, 88.79 and 87.42 m.p.h. respectively. It was not possible to run continuously for 24 hours at Brooklands, but the Bentley covered 2,083 miles in a "Double-Twelve" (86.79 m.p.h.). The 500 and 1,000, mile and kilometre, records and many others were also taken on this occasion. So ended what must be considered a pretty good first season's racing.

Approximately the first 160 chassis were short, *i.e.*, 9 ft. 9½ in. wheelbase, with BM 1800 camshafts and .019 tappet clearances later closed down to .015 in. for silence (enthusiasts please note). The 10 ft. 10 in. chassis came into being in the autumn of 1922 as a direct result of the demand for a chassis for general-purpose use. A different camshaft, BM 2391, was used, with clearances of .004-in. inlet and .006-in. exhaust. Straight-sided pot-type pistons replaced the hour-glass type, and the b.h.p. at 3,500 r.p.m. was 70–72. A 4.23 rear axle was used with closed coachwork and 3.92 with open touring bodies. These ratios were used in conjunction with a new gearbox, the "B"-type, with more widely-spaced ratios than the sporting, or "A"-type box.

A "T.T. Replica" chassis was also produced. It was the forerunner of the Speed Model, popularly known as



Perhaps the most popular of them all—the Vanden Plas 4-seater.



One of the 9-ft. wheel-base, 100-m.p.h. 3-litre—Paxton's car at a B.D.C. rally.

the " Red Label." In passing, it may be noted that the Bentley company never adopted the colour of the label (*i.e.*, the oval background to the " B " in the badge) as a means of identifying different models. The specification of the " T.T. Replica " was briefly thus : 9 ft. 9½ in.-wheelbase, " A "-type box, 3.78 rear axle, 5.3 -to-1 compression ratio, straight-sided pot-type pistons, single Smith carburetter, BM 2391 camshaft. The b.h.p. at 3,500 r.p.m. was 78–80. It is interesting to note that the early " T.T. Replica " chassis and Speed Models used the BM 2391 camshaft and that it was not until the 1926 season that the BM 1800 camshaft was re-introduced.

At this time the manufacturers guaranteed that the long, short and T.T. chassis would attain the following speeds at Brooklands—75, 80 and 90 m.p.h., respectively, and that every chassis would do 25 m.p.g. at 30 m.p.h.

June 1st, 1923 saw Clement and Duff at Le Mans with the 1922 record-breaking 3-litre. It was a private entry assisted by the Works and the Bentley finished 4th, averaging 49.90 m.p.h.

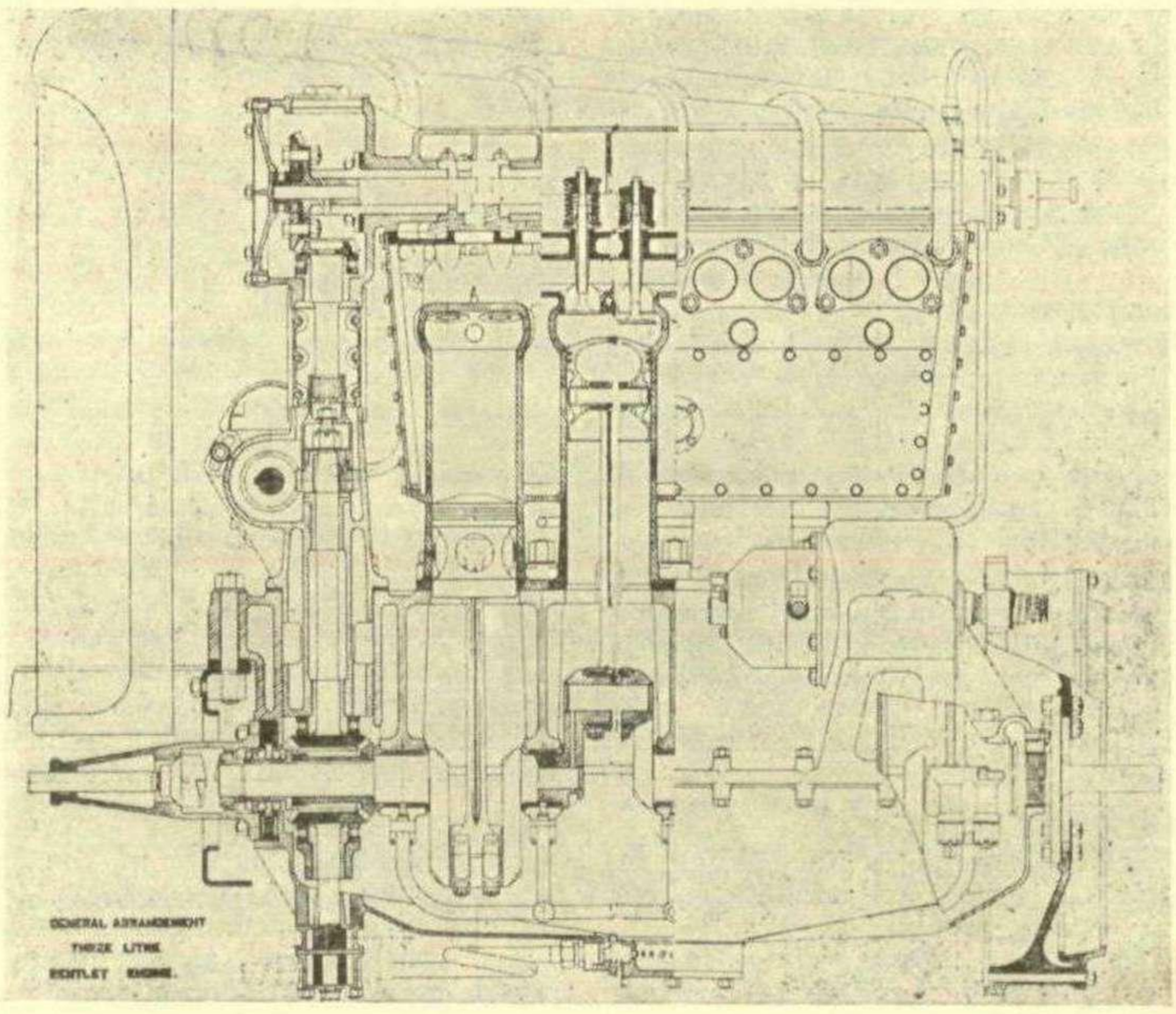
Three 3-litre cars entered for the Georges Boillot Cup race that year on September 7th, driven by Clement, Duff and Kensington Moir. Clement retired with a burnt-out piston ; Duff failed to start, having smitten a cow in practice ; and Moir managed to finish in spite of carburetter trouble. This trouble was most elusive. In that race a 48-R.A. straight-through Zenith carburetter was used and the mixture gradually became weaker and weaker until at anything below 3,000 r.p.m. the car would not pick up at all. When the engine was switched-off after crossing the finishing line it immediately caught fire—this was soon put out. The interesting part of it was that the screw which went through the outside of the body into a groove on the outside of the choke tube in the top of the carburetter, to locate it, was not long enough and did not grip the choke tube properly and, although the choke tube was quite tight, it is supposed that the heat of the race gradually expanded the body of the carburetter and the choke tube then gradually climbed inside the carburetter and took the whole of the venturi away from the neck of the jet which protruded into the smallest portion of the choke tube, thereby weakening the mixture considerably.

Four-wheel brakes were introduced in 1924, and it is not generally known that, even at that time, Bentleys were experimenting with an hydraulic system. Hydraulics were ultimately abandoned in favour of the existing rod-operated lay-out. A point worthy of note in favour of the new braking system was the equalising mechanism, which made use of the balanced beam-type of gearless differential, which, when fitted with a damping device in the form of spring-washer loaded bolts, proved eminently satisfactory. The steering was also modified to cope with the new braking system and a shorter drop-arm used to compensate for the additional weight of the extra components. The only other changes in 1924 were the introduction of twin S.U. carburetters in the place of the Smith on the Speed Model, and B.H.B. pistons were standardised, giving a 5.3 to 1 compression ratio. On the Standard chassis the 45 B.V.S. Smith carburetter superseded the 45 V. S.

Clement and Duff were at Le Mans again on June 20th—and this time they won the race at an average speed of 53.78 m.p.h. for the 24 hours.

Very little alteration in design occurred in 1925. The radiator was raised 1 in. and a header tank of increased size fitted. During this period, the 9 ft.-wheelbase, 100-m.p.h. model was produced in small numbers. It had a raised compression ratio of 6 to 1, the b.h.p. being 82–84 at 3,500 r.p.m. Pressure feed to the twin S.U.s replaced autovac feed and a rather distinctive radiator shell was evolved, reminiscent of that of the Standard " Big Six," which tapered-in at the bottom. It had a green label. One of these cars was driven by Gallop and Thistlethwayte at Le Mans in 1926. It was chassis No. 1179 and now belongs to E. A. Paxton, a member of the Club, who is busy restoring it to its original condition. This year also saw three World's Records and thirteen International Class " D " records fall. At Montlhèry, on September 9th and 10th, Benjafield and Duff took the 1,000 kms. at a speed of 97.11 m.p.h., and the 1,000-miles record at 97.40 m.p.h. Then, on the 21st and 22nd, partnered by the Club's President, Woolf Barnato, they gained the 24-hour record at 95.03 m.p.h.

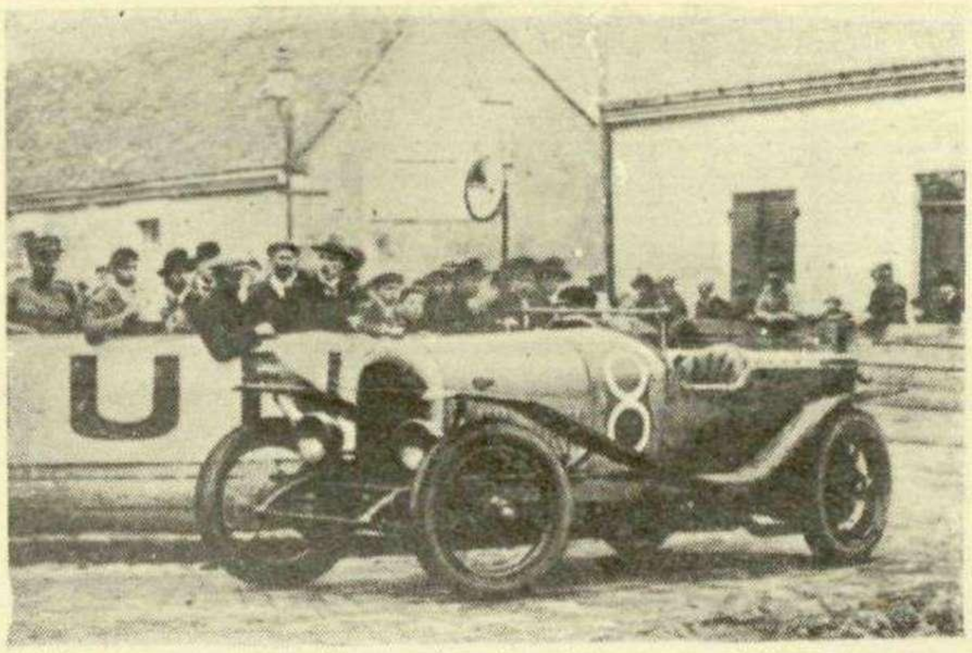
In 1926 the Speed Model received further attention. The compression ratio was raised ; the BM 1800 camshaft was introduced as standard ; duralumin rockers superseded the steel rockers ; b.h.p. at 3,500 r.p.m. was now 86–88 (the Le Mans cars used racing pistons and developed 88–92 b.h.p. at this engine speed) ; the sump was redesigned, and 5.25 in. by 21 in. tyres became standard, the steering gear being altered to suit. A chassis known as the " Light Tourer " was introduced. With the exception of wheelbase this was almost identical with the Standard chassis. In fact, it might well be described as a " short-chassis



An interesting sectioned g.a. drawing of the 3-litre Bentley engine in its original form.

Standard " model for use with open coachwork.

A team of three 3-litres went to Le Mans in 1926. They were numbered 7, 8 and 9. The first of these (which was to retain its number for the rest of its life, always being known as " Old Number Seven "), driven by Benjafield and Davis, crashed in the last hour of the race and



ultimately finished sixth. No. 8, driven by Clement and Duller, retired with stretched valves and No. 9 (the 100-m.p.h. model referred to above) also retired with a broken valve. In the Spring more records fell to the 3-litre Bentley at Montlhèry, the most noteworthy being World's Records for 2,000 kms. and 12 Hours, at 100.23 m.p.h. and 100.96 m.p.h., respectively.

For 1927, the " Speed Weymann " chassis was introduced. Virtually a Speed Model chassis, it was fitted with a 4.23 rear axle, and a " C "-type gearbox, which ultimately became standardised on the Speed Model. It was designed, as the name implies, for use with a light-fabric saloon body of Weymann construction and was equipped with a double silencer. About this time the valve gear was redesigned, the rockers being fitted to separate rocker boxes for each cylinder. The whole assembly was much more robust than its predecessor, principally as a result of the replacement of the long rocker rod by a shorter rod of larger diameter for each cylinder.

A team of 3-litres competed in the Six-Hour Race at Brooklands on May 13th. Clement and Benjafield, driving Nos. 10 and 12, retired with rocker trouble, but Tim Birkin came in a well-deserved 3rd, at 59.8 m.p.h., having lost the use of top gear after four hours running.

Le Mans, in 1927, provided one of the most glorious events in all Britain's motor-racing history, and its classic details are too well-known to need recapitulation. Suffice it to recount that, after the entire Bentley team had been involved in a terrible multiple crash at White House Corner just after nightfall, " Old Number Seven " (now bearing No. 3), with shattered wings and lamps, deranged steering and brakes, and a twisted chassis, continued at unabated speed and, coaxed by Davis and Benjafield, roared past the chequered flag perhaps the most splendid First of all time. It had averaged 61.36 m.p.h. for the race.

Little of note in the development of the 3-litre took place after 1927, as work was then in progress on the 4½-litre Bentley, which was to supersede it and worthily carry on the Bentley tradition. During 1926/7 the blocks of Speed-Model engines were machined to allow the use of a 6.1 to 1 compression ratio with hour-glass racing pistons, although the majority continued to have B.H.B. pistons and a 3-mm. compression plate for general-purpose work.

In all, 1,620 3-litre Bentleys were manufactured and this total was made up as follows :—

Short Standard	205
Long Standard	779
T.T. Replica	74
Light Tourer	41
Speed Model	507
100-m.p.h. model	14

Four further chassis were built in the thirties by Bentley Motors (1931), Ltd. from parts taken over from the old Company.

Nearly 200 3-litres, the youngest of which is 18 years old, are still on the road in the hands of Club Members, and, considering that there must be many more outside our ken, this is, in itself, a fine tribute to " W. O." The 3-litre was the first production of a make of motor-car of whose achievements Britain is justly proud and for which there still exists an enthusiasm the like of which is not to be found for any other marque.

Most of the illustrations for this informative article were kindly loaned by the Bentley Drivers' Club. Those without captions depict the following :- (1) *Duff's 3-litre at Le Mans*, 1924; (4) *An early 3-litre driven by Dr. Benjafield, seen on the line at Kop Hill, and finally, another view of Duff, cornering at Le Mans in* 1924, *when he won at an average speed of* 53.78 *m.p.h. for* 1,290¾ *miles*—Ed.

APPENDIX

Gearbox and Axle Ratios

		Top	*3rd*	*2nd*	*1st & Reverse*
" A "-Type :—					
Six cover nuts. Large gate, 3 in. by 4¾ in. Speedometer drive protrudes from front of box. Bentley " B " on cover.	Box Ratios ...	... 1	1.33	1.63	2.64
	Overall Ratios : Axle Ratio :				
	3.533 (53/15)	... 3.53	4.70	5.76	9.33
	3.785 (53/14)	... 3.78	5.03	6.17	9.99
	3.923 (51/13)	... 3.92	5.22	6.39	10.35
	4.23 (55/13)	... 4.23	5.63	6.90	11.16
" B "-Type :—					
Sixteen cover nuts. Small gate, 2¾ in. by 2¾ in. Speedometer drive secured to nearside of box.	Box Ratios :—	... 1	1.453	2.073	3.826
	Overall Ratios :— Axle Ratio :	...			
	3.533 (53/15)	... 3.53	5.13	7.32	13.51
	3.785 (53/14)	... 3.78	5.50	7.85	14.48
	3.923 (51/13)	... 3.92	5.70	8.13	15.00
	4.23 (55/13)	... 4.23	6.15	8.77	16.18
" C "-Type :					
As " B "-Type, but has an outboard bearing for the change-speed shaft on the nearside of the box casing above speedometer-drive casing.	Box Ratios ...	... 1	1.357	1.823	3.364
	Overall Ratios :— Axle Ratio :				
	3.533 (53/15)	... 3.533	4.794	6.44	11.885
	3.785 (53/14)	... 3.785	5.136	6.9	12.732
	3.923 (51/13)	... 3.923	5.323	7.151	13.197
	4.23 (55/13)	... 4.23	5.74	7.711	14.229

EXHIBITION

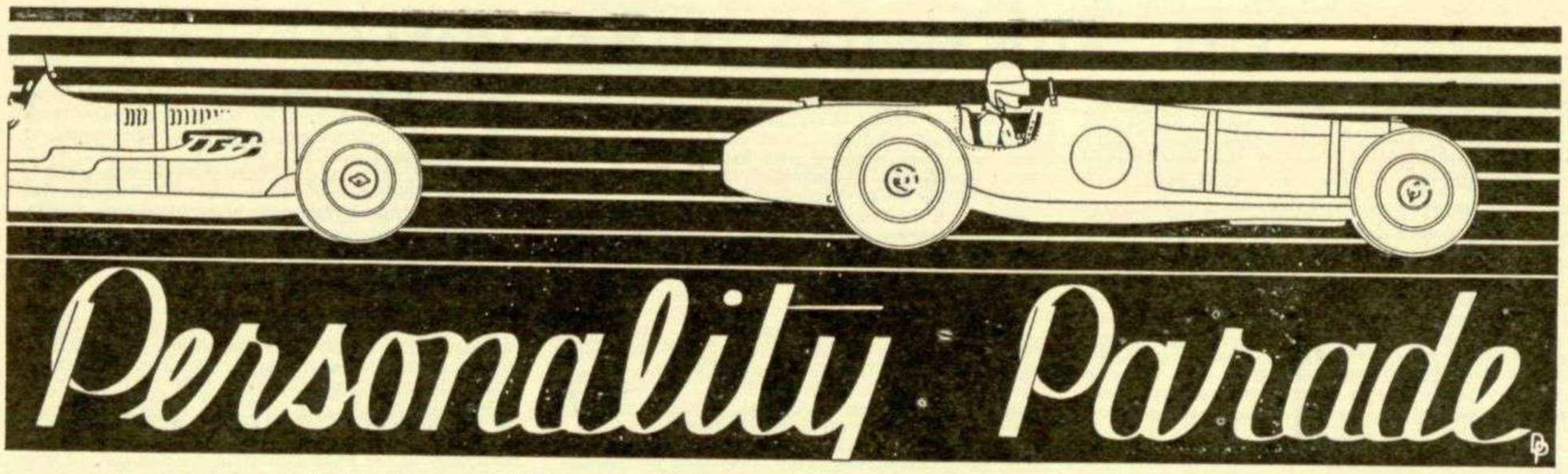
Chipstead Motors, Ltd. are holding an exhibition of vintage and modern sports cars at Empress Hall, Lilley Road, S.W.6, on February 23rd, opening in the morning. The B.O.C. and B.D.C. are co-operating and there is space for 400 cars. Enthusiasts from all clubs are welcome.

BRISTOL PREVIEW

An interesting feature of the Bristol car pre-view was the single, down-draught Solex carburetter, for which better acceleration to 60 m.p.h. and quieter running is claimed than for the triple S.U.s used for maximum performance.

