

MOTOR SPORT

INCORPORATING SPEED AND THE BROOKLANDS GAZETTE

EDITORIAL AND ADVERTISEMENT OFFICES

15-17, CITY ROAD, LONDON, E.C.1

Telephone : MONarch 8944

PUBLICATION DATE - - - FIRST OF THE MONTH
SUBSCRIPTION RATE - - - 18/- PER ANN. POST PAID

MATTERS OF MOMENT

THE 1950 INTERNATIONAL CALENDAR

The *Calendrier* for next season has been passed by the Federation International de l'Automobile after a special meeting in Paris, and issued for all those interested to heed and digest.

Conscious of the clashing of fixtures and general congestion which characterised the 1949 list, the F.I.A. asked that national bodies would cut down their demands for international fixtures to an absolute minimum. This so reasonable request was honoured by Stanley Barnes on behalf of the R.A.C. after he had come to an agreement with the S.M.M. & T. that events that formerly had international status will continue to receive trade support in 1950 even though changed to national fixtures. After this piece of praiseworthy diplomatic negotiation, the R.A.C. asked for only seven dates in the F.I.A. *Calendrier*—the G.P. d'Europe, Jersey races, Ulster Trophy, Isle of Man races, B.R.D.C. Silverstone Meeting, the Tourist Trophy, and the Easter B.A.R.C. Meeting. However, France required 27 and Italy 22 fixtures, and the grand total rose to 99 dates.

Under the circumstances it is a question not so much of why unfortunate clashes or "closenesses" occur, but of praise that the F.I.A. has managed another unwieldy list so well. True, Le Mans follows the Empire Trophy meeting of the preceding Thursday and those British drivers competing in the Belgian Grand Prix must be in Douglas for practice for the B.R.D.C. races a mere three days later. Then Albi closely follows Jersey, and Formula II races are jumbled mightily. But on the whole it could be worse, and we gather than in 1951 severe slashing of unnecessary dates will be undertaken.

The season is due to start with the Circuit de Mar del Plata, in the Argentine, on January 6th, and end on November 12th with the G.P. of Morocco at Casablanca. The "star" Formula I races constitute the G.P. d'Europe at Silverstone on May 13th—a signal honour for Britain as it is the race of 1950, and the obvious one in which the B.R.M. team should appear, if it is going to—the Monaco G.P. on May 21st, the Swiss G.P. at Bremgarten on June 4th, the Belgian G.P. at Spa on June 18th, the G.P. de A.C.F. at Rheims on July 2nd, the G.P. of Holland at Zandvoort on July 23rd, the German G.P. at Nurburg on August 20th, the Monza G.P. on September 3rd, and, finally, the Czechoslovakian G.P. at Brno on September 24th. Busy days ahead!

Formula II cars are well catered for, and it is particularly interesting that a new formula, Formula III, has been recognised, for unsupercharged cars not exceeding 500 c.c. and a minimum weight of 440 lb., such is the world-wide interest that the little cars have aroused.

To support the racing-car events there is a long list of sports and production-car races, notable fixtures being the Targa Florio on April 2nd, Le Mans on June 24/25th, Spa on July 8/9th, and the R.A.C. T.T. at Dundrod on September 16th. Shelsley Walsh and Prescott do not get international status, but their former international meetings will receive the S.M.M. & T.'s blessing. Mont Ventoux, Freiburg and Maloja are amongst the venues for international sprints.

There are nearly as many International Rallies as races, "star" events being the Monte Carlo Rally from January 22nd to 29th, the Lisbon Rally from May 18th to 21st, and the French Alpine Rally from July 12th to 21st. We may be confident of strong, successful British participation in these events.

The British (and Irish) international fixtures are:—

April 10th : B.A.R.C. Easter Meeting, Goodwood.
May 13th : R.A.C. G.P. d'Europe, Silverstone.

May 27th : Ulster A.C. Ulster Trophy Meeting.
June 22nd : B.R.D.C. British Empire Trophy Meeting, I.O.M.
July 8th : I.M.R.C. Leinster Trophy Races, Eire.
July 13th : B.A.R.C. Jersey Road Races.
Aug. 26th : B.R.D.C. Silverstone Meeting.
Sept. 9th : I.M.R.C. Wakefield Trophy Meeting, Eire.
Sept. 16th : R.A.C. Tourist Trophy, Dundrod.

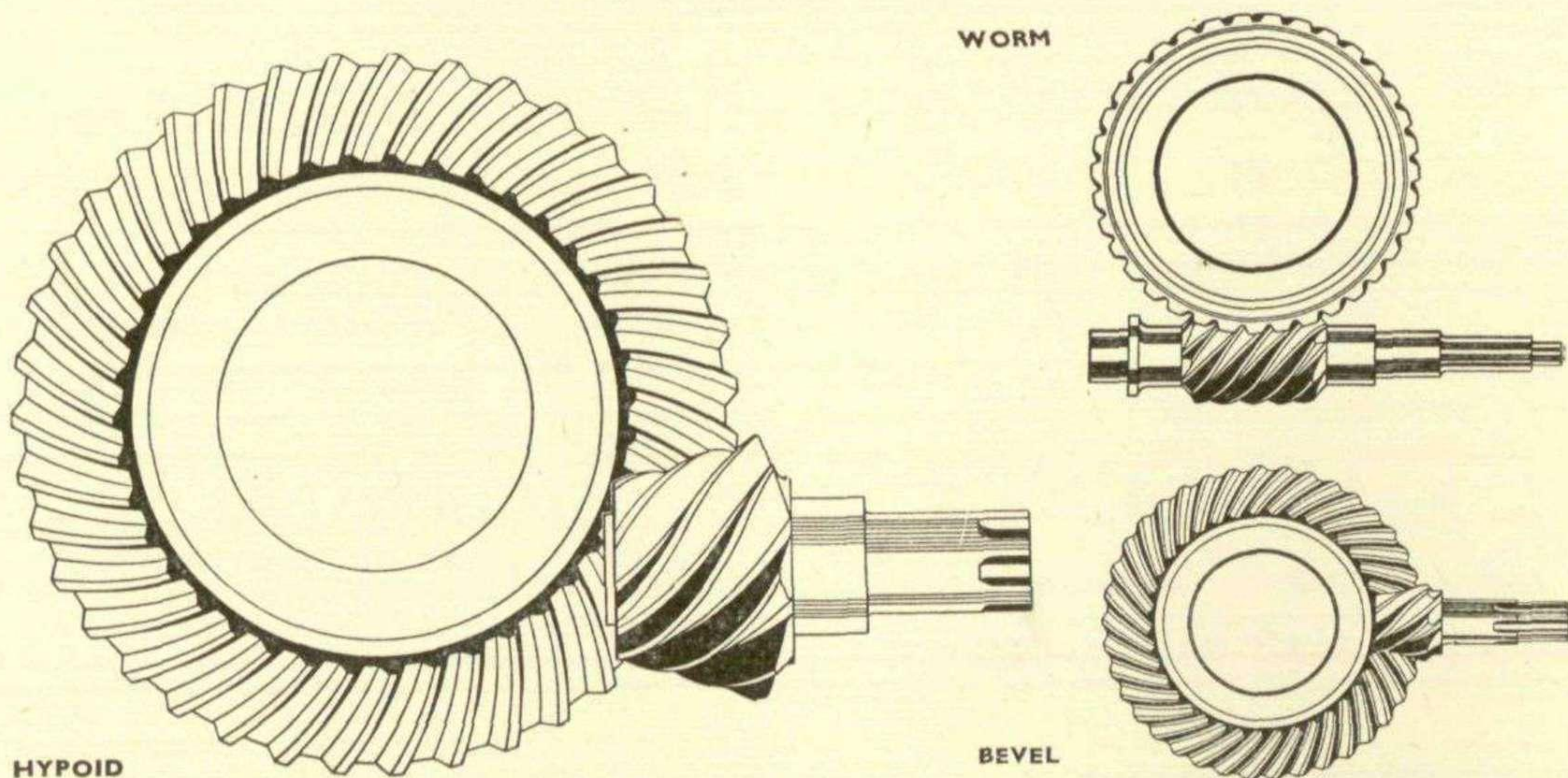
MONTLHERY

With the disgraceful demise of Brooklands people have been heard to bewail the lack of a banked track where record-attacks and precision duration-testing could be undertaken. When Montlhéry Track, near Paris, re-opened MOTOR SPORT suggested that it was worthy of consideration by British drivers as a replacement venue for Brooklands. The recent record-breaking runs thereat by British motor-cycle riders and by Geoffrey Crossley with his Alta lend practicability to our suggestion, although we are well aware that the French motor course is not so accessible as was Brooklands, which was situated less than 20 miles from London.

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THE HYPOID AXLE



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Extreme Pressure Lubricant



L E A D E R S H I P I N L U B R I C A T I O N

Reports of Recent Events

M.C.C. SPORTING TRIAL

This year's Sporting Trial of the Motor Cycling Club, which started from Buxton on October 22nd, attracted 88 car entries and also the rain, which rendered it a difficult event, only seven competitors gaining First-Class Awards. The hills included Washgates, Checks, Pilsbury, Jenkins Chapel, Litton Slack, Taddington Moor and a modified version of Cow Low. The trial went with the M.C.C.'s usual efficiency, apart from some delay at Washgates when the tractor jibbed.

The "Buxton" proved a victory for A. B. Rogers, J. Clegg and J. H. Appleton. Holt overturned his Ford Ten-engined G.R.H. Special on Litton Slacks' top hairpin.

Results :

BEST PERFORMANCE, INVITED CLUBS.—Tie, A. B. Rogers (3,622-c.c. Rojah) and J. Clegg (1,172-c.c. Special).

M.C.C. MEMBERS.—J. H. Appleton (4,400-c.c. Allard).
FIRST-CLASS AWARDS.—K. E. O. Burgess (3,917-c.c. Allard, S.); C. M. Wilde (1,172-c.c. Ford, S.); R. E. Holt (3,622-c.c. Ford Special); A. G. Imhof (1,172-c.c. Imhof Special); S. C. Rogers, Clegg and Appleton.

SECOND-CLASS AWARDS.—G. L. Hancock (3,622-c.c. Allard); C. Harley Simm (1,185-c.c. Brayshaw, S.); C. A. M. Bearshaw (1,172-c.c. A.M.B. Special); B. H. Brown (3,622-c.c. Ford Special); S. S. Turner (3,622-c.c. Allard); J. C. Wallwork (1,776-c.c. Standard Special); B. K. Thompson (1,172-c.c. A.W. Special); K. R. Bailey (1,503-c.c. Riley); C. Corbishley (1,172-c.c. C.C.S.); G. R. Holt (1,172-c.c. G.R.H. Special); C. L. Bold (1,080-c.c. Bold); A. F. Eadon (1,485-c.c. Rover); A. T. Daniel (1,081-c.c. Daniel, S.); E. W. Price (1,922-c.c. Price Special); G. D. Waldron (1,172-c.c. Dellow, S.); C. L. J. Tracey (1,172-c.c. Dellow, S.); M. Frost (1,172-c.c. Dellow, S.); H. C. Clayton (1,172-c.c. Clayton Special).

TEAM AWARD.—R. E. Rogers and G. R. Holt.

SHEFFIELD & HALLAMSHIRE M.C. HIGH PEAK TRIAL

Conveniently following the "Buxton" on October 23rd, this trial, the fourth of the series, was rendered severe by heavy rain. The 41-mile route took in Bamford Clough, Pindale, Litton Slack, Old Lees, Greenhope, Cowdale, Fred's Folly and Cow Low, with special tests at Pindale and Batham Gate. Litton Slack proved in very dour mood, but, like the other hills, had been divided into sections for purposes of marking. Those who attained the summit were Clayton (Ford-Ten Clayton Special), Spence (Ford-Ten F.M.W.), Price (V8 Price Special), and Hancock (Allard). After this the rain cleared away the mud and the ascent became comparatively easy. Cow Low's zig-zag 1 in 3 was climbed by Rhodes (B.M.W.) and Clegg (Ford-Ten Clegg Special). The "High Peak" proved a real "stopper" and victory went to the Ford Ten-engined Special, as study of the results shows convincingly. A good effort was a film of the morning's hills, shown that evening to competitors, at the Palace Hotel, Buxton.

Results :

1st : J. Clegg (1,172-c.c. Clegg Special).
2nd : T. C. Harrison (1,172-c.c. Harford).
3rd : A. G. Imhof (1,172-c.c. Imhof Special).
4th : G. R. Holt (1,172-c.c. G.R.H.).
5th : C. L. Bold (1,080-c.c. Bold Special).
6th : B. K. Thompson (1,172-c.c. A.W.S.).
7th : K. R. Bailey (1,053-c.c. Riley Special).
8th : C. D. Waldron (1,172-c.c. Dellow).
9th : K. Rawlings (2,008-c.c. Vanguard Special).
10th : P. Atkinson (747-c.c. Austin).

11th : A. D. Alldred (1,172-c.c. Ford).
12th : M. Wilde (1,172-c.c. Ford).
13th : C. Corbishley (1,172-c.c. C.C.S.).
14th : A. B. Rogers (3,622-c.c. Rojah).
15th : J. G. Lister (1,172-c.c. Austin).

HIGH PEAK TROPHY (best performance).—J. Clegg (1,172-c.c. Clegg Special), Lancs and Cheshire C.C., 94 marks.

BESTON TROPHY (second).—T. C. Harrison (1,172-c.c. Harford), S. and H.M.C., 92 marks, aggregate test time 71.4 sec.

NEEDHAM TROPHY (third).—A. G. Imhof (1,172-c.c. Imhof Special), S. and H.M.C., 92 marks, time 76.3 sec.

TEAM PRIZE.—B. K. Thompson, K. R. Bailey and C. Corbishley (Lancs and Cheshire C.C. "Wheat-sheafs").

PRESIDENT'S AWARD (best standard car).—R. Oakes (1,250-c.c. M.G.), M.G.C.C., 67 marks.

SUNBEAM-TALBOT OWNERS' CLUB "SCARBOROUGH RALLY"

Under a glowing sky, with gleaming cars and bristling exhibitions of competitive determination, the Second Annual Rally to Scarborough on October 22nd and 23rd of the Sunbeam-Talbot Owners' Club proved an outstandingly successful occasion.

Nearly one hundred entrants, from all parts of the country, vied one with another for premier honours in the high-efficiency driving tests—embodying acceleration, braking, cornering, manoeuvring through set obstacles, distance judging etc., all against the stop-watch—and demonstrated the outstanding prowess of respective drivers.

The Club acknowledges a very great debt of gratitude to the Corporation of Scarborough for the excellent facilities provided on the Marine Drive and on Oliver's Mount, both of which transpired to be venues for vast numbers of Scarborough motorists and holiday visitors, for whom a week-end's excellent sport was staged. At the Grand Hotel on the Saturday evening, the

Club's dinner-dance was honoured by the presence of His Worship the Mayor (Alderman R. F. Chapman) and Mayoress, who, in extending a cordial welcome to the Club, promised wholehearted co-operation and support of the Town's services for all future events.

With only split-second differences between respective competitors, the judges' task provided no easy problem. The presentation of prizes, graciously carried out by the Mayoress, was the scene of marked enthusiasm.

Respective class winners were :

CLASS A. SUNBEAM-TALBOTS, 10.H.P. :

1st : W. Freed (London).
2nd : F. W. Webster (Leeds).

CLASS B. SUNBEAM-TALBOTS, 14.H.P. :

1st : R. J. Adams (Lisburn, N. Ireland).
2nd : E. A. Lloyd-Davies (Wolverhampton).

CLASS C. HILLMANS :

1st : R. S. Henson (Coventry).
2nd : E. N. Hiskins (Wakefield).

CLASS D. HUMBERS :

1st : C. Hardy (Hull).
2nd : H. Arundale (Scarborough).

LADIES' PRIZE :

Miss Mary Stainforth (Lincoln).

YORKSHIRE DISTRIBUTORS' TROPHY (offered for the best performance in a Sunbeam-Talbot).—R. J. Adams (Lisburn).

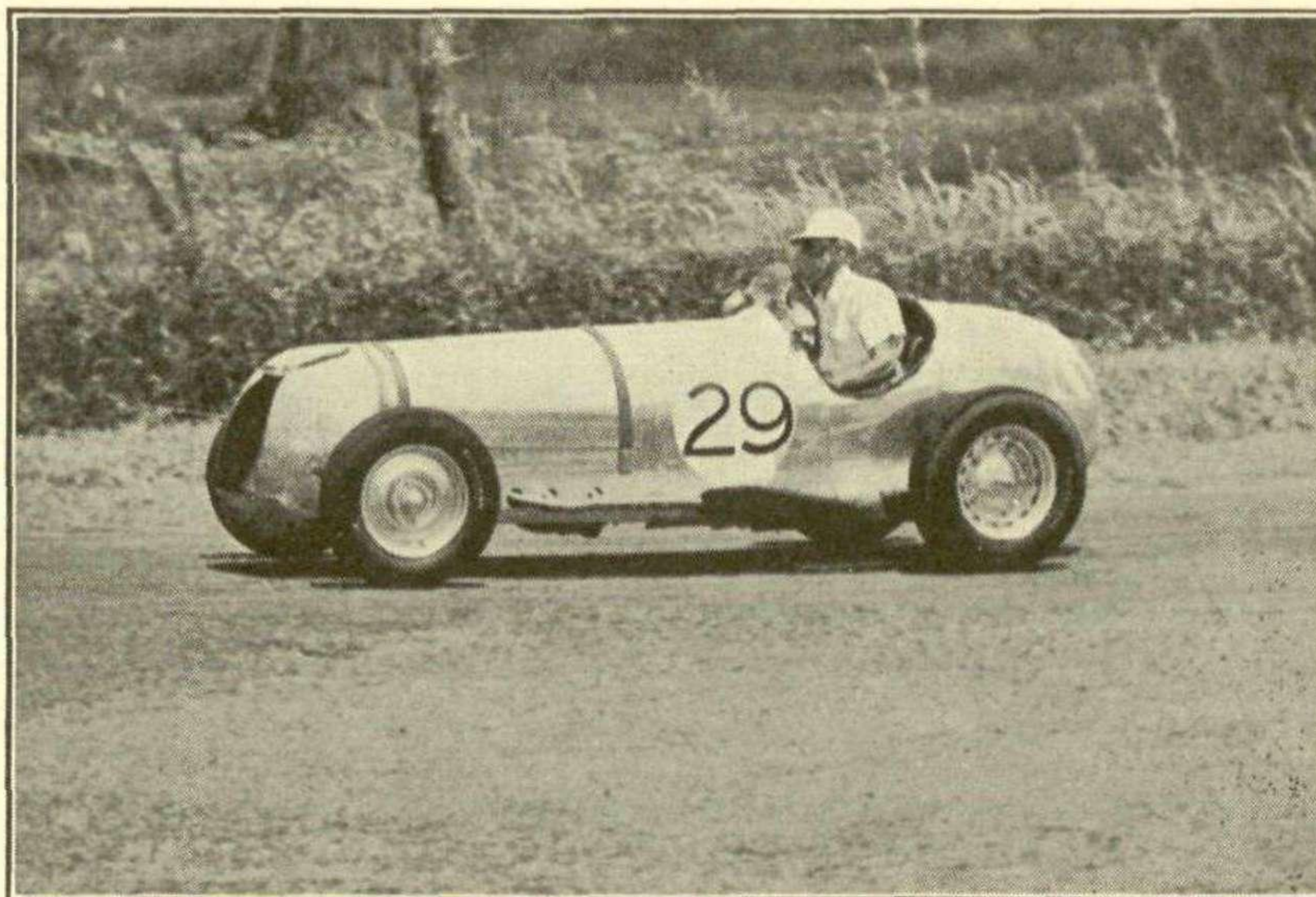
The Grand Concours d'Elegance held on the Marine Drive on the Sunday morning presented almost a miniature Earls Court, the successful entrants being :

1st : R. J. Adams (Sunbeam-Talbot 90) (Lisburn, N. Ireland).
2nd : R. Walshaw (Hillman Minx) (Halifax).

THE BOSSOM TROPHY TRIAL

The Bossom Trophy Trial, run off in Kent by the Maidstone and Mid-Kent M.C. on October 30th, was a stiff event.

Over 60 entries came in, mostly typical trials specials, but including Jarvis' immaculate and embarrassed 4½-litre Bentley. It was interesting that several Austin/Ford exponents seem to be going back to Austin Seven engines and Welfare had what appeared to be a normal



[Photo by "Malaya Tribune"]

SPECIAL IN SINGAPORE—J. H. K. Moncrieff's Ford V8-engined Kudensay competing in the Johore Grand Prix.