THE 1946 " MOTOR SPORT "

Readers who require their 1946 issues bound and indexed should forward them to our offices. The charge for this service is 10s. 6d. and some delay is inevitable. The index can be supplied separately, price 1s 6d. post free.



A Series of Interviews with Personalities famous in the Realms of Motoring Sport

No. 12—Peter Monkhouse

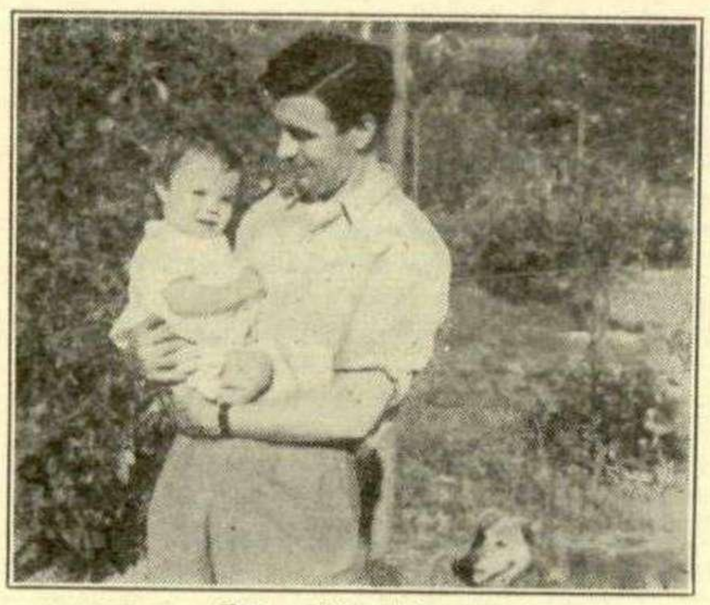
SOMEBODY once gave as his doctrine for success the adage, "Bite off more than you can chew—and chew it."

Recently we found it entertaining to observe Peter Monkhouse endeavouring to cope with this paradox. To succeed in smoothly running a sizeable engineering and motor business these days is no mere bagatelle but, when added to this responsibility are the hazards of trying to start up a new aero-engine factory to make a 100-h.p. 4-cylinder flat-twin unit, one will understand that he is a man of industry. It was, then, with some difficulty that we ran him to earth and plunged into the delights of motor-racing.

Apparently he was never allowed to drive a car, or even sit in a driver's seat, until the age of 17 (rather unusual ? but due to his strict and justly cautious parents). Consequently when finally he was permitted to take the wheel his unleashed frustration caused him to drive at the most fabulous speeds. Needless to say this envolved him, and unhappily his father's cars, in the most hair-raising accidents imaginable, so much so indeed that his father's insurance company, who were beginning to chafe under the strain, refused to cover Monkhouse Senior's cars when driven by Monkhouse Junior, which proviso, incidentally, still stands.

Monkhouse had no real interest in motor-racing, however, until he went to Cambridge, where the exciting atmosphere of a Cambridge University Speed Trial first caught hold of him.

Like practically every other enthusiast, he started with an Austin Seven. It was a Gordon England Cup Model (1926), but the lack of brakes and poor road-holding soon convinced him that something ought to be done about it. He thereupon built a special version, using a duralumin channel-section chassis frame, believed to be the first in this country. The material used was 2½ by 1¾ by $\frac{5}{16}$ in. thick; the frame was of rectangular shape with ¼-elliptic Frazer-Nash-type front suspension. The front axle was increased in width by 13 in. and reversed ¼-elliptic springs were used at the back, in the Bugatti fashion. The engine was given two 30-mm. Zenith downdraught carburetters. A Laystall crankshaft was used, together with a Ricardo cylinder head which provided dual ignition. One set of plugs were fired by the Austin magneto driven in the usual way, and the other set from an 8-cylinder magneto driven from the camshaft. With elaborate care he made special hollow tapered con.-rods with 4-bolt big ends. It took about 400 hours to fashion them in the university workshops.



Peter Monkhouse.

Monkhouse, full of inspiration and exhuberance, entered this car for Shelsley and was permitted, by the no doubt cynical officials, to run in the 750-c.c. class, despite the fact that he proposed to feed the gas to the engine via a No. 11 Cozette compressor driven at constant speed by a 500-c.c. Panther motor-cycle engine slung beside the driver. It was such a shame that it did not work, and he recalls the famous words uttered by a great designer: "development is more valuable than invention."

Other cars owned by him include an 850-c.c. "P"-type M.G., which to this day holds the 850-c.c. sports-car record at Syston. Later it was converted into an off-set single-seater, and in this form it won races on the Mountain and Campbell circuits at Brooklands, obtained two places at Donington and was fourth in the Limerick G.P., 1938, making fastest time despite the fact that it was unsupercharged and of only 1,031 c.c.

At this time Monkhouse also ran a 1934 T.T.-type "NE" 1,250-c.c. "Magnette," and it is probably true to say that while this car was owned by Ian Connell and later by Monkhouse, it gained a place in every event for which it was entered, and broke the 1½-litre sports-car record at Brighton for three years in succession.

Most of his other exploits were confined to short trips in other people's much faster cars, chiefly in Ian Connell's Darracq and E.R.A., and it was with the latter that he made the fastest lap of all British drivers in the 1938 G.P. at Donington, and still holds the Lewes course record, 18.27 sec.

At present, of course, he has the ex-B.O.C.'s Type 51 Bugatti, with which he has achieved a decent measure of success since the war. We understand that one of his keenest supporters is his son, aged nine.

As to next season's plans, whilst there are a number of interesting special cars being designed and built at Monaco, it would be unfair to the various owners to publicise their plans. It is understood, however, that Monkhouse himself has an exciting, but strictly hush-hush, project.

Regarding his most frightening experience, he was hard put to it to recall a moment of terror at the wheel. He recalls an incident at Prescott whilst practising. He was endeavouring to go round the semi-circle at full throttle in his Bugatti when he lost control and was momentarily expecting to make the ignominous exit through the hedge, instead of which the car turned completely round and gave him an excellent view of the course he had just covered. He finished the course in reverse, in 67 sec.

On the subject of independent suspension, he sets no store by rear independent suspension, which he considers to be overrated, and only required by the very fastest cars. E.R.A.s, Maseratis and others, as he pointed out, have managed fairly well with a conventional rear axle. Independent front suspension, however, he considers essential, since considerable weight saving is possible and it also enables the engine to be pushed further forward, giving more room, a shorter wheelbase and a lighter car. The chassis frame needs to be specially designed for most types of i.f.s., especially the torsion-bar type, which throws stresses upon the frame for which no conventional chassis was designed, so that massive box-like rigidity becomes necessary.

Concerning the use of light alloys, he states that whereas lightness is a desirable feature of any car, it is expensive to obtain. Light alloys can be used extensively where they will not be highly

Continued on page 38

THE EDWARDIAN ROLLS-ROYCE

JOHN Bolster's "Veteran Types" article last December, on his 1911 "Silver Ghost" Rolls-Royce, car has aroused a lot of interest. Mr. W. A. Taylor, of Banwell, writes as follows of some early Rolls-Royce exhibits at Olympia :—

Sir,

John Bolster's article on the 1911 Rolls-Royce was extremely interesting, and I am very glad to see you are reviving the "Veteran Types" articles.

We have recently dug up in the recesses of my father's motor-house the Olympia Show catalogues for the years 1905-1908, and 1912. May I quote verbatim the Rolls-Royce data for their exhibits for these years ?

It is interesting to note that the title of the firm in 1905 and 1906 was C. S. Rolls & Co., in 1907 and thereafter Rolls-Royce Ltd.

1905 *Show.*—One 6-cylinder 30-h.p. Rolls-Royce chassis, 1906 type with patent Rolls-Royce gearbox, four forward speeds and reverse, direct drive on the 3rd speed.

One 6-cylinder 60-h.p. Rolls-Royce, 1906 type, limousine body.

One 8-cylinder 20-h.p. Petrol Landaulette, "Par Excellence," special Rolls-Royce 8-cylinder engine.

Special Rolls-Royce "Legalimit" car, built for Sir Alfred Harmsworth, Bart., 8-cylinders. Specially designed to travel on the flat at a speed not exceeding 20 m.p.h., and to ascend hills at a speed not less than 20 m.p.h. without changing gear.

The light 20-h.p. standard Rolls-Royce car on which Mr. Percy Northey gained second place in the race for the Tourist Trophy, 1905.

1906 *Show.*—The 20-h.p. Rolls-Royce car which won the Tourist Trophy, September, 1906.

30-h.p. 6-cylinder Rolls-Royce Single Limousine (Barker).

40–50-h.p. 6-cylinder Rolls-Royce (1907) Chassis.

40–50-h.p. 6-cylinder Rolls-Royce Pullman Limousine.

1907 *Show.*—40–50-h.p. 6-cylinder Rolls-Royce Side-entrance Touring Car. The famous "Silver Ghost," the car which holds the World's Record for a non-stop run, having covered a distance of 14,371 miles without any involuntary stop, under the observation of the Royal Automobile Club. This car also won a gold medal in its class in the Scottish Automobile Club's Trials last June. The working parts are exhibited separately on the Stand.

40–50-h.p. 6-cylinder Rolls-Royce chassis. In general design is similar to the "Silver Ghost," with some notable improvements. Price £985.

40–50-h.p. 6-cylinder Rolls-Royce Limousine Landaulette. Price £1,325.

40–50-h.p. 6-cylinder Rolls-Royce Limousine Landaulette. Price £1,260.

1908 *Show.*—40–50-h.p. 6-cylinder Rolls-Royce chassis. Price £985.

40–50-h.p. 6-cylinder Rolls-Royce ("Silver Rogue"). Side-entrance 4-seated "Roi des Belges" body. This car is the actual one which competed in the recent 2,000 miles Trial of the R.A.C. Price £950.

40–50-h.p. 6-cylinder Rolls-Royce, limousine body, with enclosed driver's seat. All the side windows are made to open, and the supporting pillars being made to turn upwards into the roof, forming an almost complete open-and-closed carriage at will. Price £1,365.

1912 *Show.*—40–50-h.p. 6-cylinder Rolls-Royce D-fronted Limousine ; body built low with domed roof, by Cockshoots, of Manchester ; extension folding canopy covered with Paride to roll up to the front of roof when not in use, and deflector folding windscreen ; painted a rich dark blue picked out in black ; trimmed with superfine woollen cloth and silk laces to match ; silver-plated mountings. Price £1,345. Tax 20 guineas.

40–50-h.p. 6-cylinder Rolls-Royce enclosed Limousine, body by Barker & Co., with frameless windows and dome roof ; painted a rich shade of green, with black mouldings, relieved with fine lines of emerald green ; upholstered in drab cloth and laces to match. Price, £1,420. Tax 20 guineas.

40–50-h.p. 6-cylinder Rolls-Royce flush-sided Phaeton of original design, embodying low and racing lines, yet giving ample room inside ; body by Sir Wm. Angus Sanderson & Co. ; painted "Rolls-Royce" green without any relief whatever ; it is upholstered in green leather to match the paint work ; a Cape hood and glass screens are also fitted ; the whole effect of the car suggests luxurious and superb elegance. Price £1,250. Tax 20 guineas.

If any Edwardian enthusiast would like any other quotations from these catalogues, I shall be only too pleased to look them up and give them.

I wish I had the 1904 catalogue. I should very much like to know how many types, and what types, were produced in 1905. Can anyone tell me ?

I am, yours, etc.,

W. A. TAYLOR.

Mr. Watson suggests that the type designation "Silver Ghost" applied only to the 40/50-h.p. car of 1907 and that this car appeared in that year, not in 1906. Although the post-1907 show catalogues do not seem to have instanced the "Silver Ghost," Mr. Watson is incorrect on the former count, because down to 1925 the s.v. 40/50-h.p. car was certainly called by this type-name. Another very interesting letter from Mr. P. L. B. Hills, of London, concerns a 1908 40/50-h.p. car :—

Sir,

Readers of John Bolster's admirable article on the 1911 Rolls-Royce might be interested to see the enclosed photo of an older (1908) model. The chassis number of this particular car was 714 (the original "Silver Ghost" was 701). The original body had no doors to the front seats, and was so heavy that the overdrive top gear could only be used downhill or with a following wind. The body shown dates from 1911, and the original acetylene lights were replaced by electric ones in 1920.

The main external difference from Bolster's car is the fixed wooden spoked wheels, with Stepney rim for spare. The Stepney could be fitted fore or aft; but the front wheels were 880 by 120 mm., while the rear were 895 by 135, and as it was a good tyre that lasted 3,000 miles in those days, a good stock of spares of two different sizes had to be kept.

The overdrive top was 1.98 to 1, 3rd (direct drive) being 2.98. I fear Bolster is somewhat optimistic in putting the maximum speed at 70. An uncle of mine had a 1911 three-speeder, which we reckoned would do an honest 60. The (belt-drive) speedometer on the older car could be pushed up to 65 on the over-drive, given a long straight stretch, plenty of nerve and no traffic (one tended to need both sides of the road as well as the middle). I was always given to understand that this engine peaked at 1,200 r.p.m., which, if the wheel size is the same as Bolster's, would be 61½ m.p.h. on the overdrive.

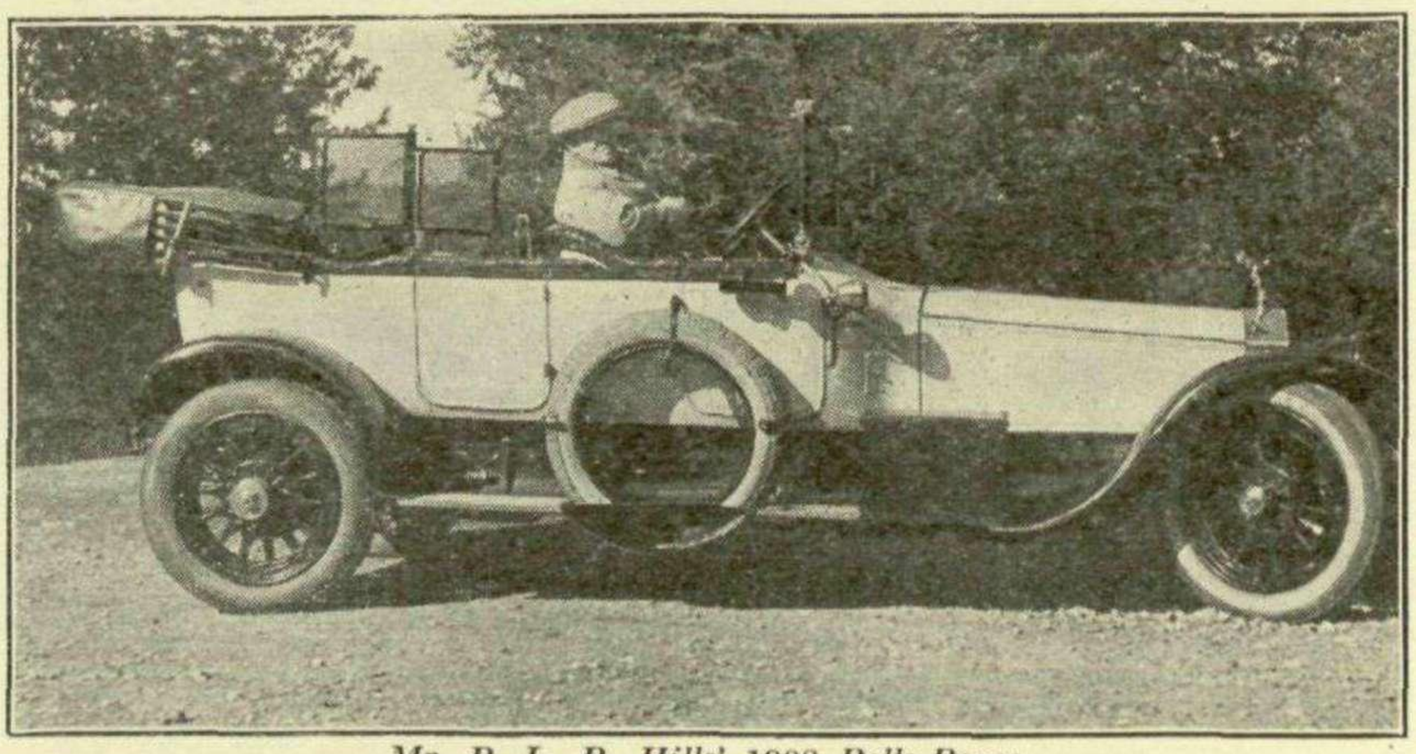
The petrol tank on this car was under the front seat, with a one-inch diameter filler-cap kept air-tight by a rubber washer. The drill, was to pump up air pressure before starting, a mechanical pump then taking over the job while the engine was running. Starting was child's play : from cold, three pulls-up on the handle, then switch on the buzzer, twiddle the hand throttle, and away she went. Once hot, the compression would hold up to three hours, and she started by switch-and-twiddle alone.

The clutch, as Bolster says, was a treat, as long as the pedal was kept fully depressed at night by a chock ; otherwise, the lubrication was squeezed out of the leather, and heartbreaking squeaks and jerks followed.

I learnt to drive this car when it was seven years old and I twelve. Gear-changing, once one mastered the centrifugal governor on the throttle, was easy, and the expert did not need the clutch. Maintenance, however, was a little excessive by modern standards, the chassis requiring 63 grease-caps to be filled once a week.

It would be interesting to know how many of these old cars are still on the road—

P. L. B. HILLS.



Mr. P. L. B. Hills' 1908 *Rolls-Royce.*

BRDC Notes

Brooke, Parnell and Abecassis have entered a team of E.R.A.s for the Swedish Winter Grand Prix, which will take place on February 9th, over 40 laps of a 5-km. snow circuit, on an aerodrome in Northern Sweden. Prior to the Grand Prix, there will be a race of sports cars for which Oscar Moore has entered his Frazer Nash-B.M.W.

It is understood that both John Cobb and "Goldie" Gardner are being invited to participate in the "Record" week, which will be a feature of the forthcoming Salt Lake City Centenary celebrations.

CORRECTION

In last month's issue it was stated that the B.R.D.C. and J.C.C. had combined to open the United Motor Sports Club. This is not so. The Club is sponsored by H. J. Morgan and D. J. Scannell, respective Secretaries of the J.C.C. and B.R.D.C., and founder members include individual members of the Committees of these and other Clubs and the majority of the personalities most prominent in the motor sporting world.

The lounge and cocktail bar are now open and the restaurant is being prepared to serve lunches and dinners at an early date.

Members of existing motor clubs are eligible for membership. The annual subscription is £2 2s. 0d., and applications should be sent to the Secretary, United Motor Sports Club, 2a, Brick Street, W.1 (Telephone : Grosvenor 2765).

SIDESLIPS

by

"BALADEUR"

"IS racing played out? I think it is. Certainly it is of very little value today to the motor-car builder, and there are very few private owners indeed who will go to the big expense of running racing vehicles. . . ."

This somewhat gloomy assessment of the prospects for the Sport was enunciated rather over 40 years ago by Mr. Henry Sturmey, writing in the *Autocar* for July 8th, 1905; and whenever I have found myself tending to become depressed by the apparently discouraging outlook, I have taken comfort from the consideration of how often since that date similar views have been expressed by the most convincing authorities—and of how convincingly subsequent events have proved them to be wrong.

"No one is more ready than myself," continued Mr. Sturmey on this occasion, "to admit that racing ten years ago did a very great deal for the development of the touring vehicle . . . but today the racing car has got beyond practicability. It is to all intents and purposes a freak . . ." One wonders what he would have thought of, say, the Continental racing cars of 1947, or whether he could have credited the number of enthusiasts who, forty years later, would have given at least one of their eyes to possess the 100-h.p. "freaks" which a few days before had been competing in the last of the Gordon-Bennett races.

In 1905, however, his was by no means a lone voice crying in the wilderness. Thus, as he himself remarks, the *Motor Review*, published in Paris, had reported the previous month that, "French manufacturers . . . no longer look upon races as a means of providing data for enabling them to improve their cars. Having learned all they can from races, long-distance speed events can teach them nothing that they do not know [!] . . . It is now recognised that racing led makers to a point which threatened to do them a great deal of harm in the building of excessively light vehicles, and . . . it is now seen that very little more can be done in this direction." It was *not* seen, evidently, that at this very moment the development of the automobile stood upon the very threshhold of the *Coupe de l'Auto* era for "excessively light vehicles," which were to become the ancestors of the modern car; that long-distance speed events were still to teach these French manufacturers, so arrogant in their ignorance, the desirability of putting brakes on their front, as well as their back, wheels; that even the supercharger, so bitterly criticised, even in our own day, as purely the adjunct of the highly specialised racing car, should finally find its place, in the hands of an enterprising maker, as an essential part of a light delivery van, designed primarily for economy.

At about the same period as that when Mr. Sturmey was uttering his strictures, Mr. R. J. Mecredy, in his *Dictionary of Motoring*, was also indulging in an *ex cathedra* pronouncement in the same vein. "Racing," he says, "is only of real value in the early stages where the cars are undeniably imperfect. Once a standard of high efficiency is reached [such as that attained *circa* 1905] these events become merely tests of horse-power and daring, and they encourage the production of monstrosities which are utterly unsuitable for any purpose but racing."

The next year, 1906, it was the turn of the Mercédès agent in France, of all people, a gentleman who rejoiced in the surname of Charley (having changed it from Lehmann to celebrate his French nationalisation!), to join in the chorus. "Mr. C. L. Charley," reported the *Autocar*, "has been trying to create a little mild sensation by declaring that henceforth the Mercédès cars will have nothing to do with racing." Our contemporary's reporter, however, had no sympathy for Mr. Charley's expressed reason for the decision. "It is not without interest to learn," he remarks, "that the man who has always been such a staunch supporter of racing should have declared that he can no longer see any utility in it, but . . . we hardly suppose that the Cannstatt (*sic*) engineers will deprive themselves of the valuable experience obtained from racing because Mr. Charley would prefer having nothing more to do with it. It is easy to imagine that Mr. Charley must feel very sore over the failure of the Mercédès cars to figure prominently in the big races during the past two years . . . ." The last part of which was, perhaps, a fair comment on a matter of public interest. In any case, the "Cannstatt" engineers were to prove, as our contemporary suggested might be the case, less easily discouraged than was their French representative, and one wonders whether the said Mr. Charley was still prepared to express the same contempt for the utility of racing after the Mercédès victory in the 1908 Grand Prix.

In any case by that year an even more ironical situation due to the same, or very nearly the same cause, had arisen in England. In September, on the very eve of the "Four-Inch Race," Mr. S. F. Edge, it was reported, "has announced his intention of withdrawing Napier cars from all dangerous competitions in deference to the public feeling against dangerous racing." "We presume he would call the 'Four-Inch Race' dangerous," commented our contemporary; but for all that, Mr. Edge himself entered one of the Hutton cars built in the Napier works for it, and it was this car, which had already won fame for itself as "Little Dorrit" in more or less dangerous competitions at Brooklands, which proved the winner of the Isle of Man race!

Alas! however, there is seldom smoke without fire. The racing car, as Gerald Rose, writing in 1909, explains, had been becoming more and more a burden to the manufacturer, and when a movement was started for a self-denying ordinance to which all should subscribe, it met with a large measure of support. The A.C.F. did its best, it selected a circuit for the 1909 Grand Prix in Anjou, it produced a new set of rules, but it decided that the race would not be run unless a minimum of 40 entries were received. When the lists closed the actual number which had been sent in was nine. Gratefully, the leading manufacturers, learning that there would be no Grand Prix in 1909, decided that they could rest on their laurels. Undeterred, the A.C.F. started canvassing opinion about new regulations—or even no regulations at all—for 1910. Once more the manufacturers refused to co-operate; it really did look as if racing was dead.

Unfortunately for the complacency of those manufacturers whose names had become household words during the early years of the century, however, they had overlooked or been merely contemptuous of the little *Coupe de l'Auto* machines. The years rolled by and the voiturettes increased in power and speed, the fame of their victories eclipsed the ancient history of what the monsters had done, and, more or less suddenly, it must have come to be realised that Sunbeam or Vauxhall was more a name to conjure with than Napier or Wolseley, that Peugeot had again outshone Panhard et Levassor, its rival of the very early days of motor-racing; that Delage now meant more than De Dietrich, Hispano-Suiza more than Richard-Brasier or Renault. Even Mathis and Bugatti, that unconventional pair of Alsatians, were beginning to represent modernity, and the name Mercédès to sound antique.

But to the pundits, the progress which had been made by the most enterprising manufacturers, the methods by which so much power had been wrung from small light engines by the exponents of the new school of racing-car design, were not altogether to be commended. Thus Mr. H. Massac Buist, commenting in the *Autocar* on the 3-litre Peugeot which won the 1913 *Coupe de l'Auto* race, after doing full justice to its efficiency as a racing machine, poses the question: "What good is all this as to the improvement of the actual touring car?" Not, he thinks, very much; and the reason for his doubts resided in the fact that the Peugeot used "this special overhead noisy type of valve gear," instead of the "standard car valve principle," as used by the Sunbeams. Rightly he prophesied that, if this sort of thing were to go unchecked, you would soon find respectable English manufacturers like Sunbeams themselves following these *risque* French practices, and then the projected Tourist Trophy race in the Isle of Man the next year would be rendered utterly useless.

In other words racing-car design, instead of blazing the trail for that of touring cars, was to be confined within the limits of existing standard practice. Alas! for the Canutes—among whose number, where motor-cars are concerned, I almost always unhesitatingly range myself! Go forward a decade from September, 1913, when Mr. Buist's strictures on the Peugeot were penned, and you will find that of the 1924 models offered to the British public, no less than 37 per cent. had succumbed to "this special overhead noisy type of valve gear," and only 54 per cent. remained faithful

to "standard" practice. Three years more, and overhead valves, with 47 per cent., had exceeded the side-valve percentage of 41; by 1939 no less than 63 per cent. of current models had overhead valves and only 36 per cent. had side valves. So much for the uselessness of racing!

But in these years when the racing car was breaking fresh ground by the development of overhead valve engines, so little significance was generally attached to the process that as a rule contemporary specifications completely fail to refer to the matter, and one is left in ignorance of the date of the adoption of this feature of design by the various makers. The abandonment of automatic inlet valves during the early years of the century had had one obvious disadvantage in that, if the valves were placed side by side, instead of one above the other, their area had almost inevitably to be reduced. The T-head solution of the problem (for which, I must admit, I still retain a sentimental attachment) was generally considered an extravagant one, in that it involved the use of two camshafts. For all that, while some makers such as Mercédès favoured the alternative "inlet over exhaust" arrangement, others such as the manufacturers of the Belgian Pipe car were prepared, when they adopted mechanically-operated inlet valves, to accept the logic of the situation, place both valves in the head at an angle of 90 degrees to each other, and operate them by push-rods from two camshafts in the crankcase. In general, however, designers were worried by the problem; and while they were still worried by it, there appeared, some forty years ago, a revolutionary, and apparently completely satisfactory, solution to it.

The invention of the sleeve-valve by Charles Y. Knight was hailed in the most knowledgeable quarters as the first really major contribution which the United States had made to the development of the automobile. Its adoption, shortly afterwards, by the English Daimler Company was one of the boldest departures from established commercial practice that had ever been made. In vain might a correspondent in the technical Press censure the "cylindrical valves" of the new Daimler engine for 1909 as "obviously unmechanical and contrary to the true principles of engineering," comparing their operation to "lifting a house to open a window." The example of the senior British manufacturer had been copied within a year or two by the *doyen* of Continental makers, the house of Panhard et Levassor itself, while in Belgium, Minerva was using the Knight engine as early, I believe, as 1907. And on the Continent generally the idea spread like wildfire; the days of the poppet valve were numbered, the age of the *moteur sans soupapes* was come.

An analysis—although admittedly a far from perfect one—of 1913 models on the British market reveals only two (the 1910 chain-driven o.h.c. Germain being no longer represented) which sported the "special overhead noisy type of valve gear" of which Mr. Buist complained in the case of the racing Peugeot. These, the "Prince Henry" Austro-Daimler and the Isotta-Fraschini, both had single overhead camshafts, while the former, certainly, and the latter to the best of my knowledge and belief, had inclined valves operated by rockers. Both were described as 27-80 h.p., the bore and stroke of their 4-cylinder engines being 105 by 165 mm. (5,709 c.c.) in the case of the Austro-Daimler, and 105 by 180 mm. (6,236 c.c.) in that of the Isotta; and if anyone likes to make me a present of an example of either of them, I shall not turn up my nose at it! Away in Molsheim, of course, a gentleman of the name of Bugatti was also building an o.h.c.-engined car, but he does not seem to have considered the great British public as worthy of being presented with it to any noticeable extent, with the result that "Black Bess" is something of a special rarity among Edwardian survivals. Corre la Licorne still had the inlet-over-exhaust arrangement, redolent of earlier days, and the Belgian Sava, by way of variation, had plumped for exhaust-over-inlet; but for the rest, the side valve reigned supreme, except where *sans soupapes* enthusiasm held sway.

And its popularity was widespread. As well as Daimler, Minerva and Siddeley-Deasy, who had gone in for it wholeheartedly, Panhard et Levassor, Clément-Bayard and Grégoire in France, Mercédès in Germany, and Martini in Switzerland, each presented at least one model with a Knight engine. Argyll's single-sleeve valve design, which deserved more commercial success than it actually achieved until its adoption for aero engines, was used both by the Scottish firm which originated it and by the Swiss Piccard-Pictet. Itala and Darracq had both adopted the rotary valve, at least for some models, the Darracq engine being built to the designs of M. Henriod, who had been at this sort of thing, I believe, since the days of Paris-Madrid or even earlier. The Schneider had run a car in the Grand Prix with what I take to have been a cuff-valve engine, and, finally, Peugeot, while reserving the "special noisy overhead type of valve gear" for the racing cars, had just introduced a 40-50-h.p. "valveless" standard model with "a combination of sleeve and piston valve."

The analysis, even if it is imperfect, at least serves to show that, on the eve of the Kaiser war, there was considerable enthusiasm for the *moteur sans soupapes*. Unlike almost every other major development in automobile design, however, the abandonment of the poppet valve had been decided upon first for standard models and then tried out in racing-cars afterwards. Its subsequent history is, therefore, of especial interest.

Early in 1913 the Knight-engined Mercédès had been run in the Indianapolis "500" and shrewd observers had noted that the car, which finished fifth, had used no water, only 25 gallons of petrol, but no less than eight gallons of engine oil. The next year came the Tourist Trophy, and as Mr. Massac Buist had correctly surmised would be the case, Louis Coatalen, assisted by Kenelm Lee Guinness, duly appeared and walked off with it by fitting one of these offensive overhead valve engines to the Sunbeam. But after giving due praise to the victor, the *Autocar* characterised the race as "a triumph for the sleeve valve." In many ways this comment was justified, for the starters included a team of three Knight-engined Minervas; all three were among the six finishers; and their places were second, third and fifth. Indeed, the only adverse criticism which could be levelled at them was that each engine used about a gallon of oil each circuit and the resultant smoke was so bad that some observers thought that they ought not to have been allowed to start.

The advent of Gabriel Voisin to the ranks of automobile manufacturers was an important event to the generation of 1919, which was so familiar with his aeroplanes. He was, moreover, not only inclined towards the sporting side of automobilism, but also a devotee of the sleeve-valve. Admittedly his curious aero-dynamic 2-litre racers were not among the fastest of the competitors in the 1923 Grand Prix, and they "emitted dense clouds of smoke when travelling at speed"; but he had vindicated the value of the Knight engine by a resounding victory in the Touring Grand Prix the year before, and the tradition of the sleeve-valve's success in this race was carried on until the middle 'twenties by the team of Peugeots, which scored victory after victory. Where fuel consumption is of importance, indeed—and where consumption of lubricating oil can be, by comparison, ignored—the sleeve-valve may be said to have proved itself in racing. But for better or worse, oil costs money as well as petrol; and after achieving a maximum popularity of about 10 per cent. of all models offered to the public around 1930, the vogue of the sleeve-valve began steadily to decline. Its final abandonment by Daimler in 1935 was one of the most serious blows suffered by its supporters; the Minerva, ever faithful, was, I think, the last Knight-engined car on the British market; and by 1939 it could not boast a single representative. Of course if they go on rationing petrol for ever, as they seem inclined to do, someone may think the design is worth reviving; in which case the authorities, I have no doubt, will decide to ration oil.

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PERSONALITY PARADE—

Continued from page 35

stressed, but weight for weight, nickel chrome steel is about the strongest material. Steel has the advantage that it can easily be welded. The chassis of the G.P. Mercédès-Benz had a frame made with oval-section, 1-mm. thick steel tubing. Normally this material is sufficiently weak to allow it to be distorted by hand. However, it became very strong when it was stiffened with welded-on webs and gussets. Weir's "K.3" M.G., Monkhouse considers, is one of Monaco's best jobs of lightening. Substituting welded, large-diameter light-gauge tubular-steel members for the standard cross-members did much to reduce weight and increase rigidity.

Finally, hobbies—well, apart from motor-racing, these have been temporarily suspended, but the inclination is mechanical, and it is model steam and electric railways combined with photography and sailing which take his fancy. It could be said that colourful clothing is a kind of hobby; anyway he abhors dingy and conventional dress.

Bull-Noses

DRIVING through Oxford in a "T.C." M.G. "Midget" we espied in the Morris Showrooms a particularly stark vintage motor-car. It was, of course, none other than the very first M.G., the car which the late Cecil Kimber had built at Longwall, Oxford, in 1923, and which became the product around which the now famous M.G. Car Company, Ltd., was formed. This first M.G. had taken its rightful place in the 1946 Cavalcades and we had known of it long before that, having published its photograph in MOTOR SPORT over twenty-two years ago. But somehow we had always thought of this car as just a rather specialised Morris-Cowley with queer mudguards and sports body. Seeing it "in the flesh" for the first time we were struck by its very stark, business-like appearance—as our passenger observed, it could be taken for one of the better Continental small sports cars of its period.

Kimber built this M.G. as any other enthusiast constructs a "special." The engine was one of three 11.9-h.p. Morris-Cowley-type units specially built in the Hotchkiss tool-room, and converted to push-rod o.h.v. layout. Head and ports were polished, the crankshaft balanced and the white-metal run directly onto the connecting-rods. Cast-iron pistons were retained but the carburetter was special and the oil pump was increased in size to give a maximum pressure of 60 lb./sq. in. Magneto ignition and a wet-plate clutch figured in Kimber's specification. The normal Morris 3-speed gearbox and back axle were used, but the chassis frame was special, so that the normal Morris ¾-elliptic rear springs of that time could be replaced by flattened ½-elliptics. Each brake had four shoes and fuel was carried in a 12-gallon tank, pressurised from a hand pump in the business-like cockpit. The two-seater body was light and very suited to the car. That then, was the original M.G. It would do 82 m.p.h. and gained its first success in the 1924 M.C.C. Land's End Trial, winning a gold medal.

At Brooklands in 1922 Summers raced an aluminium-bodied Morris-Cowley, but does not seem to have had much success with it, although it did do a standing lap at over 60 m.p.h. Then, about a year later, Mr. A. E. Keen, a Director of Morris Motors, Ltd., had built for him a special single-seater Morris-Cowley. It was timed to do over 90 m.p.h. on the road and at the 1924 Thetford Speed Trials made f.t.d., covering the standing kilometre in 35.52 sec., a very fine performance indeed, equal to 63.5 m.p.h. This car had a slightly modified cylinder block with ports opened out to 41 mm. diameter, and the valve seats reduced to a width of $\frac{1}{16}$ in. The valves had stems reduced to a diameter of $\frac{5}{16}$ in., which reduced the weight of each valve by one ounce, and the tappet feet were also lightened. Steel connecting rods were used, liberally drilled until they weighed but 18½ oz. each. These rods were not only carefully matched but they carried oil scoops to aid general engine lubrication. The Ricardo slipper pistons, also drilled, turned the scales at a mere 6½ oz. complete with gudgeon pin; they had one ring only and were naturally noisy at low r.p.m.

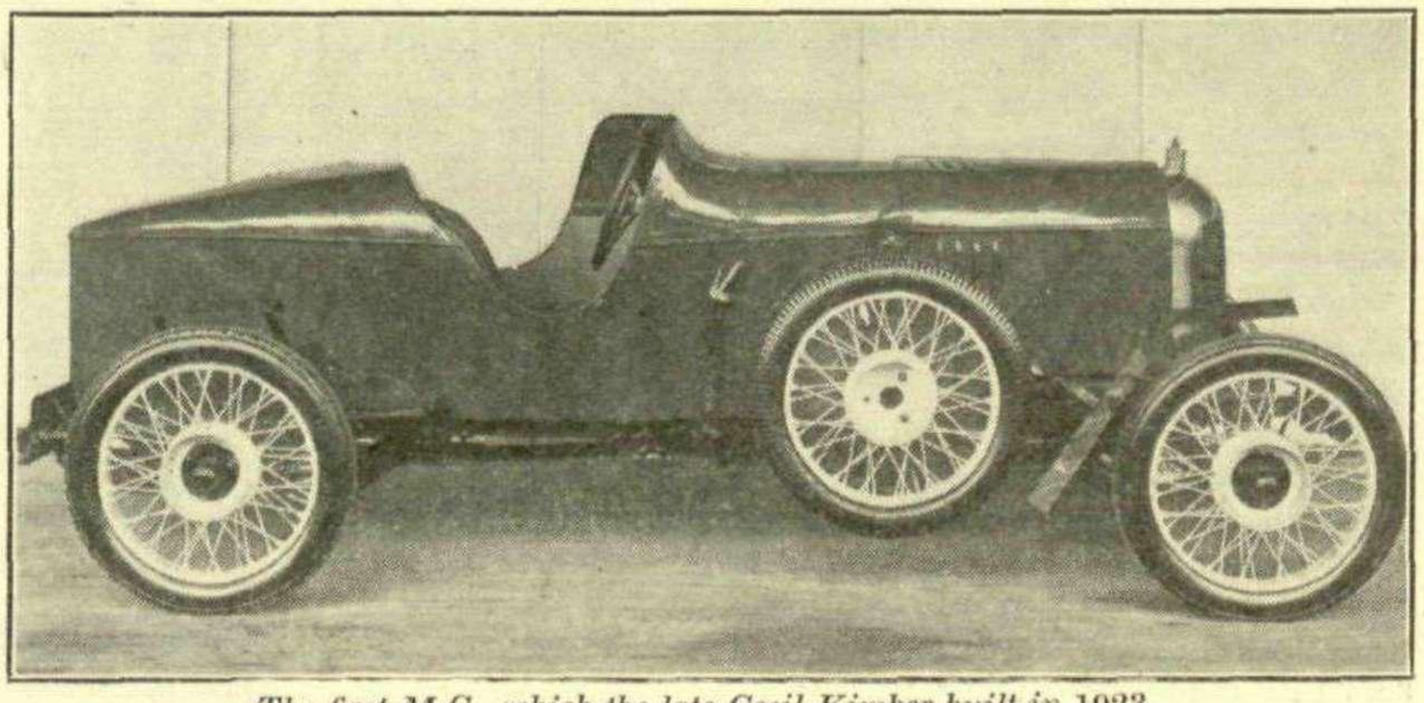
Although various experiments were conducted, standard valve timing was found to give the best results. Ignition was looked after by a G.D.4 Lucas magneto and carburation by a $1\frac{3}{16}$-in. bore S.U. The compression-ratio was increased to 5.7 to 1 and the flywheel was reduced in weight to 31 lb. The standard thermo-syphon cooling system was retained, with the fan removed, but a large-bore, straight-through exhaust system was fitted. Otherwise, production components were used and not only was the engine comparatively silent at full-throttle, but F.12 K.L.G. plugs stood up quite satisfactorily. The engine ran up to 4,000 r.p.m. comfortably and the normal lubrication system sufficed. This engine was put into a chassis in which the ¼-elliptics of the ¾-elliptic rear suspension assembly were replaced by solid forgings, enabling flattened ½-elliptic springs to be used. The front ½-elliptics were also flattened and Hartford shock-absorbers used all round. The engine was set 3 in. lower and 9 in. further back in the chassis than normal, the torque-tube being shortened to suit, while the front dumb-irons were braced by a cross-tube and tie-bolt. To accommodate the single-seater body, which blended nicely with the bull-nose radiator, the steering was raised and carried on a special bracket to centralise the wheel and the clutch pedal was moved to the near side of the gearbox. Gearbox, axles, etc., were standard, and artillery wheels were retained.