Austin Seven "Chummy," even to three-speed Austin gearbox. Other Austin Seven-engined cars were entered by Edwards, Yates, Hawkson and Lang. Durling drove an ingenious four-wheeled version of Morgan/Ford Eight three-wheeler. There were twelve observed sections and a special test.

Only Burgess' Allard climbed Higgin's Horror but he failed on the first ascent of Boxley Warren, where the start was on such a slippery patch, before a left-hand bend, that many failed to reach it. We observed Willis' B.M.W., Gosnell's H.R.G., Hart's "TC" M.G., Richards' Austin/Ford, Robert's V8 H.K.R. Special and Turner's Allard fail at or near the start, the last-named, four up, bouncing its valves and sending clouds of steam from its tyres in its dismay. Given help, some of these unfortunates ascended the rest of Boxley Warren strongly and as time went on the hill seemed to get easier. Mead's ex-Potter Allard went up really well, Day's Mercury had no trouble, blipping up, while Oxendale started neatly, his H.R.G. going very strongly. Yates, in the ex-Birkett Austin Seven, did splendidly, Readings' Regent Special and Wick's Riley Nine Special were good, as were Roberts' Special and Goltz-Mehn's Ford Eight. Smith's F.M.B. Ford Ten blown Special had power to spare and Waring's Dellow did a fierce, fast assault, blower whining. Appleton (Allard) and Hollingsworth (Ford Ten Special s/c) were carefully successful.

Hill's Hill stopped about half the entry and Goofy's Warren was difficult. Boxley Warren was then taken the opposite way, involving a nasty, cambered downhill right-hand turn, which threw cars heavily on to the outer bank. This proved too much for Burgess, whose Allard slipped straight on, Turner's Allard, in spite of four up and three spare wheels, Brown's Ford V8 Special, Hughes' Austin Ten, Rumfitt's original Allard, which got well stuck, Willis' B.M.W., Hart, who approached wrongly and got his M.G. thoroughly jammed, Richards' Austin/Ford, the H.K.R., Lang's "Ulster"-bodied Austin, which fell over, and the Bentley, which ran backwards at peak revs. Imhof made a truly brave ascent in his wonderful mid-engined blown Ford Ten Special, one rear wing adrift. Wick's Allard succeeded with four up, Price hit the bank a fearful crump and lost his air-cylinder, which a marshal treated as if it were a bomb or mine, but he got up, Pentony made a good job of it in his Vauxhall/Morris, and Wooton's Austin/Ford was very well handled, as was Yates' Austin.

Day was 3.9 sec. better than average in the special test, so he won for the third time in succession and keeps the Trophy. Spectators turned out in considerable numbers and at one hill quite an array of cars were parked, including a fine 4½-litre Bentley four-seater, a 328 B.M.W., and Carter's "2.6" Alfa-Romeo and even a Donnet-Zedel cabriolet. The tea-stop was a typical scene at a trials-end, but hot food would have been nice.

Results :

BOSSOM TROPHY.—A. E. A. Day (Mercury).
1,100-C.C. CLASS WINNER.—C. Yates (Austin Seven).
2,000-C.C. CLASS WINNER.—E. G. Spence (F.M.W.-Ford).

OVER 2,000-C.C. CLASS WINNER.—J. H. Appleton (Allard).

MAIDSTONE AND MID-KENT M.C. AWARD.—L. J. Hollingsworth (Ford Ten Special).

FIRST-CLASS AWARDS.—V. S. A. Biggs (1,172-c.c. Ford), E. N. Frost (4,276-c.c. Allard), J. Readings (1,785-c.c. Regent Special), J. C. Smith (1,172-c.c. F.M.B. Ford), M. Lawson (1,497-c.c. H.R.G.), G. G. Smith (1,172-c.c. M.G. Ford), G. Pentony (1,442-c.c. Morris).

SECOND-CLASS AWARDS.—R. Davis (1,172-c.c. Leopard Special), H. Clayton (1,172-c.c. Clayton), W. F. Mead (3,917-c.c. Allard), K. E. O. Burgess (3,917-c.c. Allard, s/c.), J. H. Appleton (4,375-c.c. Allard, s/c.), M. Wick (3,917-c.c. Allard), A. G. Imhof (1,172-c.c. Imhof Special, s/c.).

TEAM AWARD.—Lawson, Pentony, Imhof (North-west London).

R.I.A.C. WALTER SEXTON TROPHY

The 1949 award of the Walter Sexton Trophy for the highest aggregate of marks gained in open speed competitions by members of the Royal Irish Automobile Club, goes to J. Kelly.

THE S.U.N.B.A.C. VESEY CUP TRIAL

The return of rain made this a very stiff event, and Cyril Bold can congratulate himself well and truly on winning the cup with his 1,080-c.c. Bold. Lye Wood caught the unwary or unpowerful in deep mud. Eaton was distinctly stiff, and timed section and test, respectively, enlivened Longville and Heywood Common. Indeed, only Atkinson (Austin), Burgess (Allard), Lowe, Waldron and Tracey in their Dellow, Bold and Wharton made any appreciable onslaught on Eaton and no one climbed clean. Marshbrook defeated many by reason of wet grass. In recent trials more mechanical trouble has been experienced than one expects in present-day "mud-larks" and the Vesey was no exception—almost a *reliability* trial, in fact. Len Parker had transmission trouble with his new rear-engined Parker-Special, Rawlings trouble with the Vanguard gearbox of his Vanguard Special, Edwards lost two of his Ford's gears and Corbishley actually changed a gasket on his C.C.S. between hills. Bold was 2 sec. faster than Wharton in the Special Test, both losing 12 marks.

Results :

VESEY CUP (best performance).—Bold 1,080-c.c. (C. L. Bold).

CARLESS CUP (best over 1,500-c.c.).—Allard 3,917-c.c. s/c (K. E. O. Burgess).

WATSON GWYNNE BOWL (best under 1,500-c.c.).—Wharton 1,172-c.c. (K. Wharton).

FIRST-CLASS AWARDS.—Dellow 1,172-c.c., s/c (R. B. Lowe), Dellow 1,172-c.c., s/c (G. D. Waldron).

SECOND-CLASS AWARDS.—Wol-Ford 1,172-c.c. (H. B. Woodall) C.C.S. 1,172-c.c. (C. Corbishley), Dellow 1,172-c.c., s/c (F. E. Shanks), Daniel 1,081-c.c. (A. T. Daniel), Dellow 1,172-c.c., s/c (J. W. Cox), Dellow 1,172-c.c., s/c (P. J. Collins), Allard 4,375-c.c., s/c (J. H. Appleton), Allard 3,917-c.c. (H. C. Roberts).

TEAM AWARD.—C. Corbishley's "Mudslingers" (Bold, Wharton, Corbishley).

CEMIAN M.C. PRESIDENT'S CUP TRIAL

Held on November 13, the results were :

PRESIDENT'S CUP.—T. W. Oxendale (H.R.G.).
SALOON AWARD.—R. L. Sadler (Hillman).

FIRST-CLASS AWARDS.—R. A. Rivers (Morris Eight), D. W. Freeman (H.R.G.), P. E. Sundt (Austin Seven).

SECOND-CLASS AWARDS.—A. E. A. Day (Mercury Special), L. Green (Ford Ten), V. Gordon (M.G.).

GRAND PRIX OF MADRID

Sommer's Simca won the Final, averaging 63.2 m.p.h. for the 125 miles. Trintignant's Simca was second, de Graf-

fenried's Stanguellini F.I.A.T. third, Taruffi's Cisitalia fourth, Dei's Cisitalia fifth and Phillippe's Simca-Deho sixth. Sommer won one of the 40-mile heats, Chiron drove an O.S.C.A. to victory in the other.

V.S.C.C. (Northern Section) NIDDERDALE TRIAL

Fifteen cars started in this event on November 5th and the route embraced Middle Tongue, Hole Bottom, Main Strel, How-Stean, Lofthouse Bank, a "slow-fast" test and an acceleration test. Jane's 1923-5 Lancia made best performance in both tests and best performance in the trial, the runners-up being Ingham's Riley Nine and Rayfield's ex-Margaret Allen 3-litre Bentley with 4½-litre engine.

CHELTENHAM M.C. TRIAL

Seventy-one starters graced this trial on November 12th but the hills were, on the whole, fairly easy and Appleton (Allard) scored his victory by reason of the forward-and-reverse special test.

Results :

BEST PERFORMANCE (Player Bowl and Souvenir).—J. H. Appleton (4,375-c.c. Allard, S.), no marks lost time on eliminating test 12.6 sec.

BEST UP TO 1,000 C.C., U/S.—H. E. Roberts (933-c.c. Fordmor), no marks lost, 14.6 sec.

BEST UP TO 1,000 S/C AND 1,100 TO 2,000 C.C. U/S.—J. Sleeman (1,172-c.c. Sleeman), no marks lost, 14.4 sec.

BEST CHELTENHAM M.C. MEMBER (resident within 15 miles).—J. M. Readings (2,570-c.c. Lancia), 6, 14.6 sec.

TEAM PRIZE.—"Tryers": P. A. Atkinson (747-c.c. Austin), no marks lost, 16.6 sec.; J. Sleeman (1,172-c.c. Sleeman), no marks lost, 14.4 sec.; and K. Rawlings (2,100-c.c. Vanguard Special), no marks lost, 13.4 sec.

FIRST-CLASS AWARDS.—G. Hinder (747-c.c. Austin), 9, 18.2 sec.; P. A. Atkinson (747-c.c. Austin), no marks lost, 16.6 sec.; G. R. Holt (1,172-c.c. G.R.H.), no marks lost, 16.6 sec.; K. Delingpole (1,172-c.c. Dellow), no marks lost, 15 sec.; J. Clegg (1,172-c.c. Clegg), no marks lost, 14.8 sec.; J. Whitefield (1,172-c.c. Ford Special), no marks lost, 19.4 sec.; C. Bold (1,080-c.c. Bold), no marks lost, 14.6 sec.; R. Holt (3,622-c.c. V8 Special), no marks lost, 13.8 sec.; L. G. Evans (1,172-c.c. Dellow, S.), no marks lost, 14 sec.; J. Cox (1,172-c.c. Dellow, S.), no marks lost, 14 sec.; K. Rawlings (2,100-c.c. Vanguard Special), no marks lost, 13.4 sec.; R. W. Faulkner (4,000-c.c. Mercury), no marks lost, 13.4 sec.; A. E. A. Day (3,917-c.c. Mercury Special), no marks lost, 13.6 sec.

CLASS F RECORDS

At Monthery Track on October 31st, Geoffrey Crossley broke the Class F 50 kilometre, 50 mile and 100 kilometre records at 125.92 m.p.h., 124.4 m.p.h. and 124.17 m.p.h., respectively, driving his 1½-litre G.P. Alta. He improved on the previous records, made at the same venue twenty-three years ago by Eldridge's Miller, by 5.86 m.p.h., 2.52 m.p.h., and 1.68 m.p.h., respectively.

MOTORING FEATURES

Manufacturers, designers, publicity specialists and ordinary readers will be interested in the motoring features which appeared in the October issue of that ambitiously laid-out British magazine "Future." Five separate motoring articles appear in that issue, the title of one of which is "The Role of the Specialist Car"; all present new angles on motoring topics. This augurs well for further motoring matter in future issues.

TO BRIGHTON ON FOUR CYLINDERS

The Editor Accompanies Geoffrey Frank on the Veteran Car Run in a 1902 15-h.p. Panhard et Levassor

EACH year, on the memorable day when the veterans go to Brighton, the V.C.C. is kind enough to find me a seat in, or on, one of the competing cars. In 1936 I went down on Dick Nash's 1900 Peugeot and in 1937 on the late Capt. Wylie's 1898 Hurler—very literally "on" in both instances! In the post-war "Brightons" I went through on Jim Kentish's 1902 de Dion Bouton in 1947 and, last year, in George Lanchester's 1902 Lanchester. This year Geoffrey Frank generously found space for me in the 1902 Panhard et Levassor entered jointly by himself and E. S. Berry.

The only other requirement was a tender car, especially as "our" veteran had to come down to the start all the way from Southport so that there was just a chance that it might *not* be there to convey us to Brighton when we got to Hyde Park in the early morning of November 13th. It seemed snobbish to take a modern with *four*-cylinders on a Brighton run so we prevailed upon Jowett Cars, Ltd., to lend us a two-cylinder Bradford Utility. A more dependable, economic (32 m.p.g.) and useful vehicle we could not have desired. Its spaciousness, willingness, ruggedness and the fascination of its flat-twin exhaust beat appeal afresh every time we try one. Incidentally, the excellent visibility through the big windscreen and ample side-windows provided our co-driver with an excellent view of all that was going on, and the vintage comfort of the driving position and the sponge-free steering was continually appreciated.

Arrived at Hyde Park our thought that the Panhard might be an absentee was proved a false one; indeed, it had come down to London in ten hours with no more ado than a little ignition trouble and a displaced cotter on one of the automatic inlet valves, the correct valve-spring strength not having been determined quite to the engine's satisfaction. Soon Geoffrey Frank, in a fine Sherlock Holmes hat, hove in sight in the Panhard, accompanied by a 4½-litre Bentley towing the trailer which had brought down Berry's magnificent 1895 Lutzmann.

Our mount of the 1949 Run was a truly impressive car, beautifully turned out. Its four-cylinder 90 by 130 mm., 3,307-c.c. Phoenix engine was cooled by a generous gilled-tube radiator, had a ZU 4 Bosch magneto, and the aforesaid automatic inlet valves. Transmission was by four-speed gearbox and side chains and the body a useful four-seater, of which I and another intrepid passenger occupied the distinctly comfortable rear seat located behind, and far above, the back-axle. Before us on the back of the front seat was a five-gallon petrol tank.

Not every one had our good fortune of moving off majestically and confidently at the word of command. Ford and Burton, for instance, on No. 1, a 3½-h.p. Benz and Barnard's and Balls' Oldsmobile had bothers right on the line, while Major Mills' and Jackman's 1902 Oldsmobile was boiling within the first 100 yards. Then, ere we were out of Hyde Park, Spiller was observed to be working on the engine of his 1902 de Dion and Ford's M.M.C. and Pratt Boorman's Panhard were being replenished thus early with vital fluids. But, out of 130 entries, only five non-started. For our part, we rode comfortably on our lofty perch, the merry song of the driving chains drowning the noise of the automatic inlets. The Panhard was slowed early by hills, it is true, and asked for an early change down if transmission snatch was to be avoided, but she pulled strongly, exceeded 30 m.p.h. comfortably on the level (its flat-out maximum is rather better than 40) and, we were glad to note (1), possessed adequate brakes.

Soon we overtook Peter Hampton's 1902 5½-h.p. Peugeot, Mrs. Hampton in close company in the Type 46S Bugatti saloon. Ever fearful of running into a time-check early, Frank held the Panhard back through London. Approaching Buckingham Palace Major Gardiner had had to "get out and get under" his 1899 Locomobile steamer, and at Kennington we came upon Crossman's 1900 George Richard stationary, but were assured that all was well and that it was pulling well at 12 m.p.h.

The usual police "clear passage" at Brixton Hill's traffic lights was not operating this year and Frank preferred to stop for the red, despite yells of "go on" from the onlookers. At Brixton Lightfoot was investigating the complex engine of his 1902 Arrol-Johnston dog-cart and Moss' Crestmobile had stopped. From a standing-start, due to the lights, Brixton Hill caused the Panhard no trouble at all, Frank handling her with ease, in spite of being more used to his own Edwardian cars. Indeed, as we overtook Mrs. Ford's and Cooke's 1903 de Dion and changed-up near the summit, the onlookers clapped approvingly, although Allday's 1903 Mercedes was able to overtake us. But Wisdom's 1899 Wolseley was going up slowly, emitting an odd whistle. Lights caused us to halt at Streatham Place and soon afterwards the 1901 Mors, its tender car an Edwardian Charron, was seen stationary, but engine running. Ominous—or merely before schedule?—the Goff/Lane de Dion was parked off the route in Leigham Court Road.

Traffic was congested at Streatham, but we overtook the Lutzmann, plodding steadily, before we stopped for fuel and half a pint of Castrol XL. It was a

lengthy stop, for the petrol nozzle wouldn't look at the small filler on our tank!

At Thornton Heath Powys-Lybbe's F.I.A.T. of 1900 vintage had stopped, and here we caught up with Evans' very early 3½-h.p. Benz. Reeves' 1899 Benz of this size was re-starting, he and his passenger peering at the gear-levers on the upright steering column. On Purley Way the Jarrett/Gibson 1898 Benz and the Welham/Bowden 1904 Cadillac had ceased to motor, and Humphries' Humber tandem was being investigated, his M-type M.G. and trailer in attendance. Near the Aerodrome Mills and Peech were adding oil to their 1904 Darracq, and the engine cover of Col. Alcock's 1902 de Dion was raised.

Traffic up the Aerodrome hill was pretty thick and the usual keen spectators had gathered. With five up, Lucas' 1904 London-built James and Browne was ascending slowly, while Andrew Fairtlough's 1904 Panhard required light manual assistance. We were delighted to see the Lutzmann climbing strongly, water vapour issuing from its cooling tanks, and we stopped on the down grade to see it safely into Purley, for its spoon and ribbon brakes do not offer much retardation. While we were stationary Abbott's famous Mercedes and Miss Tanner's 1900 de Dion went by, followed by Capt. Browell's 1904 8-h.p. de Dion of the fierce exhaust note, the Moss' 4½-h.p. Swift of a year earlier, which was rattling, and Bowyer's 1903 5½-h.p. Peugeot, although soon afterwards we crept past the last-named, which shows how well it was going.

Typical of "Brighton Sunday" all manner of interesting non-competing cars were about. To name only a few, we spotted a yellow 30/98 Vauxhall, two 11.9 Lagondas, a Calcott, a 10/23 Talbot, a 14/40 flat-radiator M.G. four-seater, the same 14/40 Sunbeam tourer that we saw, in the same place at Purley last year, a modern Georges Irat and Darracq, a Type 37 G.P. Bugatti, a Clyno, Edwardian Darracq, Delage and Wolseley-Siddeley, an Italian Type C F.I.A.T. 500, a Dyna-Panhard on English numbers, a Frazer-Nash towing a trailer, an open 40/50 Rolls-Royce and many, many more—cars which are the very backcloth of the "Brighton." Lord Strathcarron was passengering in Grose's 1903 Wolseley and a 4½-litre Invicta was following Major Mills' very effective 1901 Benz.

Vernon Balls' Oldsmobile looked to be in trouble near Purley, Gregory's Darracq of John o'Groats fame was having a breather and Estler's 1904 Siddeley passed us and staved us off.

Next to be seen in trouble was Crittall's Royal Humberette, while a non-competing twin-cylinder Renault had also paused for engine-inspection. Bothers seemed to be

coming early, as F. S. Bennett said later in his speech at the Lord Mayor's tea, for Stiles' Charatte had its bonnet up and the "cockpit" of Lawson's Tony Huber was being examined. It is, however, impossible to distinguish routine checks from dire maladies as one hurries past.

Mrs. Carlisle sat forlornly in the front seat of the 1900 Progress (surely not jilted?), the Fotheringham-Parkers were refixing the number board on their 1903 Renault, but the Haughton/Frazer Mors was going really well. Sensibly, Wingate's 1901 Pick was tendered by a Bradford Utility.

The grand weather of early morning was holding out, and the Panhard likewise, so that we permitted ourselves a very long coffee-stop (only it was tea!) at Merstham, where Geoffrey Frank's cousins had thoughtfully brought out supplies in a 2-litre Lagonda. Here a familiar non-competing 1911 de Dion coupé was parked, Spiller's 1902 de Dion had stopped for under-bonnet inspection and Eastmead's Gladiator went by at a great lick. Alas, Miss Tanner's de Dion was on its trailer, out of the Run thus early. Gardiner's Locomobile was reported in trouble and so late was the Lutzmann that the Lagonda went in search of it. Eventually it hove in sight, all being well, and the Jarrett/Gibson 1898 de Dion also came by.

Resuming at 11.31 a.m. (we had started at 8.33 a.m.) we suffered mysterious loss of power, until it was discovered that the cork used for choking the carburetter and hung beside it, had been sucked into the intake. We

again overtook Crossman's 1900 Georges Richard, which was using lots of water, passed the gallant Lutzmann, and stopped for a leisurely snack at Povey Cross. Indeed, we did not leave until 1 p.m., over roads free of all veterans.