Another Morris, which ran at Brooklands in 1926-8, was the late H. R. Wellsteed's 1,805-c.c. Morris-Oxford, which was also driven by Cyril Paul. It could do a standing lap at over 71.5 m.p.h. and a flying lap at over 78 m.p.h. It is still in existence and ran in the Cardiff Cavalcade last year.

At the same time J. Crickmay raced a Morris-Cowley which lapped at over 75 m.p.h., and did a standing lap at all but 69 m.p.h.

This car was built to satisfy a bet that a fairly-standard Cowley would do 75 m.p.h. A 1926 "Chummy" with 30,000 miles to its credit was stripped down and rebuilt. Dumb-irons cut from another chassis were bolted at the rear to convert the ¾-elliptic rear suspension to ½ elliptic, and a plate welded between the front dumb-irons, with a bar between the front shackles in addition, to stiffen up the chassis. Belting was used as a sling to hold the front axle in place should a spring break. To lower the steering the box was mounted upside down, with the drop arm inside instead of outside the frame and a bracket held the box to the side members as well as to the engine. The steering wheel was increased in size, but normal 3-stud road wheels were used. The axle ratio was raised from 4.58 to 1 to 4.0 to 1 and drilled con. rods, aluminium drilled-skirt pistons in rebored cylinders and opened-out oilways gave the engine new life. Double valve springs and a flywheel turned down very appreciably by Laystalls, assisted to this end. A long-tailed 2-seater body was made of ash covered in aluminium strips, with a streamlined undershield. New André shock-absorbers were used and further tuning consisted of fitting a 40-mm. Solex carburetter and Marelli magneto, also a 4-branch copper exhaust system. The ports had already been widened and polished. Timed by six stop watches, the car now did 93 m.p.h. over the half-mile, at 4,800 r.p.m. After some racing successes an R.A.C. observed six-hours run was made at Brooklands, during which 387 miles were covered at 64.58 m.p.h., including three depot stops, during one of which the sump was drained and refilled. This gallant Morris came to a full-stop in a subsequent 5-lap race, by reason of doing nearly 5,000 r.p.m. for a far longer distance than it was accustomed to, and in a following wind, which defeated the lubricating oil.

Some idea of how comparatively fast these cars were is gained by comparing their speed with that of Webster's 1926 "Chummy" which was able to win a special Morris-Cowley Handicap held at Brooklands in 1930 by averaging 48.83 m.p.h., its best lap being at under 51 m.p.h., whilst the fastest car entered, a 1927 two-seater, lapped at under 53 m.p.h. — admittedly fully-equipped. Actually, much earlier than this, Morris Motors, Ltd., admitted that 60 m.p.h. was fairly easily obtained without drastic alteration from standard, and many special Morris cars were built by enthusiasts.



The first M.G., which the late Cecil Kimber built in 1923.

RUMBLINGS

When Mr. H. L. Kenward, Director of Dunlop Distribution, introduced "Far Horizons," the film of Dunlop's contribution to victory, at the pre-view at Studio One, his speech ended in an appeal for individual effort in a world in which private enterprise is being suppressed more an more as time goes on. (He also said that Dunlop's employees who were in the cinema were having a day out and that the Press was doing what it is pleased to call its day's work—but that is by the way!) Now, from our point of view, it is rather gratifying to realise that ownership of an uncommon car can be a very real expression of individuality. A "sports-car," or, more correctly today, a "high-performance" car, is obviously a more specialised and distinctive product than those bread-and-button, from-A-it-gets-me-to-B devices, the body shells for which you are apt to encounter in stacked tiers on lorries. Being taken to be welded to their chassis, they always remind us of pre-fab. houses on the move. The person who wisely invests in a high-performance car simply in order to enjoy easy travel at reasonable speed from place to place, nevertheless usually gets some satisfaction from the individuality of such a product. But the person who drives an uncommon type of car mainly because it is *that sort of vehicle*, and, as such, exerts a definite appeal and gives its user a fine sense of pride of ownership, is expressing his or her individuality very strongly. It does not matter whether the car concerned is a vintage or modern high-performance car, a rare Continental or the almost-forgotten production of a small-output Home factory, or even a hopelessly out-of-date small car bought because "everyone in our neighbourhood runs an Austin Seven and I want something different."

Worthwhile

The fact is that such cars single out their owners as beings appreciative of individuality, in a world becoming increasingly more drab. And that is most certainly worthwhile, if only for the innocent pleasure it gives to those so-minded. In the past we have been apt to disdain the near-enthusiast, he, that is, who "talks cars" but doesn't quite get all his facts right or know much of motoring history, or she, perhaps, who displays a certain enthusiasm by adopting a distinctive colour scheme or extra lamps and instruments, unfortunately on not quite the right sort of car. Possibly we true-believers are taking too strong a viewpoint. Any car which is a source of pride of ownership is to be encouraged—although if we can steer proud owners away from Union Jacks and fancy names towards "genuine team cars" and real high-performance, so much the better. But let us reflect that, with new houses all but non-existent, clothes rationed, furniture utilitarian and radio almost part of one's self, individuality is disastrously difficult to preserve. The sports car in its original form appealed strongly to the individualist, and the motor-car still remains a fine medium for the expression of this desirable characteristic. On Nationalised roads crowded with myriads of identical little saloon cars running on rationed synthetic tyres by grace of supplementary allowances of rationed petrol, and actuated by civil servants clad in identical utility wearing apparel, temporarily escaped from their places behind identical folding wooden tables at Ministrys, identical in all-but-name, the presence of any car that is at all out of the rut is to be welcomed.

It is nice to reflect that individuality amongst cars and pride of ownership was fostered by types like the "30/98" Vauxhall and 3-litre Bentley, and today persists amongst the high-performance cars, besides which, such cars are safer, faster and more desirable than any utility vehicle can hope to be. For the sake of sanity and the nation's future we must preserve our individual personalities. Whether you spend £200 or £2,000 on a car, select one that can be recognised other than by its registration number and, if you are as we are, you will get a deal of quiet satisfaction from your car even when you are not motoring.

* * *

Robert Cowell informs us that his Aspin-Cowell G.P. car is being built other than from proprietary parts. He has in hand, also, a 500-c.c. racing engine and a limited-production 1,100-c.c. unblown racing car.

* * *

Parker's Allard won the Full-Moon Trial.



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Club News

WE HEAR

J. N. Morton is proposing to install a 3-litre Bentley engine in a 1925 Sunbeam chassis, and E. Hopewell Ash reports that he is using a 1922 Jowett 2-seater which he acquired last Easter, and which ably takes his family and much luggage from Ruislip to the coast on a handful of revs. the whole way. We learn that Penn's Riley which ran at Cofton Hackett last year, and which we said looked like an ex-Dixon car, is actually the car once raced by the late Pat Fairfield, and it still has four S.U. carburetters and an aluminium shell body rivetted to the chassis. Major Jackson has been running a beautifully-preserved 1928 Sunbeam Sixteen saloon, which carries a V.S.C.C. badge with dignity—but we shouldn't be surprised if he doesn't back it with something more rapid in the near future.

Early small cars continue to decorate our roads—recently we encountered a well-preserved "10/15" Fiat saloon in London, and an "8/18" Humber and a 1921 11-h.p. Humber, both 2-seaters, out of town. There is also a "14/45" Rover tourer outside a London garage.

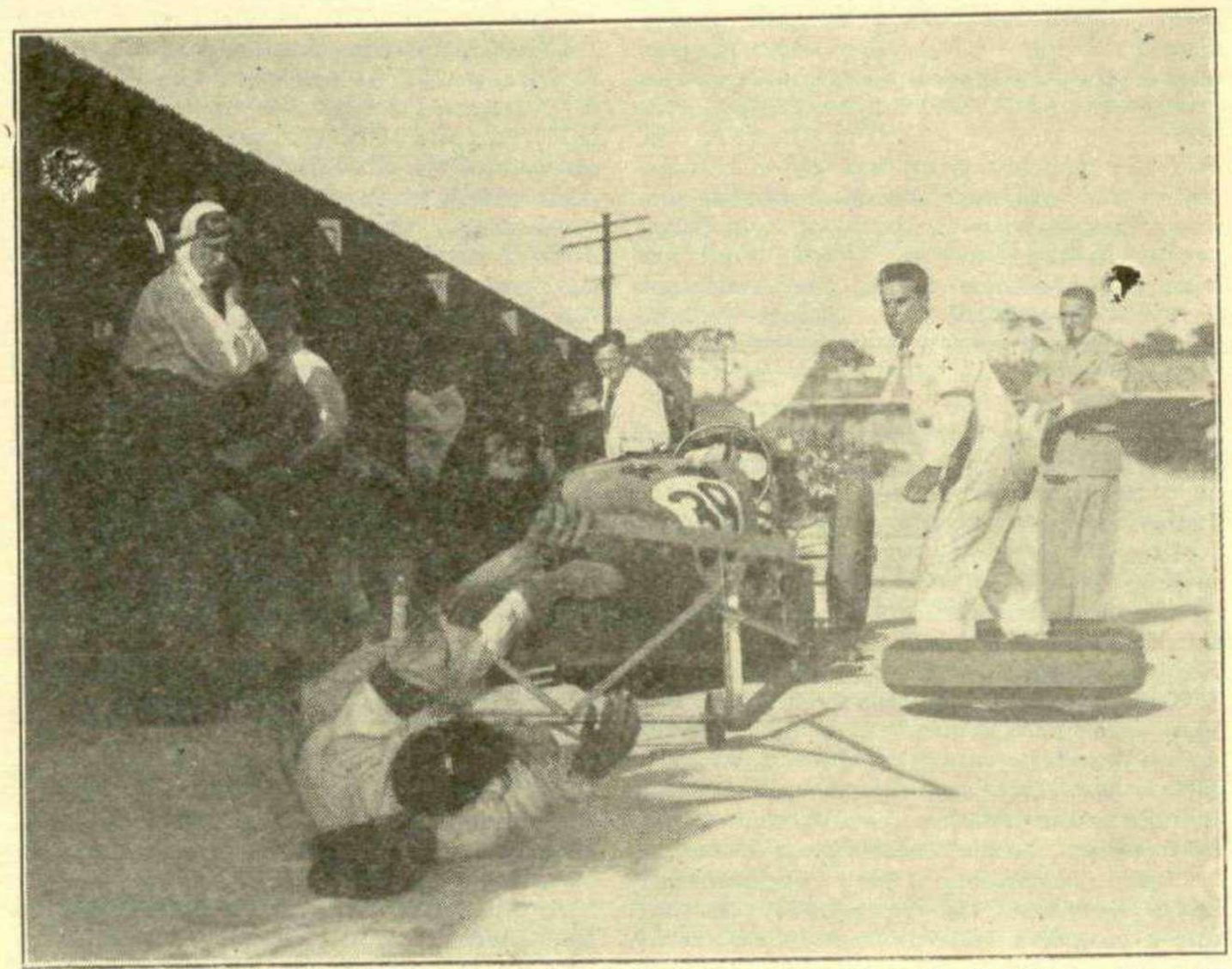
Charles Brackenbury has been using a Jeep as personal transport, and Rivers-Fletcher tells us he sold both his 1,100-c.c. H.R.G. and his wife's Austin Seven within a few hours of the announcement that they were for sale appearing in MOTOR SPORT. Imhof apparently used a standard Ford carburetter with the Marshall supercharger he had on his Allard in the "Gloucester"; the boost was approximately 4 lb./sq. in., and this installation was the work of the North Downs Engineering Co. If anyone is in need of a Lucas vertical magneto for a Ford V8 engine and can find a fiver, we hear of one for disposal. Another reader, supplying several very interesting early instruction books to the MOTOR SPORT library, remarks that he also has those covering Stanley steamers, V8 de Dion, Gobron, etc. Naturally enough, he does not wish to part with these, but would loan them to specially deserving persons.

Burroughs, who used to drive a special Ford V8 in trials, now operates the Grosvenor Garage at Warplesdon, Surrey. Tony Malden is perfecting a new insurance scheme in conjunction with Lloyds Underwriters and which should be of especial benefit to you and me. Briefly, cover is on a *driver* and not on his *car*, and any car can be driven at any time and remain covered under the one policy. Vintage and veteran vehicles are embraced and the usual "no claims" bonus applies. This sounds like a very useful service to those owning a stable of cars or for those who keep a veteran or vintage vehicle as a "second string." Details can be had by writing to Mr. Malden, c/o John G. Rutter & Co., 57-58, Pall Mall, S.W.1.

Over in the States, Walter Hadley and his wife grace New York streets with a 1910 Mercédès, 1930 Lincoln and a 1925 Amilcar, as well as occasionally driving an unblown 4½-litre Bentley. Then that cheerful and vintage-minded character, Victor Axel-Berg, is opening a garage at Winton with George Power, and hopes to ably serve vintagents and others. He wouldn't be adverse, he says, to swopping his "14/40" Delage for a faster carriage. The Glamorgan police, according to the *News-Chronicle*, are buying five sports cars with which to surprise "road-hogs," as such cars are considered less conspicuous than police-saloons. The cars are said to be costing £517 each, but no car on the market is priced thus—our guess is that "T.C." M.G.s may be used.

In Warwickshire a 1921 Coventry-Premier is for disposal, also a 1924 Singer Ten suitable as spares, while a well-kept 1921 Calthorpe was sold there recently, and we hear that several "14/40" Sunbeams and a few "23/60" Vauxhalls are running about in this area. A garage at Alton had a good "23/60" for sale recently. Rolls-Royce, Ltd., have been obliged to put up the price of the "Silver Wraith" chassis to £2,035 and that of the Mk. VI Bentley chassis to £1,985. Allard prices are also up, the "Competition" 2-seater now selling at £1,125 3s. 11d. with purchase tax. G. Asquith has an Amilcar chassis and is doing it up. He hopes to fit hydraulic front brakes and has yet to decide on an engine—although one of the 10-h.p. Carden-Ford aero engines with twin Bosch magnetos has been offered to him. Incidentally, Asquith mentions that he has been a reader of MOTOR SPORT for ten years and that a recent advertisement therein for a Riley Nine chassis found him besieged with enquiries for a full six weeks, one person enclosing his cheque without knowing anything of the car.

T. A. S. O. Mathieson is involved in a project for an air freight service between France and England, using Dakotas, whole Lord Selsdon is now Chairman of the H.R.G. Eng. Co., Ltd. R. C. Foster has acquired a 1½-litre Bugatti once raced by Arthur Baron, while the ex-Wilkinson 1½-litre straight-eight Maserati engine has gone to J. Gilbert, who is looking for a chassis to accommodate it. Then K. H. Place, who drove an S.S.100 in competition events before the war, has a 2-litre G.P. Bugatti, while G. M. Turner and D. L. Griffiths Hughes are carrying out some interesting modifications to an Alta. Hugh Hunter's latest interest seems to be a diesel-yacht, which is being built on the Clyde; Hugh will carry a Fiat "500" on deck, so that he has land transport facilities at his command at any port of call. The *Model Car News* for January contained detailed plans for Lt.-Col. "Goldie" Gardner's



Dramatic! In this country we have almost forgotten what pit-work is like. Here the MOTOR SPORT *camera catches an incident in the* 1933 *500-Mile Race at Brooklands. Kaye Don's mechanic lets the "4.9" Bugatti slip off the jack. Note that the wheel had not reached the ground ere the shutter clicked!*

famous record-breaking M.G. and data and plans for building the "M.C.N." petrol-driven model racing car. Willment has been using a 2-litre M.G. and a Morris Eight, but is also very Austin-Special conscious; he is restoring a Gwynne Eight and owns a 4½-litre Bentley. Ralph Venables still does a great deal to help the motor-cycling movement, and is still using his Aston-Martin, recently rebored and sleeved. Ivor Adams has disposed of his beautiful A.B.C. motor-cycle but is getting grand service from his early Enfield-Alldays 2-seater, which "is capable of leaving Austin Sevens and Eights from traffic lights and does about 55 m.p.h.," although its chief charm is its smooth running and good top-gear performance. He is busy getting his "R.B." (forerunner of the later Aston-Martin) into shape, but has had to replace the original Aston engine with a 1929 s.v. Anzani unit, using a Wolseley "Hornet" clutch in place of the Frazer-Nash clutch that was with it. He needs servicing data for this engine.

Writing of Aston-Martins recalls a recent evening spent with one of the fitters who was with the firm in the Bamford and Martin days and also at Feltham; he well remembers the Benson o.h.c. engine and Zborowski's famous exploits.

In Australia the proposed Lobethal road race has come to naught, on account of difficulties over the motor-cyclists demanding increased prize money, the synthetic tyre scare and shortage of materials for pits, stands, etc. This is a pity for the course is nine miles round and so fast that Barrett's "Monza" Alfa-Romeo averaged around 95 m.p.h. in the last pre-war race. It may be possible to do something here in 1948.

At Melbourne, Scorer has a s.v. S.S. I about which he seeks information, and also a "Tipo 6C" 1¾-litre Alfa-Romeo engine that he hopes to employ as the power unit of a "special." O. H. Goodwin says that his 8-litre Bentley in ordinary touring trim, has twice topped 100 m.p.h. during recent months, on one occasion with the hood up and three people in the car, on "Pool," and for him, after fifteen years, the toast remains—"Bentley." Over in Amsterdam, A. F. Lyons has a 6-cylinder, 4-litre "Barcelona"-type Hispano-Suiza which he rebuilt in 1939, using three down-draught carburetters. Modern lamps and body are used and Lyons describes it as "really a wonderful car." B. H. Banes, who still uses a side-valve Morris "Minor" as daily transport, reports seeing, in Wales, early Daimler, A.C., Austin and Humber Nine cars and, in a Cardigan garage, such rare devices as a Bayliss-Thomas and an Albatross.

Kent Karslake has unearthed an old love—a 1925 "Monza" Hispano-Suiza—which spent the war in a Devon farmyard. Yet other early small cars encountered include a fine 10.5-h.p. Lea-Francis coupé in Banbury, and a Calcott four-seater in action in Walton. Others, advertised, have included two Carden cyclecars, one a coupé, a 1922 11-h.p. Riley and a Gwynne Eight. This season Bolster seems likely to be seen at the wheel of the ex-Connell E.R.A.—good luck, John!

Incidentally, Bolster hastily explains that he hasn't bought this car, which belongs to Peter Bell. Bell once drove a Frazer-Nash in a L.C.C. Relay Race, and a "30/98" Vauxhall at Lewes. His present transport is provided by two 8-litre Bentleys, one of which was rebuilt by McKenzie. When not chauffeuring for the E.R.A.'s owner, John will run "Bloody Mary" at sprints. Then the ex-Shuttleworth "30/98" Vauxhall is on the road again, "Chitty Bang Bang II" (or what is left of him) has changed hands, another "Alphonso" Hispano-Suiza, a two-seater with bolster tank, is being built up in Kent, and S. B. Turner is working on a 1925 Gwynne "Eight" that has two S.U. carburetters and a gearbox from a "Silver Eagle" Alvis.

The ex-Baron single-seater Buick has turned up again. Amongst the veterans, Kentish is working on a 1904 Minerva as stable companion to his 1902 de Dion, and an 1899 Decauville has come to light in Loughborough. J. R. Fletcher is having a 1933 short-chassis "T.T. Replica" Frazer-Nash rebuilt and tuned by Aldridge and Riddle and intends to dispose of his Morgan 4/4 when the 'Nash is ready. Philip Bennison has found a 1924 s.v. "13.9" Rover tourer that has weathered 27,500 miles very happily. There is a plot hatching to start a new club in Herefordshire.