Soon the Crestmobile was seen in trouble and the Reeces' 1904 Wolseley had, alas, definitely retired, going to Brighton on its trailer. The Panhard responded nobly to Geoffrey Frank's skilful coaxing, covering 10 miles in 20 minutes as we made up time. Then we found the Lutzmann stationary beyond Handcross, the lattice-work doors of its engine compartment open—it had climbed the hill partly aided by its passenger. On the next hill it stopped again, it was at first thought due to over-rich mixture, but examination revealed a broken contact-breaker spring. So, while we waited with it, Sears went off in the Bentley to get this vast spring brazed, while an old gentleman from a nearby cafe, with hardly a word, went off to bring us a can of water. We debated pushing the Lutzmann in—15 miles—and discussed the rules, encouraged by the Crestmobile, whose driver was pushing it up every hill. As late as 2.30 p.m. the Bennetts' 1903 Cadillac went by. A little rain began to fall. Then Sears came back with the spring mended, it was quickly refitted and the horizontal 2½-litre single-cylinder engine with its exposed big-end was hastily re-timed. Soon it "turf-turfed" again when the big flywheel was pulled firmly round. It was touch and go, but aided by the Brighton police and our crew, the Lutz-

mann motor-carriage of 1895 got under way, a grand effort, especially as its high-volatile spirit had been used up and it had to make do with "Pool." We now had to think of ourselves, for 4 p.m. was zero-hour, so we pressed on, the old Panhard et Levassor going great guns on all four. We encountered Moss still pushing his Crestmobile, Fotheringham-Parker's 1899 Century Forecar in distress and just before the Pylons even came to rest ourselves, on account of a herd of cows, a policeman on a bicycle calling out "hard luck!" But soon we were away once more and, thanks to Panhard design and construction (advert.) and Geoffrey Frank's willing crew (the writer must be excluded as doing nothing to help beyond replacing the petrol tank cap after the refill!) we checked in at approximately 3.35 p.m. Thereafter it was a question of praying for Sears and Berry in the Lutzmann, employing the Bradford as a maid of all work (which it revels in) between garage, hotels and the tea pavilion and so home and, eventually, to bed—with another memorable and well-organised Brighton to chalk-up.—W. B.

Of the 125 starters only twelve failed to complete the course by 4 p.m. Two got to Brighton just afterwards, while Justesen's 1901 James and Browne and Eyre's Napier were disqualified for being too early at checks. The remaining 111 got a very well-deserved R.A.C. medal. The unfortunates were:—

Ford/Burton (1896 Benz), Berry/Sears (1895 Lutzmann), Smith (1898 Star), Major Gardiner (1899 Locomobile), Moss (1900 Crestmobile), Miss Tanner (1900 de Dion), Powys-Lybbe (1900 F.L.A.T.), Dunham (1901 Corre), Goodall (1901 Royal Enfield), Mills/Jackmar (1902 Oldsmobile), Humphries (1904 Humber Tandem), the Reeces (1904 Wolseley).

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THE EDITOR DISCUSSES THIS "HOT-ROD" BUSINESS

THE "hot-rod" craze, which originated in Southern California in the late nineteen-thirties, has spread throughout America. Over here we find the speeds achieved by "souped-up" L-head engined American cars over a flat-out quarter-mile difficult to believe, in spite of electric timing. After all, a 1932 Ford V8 coupé, sans wings, doing 120 m.p.h., takes some swallowing, and perhaps that is as much as we need say on the speed aspect of the "hot-rod." The fact remains that your American speed-worshipper—the Sports Car Club of America will have nothing of such worship, preferring to encourage the true sports car, vintage vehicles included—can buy all manner of proprietary parts with which to increase the performance of his Ford or Chevrolet. What is even more interesting is the manner in which data on what to do in order to achieve given results is freely available, in contrast to the rather secretive attitude on "hotting-up" production cars which prevails in this country.

For instance, two of "California Bill's Hot-Rod Manuals" have reached us and shed much light on the "hot-rod" cult. ("Hot-Rod Manual" and "Chevrolet Speed Manual," both by Fred W. Fisher, Los Angeles; two dollars each.)

Suppose, for instance, that you have only a model-A or B four-barrel (four-cylinder) Ford at your disposal. There is no need to be depressed, no need at all. You will be told that in California cars so engined have exceeded 120 m.p.h. and that one, a "belly-tank streamliner," has done 141.06 m.p.h. Note that ".06"; obviously the timing has all the appearance of being scientifically conducted. Opening your eyes and your purse you will buy a four-port head and four carburettors from Mr. George Riley, being careful to install them on a model-B block and crank assembly, as being more rugged than a model-A. This will cost you approximately £85, or you can search for a secondhand Ford Port, Cragar, McDowell, Alexander, Frontenac or other set-up, or wait for Rudy Moller to get his eight-port heads on the market again. If all else fails, you could forgo o.h.v. and put on a Roy Richter Super Winfield flathead, of either 7.5 or 8.0-to-1 compression ratio. Carburation can be looked after by Burns, Thomas, Riley or Winfield instruments, but probably your best bet is to use one or more V8 carburettors on a special manifold.

Now get out your purse again, because with all this increase of power you will need to have your bottom-end re-babbited and pipes inserted to pressurise the mains and big-ends, and this is a specialised job, for an expert such as Jack Taylor. Stock rods will do, but with solid babbitt for the pressure oiling, again a job for the expert, and the counterweighted model-C crankshaft should be drilled by this expert so that you can get oil to your re-babbited bearings. Don't put your purse away until you have bought a 3-gallon oil pan, a full-flow filter and a

Wilbur Houghton oil pump.

With .003 in. to .0035 in. big-end clearance, .002 in. mains clearance, and .005 in. end-play at the rear main some users get 100,000 miles from a babbitt job done by Taylor. Next you replace your camshaft bearings with bronze ones having .003 in. clearance, and substitute metal timing gears, plugging the oil feed, as plenty of oil will reach them from the front cam bushing.

The intake ports in the model-A or B block should be enlarged to $1\frac{1}{8}$ in., the exhaust ports by $\frac{1}{16}$ in., and exhaust valves substituted for the inlet valves after enlarging the ports to $1\frac{3}{4}$ in. or $1\frac{5}{16}$ in. The ordinary water pump suffices but a belt-driven pump from a Hudson or similar engine may be preferred, and, naturally, racing pistons, with two $2\frac{1}{16}$ in. compression and one $\frac{5}{32}$ in. oil ring will be fitted. Lincoln Zephyr valve springs should be used, either with standard or special cotters and collars, or 1935 V12 Cadillac 5-coil inner and outer springs with o.h.v. conversion heads. Forty-two pounds in weight can be saved if an alloy flywheel is purchased, and you may wish to install Ansen adjustable tappets. "Doc" Eyre will rebuild your ignition set, and if you want to go really fast, use a Ford Six coil with a Ford 81A replacement condenser or Zephyr condenser. You will already have bored out to 4 in. of course.

Suspension will be improved by torque rods running back from the front axle and the use of piston-type hydraulic shock-absorbers, after the chassis has been lowered by using a reset spring, a dropped front axle and a reworked frame kick-up. You will doubtless have converted to hydraulic brakes, possibly to column-shift gear-change, for which you follow "California Bill's" diagrams, and then all you have to do is to "channel" the body—i.e., lower it by dropping it over the side-members, and cutting down the model-B radiator grille and "chopping" the windshield.

Then, maybe, like Randy Shinn's Class D roadster, yours will knock out 130.76 m.p.h., stripped—maybe. If you are not so ambitious a model-A bottom-end can be pressurised, using a model-B crankshaft, if roadwork only is contemplated, and it is even possible to make do with splash, still using the model-B crank and rods.

Here I feel I should explain that "Hot-rodging" isn't only a matter of timed speed trials. In the States they recognise, amongst "souped" Fords, the Conservative road car, the Hot-Rod road car, the Super Hot road car and the Super Hot-Rod. "Souping up," in fact, in the Heinz tradition! The first-named contents itself with dual carburettors, compression ratio put up to 8.5-to-1, and a "semi-race" or "road" grind camshaft. Stock clearances are retained. The Hot road car will use a "hotter" camshaft, Zephyr valve springs, ported and relieved block, racing ignition, light flywheel, lengthened stroke, .0055 in. or .004 in. clearance solid-skirt pistons,

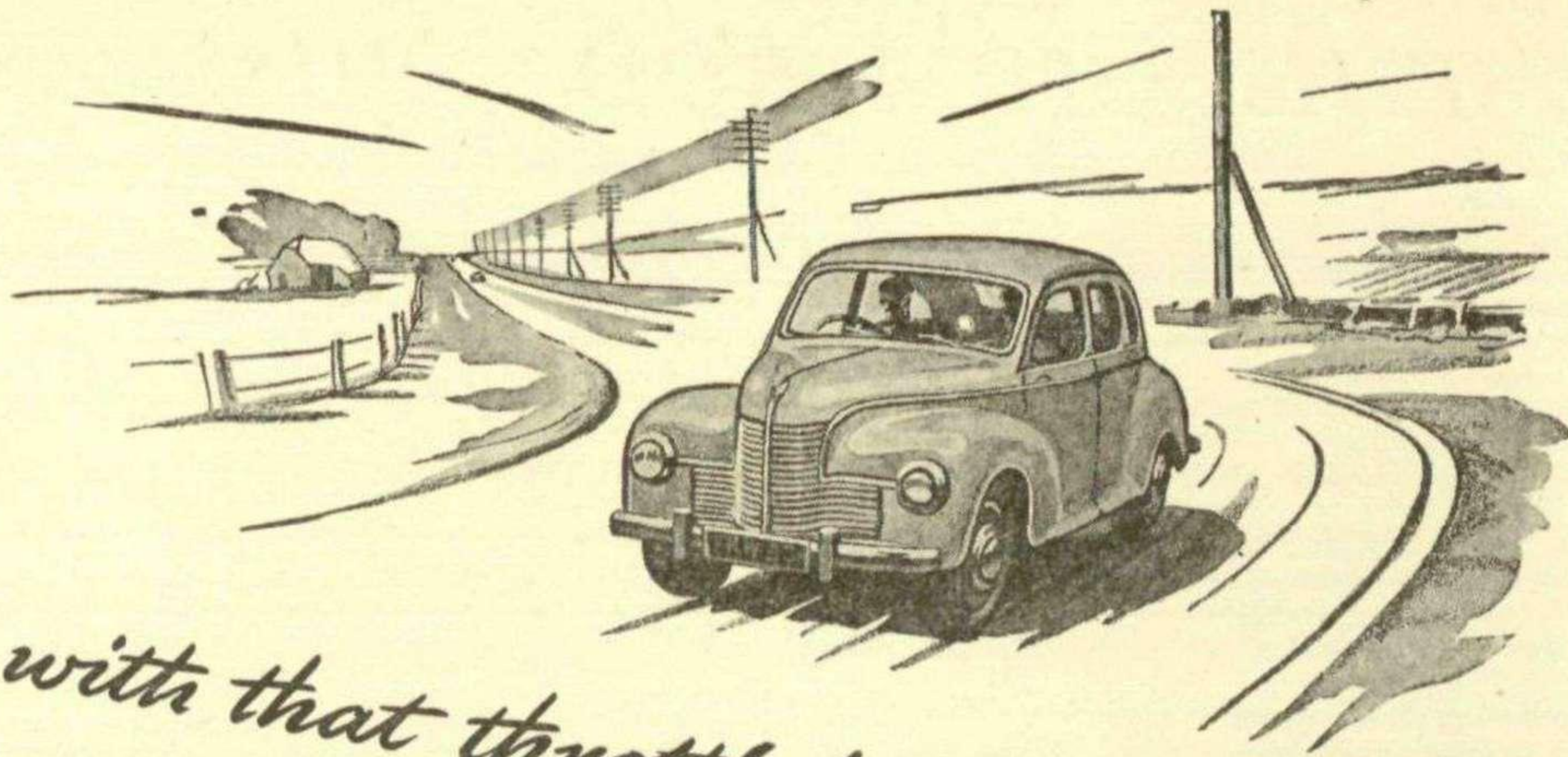
stock main and big-end clearances, alloy cam-gear and a Mercury oil pump.

A compression ratio of over 9-to-1, "full race" camshaft, adjustable tappets, Zephyr or Buick valve springs, stroke increased up to $\frac{3}{8}$ in., big clearances and dynamically-balanced crankshaft characterise the Super Hot road car. The Super Hot-Rod will have a rebuilt gearbox with Zephyr gears giving a 3.54 or 3.27-to-1 top gear, 7.00 by 16 tyres, a "super race" camshaft, very high compression ratio and piston clearances of .007 in. for sprint and .008 in. for track work. They will also need exhaust baffles, which is puzzling until you discover that this merely implies blanking off the manifold in the block to enable separate exhaust off-takes to be used.

The outstanding fact is that all these different special camshafts, heads, carburettors, pistons, ignition-sets and so on are available "over the counter" for those who crave "soup" with their Fords. Take camshafts. They come as Full-race, Semi-race, $\frac{3}{4}$ -full, Super, Super Jump and Track, from grinders such as Spalding, Harman & Collins, Smith & Jones, Winfield, Iskenderian and others. Each bears a label giving valve timing and recommended clearances.

When it comes to what to do to Ford V8, Mercury and Lincoln Zephyr engines there is no end to it. We find all manner of special components available, even to special dash panels. Many Zephyr owners are installing Mercury engines, which give about the same performance with lower fuel and oil consumption. Only the "motor mounts" require alteration. It is thought unwise to bore a V8 to greater than Mercury bore— $3\frac{3}{16}$ in.—chamfering the piston top about $\frac{1}{16}$ in. if early blocks are used. Mercury gaskets can be used with 24-stud heads. Mercury blocks bore to $3\frac{5}{16}$ in. and 59A and later blocks to $3\frac{3}{8}$ in., while 59Z truck blocks will go to $3\frac{7}{16}$ in. after taking out the sleeves. Ford pistons are rather heavy but late-type four-ring are better than three-ring. The Zephyr can be bored .075 in. oversize, and .055 in. milled from the heads. Zephyr, or the stronger Buick valve springs are superior to Ford, but Buick springs call for machined valve guides and Knudsen spring collars.

Block "relieving" and engine balancing are undertaken to practically standardised arrangements. Navarro, Weiland, Offenhauser, Edelbrock, Meyer, Sharp and others specialise in dual manifolds, with and without heating, and Spalding in two-point, two-condenser, twin-coil ignition, for the Ford range of engines. 1949 Ford blocks can be square-ported to $\frac{1}{8}$ in. or $\frac{1}{4}$ in. (width and length). Pressurised fuel systems supplement the mechanical pump on many "hot-rod." $\frac{5}{16}$ in. dia. fuel lines, or at least $\frac{1}{2}$ in. dia. for methanol, are used. Pounden-Gerde and Wico magnetos are largely employed, but special coil-sets are more popular, whether for bent-eight, four-barrel or six-holers. To put the later V8 engine into a model-A or B frame a 1934 cross-



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Easy with that accelerator! This isn't a car where you put your foot down and *wait* for it to go faster. This is a car that you tell what to do. And it does it.

You thought you were getting into a comfortable family car. Well, so you are.

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There you are—much faster cornering than you'd expected—and no roll to notice. Safe as houses.

And what about the bumps that you remember on this road?

Nobody's mended them yet—they just got kind of lost on their way through the torsion bar suspension of this car.

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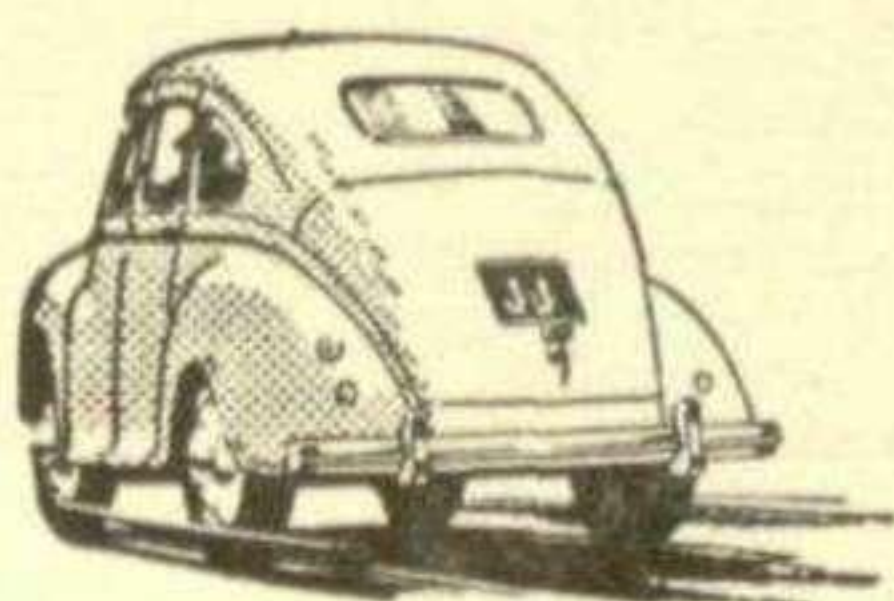
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member is welded in, or a 1932 member, but the latter is weaker and entails removing the engine to remove the transmission. The model-A or V8 universal joint can be used, with Pt. 484520 A outer cap and B 4513 inner cap. Transmission should be V8, with model-A or B rear end, or V8 rear end in 1932 frame. A 1932 or later V8 radiator is essential, in a 1932 model-B shell. It is easier to use a 1932 V8 chassis, as no alterations are necessary. Steering should be model-A.

The stroke of a V8 or Mercury can be increased by grinding or milling the Mercury crankshaft journals off-centre to reduce the diameter by $\frac{1}{8}$ in. New pistons are obviously required and Ford rods (21A-6200) and bearings (81A-6211) must be fitted. Engine speed will drop by 500 r.p.m. for each $\frac{1}{8}$ in. of added stroke. Unless a 1939 or later block is used, excessive machining of the crankshaft will be entailed. A $\frac{1}{4}$ in. extra stroke is obtainable by using a 1949 Mercury crank in any 1939-1949 block without any mods., using stock Ford mains and 29A Mercury rods. 1949 Mercury pistons or special pistons must be fitted. If the 1949 Mercury crank is "stroked" $\frac{1}{8}$ in. and 21A Ford rods are fitted, the stroke is lengthened $\frac{3}{8}$ in. With a 1949 Mercury shaft be sure to use the 1949 Woodruffe key; earlier shafts have larger keys. "Stroking" does not weaken the shaft, but it should be dynamically balanced. This method of obtaining greater swept volume and higher compression ratio is, of course, employed on Mercury engines by Allard in this country. In the States up to $\frac{1}{4}$ in. extra stroke is used occasionally.

Ford or Mercury blocks are relieved from valve pocket to bore by tapering to a depth of $\frac{1}{8}$ in. to $\frac{5}{16}$ in. and $1\frac{1}{8}$ in. or $1\frac{3}{8}$ in. dia. inlet valves fitted. On any 1946 or later block the heat riser passages may be ground out to $1\frac{1}{16}$ in. or $1\frac{1}{8}$ in. Gear ratios are rendered suitable for hot-rodging by using 1941 Zephyr gears, or if higher ratios are needed, 1946 Zephyr gears in 1939 or later Ford boxes, or Ford boxes back to 1937 if a 1939 lid is used.

Only the cluster gear, front main shaft and second gear need substituting. The 1941 Zephyr gives 2.33-to-1 low, 1.57-to-1 second, the 1946 2.12-to-1 and 1.44-to-1, compared to 2.82-to-1 and 1.62-to-1 for 1935-1940 V8 and Zephyr, and 3.12-to-1 and 1.77-to-1 for 1941 and later V8s. Ford axle ratios are 3.27, 3.54 and 4.11-to-1. Some special heads fit 21-stud blocks, including Evans and Meyers, and Cyclone heads alone permit the use of the 1937 in-block water pumps. Some of these heads give a rated compression ratio as high as 11.1-to-1. Moller Adams lists a wonderful inclined-o.h.v. head for use with all 24-stud Ford and Mercury blocks that is claimed to give 1 h.p. per cubic inch displacement on a compression ratio of 7.5-to-1.

From the foregoing it is clear that America takes "hotting-up" more seriously, so far as Bill Blog the baker and his mate the candlestick-maker are concerned, than we do in England. American readers will do well to study California Bill's publications, which tell you as much what to do to Chevrolets and Ford Sixes as to the other Ford models. I wonder, however, if it is worth all the trouble, or whether you wouldn't do better to order yourself one of Mr. Lyons' excellent "XK120" Super Sports Jaguars.