D. M. Hill has rebuilt a 13.9 h.p. 1925 Lancia "Lambda" which he wouldn't mind exchanging for a big-port "12/50" Alvis or a Frazer-Nash, as his garage is rather cramped. He says fellow "Lambda" users may like to know that he cured wheel wobble by fitting the later adjustable-type steering tie rod, set to ⅛-in. toe-out, instead of 3/16-in. toe-in. He got good results from a V-type Zenith carburetter. H. Holmes has an Anzani G.N. hybrid first registered in 1933 with 2-seater sprint body and seeks a handbook, while W. A. Hill is having a 1930 "19/100" Austro-Daimler rebuilt to his requirements. It seems that Yates' 6-cylinder Maserati, which he will race this year and which Giron will service, is not one of the 32-valve cars, in spite of a photograph in a contemporary.

Another would-be racer will be Joseph Lowrey, B.Sc., who has acquired the Mercury-Nash for sprint-work. Splendid news—Gerald Rose, perhaps the greatest motoring historian of all time, is giving a lantern lecture to the V.C.C. on Feb. 22nd—everyone eligible will want to be present. In Italy, Count Lurani looks like exercising "Nibbio" again and talks of a V-twin Guzzi engine, while over here Colin Strang contemplates a blown Triumph speed-twin, in the background, for possible use in the "Strang 500," and also thinks kindly of a big-twin Vincent. An excellent "14/40" Vauxhall and a 1923 Sunbeam motor-cycle are preserved at Sydenham.

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E.A.M.S.C.

Rupert Pitchford, who used to be a keen member of our V.S.C.C. and who owned a Frazer-Nash, writes from Nairobi to tell us of the formation of the East African Motor Sports Club. Membership is open to all Europeans, ladies included. Road and track races, hill-climbs and trials are planned and it is stated that local hills are worse than Nailsworth at its worst and that the hazards include elephant, buffalo and rhino, not to mention lion! Vintage cars apparently predominate, although there are a few fast Alfa-Romeos pinched or borrowed from Italian colonies. Rileys, a 4½-litre Bentley, a 1925 3-litre Bentley *sans* front brakes, and several "specials," including a blown V8-engined "12/50" Alvis are mentioned. Spares and tyres are almost unobtainable, fuel is very low-octane, but enthusiasm is immense. Details from R. Pitchford, P.O. Box 4012, Nairobi, Kenya, E. Africa.

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"750" CLUB

Future plans include participation in the S.U.N.B.A.C. Colmore Trial on March 8th and the Aldershot Trial on April 13th.

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V.S.C.C. OF AUSTRALIA

The August, 1946, issue of the *Vintage Car* contains one of Shepherd's "Vintage Types" series featuring the 6½-litre Bentley, and the cover picture is of Tattersall's fine "Wensum" "30/98" Vauxhall. There is also a rather nice verse, which we cannot resist "lifting":—

"And your bonnet is turning quite grey;
Do you think you could possibly stand on your head, if somebody drove you that way?
"Tut, tut, in my prime I was speedy and fast, and many a field I have led.
"But now they have taken my lovely O.E. and planted a V8 instead.
Alack and alas, the old lady said, Convertion just gives me the fidgets.
I feel such a fraud with my new Henry Ford, I hope we don't sponsor some midgets."

Which, of course, points a moral. The Victorian Division of the Vintage Sports Car Club of Australia held a trial, the winner of which was Duckett's Anzani-Bugatti, with Camm's "G.S.S." Salmson and Merle's "30/98" Vauxhall the runners-up. Duckett was leading on aggregate points. Seven new members and nine new associates are listed, their cars including two "30/98" and two "23/60" Vauxhalls, a "12/50" Alvis, a sports Austin Seven, a Type 43 Bugatti, two T-series M.G.s and a Singer-Bugatti-Special. A 1914 Siddeley-Deasy, 1903 Vauxhall and 1901 Oldsmobile are also mentioned. You can't suppress the Aussies! Next fixture is a 1½-day Mountain Trial.

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N.L.E.C.C.

The annual dinner and dance of the North London E.C.C. took place on December 14th last, at the Hendon Hall Hotel, and there were 116 members and friends present. Guests included Mr. and Mrs. Findon, Mrs. Kay Petre, S. C. H. Davis, and members of the Berkhamsted M.C. & L.C.C. and Chiltern C.C. Awards for events during 1946 were presented by Mrs. Kay Petre, who was subsequently handed a bouquet on behalf of the Club by A. F. Rivers-Fletcher. The Raymond Way Trophy, a cup for best performance by an N.L.E.C.C. member in one of the club's events in 1946, was won by Rivers-Fletcher, whilst the Rivers-Fletcher Challenge Trophy for the most meritorious performance in any motoring event in 1946 by a member of this club, went to Colin Strang as first holder, for his f.t.d. at the Vintage

Prescott in the 500-c.c. "Special."

S. C. H. Davis proposed the toast "The Club and the Sport," in which he said only in this country do we see clubs of this sort, where real enthusiasts join to get some fun out of their motor cars, whereas on the Continent there is a strong business flavour predominating. If he possessed C. N. Strang's 500-c.c. "Special," and had built it himself as had Strang, he would not exchange it for all the G.P. cars in the world. Regarding the Sport he stressed the need to treat it as a sport—"Do your damndest to win, but if you don't, don't grouse." Even if a fellow competitor does not seem to you to be keeping to the exact letter of the law, he possibly is doing so unwittingly, so treat it as all part of the game, and remember—there is no such thing as bad luck, for again it is all part of the game. Although part of motor racing is a business, especially where manufacturers are concerned, the sporting side stands out a *mile*. It is the *car* that counts, not the driver.

F. J. Findon replied for the guests, including the ladies, and said how pleased he was to see that the "women of Britain," as they had been known in their various war-time capacities, had once more become the "ladies of Britain," a fine example being Mrs. Petre herself, who kept the home fires burning so well in Fleet Street. He was always pleased to come to this club's functions, as he considered we interpreted the term "enthusiasts" up to the hilt.

C. N. Strang replied on behalf of the club, and S. J. Humphries proposed the "Guests, including the Ladies." The secretary gave the chairman's toast, stressing how much Rivers-Fletcher had done for the club, and how his support had never lagged.

A very enjoyable evening broke up around midnight, and this year we just managed to miss foggy weather.

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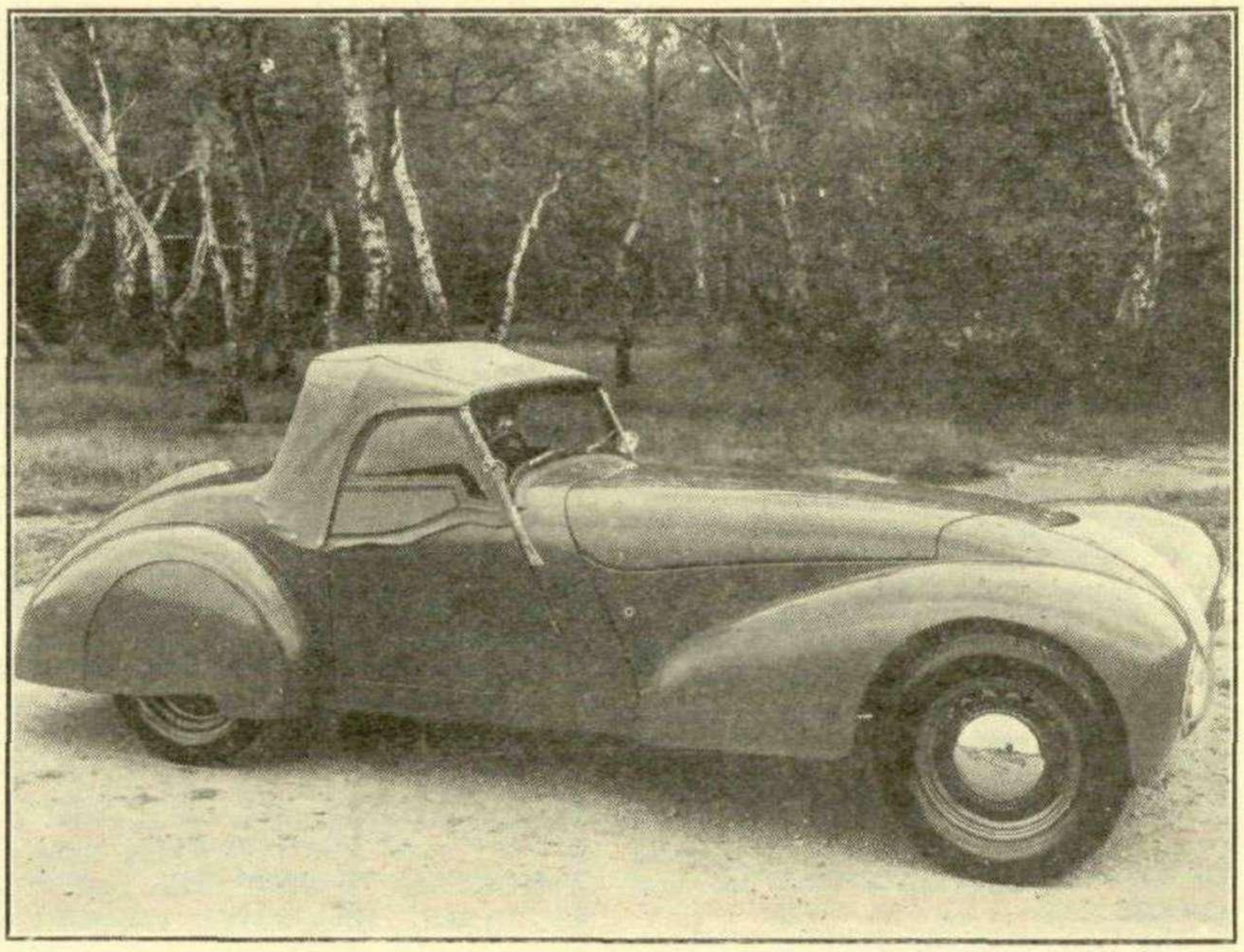
J.C.C.

The Junior Car Club is holding a dance at Grosvenor House on March 4th. The club's Technical Committee is preparing the regulations for the recently-announced Gas Turbine Car contest, while the motoring sport fund has reached £2,700 and still remains open. Fifty-one new members joined between June and December last. The *J.C.C. Gazette* for last quarter contained, besides many news-items, an article on America by L. F. Dyer, impressions of Ceylon by B. Gordon Graham, a science article by Prof. A. M. Low, and "Brooklands Aftermath," by W. Boddy, Editor of MOTOR SPORT. Car badges are available again. Secretary: H. J. Morgan, Melbourne House, Aldwych, London, W.C.2 (Temple Bar 4546).

★

A.S.C.C.

The Australian Sporting Car Club is going great guns. It really constitutes an amalgamation between the N.S.W. Light Car Club, which was founded in 1930, and the more recent N.S.W. Sporting Car Club. Meetings take place at the various centres, which are situated so far apart as Adelaide and Sydney, and at Melbourne, which is 580 miles from Sydney.



Something distinctly modern, for a change! The "Competition" model Allard 2-seater. We understand that it performs far better than the rather hard-used experimental car we tested last December and we look forward to putting it through its paces.

A race meeting on an airstrip was scheduled for January 27th, and it is hoped that the Australian Grand Prix, over 150 miles on an individual handicap basis, will happen at Bathurst at Easter. British entrants will be most welcome; incidentally, it seems that Auto-Union were teed-up to send out two or three cars for the 1939-40 Australian season. Peter Whitehead's drive in his E.R.A. in the 1938 race is apparently still talked about! If there is sufficient support, a 1½-litre scratch race will be run as well this year. The A.S.C.C. is also anxious to encourage 500-c.c. racing in Australia.

Details from the Secretary, c/o Box 3304, G.P.O., Sydney, New South Wales.

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LANCASHIRE AND CHESHIRE A.C.

The recent Semi-Sporting Winter Trial was run on follow-my-leader lines and took in sections having some lovely names, such as Tockholes, Eric's Folly and Wotno Grip. Twenty-two cars entered and 61 members dined together afterwards at the "White Bull." The winner of the trial was Haskins' "M.M."-V8, with Tyrer's B.M.W. runner-up. Other fun-and-games included a firework party, etc. Club magazines have multiplied of late, which is a healthy omen, and this club issues a bright example. Hon. secretary, R. M. Powell, 72, Upper Chorlton Road, Whalley Range, Lancs.

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ULSTER A.C.

The Ulster A.C. has revived its ambitious *Ulster Motoring Review*, which was a feature of pre-war times. The December issue contained messages of congratulation on the Ulster Trophy races—one of 1946's highlights—from Earl Howe, S. C. H. Davis, F. J. Findon, Douglas Tubbs, R. Cowell, C. G. H. Dunham, F. R. Gerard, David Hampshire, T. C. Harrison, Leslie Johnson, R. Parnell, H. J. Ripley, R. J. Weir and Barry Woodall. The ladies' page is continued and fashion notes in respect of a recent party constitute a novel touch. An Austin Seven driver who got bogged in a recent trial was promptly created Baron of Ballymena and Count of Carrickfergus Common, in whose mud he sank. There is lots of fun to leven the serious side. The Ulster Trophy fixture is due this year on August 9th, and the winner of the aforementioned trial was N. S. Robb (Wolseley), with C. S. Porter (H.R.G.) a close second. Twenty-four new members were elected recently. The secretary's address is 46, Sydenham Avenue, Belfast.

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MORE FROM DOWN UNDER

Following close on the August *Vintage Car* came the September issue, with news of more virility on the part of the V.S.C.C. of Australia. This time Shepherd's "Vintage Type" is the Anzani-engined Frazer-Nash. [But no mention is made of the Powerplus 4-cylinder engine in the early history which opens this article, while there were actually *two* saloon Frazer-Nash cars, not one, R.G.S.—ED.] Certainly the Shepherd drawing makes up for those omissions. The Victorian Division hill-climb saw Dean's Lancia "Lambda" win on handicap, 46.9 sec.—6s., and Duckett's Anzani-Bugatti accomplishing fastest vintage time from scratch in 42.2 sec. Fastest time of the day was made by Davey-Milne's Special, in 41.4 sec. Amongst those present was 79-year-old uncle Duckett with his immaculate 1912 Talbot Duckett now leads with 22 points for the

Aggregate Award, from Camm (17) and Dean (14). The Austerity Trial embraced several features which our organisers might care to copy. At one control a check for correct oil-level and water level was made (no marks lost—could British trials drivers claim that attention to their engine's essentials?), then came a timed plug-change, while later cars were timed, unknown, over a quarter-mile and drivers later asked to judge their speed. There was also a blindfold reversing test and, finally, drivers had to give the engine number, r.h. turning circle (which was thereupon checked), and length of their cars, and marks were lost for unequal tyre pressures. The winner, it would seem vastly to his credit, was Tillett's "14/40" Vauxhall, from Donaldson's Austin Seven. The guest of honour was Mr. Mortlock, whose Packard was driven by an ex-Rolls-Royce test driver and escorted ahead and astern by Rolls-Royce Twenties. Mr. Mortlock explained that the Packard is mere transport and that he has a 1911 "Alpine Eagle" Rolls-Royce at home.

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CARDS

The Proprietor and Editor of MOTOR SPORT wish to thank all those readers who sent Christmas and New Year Greetings. Amongst the large number of cards received must be mentioned Cecil Clutton's very fine photograph of the Itala at Shelsley Walsh, Peter Clark's Mercédès at Prescott, Penny and Rivers-Fletcher's H.R.G. at Brighton Speed Trials, Raymond Mays' drawing of his E.R.A., Ken Hutchison's wood-cut of his trials Allard, a G.P. Alta drawing from R. C. Rowland Motors, Ltd.; two Bugatti Club cards from Marcus Chambers and Norman A. Smith; and other cards from Rolls-Royce Ltd., the Healey Motor Co., Ltd., Stuart Wilton, Stanley Sedgwick, Dr. and Mrs. Edisbury, J. D. Aylward, the Southsea Motor Club, the "Scuderia Impecuniosa," Max Williamson, Donald Parker, Mr. and Mrs. F. J. Anning, C. Rae Griffin, John and Betty Bolster, J. E. Scott, Anthony, Theodora and Ambrose Heal, Ivor Adams, Edward Hyde, Mr. and Mrs. Whincop, Julian Fall, Norman Routledge, Pat and Mary Whittet, Ray Funnell, John Hugenholtz, the Southampton Car Club, Continental Cars, the Veteran Car Club of Great Britain, K. Bowers, the Bristol Aeroplane Co., Ltd., and T. P. Breen. Also one from the local milkman, which is just another thing about living in the country . . . We can assure senders that these cards made a fine display on the Editorial sideboard over the holiday and that we reciprocate with every good wish for 1947.

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EXHIBITION

Any publicity which can be given to motor-racing is worthwhile and our thanks are due, therefore, to W. M. Couper for staging an excellent show at his showrooms at St. Albans at Christmas. Ten spotlessly clean racing cars were set out in the premises of W. M. Couper, Ltd., in co-operation with the B.R.D.C. They comprised an o.h.c. Austin Seven (125), K. D. Evans' Alfa-Romeo (140), Abecassis' Alta (140), Dunham's outer-circuit Alvis (100-110), Rose's "Le Mans" Bentley (100-110), Monkhouse's Type 51 Bugatti (140), Whitehead's E.R.A. (130-135), the Gardner M.G. (207), Peter Clark's 1914 Mercédès (115) and the Wisdom Jaguar 100 (120-125). The numbers in parenthesis refer to the approximate maximum speeds, taken from the data cards adjacent to each car. A fine background of a pit-counter, photographs, Gordon Crosby paintings and Christmas decorations completed the show, which remained open during school holidays. A luncheon at the Noke Club was attended by 38 persons, Lord Howe and Lt.-Col. Gardner replying to Couper's opening speech. Amongst the guests were racing-drivers Abecassis, Connell, Evans, Freeman, Joyce, Monkhouse, Whitehead and Davis, while the Chief Constable of St. Albans City and Col. Young, Chief Constable of Hertfordshire, were amongst those present. A good effort!

FIXTURES FOR FEBRUARY

2nd.	Hagley & D.C.C. Trial, Worcestershire and Hereford area.
15th.	Riley M.C. (London) Trial.
16th.	Southsea M.C. President's Trophy Trial, Petersfield area. North Midland M.C. Trial. V.S.C.C. Trial, Bisley area.
22nd.	N.W. London M.C. Coventry Cup Trial, Hindhead area. Berkhamsted M.C. & C.C. Windwood Cup Trial, Chilterns. Yorkshire S.C.C. Semi-Sporting Trial, Shipley area.
Mar. 2nd.	Harrow C.C. Moss Trophy Trial, Chilterns. West of England M.C. Spring Trial, Tiverton area. Sheffield & Hallamshire M.C. Semi-Sporting Trial, Derby and Yorkshire.

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EASTBOURNE

Last year the Public Relations Officer of the Eastbourne Town Council shook us to the core by asking us how he could attract a motoring event to this well-known watering place. We feel that desires of this kind, experienced by public authorities, are to be encouraged with all the energy we can command. The matter is now in the hands of Anthony Heal and Harry Bowler of the V.S.C.C. We expect an interesting development a little later on and when the event is announced it should receive as much support as possible.

COVER PICTURE

"Gentleman in the lounge suit." Although he is driving a real racing car—to wit, a six-cylinder 1½-litre Maserati—Luigi Villoresi did not "dress the part" when he came over to Shelsley Walsh in 1937. This year, although we look forward to proper racing at Jersey, Ulster and possibly elsewhere, sprints will still be our mainstay. Is it too much to hope that some Continental drivers will support our International meetings? After all, our drivers went abroad quite frequently last season, in spite of many factors being very much against them.