However, let us just see what they claim for all this "souping." A stock 1940 Mercury gave 90 b.h.p. at 3,500 r.p.m. With Navarro 9.25-to-1 heads power rose to 101 b.h.p. at 3,500 r.p.m., but decreased below 2,100 r.p.m. With these heads and a dual-carburettor manifold, generator now removed, 108 b.h.p. at 3,500 r.p.m. was realised. The torque peak moved from 1,900 r.p.m. to 2,350 r.p.m. Chevrolet and Ford Six engines are made to do 6,000 r.p.m., equal to piston speeds of 3,750 and 4,400 ft. per min., respectively. Fantastic speeds are claimed at the Lakes speed trials, for which safety-belt, ignition kill-switch and fuel cut-off are insisted upon. Roadster racing takes place in Southern

California between cars without flywheels and having quick-change gearboxes, locked axles, high-g geared steering and roll-over hoops. The roll-over hoops apart, it all comes back to what we have learned in Europe. Apart from supercharging and special fuels, nothing points to the power outputs necessary to achieve the speeds claimed in all-out sprints—is the answer in streamlining?

Superchargers are not generally available in the States suitable for Ford V8 engines and the McCulloch needs very careful rebuilding to get even 4 lb./sq. in. boost. Apparently the Spalding Brothers used a converted Mercedes-Benz supercharger on a 221 cub. in. V8 with Riley o.h.v. heads. With 12 lb. boost 132 m.p.h. was reached and a s.s. $\frac{1}{4}$ -mile in 12.5 sec. claimed. Barney Navarro is said to have got 237 b.h.p. at 5,350 r.p.m. from a 239 cu. in. V8 with converted G.M.C. supercharger, 8.75-to-1 heads and Hastings 14-225 sparking plugs. This gave a speed of 139 m.p.h. Even using methanol the engine still overheated and in its final form had size 63 jets in its four carburettors, passing "Solvex 105" fuel. Don Blair is reported to use the Spaldings' Mercedes blower on a Mercury engine and to get 141.06 m.p.h. in an unstreamlined roadster.

These speeds from very highly-tuned, extensively modified *supercharged* engines are rather more compatible than the 150-190 m.p.h. runs we are expected to attribute to unblown stock-style L-head engines. I have analysed the "hot-rod" position in some detail, so that if ever a normal-looking model-A Ford coupé beats your British sports car from the traffic-lights you will know the reasons why. We will let California Bill have the last word. He tells us that a very light V8 roadster with a "full race" camshaft grind can pull a 3.27-to-1 top gear and will peak at 6,800 r.p.m. in first gear, 6,200 in second and reach 4,800 to 5,200 r.p.m. in top "depending on the rest of the set-up." However, it "idles rough!"

W. B.

WEEK-END WITH A SUNBEAM-TALBOT "90"

THE recent announcement of the conversion of Rootes Securities to a public company and of its past year's earnings totalling £1,143,000 focusses attention on its products, of which the Sunbeam-Talbot "90" is by far the most interesting from the sporting driver's point of view.

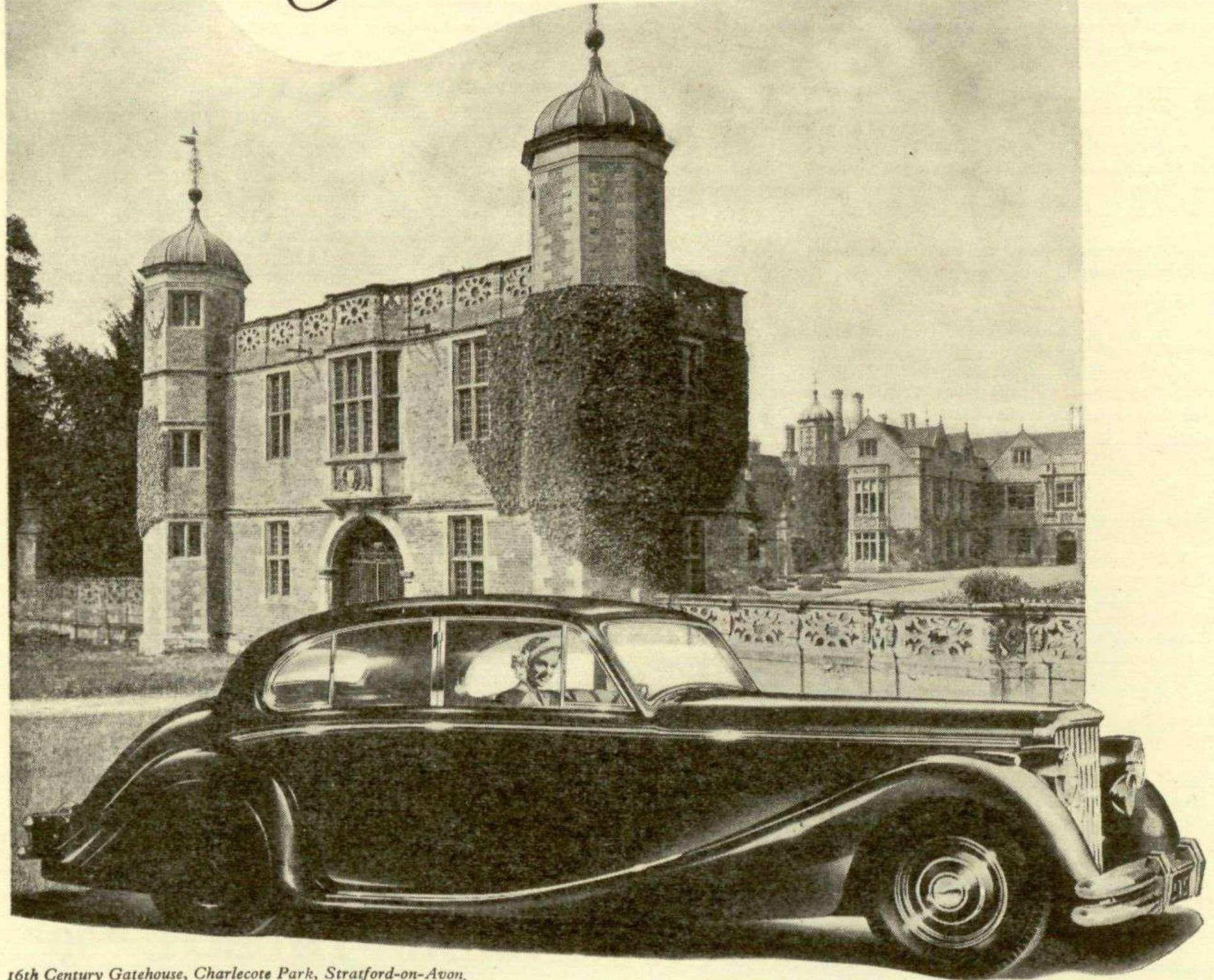
Recently we covered over 200 miles in one of these cars and were favourably impressed with the silent, refined running and the comfort and convenience of the appointments of this handsome-looking saloon. The detail aspects of the car's bodywork and equipment are the same as those of the Sunbeam-Talbot "80" which was dealt with in MOTOR SPORT last September, but whereas that car has a 63 by 95 mm., 1,185-c.c. engine, the "90," also a push-rod o.h.v. four-cylinder, is of 75 by 110 mm., 1,944-c.c., and an efficient unit at that, developing 64 b.h.p. at 4,100 r.p.m. Consequently, in spite of the car's appreciable weight, 26 $\frac{1}{2}$ cwt. unladen, the performance is

brisk, with an absolute maximum of 77 m.p.h. and 57 m.p.h. obtainable in the 6.41-to-1 third gear. Top gear is 4.3 to 1 and tends to snatch running below 6 m.p.h. The car is usually started in second gear (10.62 to 1) and at 20 m.p.h. one changes into third, the smooth acceleration continuing to 40 or more m.p.h., when one normally selects top. The silent running of the car, its excellent Lockheed brakes and its generally comfortable riding impart a pleasing sense of luxury and the steering, which is light once the car is really moving, allows the driver to swing through bends with ease, while the castor action is useful after rapid negotiation of acute corners. There is a tendency to pitch at times, but the $\frac{1}{2}$ -elliptic non-independent suspension gives generally comfortable riding, the deep leather upholstery further absorbing any shocks or tremors transmitted. There is a slight sense of top-heaviness when cornering fast, but generally the Sunbeam-Talbot controls well. The wheel

and pedals are well-placed and the engine is as untroublesome as it is inaudible and does not "pink" on Pool. It starts easily from cold, thanks to the self-starting carburettor. That the car has good ground-clearance and an exhaust system which rough-going does not damage we discovered when negotiating parts of the Icknield Way in the course of covering the Cottingham Trophy Trial. Full marks are awarded to the pleasant driving position, easily accessible capacious rear locker, effective Clayton heater, H.M.V. radio, lever-controlled quick-action front windows, and adjustable squab of the driver's seat. The doors were, however, disinclined to shut properly unless slammed very hard. The remarks relating to the "80" otherwise apply to the "90," which offers easy speed and modern convenience in attractive combination, and that notable refinement of running which has always been a feature of Sunbeam-Talbot cars.

Continued on page 533

Jaguar



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The Jaguar is renowned throughout the world for its unique combination of elegance and high performance. At 5 or 95 m.p.h. the $3\frac{1}{2}$ litre heralds its approach with the merest whisper; and in the deep-seated comfort of its soft leather upholstery the driver has the magnificent feeling that he could steer this car through the eye of a needle. The $2\frac{1}{2}$ litre is relatively no less remarkable. And the XK Super Sports holds the world's record of 132.6 m.p.h. for a standard production car. Truly the Jaguar is a car of cars.

THE FINEST CAR OF ITS CLASS IN THE WORLD

THE HARROW C.C. COTTINGHAM MEMORIAL TROPHY TRIAL



W. H. Waring's
Dellow Performs
Outstandingly in
Foggy but
Effective Classic.

[MOTOR SPORT copyright.]

WINNER OF THE COTTINGHAM TROPHY for best performance by a member of the organising club, A. G. Imhof smiling happily as he ascends the long climb known as Section 4. Note the angle of the back wheel, independent rear suspension now being employed.

IN fog conditions on November 19th, the Harrow C.C. ran off a most effective and stiff trial, the sections, mostly long slippery grass slopes, subdivided and marked accordingly, and all located within an economically small radius; 54 entries were received and the event counts towards the B.T.D.A. "Star." From the "Lambert Arms" at Aston Rowant a run of two miles brought cars to the first section, which had ten sub-divisions. Before we arrived Clayton's Ford Ten-engined Clayton, Phillips' Fairley, Appleton's Allard and Faulkner's Mercury had climbed clean. Many failures followed, but McAlpine made a grand ascent in his "oversize" Mercury-engined Allard, Oliver acting as navigator, Waring treated the hill with contempt, his Dellow's blower whining defiantly, and Imhof's central-engine Ford Ten Special, now with swing-axle independent rear suspension where originally he had no springing at all, was also fast and determined. Collins made a gallant attempt, his Dellow failing in the last section, where Price's V8-Price also stuck. Smith's M.G.-Ford Ten had a fluffly engine to offset his girl-passenger's bouncing tactics, but he got to Section 8, as did Mead's Allard, the blown Buckler, its body now conforming with F.I.A. sports-car requirements, and Cocker's H.C. The next two hills were of similar

type, but shorter and steeper. The first of them defeated every competitor and up the next, curving-left-hand ascent, where the sun shone only at the top, Waring pointed his success by getting his Dellow over the summit, whereas Imhof stopped in the last section.

A return was now made to the first hill, but near the top drivers had to divert from the former course and climb a steep grass bank. Day's Mercury, Appleton's well-handled Allard, Smith's carefully-handled but fluffly F.M.B. Ford, McAlpine's Allard, Collins' Dellow and Price's Price managed it and Imhof's Special had plenty in hand, while Waring, now obviously a likely winner, came up perfectly, rocking the Dellow's wheel from side to side. Mead's Allard and Ginn's Ford V8 just made Section 8, and Readings' Regent, driver as well as passenger bouncing furiously, stopped just short of it, as did Macklin's Ford-Ten-Austin, and Lawson's H.R.G., in spite of doing peak revs., after which Pentony just persuaded his Vauxhall-Morris into Section 8. After welcome hot soup at the "Lambert Arms," (racing-driver Geoffrey Daybell used to be manager and this was a popular starting point for pre-war M.G.C.C. trials) drivers set out in the fog to tackle six more sections, Crowell being cut out to make up time. At Pyrton many competitors

could not so much as leave the start, but 23 cars got up. Willis was a determined failure in his B.M.W., but a Jensen just would not look at it. After this three more of the morning's hills were re-tackled and then came Section 11, where a steep hump at the very bottom brought practically every car to rest, except the Imhof, which reached Section 4 and Waring's Dellow, which, surprisingly, didn't get quite so far. The last Section, a long, chalky haul, "failed" all but five competitors. So ended a well-run event, which finished not too late and which had not cost competitors too many coupons. Waring's Dellow deservedly made best performance and went back to Bristol in state on a trailer behind a Jaguar saloon. Clerk-of-the-Course Tett announced the results soon afterwards:—

BEST PERFORMANCE AND COMMITTEE CHALLENGE CUP: W. H. Waring (1,172-c.c. Dellow), 23 marks lost.

COTTINGHAM MEMORIAL TROPHY: A. G. Imhof (1,172-c.c. Imhof Special), 31 marks lost.

CHALLENGE CUP: R. W. Phillips (1,486-c.c. Javelin-Fairley), 32 marks lost.

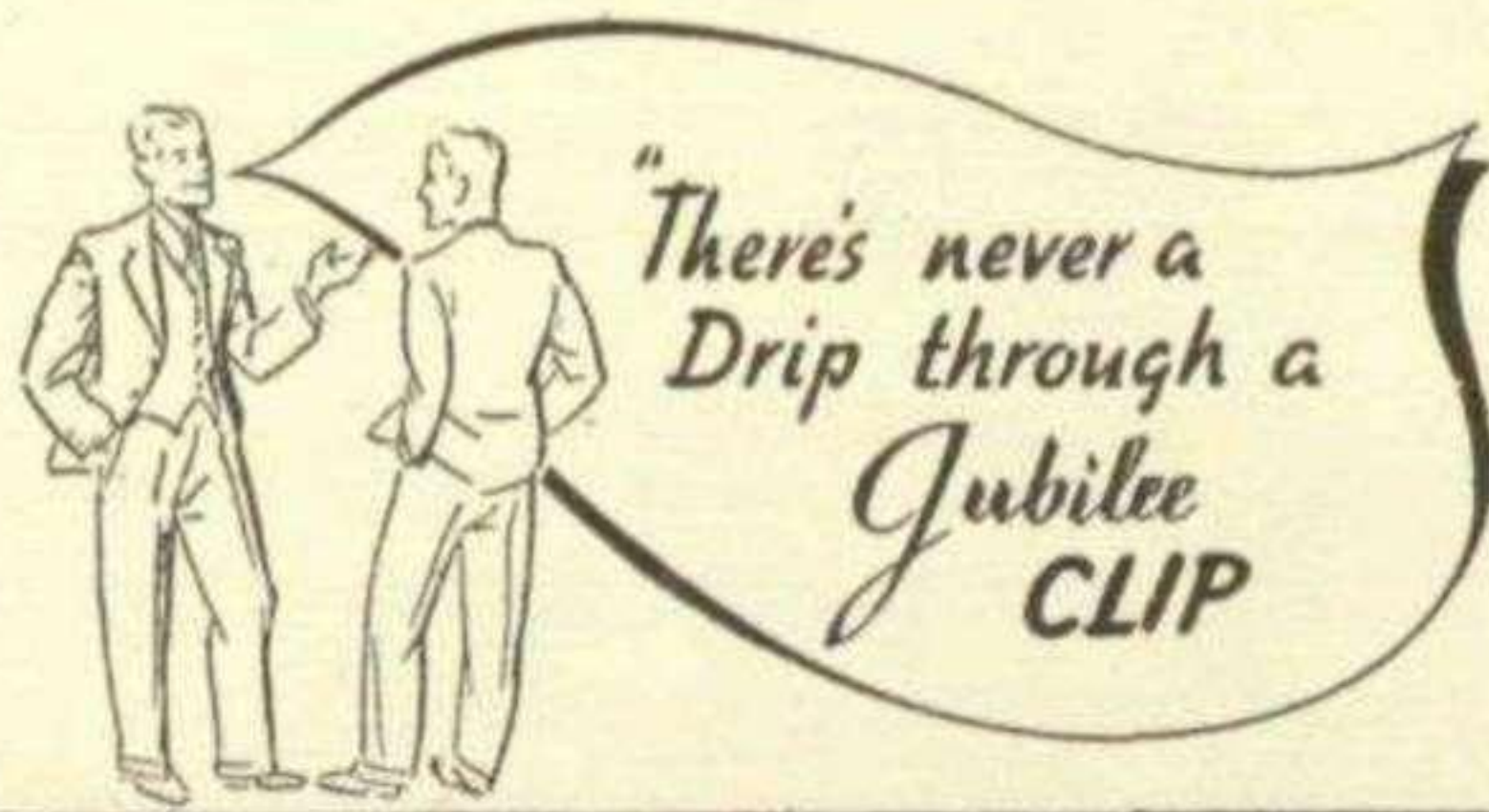
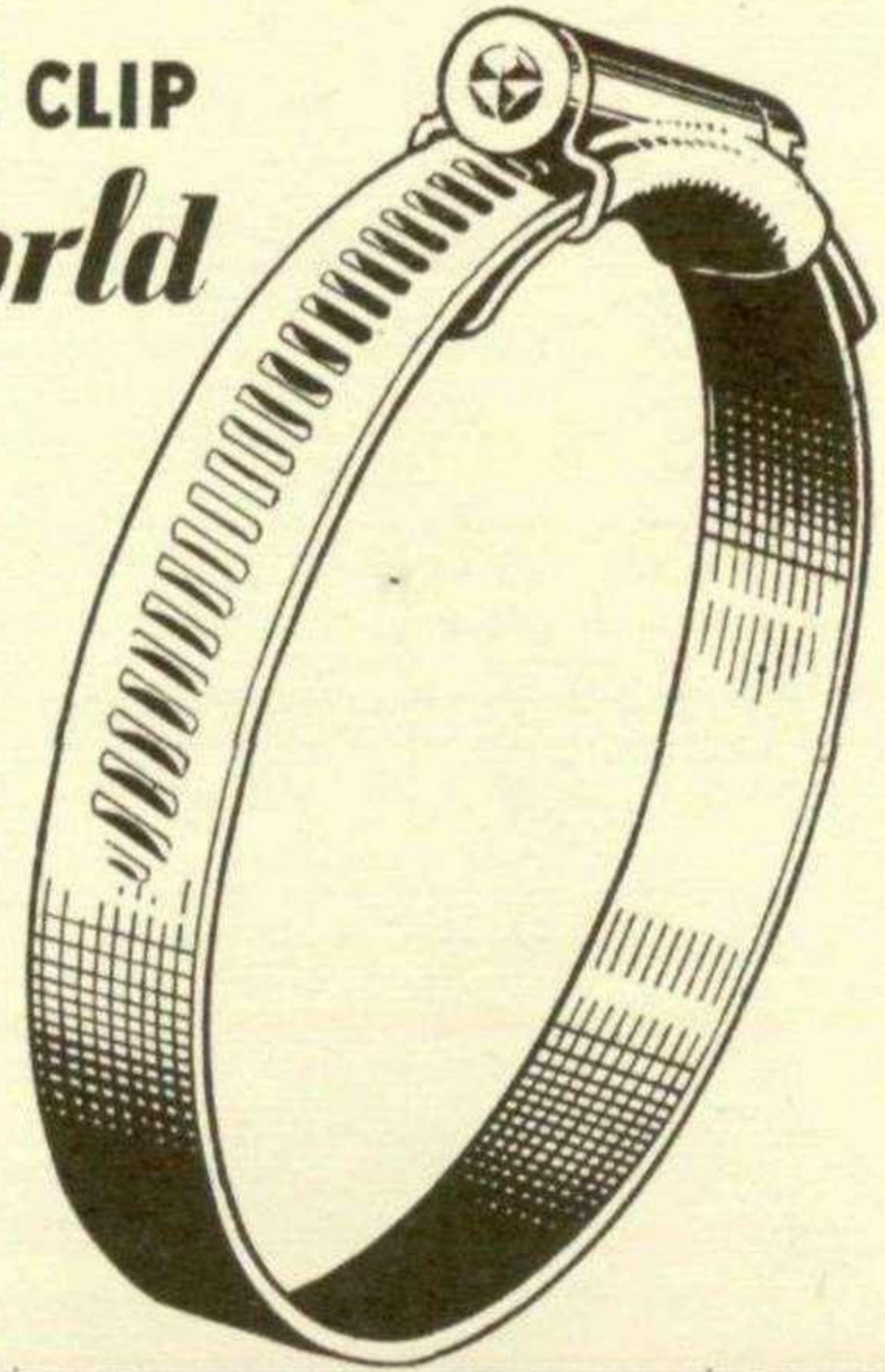
DRYDEN CUP: D. W. Price (3,922-c.c. Price Special), 35 marks lost.