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CORRECTION

In "Rumblings" last month we said that when Parnell's "Challenge" appeared at Prescott it had an Alta engine. At that time great secrecy was observed, a rug being thrown over the engine when the bonnet was removed for plug changing. So perhaps we may be excused this error, especially as the ringed-letter badge on the engine of this car, then known as "Challenger," was painted out. That engine was, in fact, an E.R.A.

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GENERAL NOTES

Autumn, which now seems so distant, saw us embarking on all-too-short Saturday afternoons in a suitably non-standard Austin Seven and a Riley "Gamecock" for the purpose of finding hazards for a Night Trial. On one occasion it was Silchester, where we gazed in awe at the Roman Wall and were distressed to find the Forum overgrown and unidentifiable. On another occasion we motored on the long-disused Basingstoke-Alton railway, including driving along on one of the platforms of a station that became defunct seventeen years ago, sheltered for a while in the remains of a derelict chapel beneath the shadow of one of the embankments of that forgotten line, and came to an abrupt halt while storming a muddy hill because the throttle-pedal came adrift, to the delight of the rider of a Velocette who was accompanying us. That entailed rigging a length of string to do duty in lieu of the broken control, and this thereafter appeared to be operated by either driver or passenger as convenient, to the horror of the occupant of the "tonneau." There was the discovery of a local ruin, King John's Castle, which could only be approached on foot, the place being inaccessible by car. The tow-path we used brought us to a place where a disused canal ran under a stream through pipes, the banks of both being at all but the same level, giving a water-cross-roads effect. There is the memory of a stirring climb up a hill which would make a useful sprint course, and the unexpected sight, from its summit, of a motor-towed glider soaring from a near-by field in the fast-fading light. It was all the greatest fun and we returned with much the same feeling of exhilaration that we understand is experienced by those who take off most of their clothes and kick a piece of inflated leather about.

Different cars have been presenting themselves for sampling, and that in

Continued on page 45

★ BOOK REVIEWS

"UNDERSTAND YOUR CAR," *by H. A. Hazell, A.M.I.M.I.* (*Sir Isaac Pitman and Sons, Ltd., price 5s.*)

A new edition of this little book has recently appeared, with many new illustrations. It is a useful work for the novice to study, but it tends to be written around Morris cars, rather than to generalise. On the other hand, we certainly hope that these cars do not employ 10 degrees of *forward* inclination of "the stub axle pin" in endeavouring to obtain castor-action, as the author states is done on cars in general in the chapter on "Steering and Braking"! There also seems to be confusion between stub axle inclination to attain centre-point contact and king-pin inclination to attain castor-action. Diagrams give some idea of what Ackerman steering is, but the text, although describing it as "the most interesting point," does not really explain how the steering-arm angles are calculated, only *why* different angles of turn are required at the road wheels. Drivers are advised to reduce speed in a gale, because "when the speed of the car is increased so the weight on the ground will be reduced"—surely *some* gale, or *some* car!

We think experienced engineers may find disagreement with the statements that the "action of the differential gear is simple," and that decarbonising and valve-grinding are more complicated with an o.h.v. than with a s.v. engine. Although a description of the almost-defunct "wet" clutch is included, hypoid and worm drives are dismissed as "more silent" than others, no mention of lower transmission lines being made. Moreover, the author describes, under "Suspension," a particular ½-elliptic leaf system in some detail and completely ignores independent suspension or any other layout. Likewise, torque-tube transmission might not exist, and in describing the final drive mention is made of "approx. the 5 to 1 reduction in top gear," with no explanation that this ratio varies appreciably between different cars. Odd driving hints have crept in and would seem out of place, particularly when we are told to allow the knee to lift when letting in the clutch and are cautioned to always reduce speed for cornering. Only one firing order is quoted for 4- and 6-cylinder engines. In his preface the author refers to visualizing how the touch of the foot on the accelerator causes the car to move away—in this he surely pre-supposes the Invicta "*Black Prince.*"

In this small 164-page book driving, maintenance and a description of the modern car are combined and it seems that the author has hurried too quickly through the mass of material at his command. As a rather casual introduction to the modern motor-car this book could represent 5s. well spent. Apparently this is the sort of thing many people require, for "Understand Your Car" is now in its third edition. Some changes have been made in this edition, we are glad to see, notably in the former vague statement that main *and* big-end bearings are "lubricated from a gallery in the crankcase," but we are surprised to find a T-head engine in the illustrations depicting the functioning of the Otto cycle.

"FORD AT WAR," *by Hilary St. George Saunders.*

It would be nice to forget war, but many exploits that contributed to victory remain to be told and make interesting, if morbid, reading. Fords have got the author of those excellent M. of I. R.A.F. publications, such as "The Battle of Britain," "Bomber Command," etc., to tell their story and an excellent job he makes of it in 93 pages. Military products are not the only ones dealt with—there is a most absorbing account of tractor development and production, from its inception in 1917. Blitz stories are there in vivid detail, and Ford enthusiasts will find the data about various types of vehicles of interest. An excellent feature, which lifts this publication right out of the common rut, are coloured illustrations and a map of the Dagenham area, beautifully painted by Helen McKie. This book does not appear to be obtainable through normal channels, but doubtless application to your local Ford dealer will produce a copy.

CLUB NEWS—Continued from page 44

itself is interesting. A Vauxhall Ten, driven down to Hampshire from London late one night, took us in cold, driving rain to the Gloucester Trial. We had all the excitement one hopes for on these occasions, getting hopelessly lost in the morning trying to find "Juniper." There was a hurried return to the start ere we got our bearings and saw something of the trial. A long cross-country drive down some very slippery lanes ended in our being told that Hedgcomb had been cut out and we must needs go post-haste to Nailsworth, in a part of the world which always gives rise to a desire to return at the earliest opportunity.

Next week-end it was an Austin Seven "Ruby" which took us to similar enjoyment in the Bristol area. Then there was a stately Sunbeam Sixteen saloon in which we rolled along local lanes in brilliant winter sunshine one morning, and a Trojan tourer which proclaimed its arrival in unmistakable manner one evening, later proving to be an easy starter, very roomy and comfortable, endowed with a fantastically effective emergency brake, and having quite an exhaust-note, withall. We even went up to town and back in an Austin Seven van, a solo Norton accompanying us on the return journey, and an excellent meal was taken at that pleasant port of call on the west side of the Thames adjacent to Staines Bridge, the "Sunnyside" restaurant. *That* outing finally ended with a short drive in a pre-war "1,100" H.R.G., and once again, during this brief acquaintanceship, we thought what a well-planned, practical all-round sports car it is, non-aerodynamic or not. By way of contrast, there was a rugged "14/40" Delage, very purposeful and open-air.

Then there was a run up to Warwick from London in an eminently satisfactory motor-car, in the form of a Type 49, 3.3-litre Bugatti saloon. Through town traffic it felt secure, taut and business-like, but its owner was displeased, saying all eight "pots" were not equally busy. A stop at a garage in Dunstable, after E.R.A. Ltd. had disdained to tackle the job, resulted in a severe shock for the garage-boy when, asked to "clean the plugs," he lifted the bonnet and saw all *sixteen* of them. After that we went along much better and the open bends at the latter end of the run were sheer joy.

Having seen all we wanted to see at Healey's, but missing our run in this wonderful car through a carburetter-flange breaking, we took our place behind the wheel of the Type 49. Astonishing, how one feels at home from the commencement in a vintage-type car—at least, we nearly always do. This particular Bugatti was said to steer badly because of incorrect castor action, but it seemed to go round corners in a most satisfactory manner. The gear-change, with patience, went through delightfully and the howl of third was distinctly stimulating, matched by real acceleration that few American saloons cared to counter; second gear served as a reminder that, if reasonably over-hauled, this was not a new car. The visibility and the sensible placing of the wheel, the traditional long advance and retard lever protruding from the right-hand side of the facia, the comfort and cosiness of the elegant body and the cunning anti-dazzle blinds on the screen, in a car well-braked and able to get along easily in excess of 70 m.p.h., combined to make us realise how very good new cars must be to compete against the better vintage jobs. And the Bugatti's owner, even then, was saying that he found the Healey very good indeed . . .

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REPORTS OF RECENT EVENTS—
Continued from page 29

the test was 20.8 sec. Competitors were blessed by fine weather and a moon, but retirements were frequent, including Richards (Triumph) with electrical failure, and Maton's Morris Eight which broke its crankcase. There were some refreshing features about this trial and although it provided a distinctly novel and amusing night's sport it was not by any means outside the realm of serious motoring competition. We hope this unique trial will become an annual fixture of the Hants and Berks M.C.

Results:

BEST PERFORMANCE OF THE NIGHT: E. Brandon (M.G.-T.C.), 65 marks lost—his navigator also receives an award.

FIRST-CLASS AWARDS: L. M. Ballamy (F.W.D. Citroen), 121 marks lost; R. Hellyer (Singer), 131 marks lost; T. Bellm (Ford Eight), 137 marks lost; P. Clark (Nordec-Ford, s/c.), 142 marks lost.

SECOND-CLASS AWARDS: Simpson (P.B.-M.G.), 147 marks lost; J. French (Austin Seven), 156 marks lost; Dr. Ewen (Delage), 161 marks lost, 19 sec. in test; W. Hill (Hispano-Suiza), 161 marks lost, 19.2 sec. in test.

Letters from Readers

Sir,

In order to vindicate my well-known and passionate love of accuracy in technical articles, I felt that I must write and point out two errors which appear in the printed version of my article describing the power unit of Mr. George Symond's Austin Seven "Grasshopper."

It may be that the rush to get your January issue out had occasioned these.

In the first place, the blower is obviously not driven from the dynamo spindle, but from a pulley mounted on the spindle carried in the special dynamo casing. This spindle carries a gear meshing with the camshaft gear and revolves at engine speed.

Secondly, the penultimate paragraph in my typescript is omitted, completely, from the printed version. This gives the ultimate paragraph, as printed, no referential context; it is therefore meaningless, and may be ignored.

I am, Yours, etc.,

Enfield, Middlesex. HAROLD BIGGS.

* * *

Sir,

I want to keep you in touch with the latest developments of the "500" Car Club movement.

On Monday, December 9th, there was a meeting at my house of the Technical Panel. Mr. Laurence Pomeroy came down from London to be present. Mr. Harding, Secretary of the Technical Panel, was there, as well as General Secretary John Siddall, R. D. Caesar, P. McCormic, A. H. G. Butler, R. Bickerton. Mr. Roland Cross, of Bath, came as consultant to the panel. The main objects of the meeting were the functions of the Technical Panel and the way in which the club magazine, "Iota," would be its mouthpiece. This magazine will have other functions as well, of course. It will be of some 40 pages and in format 8 by 6 in.

The Technical Panel will give guidance to such builders as require it, but it does not take responsibility that plans which it has approved or cars it has inspected will pass the R.A.C. scrutineer. Responsible representatives of the panel will be chosen in various areas to inspect cars built in their area.

Members of the Panel will provide a series of articles on various aspects of design and construction to appear monthly in the magazine "Iota." Mr. Pomeroy promised to give this a start.

The Panel will approach suitable firms on behalf of the Club and enquire about the availability of engines, gearboxes and other materials. This will avoid the said firms being inundated with enquiries from individuals. Individuals with parts of engines for disposal are asked to inform the Panel so that this and the above information may be published in tabular form each month.

On Friday, December 20th, four of us went to talk to the M.A.C. at Birmingham on "This '500' Business." We were John Siddall, Dick Caesar, Jack Harding and myself. It was a great success. Dick Caesar showed the C.A.P.A. film as proof that cheap racing is possible though, of course, "500" racing will be different in many respects. Mr. Caesar then traced the history of the "500" formula. How he had mooted the "cadet class," for stock Ford Ten or similar engines, at the M.E.C. meeting at Birmingham in October, 1943 (as previously put forward by Orlebar). How Neve had written in MOTOR SPORT in support of a 500-c.c. class. Neve is an old friend of mine, and when he came to Bristol in November, 1944, I brought him and Caesar together and a fruitful discussion ensued. Then the B.A.C. Motor Sport Club held its meeting and at that and the subsequent meeting, at which representatives from clubs all over the country were present, the formula was evolved. Mr. Harding outlined the reasons for the various items of the formula. I amplified his statement and told a little about the plans of the magazine, of which I am Assistant Editor.

Mr. Siddall introduced the speakers and generally directed our part of the show. He also gave the latest "gen." There were 82 cars building, 67 being expected by next spring. In the U.S.A. two clubs are being formed to our formula, in Australia three, in Belgium one and in Holland one. Possibly Italy may come in too. But the latter is not yet very certain; Lurani is interested, however.

After an interval there was a lively question time. At the end all our 50 entry forms went and many more left names, etc. The chairman of the meeting asked for a show of hands of those intending to build cars. Ten went up. It was a great success and we would like to thank the M.A.C. for their consideration and kindness and the warmth of their reception. Even before the meeting 14 cars were scheduled in this area.

One point of Dick Caesar's I would emphasise, namely, that not everyone should aspire to become champion of this class of racing. There is plenty of room for local "Village Green" racing as well.

I am, Yours, etc.,

JANE BREYER,

Bristol. Press rep. "500" Club.

* * *

Sir,

I, like Mr. R. C. Porter, was also very interested in the article by "Baladeur" on old de Dion's. I was therefore careful to check my petrol consumption on a recent run of 440 miles in my 1904 6-h.p. model. On this journey 21 gallons were used which works out at 21 miles per gallon over good average roads. It seems, therefore, that these cars have a fairly heavy petrol consumption compared with modern standards and I am frankly amazed at Mr. Porter getting 45–50 to the gallon on his 4½-h.p. car.

Incidentally, if any of your readers find difficulty in starting a veteran on "Pool" they will probably find that a few squibs of "Ronsonol" into the compression tap will give a sure start first swing. I carry an oil can full of "Ronsonol" on the de Dion and have no difficulty in starting in the coldest weather.

I am, Yours, etc.,

Birmingham, 20. BRIAN MORGAN.

[We have always been under the impression that early small cars were moderately heavy on petrol—things like 2-cyl. Renaults, with mechanical valves, surely averaged about 33 m.p.g. ?—ED.]

* * *

Sir,

Consideration has recently been given to the possibility of holding the first Frazer-Nash Owners' Dinner and Dance since the outbreak of war, which was always an outstanding event in the list of pre-war motoring functions. As things are still difficult in many ways, it would be very helpful if anyone interested would take the trouble to telephone or write to Mr. W. H. Aldington as to their possible requirements, so as to provide at least some idea of probable numbers.

We also hear that the Club (which was responsible for organising several successful pre-war events such as the Stanley Cup) will shortly be going on to an active footing.

I am, Yours, etc.,

for A.F.N. Limited.,

Isleworth. W. H. ALDINGTON.

* * *

Sir,

I feel I should write a short note to correct a slight error in your "Personality Parade" in the December issue of MOTOR SPORT. In mentioning the hotted-up engine in the latest "Seafire" you refer to the occasional opening up to full boost required to prevent "oiling-up plugs." This occasional opening up, which should be done for about 30 seconds every 15 minutes (especially when outside air temperatures are very low and charge temperatures therefore lower than normal) is not to clear the plugs of oil, but of lead deposit. When the two-stage Merlins were fitted with the Rolls-Bendix (sometimes called Stromberg) instead of S.U. carburetters, the former being injection carburetters, the lead fouling of plugs was first encountered. It was found that the lead content in the fuel was prone to come out of suspension before the induction trunk was reached, due generally to either low rate of flow (at high boost and low revs.), and a low-charge temperature. By the periodical opening up to full boost which was adopted (1) any small formation on the plugs was cleared, and (2) the lead out of suspension was picked up in the increased swirl caused by full boost (and, of course, peak revs.), and thus dealt with in reasonably small quantities.

Additional measures were, blanking off a section of the intercooler intake to increase charge temperature, and a wider plug gap setting (the latter, of course, tieing up with the maximum altitude to which the particular aircraft was to ascend). The problem was never completely overcome and, in fact, one Mosquito crew was forced to bale out shortly after D-Day when, having had to feather the port motor due to several cylinders being "out," the starboard, even though then running at +9 lb./sq. in. and 2,850 r.p.m. (max. revs. being 3,000), also started misbehaving and eventually also had to be feathered. They landed just a few yards on our side of the "area" having delayed baling out as long as they dared. (The lead merchants must have overproduced the previous week!)

I have no connection with Rolls-Royce, but would add that, other than this trouble on certain Merlin Marks due in no way to faulty engine design, probably only a small percentage of motor-racing enthusiasts realise that the latest Merlin engines (except for troubles from ancillaries) ran between their 300-hour overhaul periods just like an Austin Seven engine, with the great difference that at take-off boost their output per litre was so close to 77 b.h.p. as makes no difference, whilst climbing boost (used for half an hour each flight) was +12 lb./sq.in. giving about 62 b.h.p. per litre. Really *and* truly remarkable.

Yours, etc.,

Leatherhead, J. K. MASON.
Surrey.

* * *

Sir,

I greatly enjoyed the feature entitled "Sideslips," by "Baladeur," in the September issue, and was particularly interested as I am the owner of a 1902 Serpollet. Knowing how rare these cars are, I thought you might be interested in a picture of my Serpollet, which has recently been fully restored and is in excellent condition. It is a Gardner-Serpollet, Surrey (Victoria top) by Kellner et ses Fils, Model F., 1902.

I am, Yours, etc.,

D. CAMERON PECK.

Chicago.

* * *

Sir,

I was glad to note from Mr. Davenport's letter in your January issue that he is in favour of applying the system of nomenclature that was suggested by MOTOR SPORT some months ago. It seemed to me at the time a logical and tidy way, and when writing to Mr. Davenport recently I added the postscript which he quotes. If this question of nomenclature becomes general on the lines you suggested, the word "Special" would not apply to the home-brewed machine, made of mixed components. Actually, it is a word some of us would like to see eliminated, but its use in connection with competition cars, I believe, came from America. Originally, the addition of "Special" to the name of a make implied that the car was genuinely of that make, but that it need not be a listed or standard model. It would be interesting to have the Editor's opinion as to the practicability of using it only as originally intended.

Returning to Mr. Davenport's G.N. "Spider," the chassis, as has been stated, is standard 1920 with the addition of F.W.B. The first engine was a 2-valve-per-cylinder production model known as a 1922 O.H.C. "Vitesse" 1,100 c.c., 84 bore × 48 stroke. The chain-driving camshafts was at rear of cylinders. These engines had nice road manners as well as being fast. I believe it was one of these that the late Richard Bolster used.

The second engine fitted in "Spider" was one taken out of Captain Frazer-Nash's single-seater "Mowgli." This engine was built, one off, in the G.N. experimental shop in 1920–21, and at first was 1,100 c.c. It had 4-valve bronze heads with O.H. camshafts driven by a chain at the front. During the time it was in "Mowgli" the bore and stroke were increased to 89 × 120, making the capacity 1,500. Similar 4-valve heads were afterwards used on the bevel-driven O.H.C. "Akela" engine which ran in the early 200-mile races. Incidentally, "Mowgli," like "Kim," was the name of an individual car (not a type), whereas "Akela" was a type name for a number of engines.

I am naturally most interested in "Spider's" re-appearance, as it is now 25 years since Nash and I worked on these twins.

Best wishes to MOTOR SPORT; it is always completely interesting, not the least "Sideslips," which surely is worthy of some illustrations.

I am, Yours, etc.,

H. R. GODFREY.
H.R.G. Engineering Co., Ltd.
Tolworth.

[We certainly are *not* in love with the term "Special" and agree that our suggested system of nomenclature might replace it. We seem to recall that in the British Grand Prix of 1926 every car entered had to be termed a "Special," this term being tacked on to the maker's name to indicate a 1½-litre G.P. car as distinct from a sports car. Even this seems unnecessarily cumbersome and race regulations should surely be sufficient to show the nature of the competing cars. —ED.]

—*ANNOUNCEMENT*—

H.R.G. ENGINEERING Co. Ltd.

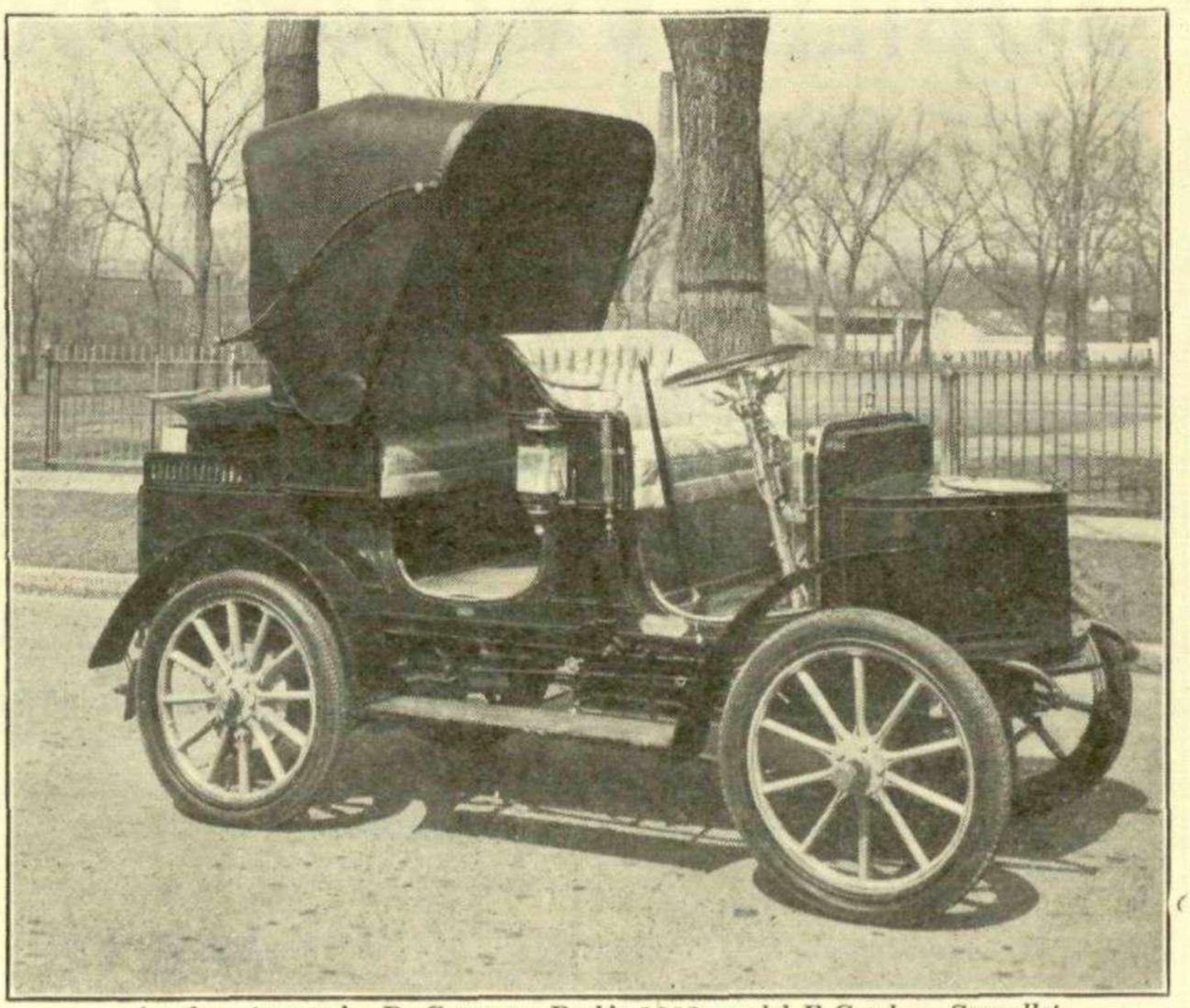
It is regretted that the prices of H.R.G. cars have had to be increased due to the continued increased cost of materials and labour.

The new prices become effective from January 2nd, 1947, as below:

	Retail Price	Purchase Tax	Total
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1,500-c.c. OPEN SPORTS	£755	£212 11 1	£967 11 1
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Sir,

"Baladeur" in his article on the rule of the road did not probe the subject deeply enough. The Pope in question only made a law to confirm what was the natural habit of right-handed people all over the world. Way back in the dim ages when two cave men met on the trail they naturally moved over to the left so that their right, or club-carrying, hand was nearest to the other bloke, who might possibly be unfriendly—if he had the girl friend in tow he thrust her to his left hand. When horses got into production the same thing applied, with the added reason that the sword scabbard was worn on the left side, so one had to mount from the left-hand side of the horse—hence the pavement or mounting blocks were on that side of the road. The mediæval tournament (see "Ivanhoe") is a perfect example of this. All decorations, feathers, and other gew-gaws were worn on the left-hand side to give free use to the right. I quite agree with your contributor about the right-handed circle in the desert, but the "Rule of the Road" only applies when meeting other traffic and I maintain that the British rule is the naturally correct one, and that the French Revolutionaries would have quickly reverted when attacked.

The French have, since the Revolution, made great efforts to teach the children to be ambidextrous without much success; perhaps they had to do this when they altered the rule of the road from its natural side.

I am, Yours, etc.,

Shepperton ERIC E. B. VEREKER.

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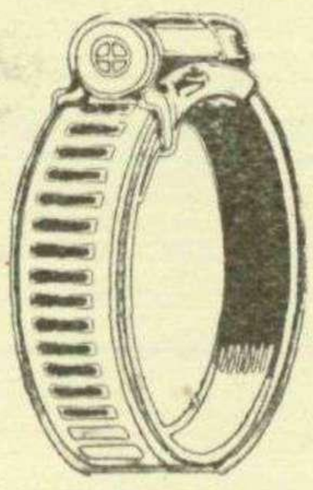
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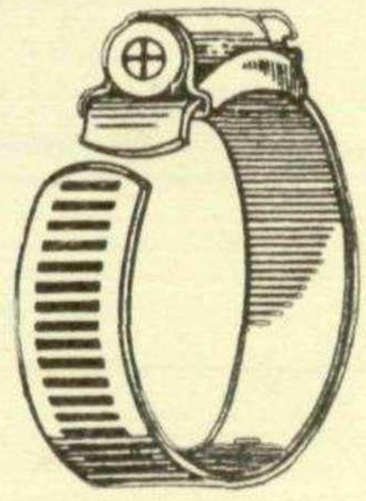
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GRAHAM C. DIX will dispose of his Sunbeam 17-h.p. " Weymann " saloon. Good condition. £180. Dix, 85, Howard Road, Birmingham 14.

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THE ex-McCormick supercharged " Nurburg " Frazer-Nash. Completely rebuilt 4,000 miles *ago. Terrific performance and road-holding.* Hydraulic brakes. All tyres good. £460, or offers. Newton, Farnborough Grange, Hawley Lane, Farnborough, Hants.

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LARGE quantity MOTOR SPORT, *Motor, Autocar,* etc., for period 1930-1944. Willing to dispose one lot or individually. Enquiries invited. Needell, 3, Chaddesley Wood Road, Sandbanks, Bournemouth.

UNUSED B.T.H. coil-replacement magneto, 4-cylinder, type " J4," anti-clockwise, viewed from distributor end. Would exchange for opposite rotation, " M "-type, " M.6 " engine, complete. Box No. 13, MOTOR SPORT, 15, City Road, E.C.1.

ASTON-MARTIN, 1932/3, 1½-litre 4-seater " International." Mechanical condition 100%, 5 good tyres. New hood and sidescreens. Bodywork and paint good. 26 m.p.g. Fast and reliable. £450. Farey, 35, Marlboro' Road, Blackpool, Lancs.

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FOR SALE—*continued*

A.C. 2-LITRE *engine, new Scintilla,* etc., rebuilt, perfect, £50. Austin Seven 4-speed gearbox, £2. Four 19-in. Rudge wheels, £2. French, 1, Preston Gardens, Ilford. Valentine 6678.

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MORGAN super-sports 1934, 1,000-c.c. " W.C." J.A.P., unlicensed 1941-45. Sound throughout. £150. D. V. Huntley, 42, Whitton Road, Fairfield, Stockton-on-Tees, Co. Durham.

RILEY Nine engine, £10 ; gearbox, £4. Alvis " 12/50 " rebored block and pistons, £8. New flywheel, £2 5s. Many other sports spares. P. A. Taneborne, 9, Waldegrave Road, Teddington.

BENTLEY 6½-litre. Fitted new body, hood and sidescreens. Engine completely reconditioned, not yet run in. Six nearly-new tyres. £650. P. J. Stanbury, Cambridge House, St. George's Road, Cheltenham.

1932 M.G. " Magna " 1½-litre sports car. £150 or near offer. Scott, 31, Bulver Road, Leytonstone, E.11.

LANCIA " Lambda " 1929 fabric saloon. Has been regularly used during Nov. and Dec. Owner desires quick sale to Lancia enthusiast. £160. Box No. 14, MOTOR SPORT, 15, City Road, E.C.1.

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750 C.C. Austin "Golford-Special." Built Aug. 1946. Brand new throughout, including tyres. 77 m.p.h.—52 m.p.g. guaranteed. Equipped lighting, hood, starter, etc. Mileage 1,175 to date, car never raced. Half-made blower included. Genuine reason for sale. £220. Slater, Golford Auto Service, Cranbrook, Kent.

RILEY Nine spring-steering wheel, £3 10s. Marshall "85," blows 12 lbs. on 1,100-c.c. engine, as new, £30. Two 650 by 16 Dunlop racing tyres, tubes O.K. for racing, £18. Two 650 by 16 wheels, Rudge "42" hub, £4 10s. each. Four very light "42" hub caps with special spanners, £3 10s. 1931 cylinder block and sump, £5 10s. One cylinder head complete with valves, etc., £6. Two side-curtains, "Imp," 25s. B.T.H. magneto, just overhauled by B.T.H. for racing, £8. To Francis Beart, Thames Cottage, Thames Street, Walton-on-Thames, Surrey.

"K.3" "MAGNETTE" or any 1,100-c.c Zoller S.R blower with twin S.U.s and all attachments for "K.3," 22 lbs. boost, perfect order. £65, near offers. Francis Beart, Thames Cottage, Thames Street, Walton-on-Thames, Surrey.

WE are now in a position to tune and prepare a limited number of Norton engines for 500-c.c. class cars. F. L. Beart, Thames Cottage, Thames Street, Walton-on-Thames, Surrey.

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1934 EX-ARMY Austin Seven 2-seater. Real trials job. Nearest £100 cash. Large selection "Seven" spares, write requirements. Austin Seven Service, Kirby Wiske, Thirsk, York.

REBORED Austin Seven engine with gearbox and all components, £12 10s. "J2"-type body for Austin with rear tank and sub-frame, £7 10s. Two new special 16 by 5.25 Austin 3-stud wheels, £6 pair. One 17 by 4.50 wheel, 30s. Mudguards, c/w and P., instruments, etc. Trevor Gillard, Westbury Road, London, E.17.

BARRY WOODALL has for disposal his Shelsley Frazer-Nash, due only to the purchase of the Delage. This car, with its famous record, prepared by Robin Jackson for Miss Margaret Allen, unofficial ladies' record for Brooklands at 130 m.p.h. Third fastest time at Shelsley Walsh at 40.36. Ladies' record at Prescott in 1939. The engine has been completely stripped, new block fitted, new rings, etc. Twin-rears, 10 tyres. Many other spares. Cliffeside, Kinver, Staffs.

FORD V8 chassis and engine, complete with starter, dynamo and four good tyres. Suitable for trials special. £90. Lanson, 24, Prince Henry Road, Otley, Yorks.

FOR SALE—*continued*

BURGESS silencer, inlet and outlet 2 5/16 in., £1. "Brescia" Bugatti long chassis and prop.-shaft, £6. Marelli magneto, type MP4 and similar, for spares, £6. Austin Seven radiator, £1. Set chrome vanadium Whitworth spanners, 25s. Austin Seven speedometer, 60 m.p.h., 10s. Combined oil-pressure, ammeter and fuel content gauge, 10s. Marchal headlamp, needs glass and bulbs, 10s. To Knight, The Orchard, Ruislip Road, West End, Greenford, Middlesex.

BENTLEY engine, "Red Label," £35. Several superchargers from £15. "Brooklands" Riley body, £15. Four aeroplane bucket seats, ideal for "specials," £1 each. Amilcar longtail body, stripped, £15. Salmson 9.5-h.p. engine, £10. Wolseley straight-8 engine, £8. Various spares for "Hornet." Salmson. S.A.E. please, viewed London. BM/ELKG, London, W.C.1.

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TWO new retreaded tyres, 5.50 by 18, with good secondhand tubes, £3 15s. each. One recut 4.50 by 18 Dunlop "Fort" cover, £2 10s. Powerplus supercharger, suitable 1½-litre, 42-mm. induction port, 59 by 71-mm. discharge port, £15. Bugatti type 55 new plated axle beam, £30. Bentley 3-litre rear axle, in pieces, £5. The Phoenix Green Garage, Hartley Wintney, Hants. 'Phone, Hartley Wintney 133.

BENTLEY 3-litre "Red Label," 1927-8 short chassis, excellent condition, £450 or offer. Spurr, Caledonian Road, Savile Town, Dewsbury, Yorks.

FOR SALE—*continued*

SET of M.G. racing shock absorbers, fit most types. Were used one event late 1939, otherwise brand new. £15 15s. Box No. 21, MOTOR SPORT, 15, City Road, E.C.1.

1939 MORGAN "F.4" 3-wheeler, £275. 1938 Ford Eight saloon, £335. Both cars perfect. Exchange vintage or open type. Good, "Topley," North Street, Winkfield, Berks.

H.E. "14/50" (1927), originally the property of well-known family, and only in use for seven years (carefully stored). Coil ignition, hide-leather upholstery; knock-on type Rudge wheels (two spares); good real-rubber tyres; self-centring steering; hand-controlled spotlight and other original extras. Taxed. £120 cash. Lee, 2, River Court, Taplow, Bucks.

FRASER-NASH G.N. spring chassis, 4-speed, Rudge hubs; central steering, spare bevel box, rear axle, clutch, etc., no wheels. £25. Wanted—"Ulster" Austin body, any condition. Write 105, Eaton Terrace Mews, S.W.1, or call Sunday mornings.

1930 "12/50" Alvis tourer, two good tyres, good hood, price on application. H. Birkett, 3, Pondtail Road, Fleet, Hants. Tel. 588.

M.G. "J.2," 1934. Fitted with showroom chassis, complete engine overhaul, steering, brakes, etc. £325. Further particulars, s.a.e., Derrick, 22, Springfield Road, London, N.11.

RILEY Nine "Kestrel" saloon (special). Taxed, rebored; £100 recently spent; good battery and tyres. £295. Barn Cottage, Hayes Lane, Kenley. 'Phone, Uplands 8937.

SET of fixed jacks, suit Riley or similar, £5. "J.2" inlet manifold, £1. Riley front axle, polished, £5. Scintilla "Vertex," £10. Rootes-type supercharger, suit 1½-litre, £20. Wiltshire Cottage, Hartley Wintney, Hants.

VINTAGE enthusiasts!! Look—Vols. 1, 2, 3, "The Automobile," 1904-5, based on Lavergne's "L'Automobile Sur Route." Over 800 illus.; working drawings; speed event results, tables, etc. New condition. For full particulars or offers appreciated, write Smithers, 261, Humberstone Road, Leicester.

1934 1½-LITRE Riley, open 2/4-seater, sound condition throughout, engineer's inspection welcome. Taxed. Nearest £285. Davis, Mount Pleasant, Repton, Derby. 'Phone, Repton 232.

ONE "12/50" Alvis stone guard; one pair of Rotax 12-in. chrome headlamps complete with stone guards; one 1936 "SS.2" radiator. D. S. Mallalieu, 63, Norfolk Avenue, Denton, near Manchester.

LAGONDA twin-camshaft 2-litre engine, No. D6928/357, complete with clutch, less magneto and carb. Very good condition internally, requires re-sleeving. £25 10s. R. & E. Arnett, Ltd., 51, Cleveland Street, Doncaster.

LANCIA 8th series "Lambda" Weymann saloon. Recently extensively overhauled, the work including a complete engine overhaul, external parts chromed, body largely recovered, all dash instruments reconditioned, new Exide battery. This is now a fine example of a grand old car, owner is desolated to part, but embarrassed, so offers the apple of his eye at £200. Beavis, Brewer's Cap, Brewhouse Hill, Wheathampstead, Herts.

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J.A.P. 994-C.C. o.h.v. air-cooled racing engine, ex-Henry Laird. 55-b.h.p. at 5,000 r.p.m. Only used five times since complete overhaul, and in perfect condition. Complete with carb., magneto and exhaust pipes. £50. Wilkes, 12, Coniston Road, Earlsdon, Coventry.

INSTRUCTION books.—One required for 1936 Riley Twelve. Will exchange for 4½-litre Bentley book. McCulloch, Anworth Hotel, Gatehouse-of-Fleet, Kirkcudbrightshire, Scotland.

1930 LAGONDA, 2-litre open speed model. Overhauled Lagonda—May. New hood, batteries. Lindley, Murray Road, Northwood, Middlesex.

1939 FIAT "500." Engine just overhauled (liners fitted). Recently resprayed maroon. Good tyres. No dealers. 7, Forest Road, Dorridge, Birmingham.

RILEY Nine engine, gearbox and complete dynamo (in pieces). Any reasonable offer. Fretwell, Barn Cottage, Kenley, Surrey. Tel. Uplands 8957.

1926 3-LITRE "Blue Label" Bentley. Chassis No. 1474, engine No. 1469. Gurney-Nutting all-weather tourer complete to original specification. (Ex-property of elderly lady.) Very well shod. Carefully used. £250 to a good home. Grice, Silecroft, Millow, Cumberland.

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VINTAGE fans ! ! 1929 349-c.c. twin-port A.J.S. motor-cycle. Recently overhauled. Good tyres ; speedo ; all electrical equipment. Spare mag-dyno, cylinder. £50 or near offer. Evans, 45, Rosemary Avenue, West Molesey, Surrey.

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LANCIA, late 8th series, "Lambda," 17-h.p. "4/5" drophead coupé. Not pretty, but exceedingly comfortable. Whole car in excellent tight condition, has Bosch equipment throughout, including headlamps ; good oil pressure and consumption, six new tyres, taxed quarter. £375. Mirza, c/o Northey Compressors, Ltd., 487, Ashley Road, Parkstone (near Bournemouth). Parkstone 1500.

M.G. "T" rear axle complete with half shafts, brake gear, less differential, £5. Front axle complete with brakes and hubs, beam bent, £2. Rear springs and trunnions, £3. Two pairs Luvax shockers, 15s. per pair. Wanted—"J" or "P" windscreen complete or frame only. Box No. 23, MOTOR SPORT, 15, City Road, E.C.1.

ASTON-MARTIN spares, including "Le Mans" engine and gearbox complete with all accessories, bevel-type rear axle, numerous "International" spares. State requirements. Gath, "Woodcroft," Brandon, near Coventry. 'Phone, Wolston 285.

1930 RILEY Nine tourer, reliable running order, sound metal body, sidescreens, £95. King, 50, St. Andrew's Road, Southsea.

FLOYD CLYMER'S superb new-production, "Indianapolis 500-Mile Race History," technical details and race descriptions, profusely illustrated, 25s. cloth bound, 18s. paper covered. Historical "Motor Scrap Books," Nos. 1, 2 and 3, 8s. each. Prices include postage. W. H. Phillips, 22, Havering Drive, Romford, Essex.

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ENTHUSIAST, owing to lack of spare time to complete, offers for sale.—"Special" chassis, ¼-elliptic springs, Austin rear axle, Amilcar front axle and steering, rebuilt Rudge wheels, two new tyres, suitable for 500-c.c. or 750-c.c. "Special" ; also 1931 Austin Seven engine and gearbox, 1938 "E.S.2" Norton engine, 1931 model "18" Norton engine. Amal racing carburetter. £95 the lot, or sell separately. Box No. 24, MOTOR SPORT, 15, City Road, E.C.1.