No First-Class or Second-Class awards were won, but the organisers sportingly gave souvenir "Firsts" to Faulkner (Mercury) 38 marks lost, Appleton (Allard) 41 marks lost and Clayton (Clayton), 44 marks lost, and a souvenir "Second" to Collins (Dellow), 47 marks lost.

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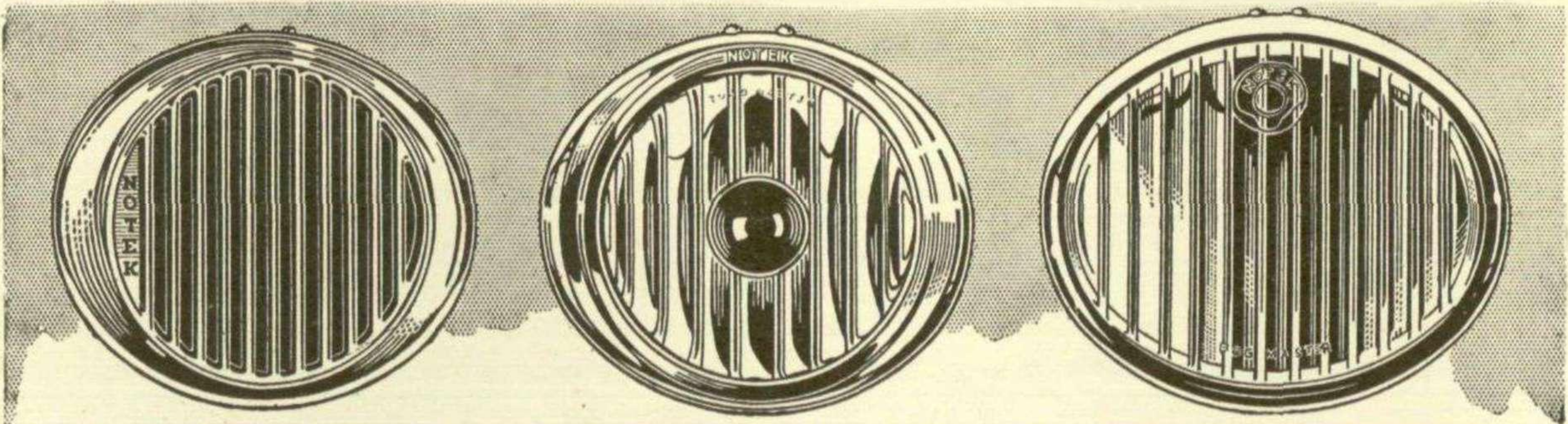
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A LE MANS CAR ON THE ROAD

An Exhilarating Day's Motoring in Peter Clark's 1½-litre H.R.G.

HISTORY, they say, repeats itself. Certainly in 1939 Peter Clark invited us to borrow his Meadows-engined "Le Mans" H.R.G. for a brisk day's winter motoring and last month, ten years later, he invited us to do likewise with the Singer-engined 1½-litre H.R.G. that he drove at Le Mans and Spa this season.

It will be recalled that at Le Mans Clark's car suffered from overheating due to a radiator leak, that Scott's car also overheated, but that Thompson's car won the 1½-litre class at 70.7 m.p.h., finishing eighth in general classification. In 1939 Clark's car had averaged 67 m.p.h. in winning the 1½-litre class at Le Mans. The H.R.G. team then went on to Spa, where Thompson's car, which had received no attention since the Le Mans 24-hour race, won the 1½-litre class of this further 24-hour race, at 64.5 m.p.h., Scott's car being third, Clark's fourth in the class, these H.R.G.s taking the coveted Team Award.

That, then, was the background of the car we tried recently on the road and some technical details of which were published in *MOTOR SPORT* last June.

Compared with the 1939 car, Clark's present "Le Mans" H.R.G. is distinctly spartan. A scuttle-hump and Perspex screen adequately shield the driver, but if a passenger is carried he or she receives the full blast of air and the uninitiated get a greatly exaggerated sense of speed! The cockpit presents an essentially business-like appearance without unnecessary complication. You sit in a comfortable fixed driving seat with side pieces to hold you firm and the pedals are small and fairly close-set, the clutch pedal slightly cut away to give foot room. The steering wheel, which takes the front wheels from one generous lock to the other in 1½ turns, occupies your lap and the view ahead is unbroken. Beneath your legs there is a tap which cuts off the fuel supply or brings in a three-gallon reserve supply from the 17-gallon rear tank and beside it is the handwheel brake-adjuster. Beneath the passenger's legs is a fire-extinguisher and the turnbuckles for more serious adjustment of the brakes.

The mottled-metal facia carries a large Jaeger rev.-counter, with clock inset, reading to 6,000 r.p.m., but possessing "reminders" at 4,000, 4,500 and 5,000 r.p.m. To the left of this are the Smith's oil and water thermometers, oil gauge and ammeter, a lap-scorer, and pull-out switches for the magneto, choke, starter, head, side and tail lamps, the two fuel pumps, and the green "recce" lamp which shines pit-wards from the off side of the scuttle. A large switch on the edge of the scuttle by the driver's right hand puts out the headlamps, which must have been convenient at the Le Mans pits, where headlamps are expected to be switched off when a car comes in. There is a horn-push in the wheel centre, sounding a very "polite" hooter, a normal Lucas dashlamp, and a control on the extreme

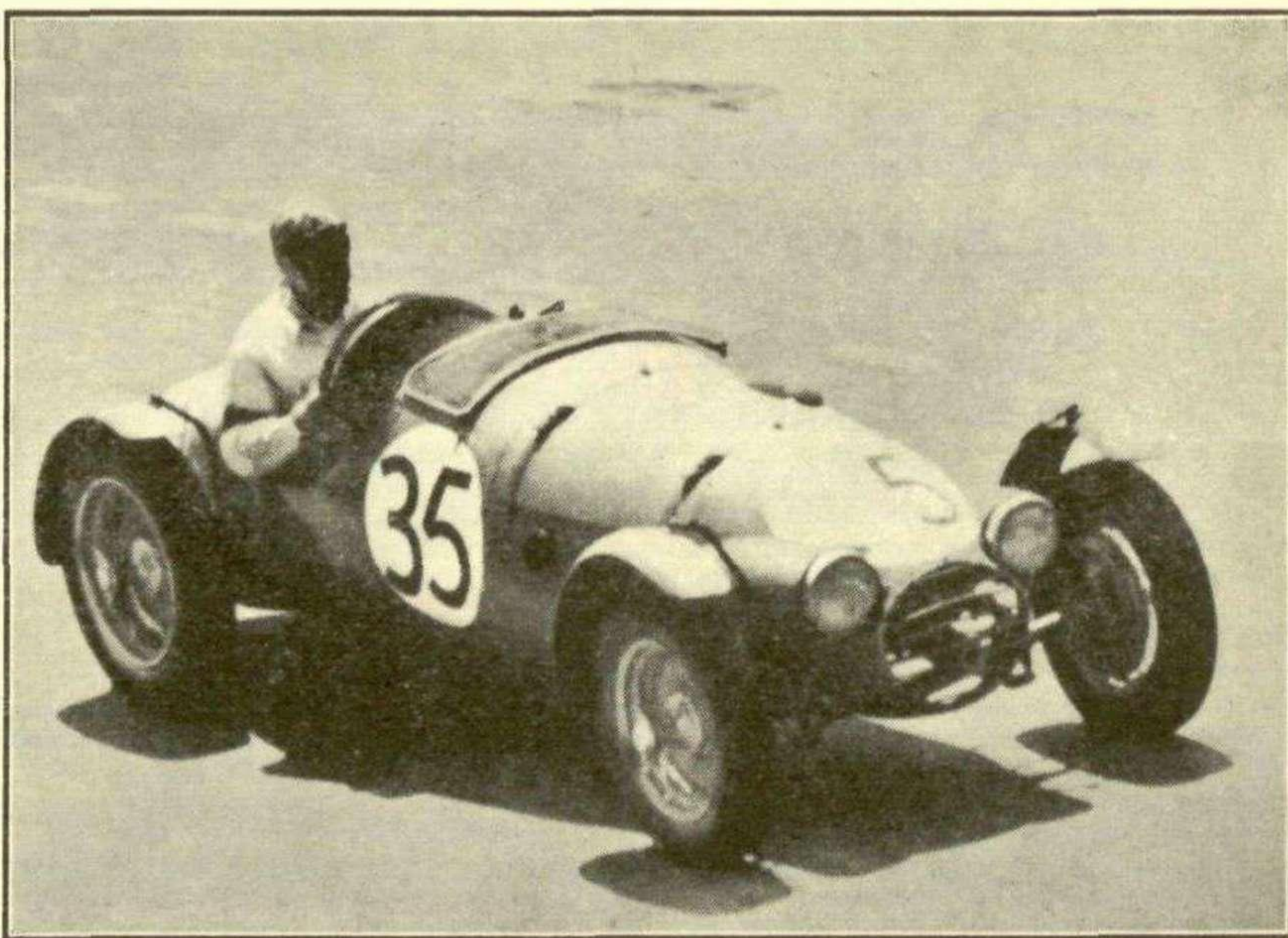
left of the facia for lowering reserve oil from a small under-bonnet tank to the sump. There is no hand ignition control or hand throttle. The substantial ball-mounted central gear-lever is conveniently remote from the gearbox and outside it the fly-off handbrake is usefully to hand. That is the sum total of the equipment in the "office" of the "Le Mans" H.R.G.

The car had its Le Mans' axle-ratio of 3.7 to 1 when we took it over, but was running on 5.25 by 16 tyres instead of the 18-in. tyres used for racing, resulting in a speed of just over 21 m.p.h. per 1,000 r.p.m. in top gear instead of 23 m.p.h. It was running on a 60-30-10 methanol-benzole-petrol mixture, the compression-ratio being 10 to 1, and we were told that we could expect a consumption of at least 18 m.p.g.

From the very commencement this compact, business-like H.R.G. is impressive. The engine commences easily and has an exhaust note which belies its outwardly-normal appearance, although this is by no means objectionable when motoring through towns. The gear change is delightful providing the clutch is fully depressed, third flicking in with a touch of throttle when double-declutching, while the lower ratios produce an immensely satisfying whine, high-pitched and purposeful in third gear, lower-pitched when accelerating in second. This gear-noise, and a hint of straight-cut gears in the back axle, brings joy to those who associate such music with the "real motor-car." In contrast the engine is virtually inaudible.

Acceleration is clean and impressive, although until we "put a watch on the rev.-counter" it was impossible to assess it, for the fairly high gear ratios preclude any "hit-in-the-shoulders" effect. The actual ratios are 11.34, 7.16, 4.63 and 3.7 to 1 and we soon found that, although the H.R.G. is perfectly docile in towns in top gear and engaging second gear is seldom necessary (indeed, to use second at low speed magnifies snatchy running due to the typically H.R.G. accelerator), conversely it paid to keep up the revs. on the open road so that third gear was frequently selected before fast corners to maintain speed out of them and this ratio is, indeed, in use for considerable periods.

Encountering a weighbridge at Hemel Hempstead we drove the H.R.G. on to it. Result—14 cwt. exactly, without occupants but with 10 gallons of fuel. Out on the open road towards Royston the car proved to have a typically high-g geared sense of "unburstableness," cruising contentedly at 3,500 r.p.m. (74 m.p.h.). The steering is very light, with moderate castor-action, and corners could be taken as rapidly as you cared to drive round them, with no protest from the tyres or deviation of the tail. Handling qualities can be dismissed as typically H.R.G. So can the suspension, which rendered the car distinctly lively on rough roads, the back wheels in particular having a seemingly busy time and the tail of the car sometimes displaying a desire to dance from side to side, which quick wrist-movement of the steering wheel effectively dissuaded. You are



[MOTOR SPORT copyright.]
SUMMER STUDY.—One of the H.R.G.s caught at speed in this year's Le Mans 24-hour race. At Spa they won the coveted Team Prize and in the accompanying article we give our impressions after driving Peter Clark's car on the road.

conscious of the ratio of sprung to unsprung weight in this light motor-car. Indeed, at speed along the less-well-cared-for secondary roads this lively riding, allied to considerable movement of the fascia panel and the juddering of the steering column, offered exhilarating motoring on this November afternoon that we shall not easily forget and proved that when Peter Clark goes motor-racing he does so in no "steel-hand-in-velvet glove" manner. Personally, we enjoyed it immensely, but the thought lingers that for habitual use this car might be more suited to those who have had their appendix removed, than to those who have not.

Along the straight road towards Newmarket we took some stop-watch readings. Standstill to 5,000 r.p.m. in second gear (47 m.p.h.) occupied 10.0 sec., and standstill to 4,000 r.p.m. in third gear (67.4 m.p.h.) 17.6 sec., the engine being taken to 4,000 r.p.m. in first gear and to 5,000 r.p.m. in second gear on the latter occasion. It should be emphasised that our driving methods were fairly casual and unrehearsed and no doubt Clark would record better times. We concluded these experiments by clocking the car from a steady 3,000 r.p.m. to 5,000 r.p.m. in second (32.8 to 47 m.p.h.), the sort of acceleration you use out of slow corners, and the time occupied was 5.1 sec. The engine is smooth and "pink-free," and never "ran-on" and a harshness felt at 4,000 r.p.m. smoothed out before

4,500 r.p.m., peak power being developed at 4,800 r.p.m. Normal oil pressure was 80 lb./sq. in., water temperature 70 degrees C., and oil temperature 50 degrees C.

The maximum achieved in top gear was 4,100 r.p.m., or nearly 87 m.p.h., and in third gear we reached 5,000 r.p.m., equal to 85 m.p.h. It must be remembered that a passenger appreciably increased the frontal area; at Spa we believe 103 m.p.h. was reached, on the larger wheels.

Another H.R.G. feature is the brakes, which require appreciable pedal pressure to secure effective retardation, although in fairness it should be said that the driving position which was designed round Clark and Morris Goodall found us with legs too abbreviated to prod the pedals properly, even the accelerator being somewhat uncomfortable to operate.

Before the light faded we enjoyed a good look round the H.R.G. The bonnet panel is easily lifted off, as two diminutive finger-holds are provided. The Singer engine has Champion plugs, two 1¼-in. S.U. carburettors beneath a "power bulge" on the near side, shielded from the exhaust system, and a Lucas vertical magneto. The fuse boxes are numbered and spare plugs accommodated on the off side of the bulkhead. The two S.U. fuel pumps live by the off-side side-member, feeding via flexible piping, there are extra small-bore water lines from the whittle-belt-driven water pump on the near side to the water off-take on the off side and single bayonet filler

caps close the valve cover oil filler, the auxiliary oil tank and the big header tank of the special Gallay radiator. A big Tecalemit ribbed oil cooler-cum-filter is mounted transversely in front of the sump and the fuel system incorporates an aero-type filter. There is a big air-scoop for each brake, the cam-levers protruding through the gauzes of the front ones, a half under-tray, and a Brooklands-type silencer beneath the centre of the car. The tail of the car is very neatly conceived, the spare wheel laying in it horizontally; twin quick-action fillers grace the fuel tank. The clever frontal aspect can be seen in the accompanying photograph.

As the winter dusk developed we hurried back to Monaco, Ltd., where the H.R.G. is garaged, the headlamps making night as day when they could be used; we were reminded that this is a Le Mans car because no dipping device is fitted and consequently we were plunged into inky darkness whenever we had to extinguish in response to the frenzied flashings of on-coming drivers! In due course, however, Watford was reached, two chilly but wide-awake mortals indebted to Peter Clark for a very enjoyable experience.

As a new team of new Le Mans cars is planned by Peter Clark for next year, this year's team cars are for sale. We understand that the price of the car we tried is £1,250; the sounds and smell alone are worth the money.—W. B.

LODGE

SPARKING PLUGS

The choice of the winners of 1949 International Races

- 1ST BRITISH R.A.C. GRAND PRIX
Baron E. de Graffenried—Maserati
- 1ST FRENCH GRAND PRIX
L. Chiron—Talbot
- 1ST BELGIAN GRAND PRIX
L. Rosier—Talbot
- 1ST SWEDISH GRAND PRIX
B. Bira—Maserati
- 1ST B.R.D.C. SILVERSTONE RACES
International Trophy A. Ascari—Ferrari
Production Car Race L. Johnson—Jaguar
- 1ST BUENOS AIRES GRAND PRIX
A. Ascari—Maserati

- 1ST SAN REMO GRAND PRIX
J. M. Fangio—Maserati
- 1ST ALBI GRAND PRIX
J. M. Fangio—Maserati
- 1ST JERSEY ROAD RACE
F. R. Gerard—E.R.A.
- 1ST BRITISH EMPIRE TROPHY
F. R. Gerard—E.R.A.
- 1ST GOODWOOD (April) MEETING
Richmond Trophy... .. R. Parnell—Maserati
Lavant Cup D. Folland—Ferrari
- 1ST GOODWOOD (Sept.) MEETING
Goodwood Trophy R. Parnell—Maserati

Also fastest time of the day in the International Hill Climbs
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FIT LODGE PLUGS FOR FINEST ENGINE PERFORMANCE

"THE ETERNAL SECOND.' I wonder in how many races Giradot finished second! He certainly won Paris-Boulogne and the Gordon-Bennett race in 1899, but he finished second in so many more races that he was dubbed 'The Eternal Second.' Giradot always interested me by reason of this particular peculiarity in his career. . . . In the great Paris-Berlin race he was Fournier's terror. Only a few minutes to the bad, he chased Fournier all the way through, but the few minutes sufficed, and Giradot finished in his usual place, namely, second."

Thus Charles Jarrott, writing, as will have been gathered, about "The Eternal Second," alias Girardot (I prefer to spell his name that way and so, I think, did he); and, like Charles Jarrott, I too have often wondered several things about his reputation in this respect. In the first place I have speculated why, if Charles Jarrott really wondered in how many races Girardot had finished second, he did not count up and see. And in the second place, I have wondered whether, if Jarrott had counted up, he would have found that the facts really justified the soubriquet. Thus wondering, I resolved to count up myself.

Of course, I cannot guarantee the accuracy of the answer, because I do not know for certain in how many races Girardot started, but if we trace his performance in every race recorded by Gerald Rose in his "Record of Motor Racing," the possibility of error should not be large. From this, then, it seems that in 1897 he started in Paris-Dieppe on a 6-h.p. Panhard and finished sixth in his class, sixteenth in the general classification. In 1898 he started in Paris-Bordeaux and did not finish, and in Paris-Amsterdam-Paris scored his first "second," on an 8-h.p. Panhard, the first type fitted with wheel steering. In 1899 he was again second in Nice-Castellane-Nice, in Paris-Bordeaux he was, most irregularly, third, and in the Tour de France, most properly, second. He did win Paris-Boulogne that year, as Jarrott records, and his was also the first of the cars in Paris-Ostend, although on that occasion his 12-h.p. Panhard was, rather indecently, beaten by a couple of De Dion tricycles.

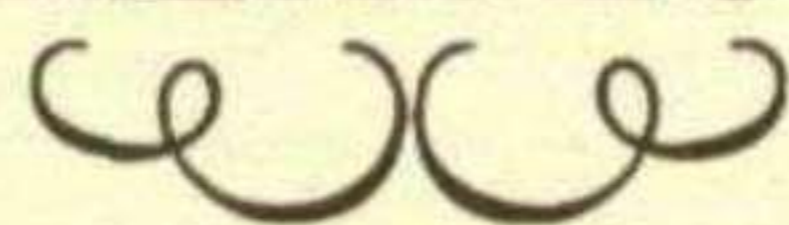
In 1900 he was fifth in the Circuit du Sud Ouest and seventh in Nice-Marseilles, he was second in the first Gordon-Bennett race from Paris to Lyons, and did not finish in the big race of the year, Paris-Toulouse-Paris. In 1901 he was second in the Grand Prix de Pau, and although he won the Gordon-Bennett Trophy in the course of Paris-Bordeaux, he was no higher than eighth in his class and tenth in the general classification. In Paris-Berlin he was second again, in spite, as Jarrott remarks, of being "the terror," with his 40-h.p. Panhard, of Fournier and his 60-h.p. Mors.

In 1902 for the first time he deserted Panhard and started in Paris-Vienna on a 60-h.p. C.G.V., made by himself in conjunction with Charron and Voigt, which, however, failed to finish, although he ran fifth with it in the Circuit des Ardennes later in the season. The next year he again failed to finish in Paris-Madrid, but just to show that his

SIDESLIPS

by

"BALADEUR"



hand had not altogether lost its cunning, was second in the Circuit des Ardennes. And his last appearance was in the French Eliminating Trials for the Gordon-Bennett race in 1905, when his car had a difference of opinion with a telegraph pole, threw Girardot out and tore off its front axle as well as several other pieces. Girardot survived this alarming experience, but he seems to have given up racing after that.

Analysed, all this adds up to the fact that, according to Mr. Rose's *Record*, Girardot started in 20 major races, and, as far as the general classification is concerned, he won two of them, or 10 per cent. In no less than seven of them, or 35 per cent., he was second; in one (5 per cent.) he was third; in five, or 25 per cent., he was unplaced; and in an equal number he failed to finish. Merely arithmetically this is, in my opinion, a very remarkable result; and when one adds to the mere arithmetic the fact that in the three years 1898, 1899 and 1901 he was second in the great race of the year—Paris-Amsterdam-Paris, the Tour de France and Paris-Berlin—one is, I think, forced to the conclusion that Girardot's soubriquet of "The Eternal Second" was well earned.

The record of another driver who just overlapped in point of time with Girardot, however, was, it seems to me, even more remarkable. Writing in 1906 of the Gordon-Bennett race in Germany in 1904, Mr. H. Massac Buist remarked: "The day was notable also for the first appearance of a really important character of [sic] Victor Lancia, the Italian destined to make the most lasting and striking impression of any racing motor-car driver." Returning to the subject on the same occasion, but in connection, this time, with the 1905 race in the Auvergne, Mr. Buist elaborated this character sketch as follows:

"But there was one figure that attracted more attention than any other throughout that day—the figure of a big, burly Italian, with bright eyes and a dashing manner, mounted on a superb black car that was capable of leaving anything else on the road 'standing.' This was Lancia, who gained so rapidly on those in front of him, that at one period his car was running 13 minutes ahead of Théry. As he swept past the various points of the course time after time, it was plain that France had no driver to put in the field comparable with him, nor perhaps a car that could stand such handling. In taking curves or corners Lancia scarcely drew out his clutch, yet in entering controls the manner in which he brought his car to a standstill on the very line without abusing his tyres was a lesson that Baron de Caters and others would do well to take to heart. So astonishing was his performance that the

usual remarks, 'I knew he would be killed,' were of course made when he failed to turn up on the third lap, owing to nothing more serious than a stone having started a leak in his cooler, and the engine having seized before he could reach a spot where a spare radiator was in waiting. True, Lancia does not allow any margin for accidents, if one may use the term, but his skill is so extraordinary that there is no need for him to do so. . . . Lancia has all Théry's fine feeling in the handling of his car in addition to Jenatzy's dash. The only lesson he has to learn is that when he is leading by half-an-hour or so it is scarcely worth while to take every risk, but to reduce the proportion of chances taken in relation to the extent of the lead that has been obtained."

A more glowing description of a driver could hardly have been given even of "the great little man," Tazio Nuvolari in his heyday, and Nuvolari has had his share of successes. Without attempting an exhaustive catalogue, he won the French Grand Prix in 1932, the Italian Grand Prix in 1931 and 1938, the German Grand Prix in 1935, the Targa Florio in 1931 and 1932, the Monaco Grand Prix in 1932, the Grand Prix d'Endurance in 1933, the Mille Miglia in 1930 and 1933, and the Tourist Trophy in 1930 and 1933. With this record in mind, let us look at that of Vincenzo Lancia, the man who, in 1906, had made, "the most lasting and striking impression of any racing motor-car driver."

His first appearance in a big race, as far as I know, was in Paris-Madrid, when he failed to reach Bordeaux. Still, there was nothing particularly remarkable in that; his 24-h.p. F.I.A.T. light car was a comparatively untried type, and many more experienced drivers were eliminated in the first stage of Paris-Madrid. At his next appearance, in the 1904 Gordon Bennett race in Germany, there was again nothing very spectacular about his performance. The 75-h.p. F.I.A.T.s in that race, which were curious-looking cars, with the radiator set so far back that it was about half-way between the hub and the back of the front wheel, were nothing like so fast as the 80-h.p. Richard-Brasier, the 90-h.p. Mercédès or the 100-h.p. Turcat-Méry. Cagno, who alternated between driving, with considerable verve, in races, and acting as chauffeur to the Queen Mother of Italy, surely an unsurpassed feat of versatility, was fourth for two laps before tyre troubles set him back, but Lancia never got higher than eighth, and finished in that position.

At the end of the season there came his one and only win, in the Florio Cup race over the Brescia circuit. But this was at the time a relatively unimportant race, and Lancia's victory was not an altogether satisfactory one, as Teste, on a 90-h.p. Panhard et Levassor, actually made fastest time, and only lost the race, by a few seconds, by being penalised three minutes for taking on petrol in the control at Mantua.

However, it was in 1905 that the real tragedy of Lancia as a racing driver began. The 110-h.p. F.I.A.T. of that year was a very different car from the 75-h.p. of 1904, fully able to compete with anything that could be set against it. We

have already seen the sort of impression that Lancia as a driver made on Mr. Massac Buist during the Gordon Bennett race in the Auvergne. In sober fact, he covered the first lap of the difficult mountainous circuit in 1 hour 34 minutes 47 seconds, at 52.6 m.p.h.; throughout the race nobody else was able to get as low as 1 hour 40 minutes, and at half distance Lancia was leading by 13 minutes all but four seconds. But on the penultimate lap he went out with a stone through his "cooler," Théry went on to win the race on his Richard-Brasier, and Nazzaro and Cagno, the other two F.I.A.T. drivers, as if to show the reliability of their cars when the Lancia hoodoo was not on them, finished second and third within just over a couple of minutes of each other.

In the Florio Cup race in September, the Itals were definitely faster than the F.I.A.T.s; either Fabry or Ceirano on one of them made the fastest lap, and Lancia finished third, having never been higher than that position. But the Vanderbilt Cup Race in October was a typical example of Lancia's misfortunes. The race was over 10 laps of a circuit on Long Island, Lancia was easily fastest over the first lap, in 23 minutes 49 seconds; cut this time down on the second to 23 m. 31 s., on the third to 23 m. 25s.; and on the fourth lap set up the lap record in 23 m. 18 s., at 72.8 m.p.h. At the end of the seventh lap, he had established a lead of twenty minutes over Heath, who was running second on a Panhard. And at this point disaster stepped in, in typical Lancia manner. "During the eighth round," says Gerald Rose, "he was run into from behind by Christie, and his back axle was so much damaged that he lost three quarters of an hour in repairs. This accident, much discussed after the race, seems to have been due to an error of judgment on Lancia's part. Christie's engine had been misfiring during most of the race, and his car was going slowly. Lancia was refilling at a supply station at Willets Avenue, and was just ready to start on when he heard the distinctive exhaust of the Christie car in the distance. Wishing to get off before Christie passed him—the American car was not easy to pass, as it swung considerably from side to side—he pulled out into the road and started away; but on this lap it happened that Christie had his engine running properly; and was going faster than in the earlier part of the race. Before the Italian had realised how fast his rival was travelling, the latter had reached him and failed to get clear; the Christie front hub cap hit Lancia's back tyre, and the American car shot into the air, breaking both back wheels in the fall. The blow damaged Lancia's car and for the second time he lost a race which was in his hands."

The 1906 season opened with the Targa Florio for "stock cars," and in it Lancia started alone on a F.I.A.T., which does not appear to have been as fast as the Itals. Nevertheless he was second at the end of the first lap, fell back on the second with a leaking petrol tank, and went out on the third with a cracked cylinder. His ill-fortune to date did not prevent his starting favourite in the first Grand Prix at Le Mans in June, but on

this occasion he made one of his least typical performances. Although the F.I.A.T.s were obviously fast, and Nazzaro eventually finished second, Lancia was much less in the limelight than usual. On the first day of this two-day contest, Weillschott, the amateur driver of the third F.I.A.T., was faster than either Lancia or Nazzaro, and on the last lap, when he ran off the road, he was running third, while Lancia was no higher than ninth. It seems that he may not have been feeling his best, for on the second day he considered handing his car over to his mechanic. In the end he decided to carry on himself, and after a sound but unspectacular drive, finished fifth, which was the highest place he had ever occupied in the race. In the Vanderbilt Cup Race at the end of the season, too, nothing so spectacular happened as in 1905; Wagner on a Darracq led from start to finish, the fastest lap was put in by Tracy on a Locomobile, and Lancia finished second, having been in that position since the fourth of the ten laps.

Of the three big races in 1907, the Targa Florio was for cars with a maximum cylinder bore of 130 mm., the Kaiserpreis in Germany required a maximum engine capacity of 8 litres, and the Grand Prix was run on a fuel consumption basis; and under each of these several conditions, F.I.A.T. produced unquestionably the best car in its class. Here, surely, were conditions in which the brilliant Lancia must at last score a resounding victory. In the Targa Florio he started off by setting up a lap record, which remained unbroken, at 34 m.p.h., but on the second lap he lost ten minutes through some unspecified delay, and had to be content with second place behind Nazzaro. The Kaiserpreis was run in two eliminating races and a final, Lancia's F.I.A.T. being alone in the first heat, with Nazzaro's and Wagner's in the second. Lancia won his heat quite comfortably, while Nazzaro and Wagner were first and second in theirs, but, rather unusually, although Lancia recorded the fastest lap in his heat, in 1 hour 26 minutes 17 seconds, Nazzaro was faster in his, with 1 h. 24 m. 10s. In the final, however, Lancia started off badly, being no higher than twenty-eighth at the end of the first round, and although after that he went faster and faster, until on his last lap he beat the lap record in 1 h. 21 m. 55 $\frac{2}{3}$ s., at 53.5 m.p.h., he was only able to finish sixth, while Nazzaro won as usual and Wagner was fifth.

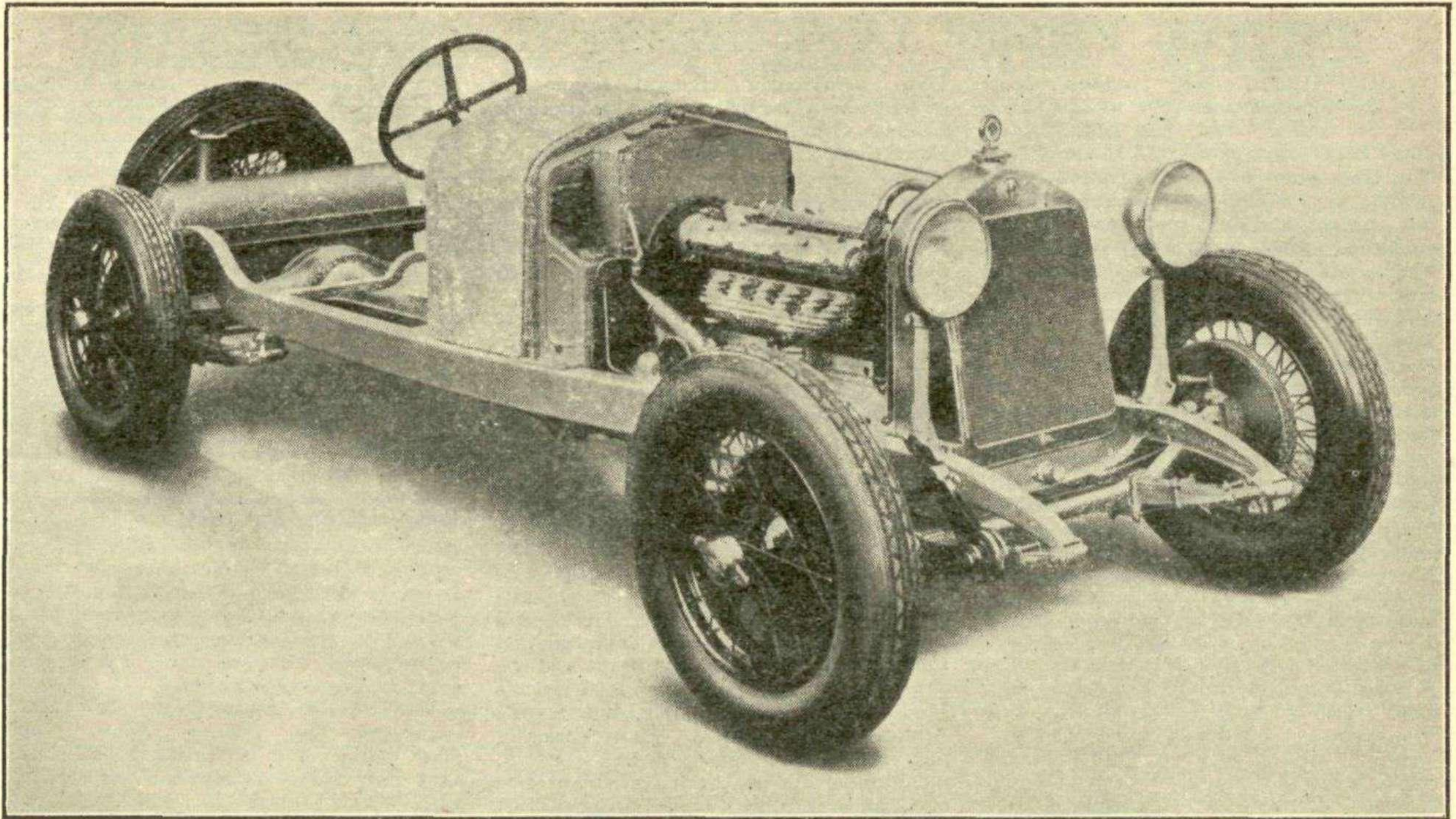
In the Grand Prix, Lancia's misfortunes are not so immediately apparent from the figures; he never held the lead, and he did not establish the lap record. And yet I believe that it was in this race that he experienced the keenest disappointment of his career. In those days of spaced starts and long courses, a driver might throughout a race see next to nothing of his closest rivals, but on this occasion it so happened that Duray on the Lorraine-Dietrich and Lancia on the F.I.A.T., while they were first and second on time respectively, were actually neck and neck on the circuit. The Lorraine, perhaps, was slightly the faster of the two, at least it was Duray who established the lap record, but for 200 miles the two cars raced round the Dieppe circuit wheel to wheel, while

the crowd practically forgot that there were any other cars in the race. And then Lancia dropped back with an engine that was misfiring, Duray went out with transmission trouble, and Lancia broke his clutch. On this occasion, it is recorded, poor Lancia wept.

But Fate had not done with him yet. In the 1908 Targa Florio, rather surprisingly, he let Nazzaro make the fastest lap, at 36.2 m.p.h., but at the end of the second round Lancia was leading, and then on the last lap he had tyre trouble, so that the race went to Trucco on the Isotta-Fraschini and Lancia was second. In the Grand Prix, the F.I.A.T. engines, which were of a new type, built to the 155 mm. bore limit, were suffering from teething troubles. Lancia retired at the end of the first lap, and his two teammates quickly followed him. But by September, when the Florio Cup race was run, these troubles had been overcome, and Lancia started off in tremendous style, covering the second lap of 32.8 miles at the prodigious speed of 82.3 m.p.h., a record which remained unbroken throughout the race. For the first four of the ten laps he held the lead, and then he ran into trouble and finished fifth, leaving victory, as usual, to Nazzaro.

As far as I know, this was the last big race in which Lancia took part. Looking back over his career since that day in 1905 when he created such a tremendous impression in the Auvergne, we find that in four years he started in twelve major events. In five of these he put up the lap record, and in five he was at one time leading the race. Yet not once did he win. Moreover, there is no evidence that his driving methods were such that his car had no chance of going the full distance. As subsequent events were to prove, Lancia was an engineer as well as a driver, and engineers usually spare their cars too much rather than too little. Besides, in only four out of the twelve races did he fail to finish, and of these four, his failure in the 1905 Gordon-Bennett race was due to the mere misfortune of a holed radiator, while in the 1908 Grand Prix all three F.I.A.T.s fell out in the early stages. Nor is there any evidence that as a driver he could not stay the pace: in the Kaiserpreis, for example, his record lap was his last. One is left with the conclusion that Vincenzo Lancia was the most unlucky, as well as one of the most brilliant, drivers that motor racing has ever produced.

But at least his career had its compensations. A good many racing drivers have turned manufacturer, but few have been as successful in this rôle as was Lancia, or as successful in such a satisfactory way, producing, from first to last, cars for the connoisseur. He was certainly much more successful than was Nazzaro, so lucky always as a driver, who gave up making cars in the end and went back to racing, whereupon he won the French Grand Prix for the second time, fifteen years after he had first done so. Much more successful, too, than Girardot, whose C.G.V. soon changed its name to Charron, whereupon even Charron sold his interest in it. One thing, however, Lancia, the manufacturer, was determined about throughout his career: he would never have anything to do with motor racing.



MILANESE CRAFTSMANSHIP.—The beautiful 1,750-c.c. twin-o.h.c. supercharged Series II Alfa-Romeo in chassis form.

Vintage and Near-Vintage Alfa-Romeos

BEFORE we leave the 1,750-c.c. models I must describe the second-series cars, the first of which was produced early in 1930, as a development of the 1929 Tipo 6C 1½ and 1¾-litre supercharged models. It was three of these second-series cars which I entered for the 1930 T.T. and which, as mentioned in the previous instalment, finished in the first three places, taking the Team Prize. The three cars actually finished within 16 seconds of each other.

The main differences between the second-series cars and the earlier series were:

(a) A larger Roots supercharger, mounted horizontally, and driven at engine speed, the rotor-gears being driven by an internally-toothed gear in place of the former straight-toothed gear, resulting in quieter running.

(b) A shorter finned induction pipe to suit the new supercharger, and twin-type Memini carburetter on the off side of the supercharger, which gave the engine a cleaner appearance.

(c) A larger clutch, first used for the 1930 Targa Florio race.

(d) Improved bonnet fasteners, later-type Bosch ignition switchbox, fuse boxes mounted on either side of the 1½-gallon reserve fuel tank on the pressed steel dash, and quick-action filler cap for the rear fuel tank.

The wheelbase remained at 9 ft. 0 in., although a few 9 ft. 6 in. wheelbase chassis were produced. The bodies fitted were usually two and four-seaters, but occasionally closed bodies were supplied. The bigger supercharger gave

by

F. W. STILES

*late Managing Director of Alfa-Romeo
British Sales, Ltd.*

PART V—

The Supercharged 2nd Series 1½-litre Twin-o.h.c. Models.

.....
an increased boost at maximum engine speed and these second-series 1,750-c.c. cars had outstanding acceleration and could reach 100 m.p.h. in road trim. The compression ratio was 5.75 to 1. A typical two-seater weighed 16 cwt. 3 qr. 24 lb. and axle-ratios of 4.08, 3.8, 3.7 and 3.5 to 1 were provided (12 by 49, 13 by 51, 13 by 49 and 13 by 46, respectively). The constant-mesh gears of the four-speed gearbox were 17 by 27.

The rear bearings and gears of the new supercharger were lubricated by a duct formed in the cylinder block, which took oil from the supply to the valve gear. The supercharger front bearings were lubricated through a Tecalemit nipple on the detachable front cover. The cover should be removed occasionally and the bearings packed with petroleum jelly. The five-bearing counter-balanced crankshaft with 42 mm. journals was retained.