RILEY Nine "Special" 6.75 : 1 crown wheel and pinion, fits standard axle ; standard differential pinions and pinion bearings, all perfect. Also spring steering wheel and 1⅛ S.U. Worters, New Barn, Longfield, Kent.

"SPECIAL" builders ! 500-c.c. open push-rod J.A.P. racing engine, brand new and unused, complete with twin-float Amal dope carburetter, two spare pistons, four rockers. £30. 428, High Road, Leyton, London, E.10.

RILEY Nine, special duralumin 4-seater body, engine overhauled 300 miles since, brakes relined, new cables. Needs carbs., adjusting and detail finishing. Offers or exchange any small car. Harrison, 21, Tamworth Road, Copnor, Portsmouth.

RILEY Nine "Lincock" coupé, 1935, bodywork excellent, colour black. Overhauled at cost of £100 (bills shown), tyres and batteries good. Exchange for "T"-type M.G. or sell, £385 or offer. Apply Dr. Musson, Little Addington House, near Kettering. 'Phone, Irthlingborough 50.

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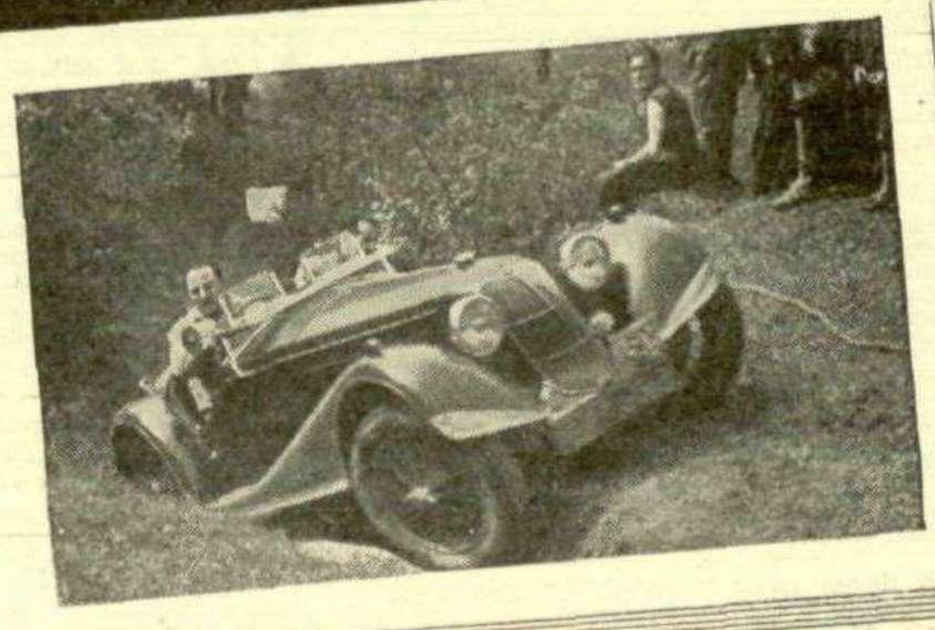
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FOR SALE—*continued*

BENTLEY short 3-litre chassis, 4½-litre engine, special camshaft, "Speed Six" axles and brake drums, 4-seater, new hood; terrific performance; good condition. £425. Box No. 25, MOTOR SPORT, 15, City Road, E.C.1.

H.R.G. GEARBOX, brand new. Wanted urgently—bell-housing for Riley "Kestrel" "14-6" with Preselecta box, also cylinder-head gasket for "International" Aston-Martin, G.S.A. G. N. Richardson, The Moors, Hartlebury, Worcestershire.

1935 LAGONDA "Rapier" 10-h.p., 4-seater sports tourer, new hood and tonneau cover, good tyres, Philco radio, taxed. £450. Box No. 26, MOTOR SPORT, 15, City Road, E.C.1.

OWING to brewing of another "special" I am willing to dispose of my Austin 750-c.c. "special" sports to an enthusiast. Reliable, fast, really sticks on the road; four new tyres; used on trials and Dancers End. £110. Stiff, 57, Scarle Road, Wembley, Middlesex. Wembley 2873.

BRAND new U.S.A. edition of "Motor Racing with Mercédes Benz," also complete 1945 MOTOR SPORTS and eight copies 1946. Exchange for "Ten Years of Motors and Motor Racing," by Jarrott, "Motoraces," by Monkhouse, "Grand Prix," by Lyndon. J. Evans, 39, Childwall Mount, Childwall, Liverpool, 16.

HORIZONTAL S.U. carburetters, single 1⅛-in., £2 10s.; twin 1¼-in., £6; twin 1⅜ in. £7. All good condition. 8, Aldersmead Road, Beckenham, Kent.

3-IN. lathe, 20 in. between centres, B.G., S.C., vertical milling and spherical turning attachments, with countershaft, 3 and 4-jaw chucks, and ½-h.p. A.C. motor, £30. 1933 "Silver Eagle" Alvis back axle, 5.1 : 1, very good condition, £8. Butterworth, 7, Grove Gardens, Frimley. Camberley 1092.

M.G., "J.2" 1934, with showroom chassis, complete overhaul engine, steering, brakes, etc. For further particulars, s.a.e. £325. Derrick, 22, Springfield Road, N.11.

1936 AUSTIN "Nippy" engine complete with carburetter and manifold (dismantled), also transmission shaft and differential 1938 Austin Seven. Offers to Dennis, 15, Vandyke Cross, Eltham, S.E.9.

WANTED

PAIR good quality headlamps, about 7-in. Pair horizontal carburetters, 2-in. bore. 8, Aldersmead Road, Beckenham, Kent.

BALANCED crankshaft for "30/98," also front axle for Delage "D.8." Evans, 15, Selkirk Road, Curzon Park, Chester.

SPORTS CARS. T. & T. interested in purchase of good sports cars. Thomson & Taylor (Brooklands), Ltd., Portsmouth Road, Cobham, Surrey.

SPORTS car urgently wanted, condition, age, distance and price unimportant. Box No. 9, MOTOR SPORT, 15, City Road, E.C.1.

ENTHUSIAST, expecting demobilisation February, seeks any right-type fast chariot. Appearance unimportant. £40 and 10 h.p. approx. limits. Please help. *Box No. 15, MOTOR SPORT, 15, City Road, E.C.1.*

WANTED, 1 pair Lucas "P.100" or similar, 1 pair 12v. horns, one 5-in. rev. counter, one 5-in. speedometer. J. Foster, North Cave, Brough, E. Yorks.

WANTED, a 6-cylinder Delco-Remy type 656-G.S., serial 9.27, distributor cap and rotor arm, or complete distributor. One 12v. sports coil. D. S. Mallalieu, 63, Norfolk Avenue, Denton, near Manchester.

WANTED for "J2" M.G.—engine and gearbox, front hubs, brake assemblies, four road wheels and hub caps, track rod. G. Monk, 74, Woodlands, North Harrow, Middlesex.

WANTED urgently, A.C. 1937 instruction book, good price paid. Please help. Write R. Morley, 101, Radley Road, Abingdon, Berks.

AUSTIN Seven trials "special," "Brooklands" or "Speedy" chassis preferred, complete or otherwise. Also any spares. "Brooklands" or "Ricardo" head, "Nippy" or "Ulster" inlet and exhaust manifolds. Lister, Winterow, Ripponden, Yorkshire.

WANTED—*continued*

WANTED, M.G. "J2" or "P"-type body, windscreen and steering wheel. Box No. 16, MOTOR SPORT, 15, City Road, E.C.1.

ENTHUSIAST requires 2-litre Lagonda or similar. Good price offered. Stewart, 39, Sheen Lane, Mortlake.

"M"-TYPE M.G. or G.N. chassis wanted urgently. Preferably with axles, steering, transmission, etc. Condition or distance immaterial. Tawn, Greenlands, Chertsey Lane, Staines, Middlesex.

PAIR "J2" front wings with or without stays, also "PB" solid copper head gaskets. Hursley Garage, Whitchurch, Bristol.

12-H.P. Sunbeam "Dawn" engine wanted, in *any condition.* Particulars and price to Ingham, Hinchliffe Arms, Cragg Vale, Mytholmroyd, Yorks.

FOLD-FLAT windscreen suitable for "J"-type M.G., width 36 in. approx. Also "J" or "P"-type M.G. for spares. Box No. 17, MOTOR SPORT, 15, City Road, E.C.1.

B.M.W. "328" instruction book required urgently (or nearest similar type). Twitten, Orchard, Nutbourne Common, Pulborough, Sussex.

ASTON-MARTIN Mk.2, long chassis, detailed instruction manual or relevant printed matter. Johnson, 63, Warminster Road, Bath.

IMPECUNIOUS young enthusiast wants sports car or three-wheeler. Must be sound. Age immaterial. Palmer, 22, Westbourne Avenue, Birmingham 3. STE 2644.

FOUR Austin Seven wheels, 4.00 by 17 in., "Ulster" camshaft and bearings, exhaust and induction system. Taylor, Red Shutters, Alcester, Warwickshire.

IMPECUNIOUS young enthusiast requires Morgan three-wheeler or sports car. Condition immaterial. Send full particulars to Box No. 18, MOTOR SPORT, 15, City Road, E.C.1.

"BROOKLANDS" Riley chassis in good condition, less engine, but with front and back axles, springs, steering and wheels. Complete car considered. Reply with details and price to Box No. 19, MOTOR SPORT, 15, City Road, E.C.1.

RILEY "Brooklands" or "Gamecock" remote gear control or complete close-ratio box; four-branch exhaust manifold; bronze racing oil pump; six-stud 4.75 by 18 wheels. Also any other racing spares. Stribling, Rosebud Cottage, Stakes Hill Road, Waterlooville, Hants.

500-C.C. *racing engine, Norton, Triumph Twin,* or J.A.P.; also close-ratio "Brooklands" or "Gamecock" Riley gearbox. Gillard, Westbury Road, London, E.17.

URGENTLY required—Engine or block for 3-litre twin o.h.c. Sunbeam. Write Barling, 48, Oxford Road, Moseley, Birmingham.

TWO or four-seater open sports body, vintage Lagonda, Bentley V.D.P. or similar. Harvey, The Limes, Hollingbourne, Kent.

TWO or four-seater body for M.G. "J. P" or "L"-type. For sale, front axle, Bluemels steering wheel, pair C.P. aero screens, luggage carrier, all off "T"-type M.G. 'Phone Streatham 0757, or Box No. 22, MOTOR SPORT, 15, City Road, E.C.1.

SCINTILLA "Vertex" 4-cylinder clockwise. State price, etc., to Sherwood & Morris, Cartwright Street, Wolverhampton. 'Phone 21000.

1½-2-*LITRE sports engine and gearbox, pair of* "P.100s." Holland, 61, Derby Lane, Derby.

CLUTCH stop complete for 1932/4 Alvis "Speed 20" or "Silver Eagle." High price paid, any condition. Barnett, 7, Howitt Close, Hampstead, N.W.3.

URGENTLY required.—Front axle for 1934 Austin 2-seater "Nippy." N. Wiley, 68, Oxbarn Avenue, Wolverhampton, Staffs.

"SPECIAL" for hill-climbs, etc., also vintage car. Can view anywhere. Write David, 69, Goldhurst Terrace, N.W.6.

WANTED—*continued*

R.A.F. ENTHUSIAST offers good home and up to £250 for 1934 Riley Nine "Kestrel" (first choice), Citroen Twelve, f.w.d., or any reputable 4-seater sports car up to 1½ litre. Excellent mechanical condition essential. Saloon or cabriolet preferred. Private offers to Higginsbottom, Dargwen, Kings Road, Lancing, Sussex.

LANCIA "Augusta" or "Aprilia" engine. Scintilla "Vertex" 4-cylinder, clockwise. Smart, Whiteley Green, Macclesfield.

2-IN. bore vertical S.U. carb., with single or twin-float chambers. Also pre-selector gearbox, suit M.G. "Magnette" or Riley Nine. Lurae, The Smithy, Seisdon, near Wolverhampton.



SMALL sports car. Anything in reasonably good condition. Please write BM/GMJY, London, W.C.1.

REAR tank, ex-Alvis "12/60," "Firefly" or "Firebird," also radiator cap. Any Alvis "12/50" spares, particularly engine assembly type "S.D." or big-port "12/60." "Sunnydale," Victoria Road, Sutton Coldfield. SUT 2527.

URGENTLY wanted.—Bosch bulb-holder to fit 1¾-in. reflector aperture. Riddell, Bryn, Maelgwygn, Cwlach Road, Llandudno.

WANTED—Centric type "125" supercharger or similar. "Ulster" Austin Seven camshaft and one-gallon sump. Other "Ulster" spares considered. 140, Maybank Avenue, Wembley, Middlesex.

FRAZER-NASH B.M.W. spares (of any model), or chassis or wrecked car, for enthusiast rebuilding. Particulars and price to Box No. 27, *MOTOR SPORT, 15, City Road, E.C.1.*

WANTED.—Cylinder block, induction pipe and water pump for modified "Brescia" Bugatti, or complete engine. A. J. Tutt, 8, Chadwell, Ware, Herts.

WANTED.—Dynamo pinion for 1,604-c.c. "Petit Sport" Amilcar. David Clarke, White Cottage Bishopton Road, Stockton-on-Tees.

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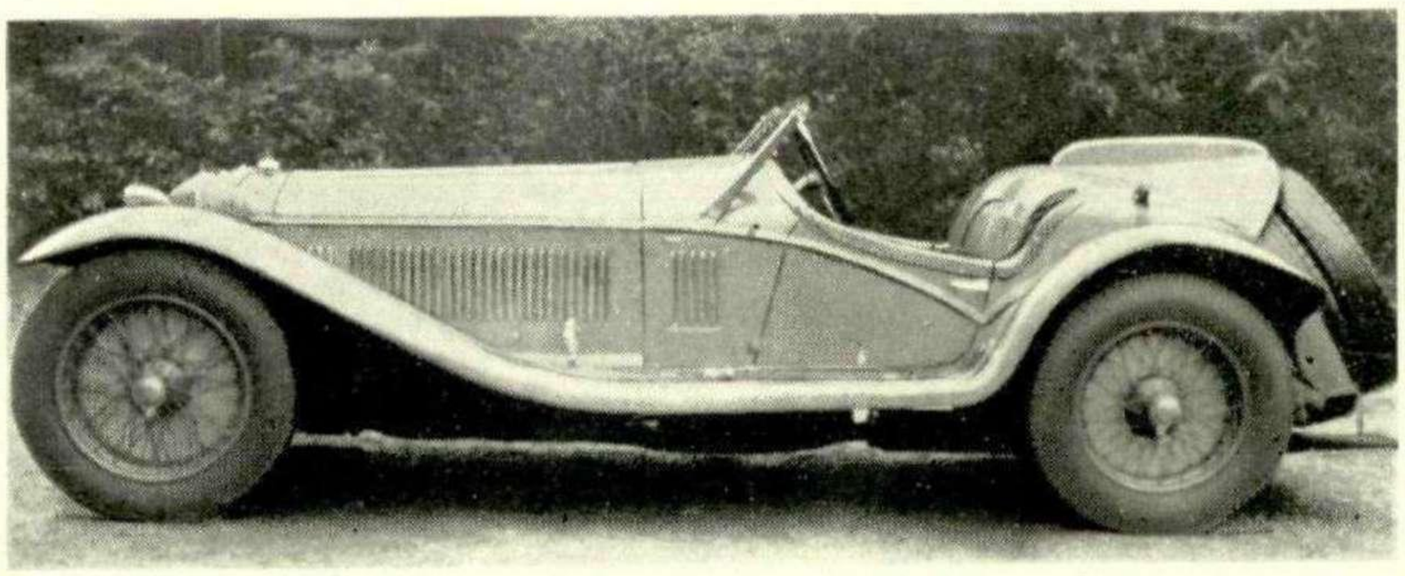
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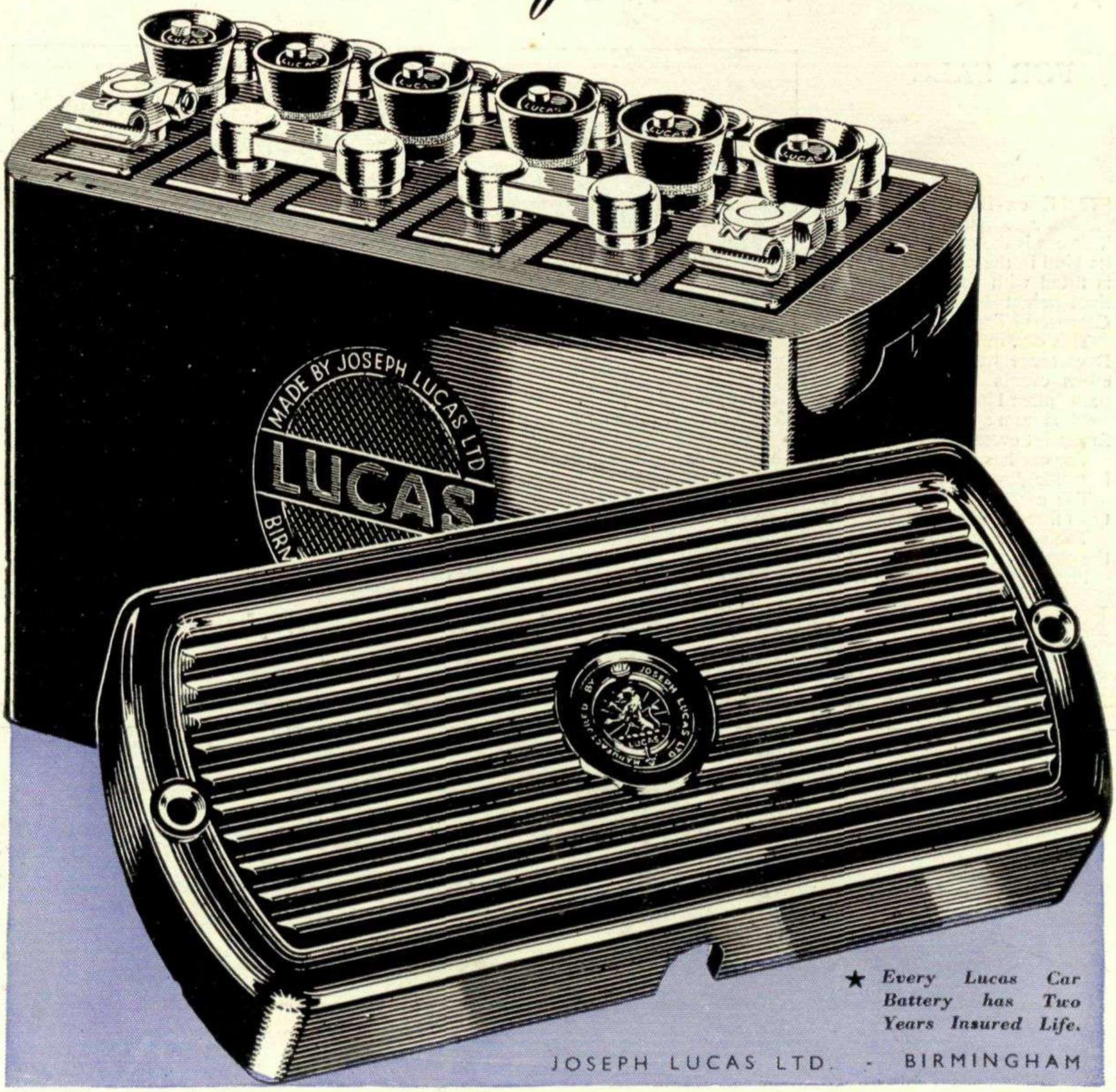
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Published by The Teesdale Publishing Co., Ltd., 15-17, City Road, London, E.C.1, and printed by Tee & Whiten and J. Mead Ltd., 15, 17 & 21, City Road, London, E.C.1. Trade Agents: Horace Marshall & Son, Ltd., Temple House, Tallis Street, London, E.C.4. Agents for Australasia: Gordon & Gotch (Australasia), Ltd.