The new clutch had five male and five female plates as hitherto, but these were approximately a third larger, which gave smoother engagement and longer life, obviating, too, the tendency for the female plates to buckle under maltreatment. The need to occasionally dismantle the clutch and clean thoroughly the splines in both drum and boss remains, however, if maximum efficiency is to be achieved. The servicing notes detailed in Parts II and III apply to the second-series 1,750-c.c. cars. For racing, use 75 per cent. petrol, 25 per cent. benzole, with 2 per cent. of light mineral oil. Petrol should be of .760 density. The oil pipe to the camshaft bearings must be slightly proud of the block, to keep lubricant out of the water jackets. We used Champion R.3 plugs for racing, R.1 for touring, with plug gap set .020 in., or wider with a heavy-duty or "Oilcoil" coil. Valve timing is: Inlet opens seven degrees before t.d.c., closes 59 degrees after b.d.c.; exhaust opens 51 degrees before t.d.c., closes 15 degrees after b.d.c. T.d.c. is indicated by an arrow on the flywheel. Tappet settings are 0.012 in. inlet, 0.014 in. exhaust, engine cold; set these before re-timing. Oil pressure should be 2½ kg. (40 lb./sq. in.) at maximum revs., and ½ k.g. when idling, using Prices C, Castrol XXL or BB. Distributor points should have 0.0012 in. to 0.0016 in. gap, carburetter settings are as given in Part IV. Run 5.25 by 18 tyres at 28 lb./sq. in. When overhauling the engine completely, remove the copper
Continued on page 526

The Vintage S.C.C. Driving Tests at Bisley

THE V.S.C.C. held another of its driving-test meetings at Bisley on November 20th, and obtained an entry of 37 vintage and 15 modern cars. The tests were not very inspired, comprising a slow-fast test, an acceleration test punctuated by a reverse into a confined space, and a parking test. There was also a concours. Some very nice cars were present. Dove's 1927 and Dore's 1920 Lea-Francis tourers made a fine pair, Towle ran his 1922 Citroën with disc front and wire rear wheels, Lockhart a rear-braked 1924 "12/50" Alvis tourer with vast furred hood, Carlisle his delightful 1908 single-cylinder de Dion, Capt. Icke a rather sad "8/18" Talbot declared as of 850-c.c. [actually 970-c.c.] with its original radiator obscured by a cut-about modern Talbot shell, while Wood drove his 1923 Riley Eleven and Robertson-Walker an early Riley Nine. Amongst the larger vintage cars were two Rolls Twentys, several 2-litre Lagondas, the 4½-litre Bentleys of Sedgwick and Cook, a Lancia Lambda, Noakes' absolutely-original 1924 "14/40" H.E., two "30/98" Vauxhalls, Eric Thompson's 1922 disc-wheeled "14/40" Vauxhall tourer with the ladies in the back protected by a "period" rear screen, Partridge's imposing 1927 "14/40" Delage coupé, Cuthell's "Alphonso" Hispano, and Capt. Browell's magnificent 1924 "40/50" Napier coupé, which displayed unexpectedly good acceleration. Abbott's Mercédès represented the veterans, very ably, and

Hern apparently thought there was going to be a motor race and brought this Amilcar Six in a van. Unfortunately, Peter Clark's 1921 Wilton did not arrive.

The spectators contributed more interesting cars, such as a 1922 flat-twin Wolseley two-seater which came from Stratford at over 30 m.p.h. average and most economically, a 1903 Gladiator, Gregory's 1904 Darracq, Crozier's ex-Metcalf 8-litre Bentley, Heal's 3-litre Sunbeam, a very lovely Sunbeam drop-head Twenty-Five with hydraulic brakes, two s.v. Amilcars, a "10/23" Talbot, a Gwynne Eight, Karslake's Hispano-Suiza, etc.

Birkett broke the long-suffering gear lever of his Type 44 Bugatti before the tests, but went wondrous slow in the "slow-fast" and secured a new gearbox top in time to make best time in the second test. In the slow-running part of Test 1, Edwards' Type 37 G.P. Bugatti stalled, as did Barclay-Inglis' Allard, and the H.E., while Carlisle anxiously applied the de Dion's push-on hand brake and the "Alphonso" Hispano and Tulloch's Hudson were too sprightly, but Hern's Amilcar fairly galloped. Many cars slid into the marker posts during Test 2, including Sedgwick, and Test 3 put lots of drivers into awkward positions, but not Tulloch, Mrs. Harman (A.C.), or Green (Riley) who parked expeditiously.

Results :

BEST TIME IN "SLOW-FAST" TEST: Capt. Castle (1926 Rolls-Royce Twenty) 26.8 sec.
 BEST TIME IN "IN-AND-OUT" TEST: H. Birkett (1929 Type 44 Bugatti), 17.4 sec.

BEST TIME IN "GARAGING" TEST: R. Briggs (1925 Lancia Lambda), 12.6 sec.

WINNER OF CONCOURS: J. Lyons (1938 Riley saloon) and D. L. Dixon (1935 Aston-Martin), tie.

CLASS WINNERS: *Vintage Cars up to 1,500-c.c.*: 1st: D. H. Gahaghan (1926 Bugatti); 2nd: A. F. Carlisle (1908 de Dion); 3rd: D. Wood (1923 Riley).

Vintage Cars over 1,500-c.c.: 1st: Capt. Castle (1926 Rolls-Royce); 2nd: T. B. Webb (1925 "30/98" Vauxhall); 3rd: C. R. Abbott (1904 Mercédès).

Non-Vintage Cars up to 1,500-c.c.: 1st: J. R. Green (1936 Riley Imp); 2nd: D. L. Dixon (1935 Aston-Martin).

Non-Vintage Cars over 1,500-c.c.: 1st: J. Lyons (1938 1½-litre Riley saloon); 2nd: Mrs. Harman (1938 A.C.); 3rd: Major Tulloch (1935 Hudson Special) and A. Barclay-Inglis (1948 Allard).

BOUQUETS AND BRICKBATS

—continued from page 524

on the subject of the National "five bob" Licence. Members of the various A.C.U. centres expressed their gratitude at being invited to the meeting and the growing co-operation between car and motor-cycle bodies was apparent.

The Bristol Motor-Cycle & L.C.C. expressed the feeling that much time could have been saved had clubs sent in their criticisms beforehand, rather than that verbal repetition should prolong the meeting.

In an effective reply, Maurice Toulmin dealt with most of the points raised.

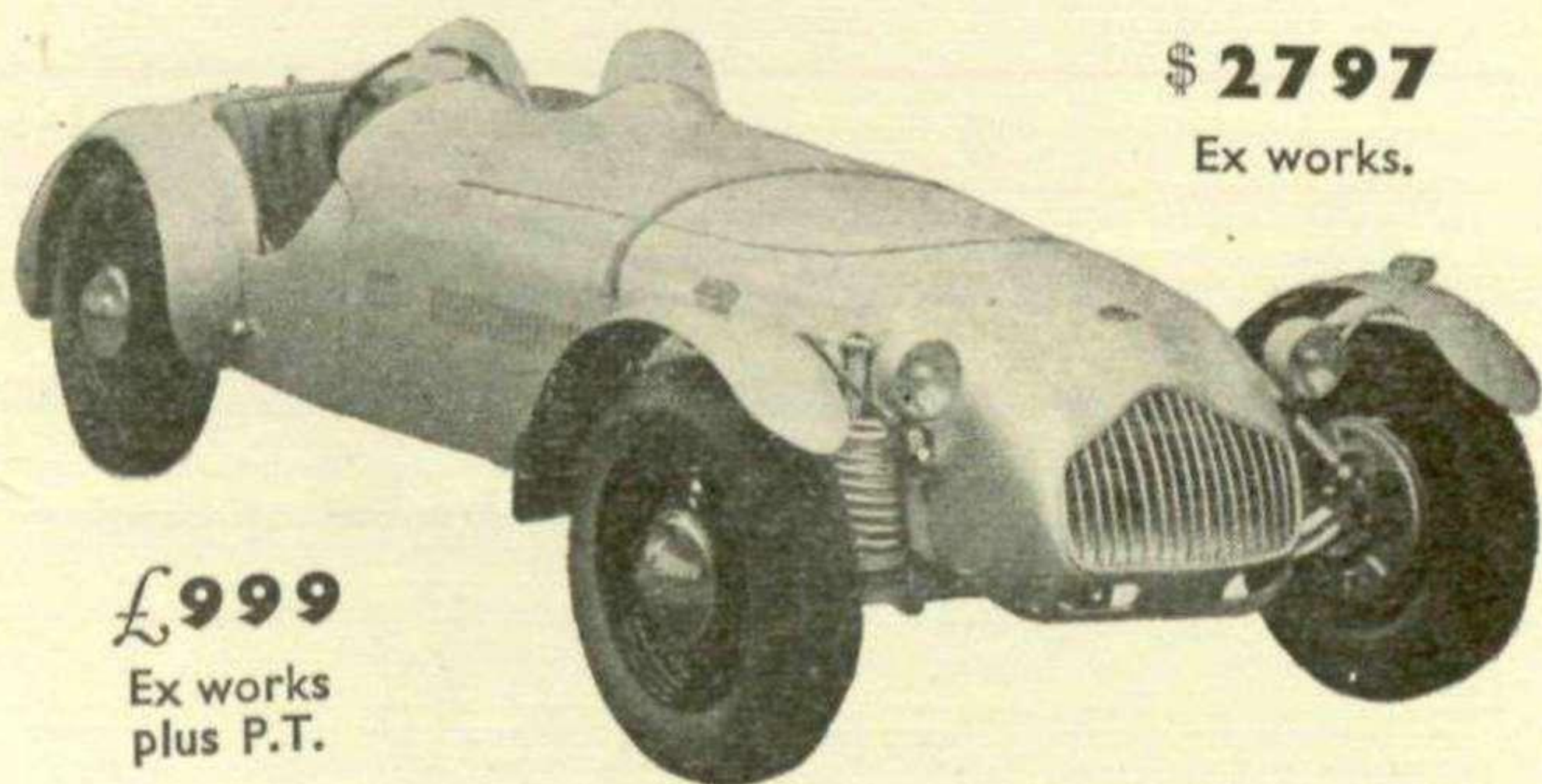
Attendance to the bitter end was encouraged by the subsequent showing of the Shell film of the British Grand Prix.

ANOTHER



WINNER

Breaking the Sports Car Record at Prescott on its first outing, and running with distinction in the Silverstone Production Car Race, the "J.2" ALLARD Competition Two-Seater is powered by a V8 4.4-litre engine giving 120 b.h.p., has a de Dion-type rear axle with a ratio of 3.5-to-1, coil suspension and a dry weight of 2,000 lb. May we send you full particulars ?



\$ 2797
 Ex works.

£999
 Ex works
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Some overseas purchasers have preferred to fit the more powerful engines suitable for this chassis but not available in Great Britain, such as American Ford, Mercury, Cadillac, Ardun, Grancor, etc. This model, less engine assembly, only costs \$2306, ex works. Among the extra equipment available for export cars is the famous Cotal 4-speed Electrical Gearbox.

ALLARD MOTOR CO. LTD., 24/28, Clapham High St., London, S.W.4

ALMOTCO, LONDON

SUNBEAMS BETWEEN THE WARS

by JOHN R. COOMBES and JOHN WYER

The heading above refers, not as might be thought to the happy times we enjoyed between World War I and World War II, but to the cars manufactured during that period by the Sunbeam Motor Car Company Ltd., of Wolverhampton. It is particularly opportune that we are able to publish this article in this issue, because this is the Jubilee year of Sunbeam, whose first car was made in 1899. The matter which follows is the work of John R. Coombes, whose father was advertising manager to the Sunbeam Company from 1919 to 1923 and who himself was, until recently, with the Sunbeam Trolley-bus concern in the old factory, and John Wyer, who served his apprenticeship with Sunbeam while they were

still making private cars. Anthony Heal, whose interest in, and collection of, historic Sunbeam cars is well known, contributes a foreword, and *MOTOR SPORT* is indebted to these three gentlemen for the great pains they have taken over the accuracy and continuity of this exclusive contribution. For many years Sunbeam built cars that were esteemed all over the world on account of their typically British quality and performance and notable refinement of running and control, and their racing department gained for this country the honour of winning the 1923 French Grand Prix and of building the first car to exceed 200 m.p.h. Something of the esteem in which Sunbeam is still held in Wolverhampton, its birthplace, is

seen in the three-quarter-length portrait of Segrave which hangs in the entrance hall of the Bantock House Museum in that town. At the present time, in comparison with some vintage cars the Sunbeam can be described as "popular," for a surprising number of the o.h.v. "14/40s" are still on the road, the number of later six-cylinder models in service is legion, while as recently as last July the twin-overhead-camshaft 3-litre proved its prowess at Silverstone. Consequently, we present this article confident that not only will enthusiasts in general find it of great interest, but that it will be of considerable value to owners and prospective purchasers of Sunbeam cars, in the Jubilee year of this famous and respected British make.—ED.

FOREWORD

*Not in vain the distant beacons, forward, forward, let us range,
Let the great world spin for ever down the ringing groove of change;
Thro' the shadow of the globe we sweep into the younger day,
Better fifty years of Europe than a cycle of Cathay.*

(Tennyson)

It is half a century since the first Sunbeam car was built in a disused coach house in Wolverhampton. John Marston had already made a handsome fortune in 1899 and his Sunbeam bicycles had achieved for themselves a reputation for quality and finish. Many thought him foolish to risk the hard-won fruits of many years pioneer work in the cycle trade on such a hazardous venture as the new-fangled "horseless carriage." He was persuaded into it by Thomas Cureton who had joined Marston's cycle works as an apprentice and had since risen to become his trusted lieutenant. Cureton made the first experimental Sunbeam car, in its entirety, with the help of one man and a boy. After trials on Sunday mornings in the privacy of his garden, John Marston decided to back Cureton's brain-child, and in 1900 a second car was produced. The first Sunbeam car catalogue, entitled *All about a Motor Car*, was published in the same year and the verse from Tennyson's *Locksley Hall*, printed at the head of this Foreword, was quoted in it. It seemed opportune, therefore, to recall it on this occasion of the Sunbeam Jubilee.

The informative article by John Coombes and John Wyer which follows, deals with the Sunbeam cars that were built between 1919 and 1935. This brief foreword can serve only to sketch broadly the developments that took place during the first two decades of the firm's history. Space does not permit a detailed account of the machines produced from 1899 to 1919, nor is it possible to make more than a passing reference to the racing and competition successes that they achieved. The latter subject really deserves a special article of its own. The development and achievements of Sunbeam aero-engines, in war and in peace, is another side of the firm's activities that merits more detailed attention than we can give it on this occasion.

Cureton's first experimental car appears to have been fitted with a single-cylinder engine mounted vertically at the front. Transmission was by belt and the high wooden road wheels were shod with solid rubber tyres. The second car, produced and catalogued in 1900, had the engine in the then more fashionable horizontal position. It was equipped with the up-to-date "electric ignition" and is said to have developed 6 b.h.p. at 700 r.p.m. Belt transmission was retained and a two-speed gear added.

In 1901 the firm entered into an arrangement with a Mr. Mabley-Smith to produce a very peculiar four-wheeled vehicle, which is probably already known to readers of *MOTOR SPORT*—the Sunbeam-Mabley. Despite the unusual design (rather like

an S-shaped Victorian sofa) these machines were made in some quantities and were sold at the modest price of £130. Mr. Mabley-Smith drew a royalty on each one and, it is said, he made more out of each Sunbeam-Mabley sold than did John Marston. At the 1901 Crystal Palace Motor Show the Mabley was shown alongside a new twin-cylinder Sunbeam which embodied a number of up-to-date improvements including wheel steering, raked steering column and band brakes working on drums (in place of shoe brakes operating on solid rubber tyres as on earlier models).

A four-cylinder 12-h.p. car was introduced in 1902 when Thomas C. Pullinger joined the firm as Works Manager. He persuaded Marston and Cureton to swallow their pride and import some French-built cars in order to learn from the more advanced industry of France how motor cars were really made. For some time afterwards engines and gearboxes were imported from Lyon to be mounted in chassis made in Wolverhampton. Thus began a connection with France that continued until the eventual demise of the Sunbeam Motor Car Company, Ltd., in 1935. As on subsequent occasions in the history of the firm this injection of French ideas resulted in the production of a successful car. The 10/12-h.p. (4-cylinder 80 by 120 mm.) not only proved to be the mainstay of the business, but served to enhance Sunbeam's reputation in competitive events. Two cars of this type made non-stop runs, without losing a single mark, in the Glasgow-London Non-Stop Trial organised by the A.C.G.B.I. (latterly known as the R.A.C.).

Behind the scenes work was quietly going on during the summer of 1903 with the testing of a new six-cylinder engine which was added to the range of Sunbeam cars offered to the public in February, 1904, barely four months after S. F. Edge had announced his intention of producing a six-cylinder Napier. Possibly as the result of Edge's propaganda (he was an accomplished publicist) Napier's claim to have built the first "six" is regarded by some as proven, but others (notably Sunbeam, Brooke and Maudslay) might well contest the claim.

John Marston's motor-car business waxed slowly but surely as the qualities of the cars he built came to be recognised. In 1905 a £40,000 company was floated with Marston and Cureton as two of the directors. W. M. Iliff's name appeared on the prospectus as Secretary. A new and more powerful model, designed by Angus Shaw, chief of the newly-established drawing office, was produced. Known as the 16/20-h.p., it had a four-cylinder engine (95 by 120 mm.), magneto ignition and honeycomb radiator (earlier cars had all used gilled tubes), four speeds and, of course, chain drive in "little oil bath" chain cases. To demonstrate his faith in the new car, Shaw set off with Frederick Eastmead in June, 1906, to drive an open four-seater from John o'Groats to Land's End and back again to John o'Groats (1,757 miles) without stopping the engine. This

performance was officially observed by the Scottish Automobile Club who provided relays of hardy observers to ride in the back seat. The engine ran non-stop for 95 hours 56 minutes and "no repair or adjustment of any kind took place during the whole period." The Sunbeam Motor Car Company was now, quite definitely, "on the map" and was steadily producing cars at the rate of ten per week. The successful 16/20-h.p. was continued in 1907 and a six-cylinder 25/30-h.p. model with the same bore and stroke (95 by 120 mm.) was added.

The first ten years had been a period of struggle, experiment and test. The decade that followed was to witness achievement and success, due largely to the genius of one man. In February, 1909, Thomas Cureton engaged a young Frenchman, Louis Coatalen, as chief engineer and once again the injection of French ideas revitalised the whole concern. Coatalen's influence spread throughout the works; he inspired the design, supervised the manufacture and himself tested the completed cars. He re-designed the 16/20-h.p. car, enlarging the dimensions to 95 by 135 mm. and he produced a new smaller model known as the 12/16-h.p. (four-cylinder 80 by 120 mm., T-head). The latter was an immediate success; 350 were made in 1910 and 650 in 1911. As a result the works had to be enlarged to deal with the volume of orders. In 1911 a worm-driven rear axle replaced the chain drive and two new six-cylinder models were introduced; 25/30-h.p. (105 by 135 mm.) and 18/22-h.p. (80 by 120 mm.). The 16/20 four-cylinder car was continued.

An ardent experimentalist, Coatalen soon took advantage of the facilities offered by Brooklands for testing cars and standard Sunbeam chassis gained many successes there. But not for long was he content to race only production models and in 1910 a special overhead-valve four-cylinder (92 by 160 mm.) engine was built and fitted in a chain-driven chassis. The radiator was mounted behind the driver and the narrow single-seater cigar-shaped body enclosed everything but the driver's head. Although quite fast the car (known as *Nautilus*) was prone to overheating. Another special racing car (*Toodles II*) was built in 1911. It was fitted with a four-cylinder (80 by 160 mm.) overhead camshaft engine and was much more successful than its predecessor. In the same year Coatalen completely redesigned the 12/16-h.p. model, using a new monobloc (80 by 150 mm.) L-head engine and a bevel-driven rear axle. One of these cars was driven in the 1911 Coupe de l'Auto race for 3-litre *voitures* by T. H. Richards. This was the first appearance of the *marque* in an international event on the continent. When lying seventh, Richards had to retire with a broken steering connection.

For the 1912 race at Dieppe a team of three 12/16-h.p. cars was prepared and they swept the board, finishing first, second and third in the Coupe de l'Auto and third, fourth and fifth in the Grand Prix itself, which was run concurrently. These basically-standard side-valve 3-litre machines beat all-comers save a couple of specially-built Grand Prix racing cars of twice and three times the Sunbeam's capacity. This great success (the first British victory since Edge's Gordon Bennett win in 1902) firmly set the Sunbeam company in the van of British constructors, which position it was to retain for fifteen years. Coatalen's part in the achievement was recognised and he was elected a director of the company. He redesigned the 16/20-h.p. and the six-cylinder 25/30-h.p. models on lines similar to the 12/16-h.p. car and this three-model range was continued until the outbreak of war in 1914. During the hostilities the two smaller models were supplied to the War Office for use as staff-cars in France and to increase the supply some were built,

under licence, by the Rover Company. Since 1913 Coatalen had been developing Sunbeam aircraft engines and to meet the needs of war their production was greatly increased. The firm's experience of high efficiency engines for racing cars stood them in good stead, and their 1914-1918 aero-engines show many signs of a close family relationship with the power-unit of the 1914 Grand Prix Sunbeam.

Louis Coatalen and W. M. Iliff were appointed joint managing directors in the year 1914, and four years later John Marston, the chairman of the company and founder of the firm, died at the age of 82. Thomas Cureton, who since his apprenticeship, had worked with Marston and had been instrumental in persuading him to branch out into the manufacture of motor cars, fittingly succeeded his chief as chairman. He occupied the post for little more than two years and died in 1921, shortly after his retirement. In August, 1920, the Sunbeam Motor Car Co. amalgamated with A. Darracq & Co. (1905), Ltd. The latter concern had, in the previous year, already absorbed the Clement Talbot Motor Co. as well as the well-known firm of spring-makers, Jonas Woodhead & Co., the engineering firm of Heenan and Froude, whose dynamometers are well known and H. du Cros, the coachbuilders. Three Sunbeam directors joined the board of the new combine which marked the amalgamation by changing its name to S.T.D. Motors, Ltd. Mr. James Todd, chairman of S.T.D., became chairman of the Sunbeam company. Thus three famous firms, each of whom had accomplished great things in racing and record-breaking on road and track, joined forces and the motoring public awaited the outcome with great expectations.

It is sometimes said that the products of firms who engage in Grand Prix racing derive the least benefit from it. A superficial look at some of the cars such firms have built might tend to support this view. But racing has more than just technical value and to the Sunbeam company it was the mainspring of their endeavour. To Louis Coatalen it acted as a spur and the hundreds of men he employed felt an intense pride in the success of the Sunbeam racing cars. So long as Sunbeams "wore the green" in international Grands Prix every man was "on his toes" and the firm maintained its technical leadership. Coatalen was the creative genius who inspired and led the team, but he was ably supported by three stalwart lieutenants: J. S. Irving, the experimental and development engineer, who put his chief's ideas into tangible form; Clement Kaye, the works manager, who organised production, and Leo Cozens, the sales manager, who kept the Sunbeam company's products and their achievements constantly in the public eye.

In 1926 the racing activities of the S.T.D. group, of which the Wolverhampton firm was the senior member, were transferred to the Talbot-Darracq works at Suresnes, near Paris, and Coatalen's attention was largely devoted to the French unit of the combine. With his influence now removed from Wolverhampton and in the absence of the racing cars the momentum of the firm began to be lost. Their technical leadership was no longer maintained and the company, unable to withstand the stress of the economic depression of the early nineteen-thirties, got into financial difficulties from which it never recovered. In 1935 Sunbeam cars ceased to be manufactured at the Moorfield Works, Wolverhampton. As the pessimists had forecast, John Marston's Sunbeam bicycles had survived his horseless-carriage venture.

Such then was the backcloth against which the Sunbeam cars described by John Coombes and John Wyer "had their exits and their entrances."

ANTHONY S. HEAL.

THE range of production models marketed by the Sunbeam Motor Car Company between the end of the bow-and-arrow war and the cessation of production in 1935 is so extraordinarily complex and varied that it is extremely difficult to trace any sort of consecutive theme, to see any logical progress between one model or series of models and those which followed. Closer examination, aided by a fairly intimate knowledge of the more detailed design changes begins to reveal a broad pattern, and the period under review sub-divides itself into reasonably well defined phases. While there are inevitably some borderline cases, it will generally be found possible to fit each model into its respective phase or group,

and we might start by listing these phases, with the principal design features by which they may be identified.

Phase I. 1919-1921. 80 by 150 side-valve, 16-h.p. four-cylinder and 24-h.p. six-cylinder cars, directly descended from the 1914 models, from which they differed in only very minor details. Cone clutches, separate gearboxes, open propeller shafts and $\frac{1}{2}$ -elliptic rear springs are outstanding features.

Phase II. 1922-1924. The first overhead valve engines. Based upon the Phase I side-valve cars, with the same range of models, but now known as "16/40" and "24/60" (later "24/70"), the only changes were in the cylinder blocks and heads, the latter now being

detachable. Chassis design was unchanged but four-wheel brakes were introduced during Phase II.

Phase III. 1922-1932. An entirely new overhead-valve engine and an entirely new chassis. The first Sunbeam design to have the inlet and exhaust ports emerging on the same side of the head. Chassis changes include unit gearbox, torque-tube and cantilever rear springs. Models comprised the "12/30," "14/40," "16/50" and "20/60," the straight-eights, and the 25-h.p. which was listed until 1932. This phase continued the earlier tradition of aluminium crankcases and separate cast-iron blocks, although the short-lived "12/30" and "16/50" were exceptions. (This is the sort of thing which makes

life difficult for the historian with the pigeon-hole type of mind.)

Phase IV. 1927-1935. This period saw the stabilisation of design rather than any striking changes. The single iron casting for crankcase and block was finally adopted, and units became generally tidier and more compact (and cheaper to produce). Chassis design also followed earlier practice, but $\frac{1}{2}$ -elliptic rear springs came back into fashion in 1930, and the open propeller-shaft on some models in 1935. It is, however, probably true to say that from 1927 onwards Sunbeam ceased to lead the industry in any important particular, and it was this more than any other factor which led to their final downfall.

This attempted summary is admittedly an over-simplification, and the difficulty of making any cast iron divisions is very apparent. Also it will at once be noted that the actual date of manufacture bears little relation to identifiable features of design, and there is considerable overlapping between the phases. The present writers hope to show, however, that design did, in fact, follow these general lines and that some steady, if unspectacular, progress was made. Let us now look at things in more detail.

Phase I THE 80 BY 150 FOUR AND SIX-CYLINDER CARS

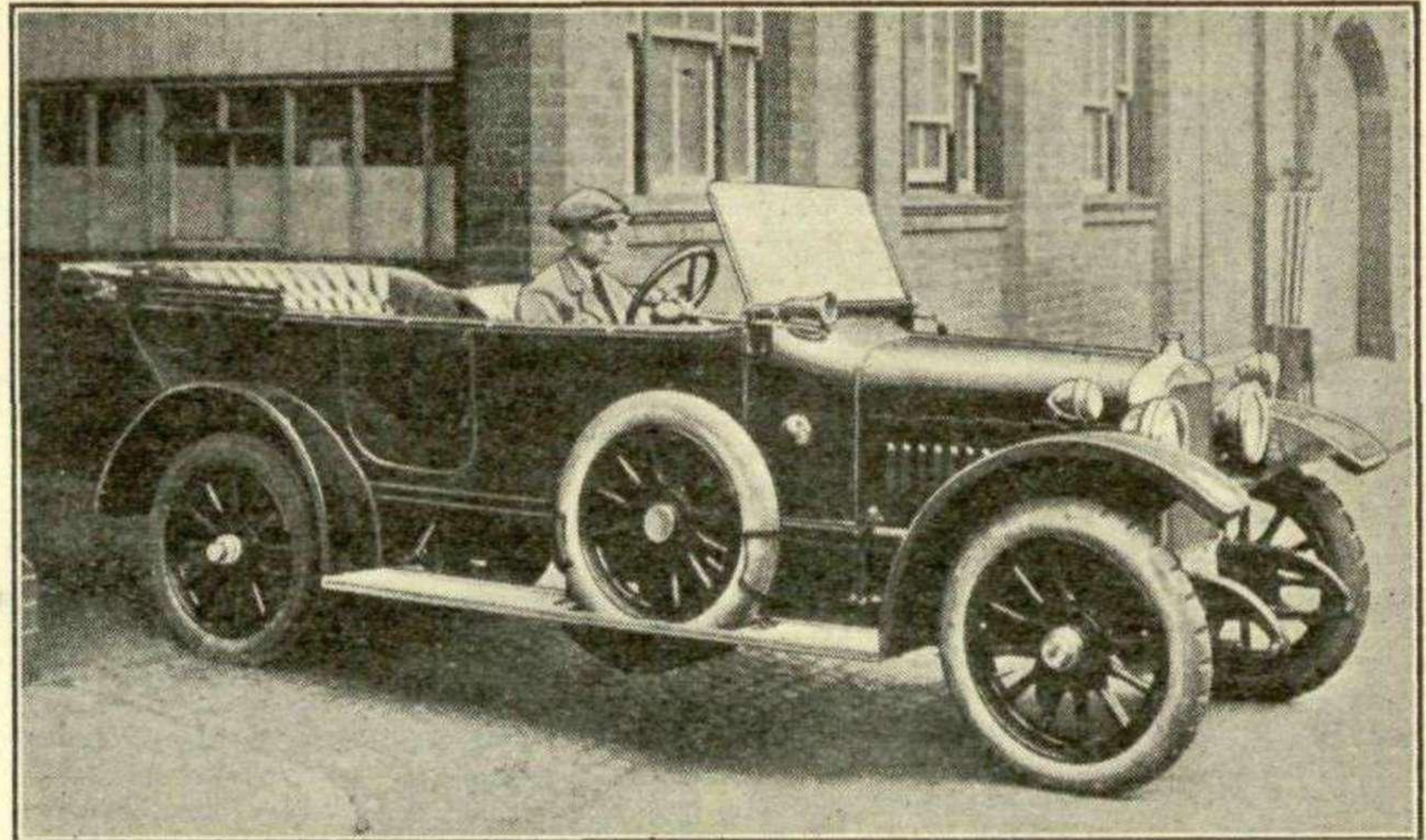
These were the first post-war models introduced by the Sunbeam Company, and were, like so many latter-day "post-war" cars, slightly improved versions of the pre-war types. They were known as the 16-h.p. and 24-h.p. models, respectively, and were developed from the very successful Coatalen-designed "12/16" and "25/30" cars which had been in production since 1910. The major changes were:—

- (a) Semi-elliptic instead of $\frac{3}{4}$ -elliptic rear springs.
- (b) A lighter, neater (and apparently weaker!) rear axle design.
- (c) Cam-operated rear wheel brakes instead of toggle-operation; and
- (d) A taller, narrower radiator. (This was introduced during the war, when the "12/16" was being built in quantities by the Rover Company.)

The general design of both models was similar, many components being interchangeable. Bore and stroke were 80 by 150, giving capacities and ratings of 3,016 c.c. and 15.9 h.p. for the "four," and 4,524 c.c. and 23.8 h.p. for the "six." The "four" was a monobloc iron casting, while the "six" was cast in two blocks of three. The cylinders were set approximately 20 mm. *désaxé*, and the L-heads were non-detachable.

The aluminium crankcase was extended well below the crankshaft, which was carried in split, white-metalled bronze bearings. The four-cylinder engine had five bearings and the six-cylinder had seven. The connecting rods were H-section steel stampings with white metalled big-ends. Cast-iron pistons carried three compression rings with a scraper in the skirt, and the hollow, floating gudgeon-pins were retained by a wide ring round the waist of the piston.

A silent chain-driven camshaft operated the valves, which were set slightly inclined in the near side of the block, through the



HISTORIC PICTURE.—The first Sunbeam car, a 1919 16/40, to leave the Moorfield works after the Kaiser war. This model saw much war service.

medium of roller tappets. The single valve springs were retained by cotter pins through the valve stems.

On the 16-h.p., a cross-shaft, driven by skew gears from the front of the crankshaft, drove a magneto on the off side and a water impellor on the near side. On the 24-h.p., the off-side-mounted magneto was driven by a silent (inverted-tooth) chain, and the water pump, also chain-driven, on the near side, had its spindle extended to drive the dynamo *via* a long, fabric-jointed shaft.

On the off side, a vertical carburetter, originally S.U., and afterwards Claudel-Hobson, fed into a water-heated manifold, the inlet ports being cored right through the block. The sparking plugs were screwed into the inlet valve caps. The exhaust manifold, heavily finned, was on the near side of the block.

Lubrication was by a gear-type pump driven by skew gears from the camshaft. Cooling was by a honeycomb radiator, assisted by a large cast aluminium fan driven by a leather-link belt from the camshaft on the "four," and from the magneto drive on the "six."

The flywheel incorporated a leather-faced cone clutch, from which the drive went *via* a short, jointed shaft to a three-point mounted, four-speed gearbox with right-hand gate control. Ratios for both models were: 3.59, 5.3, 7.82 and 11.92-to-1; whilst, strangely, the 24-h.p. long wheelbase limousine had a 3.4-to-1 axle and larger (880 by 120) tyres.

A foot-operated transmission brake was fitted behind the gearbox, the hand-lever operating cast iron-faced shoes on the rear wheels. All gearbox shafts ran in ball bearings, and the layshaft was alongside the mainshaft. The selector gear was mounted at the side of the box, which seems to be becoming advanced modern practice!

The solid open propeller-shaft had an enclosed joint at the front, and a pot-type joint at the rear. The 1919 rear axle had a curious offset differential, the near-side shaft being about two inches shorter than the off-side. Spiral bevel gearing was used, and the differential was a two-star bevel type. The hubs were originally

fully floating, but a $\frac{3}{4}$ -floating axle was introduced later. Ball bearings were used throughout.

For 1920 and 1921 a much heavier axle casing was re-introduced, which carried a straddle-mounted bevel pinion, a spur gear differential and an even larger number of ball bearings!

The front axle was of normal reversed Elliot type, and wheels were wire or artillery to choice, both types having Rudge-Whitworth hubs.

The frame was of pressed steel channel throughout, and was kicked up over the rear axle. In plan view it was notable for the sharp insweep at the scuttle, and could hardly be accused of undue rigidity in any plane. The 24-h.p. had a king-post bracing under the side-members. The wheelbase was 10 ft. 4 in. for the 16-h.p. and 11 ft. 4½ in. for the 24-h.p., the long wheelbase 24-h.p. being 12 ft. 0 in. Track (all models) was 4 ft. 6 in. Tyre size was 820 by 120.

Phase II O.H.V. ENGINES INTRODUCED

The side-valve cars were in production until the 1921 Motor Show, when they were superseded by the "Phase II" models, which consisted of new push-rod o.h.v. engines in the existing chassis. The new engines were still of 80 by 150 mm., and, indeed, the bottom half was identical with the side-valve units. It is believed several s.v. cars were converted to the new specification. Both four and six-cylinder blocks were monobloc iron castings, with detachable heads.

The valves (two per cylinder) were in line, and the valve-gear was enclosed in a neat cast aluminium cover. The manifolds were still on opposite sides of the unit, and aluminium pistons were used.

The two models were now known as the "16/40" and the "24/60," the implied brake horse powers probably being slightly optimistic. The only major change was the use of a 4-to-1 rear axle, although the "24/60" Sports retained the 3.59-to-1 ratio. The track of the larger car was increased to 4 ft. 9 in., and the tyre size on the long wheelbase

"24/60" was increased to 895 by 135, with the 4-to-1 axle.

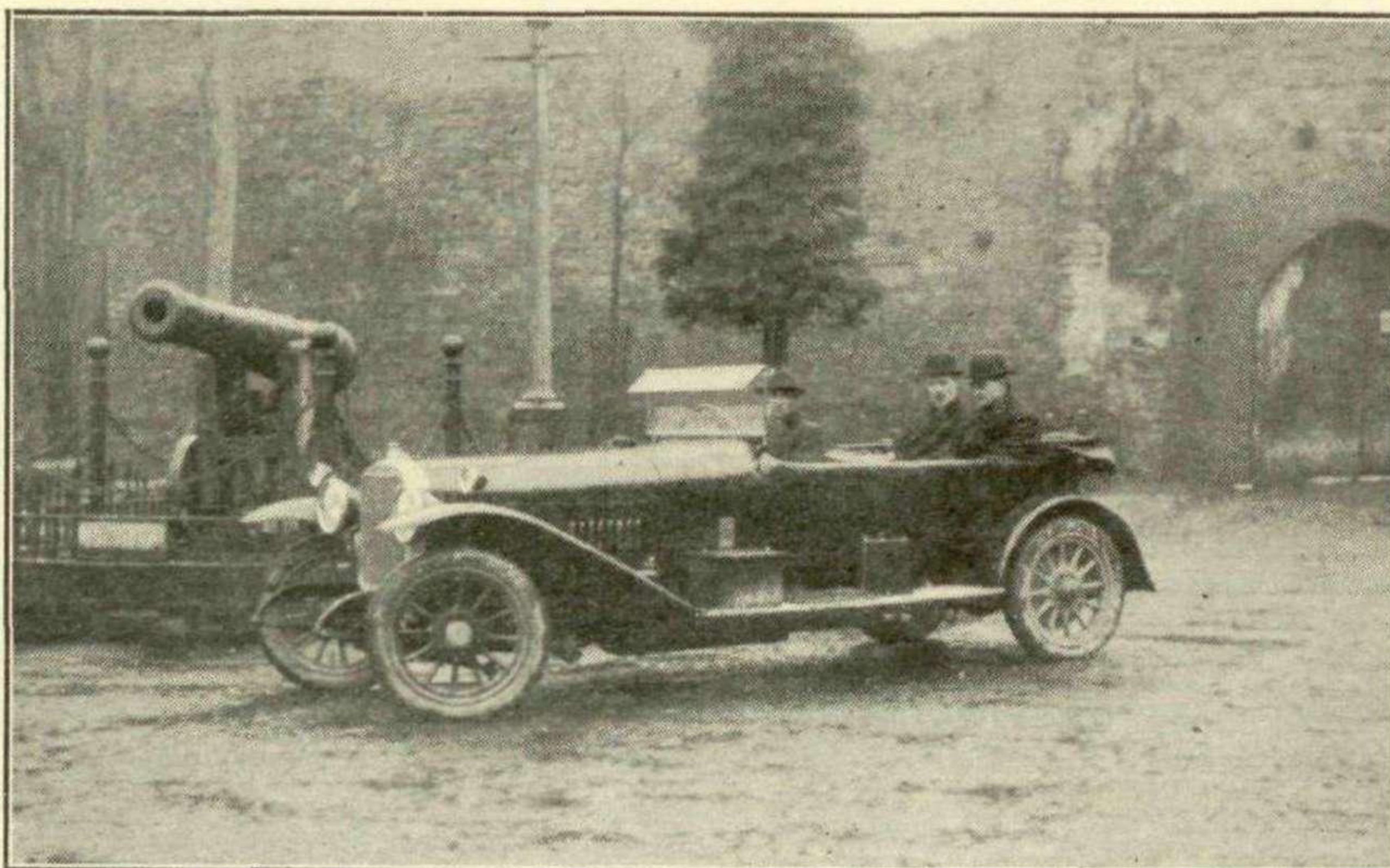
During 1922 and 1923 the extremely attractive Sports Tourers were available (at extra cost) with the very interesting "O.V." engines. These were also of 80 by 150 mm. cylinder size, but were of entirely new design, having inclined overhead valves, which were operated by rockers from a single overhead camshaft. The camshaft was driven by bevels from the front of the crankshaft, *via* a vertical shaft which incorporated a tongue and slot to accommodate thermal expansion of the block. Double valve springs were used, retained by split collets, and tappet adjustment was by setscrews in the rockers.

The detachable cylinder head carried four valves per cylinder, and ignition was by two coils and distributors feeding two plugs per cylinder.

The crankcase was an aluminium casting, split on the crankshaft centreline, the block being an iron casting. The engine was originally laid out in 1919 as a 75 by 150-mm. unit with the block cast integral with the crankcase top half. These "O.V." engines were not *désaxé*, and with their detachable heads and single o.h.c., must have been a more practical proposition for the owner-driver (and the factory) than the later and more famous 3-litre twin o.h.c. six.

The "O.V." engines, together with the later 3-litre, are of particular interest in that they are the only attempts by Sunbeam to make a direct application of their successful racing designs to production models. The "O.V." is obviously an adaptation of the 1914 racing design, and shows Henri influence. The much better known 3-litre, on the other hand, was developed from the winning 1923 Grand Prix design, and descends from the Bertarione, or Italian, school.

The six-cylinder push-rod engined car was continued for 1924, and was known as the "24/70," though whether the power output *had* increased is open to



ELEGANT.—A 1921 24-h.p. Light Sports Tourer Sunbeam, with s.v. engine, seen by the gateway of Ludlow Castle.

doubt. The only notable design change was that four-wheel brakes (with gearbox-driven servo) became standard instead of £125 extra as in the previous year.

The "16/40" was superseded in 1924 by the entirely new six-cylinder "16/50."

Phase III

THE FIRST TRULY POST-WAR DESIGN

The first entirely new Sunbeam car appeared towards the end of 1921, and was known as the 14-h.p. model. The chassis layout of this car was to form the basis for Sunbeam touring car design for the next ten years or so, and is therefore worth examining in detail.

The engine was a four-cylinder of 72 by 120 mm. (1,954 c.c. and 12.8 h.p.), and had push-rod o.h.v. It differed considerably from the larger "16/40," how-

ever, having a monobloc aluminium casting for the cylinder block and crankcase top half. Shrunk-in steel liners were used, with aluminium pistons. Floating gudgeon-pins were retained by circlips. This engine was the first built by the company with the manifolds hot-spotted together on the off side of the cast iron head.

Two tulip-headed valves per cylinder were employed, closed by double springs, and operated through mushroom tappets. A single vertical Claudel-Hobson carburetter was fitted, and ignition was by coil and distributor, with automatic advance.

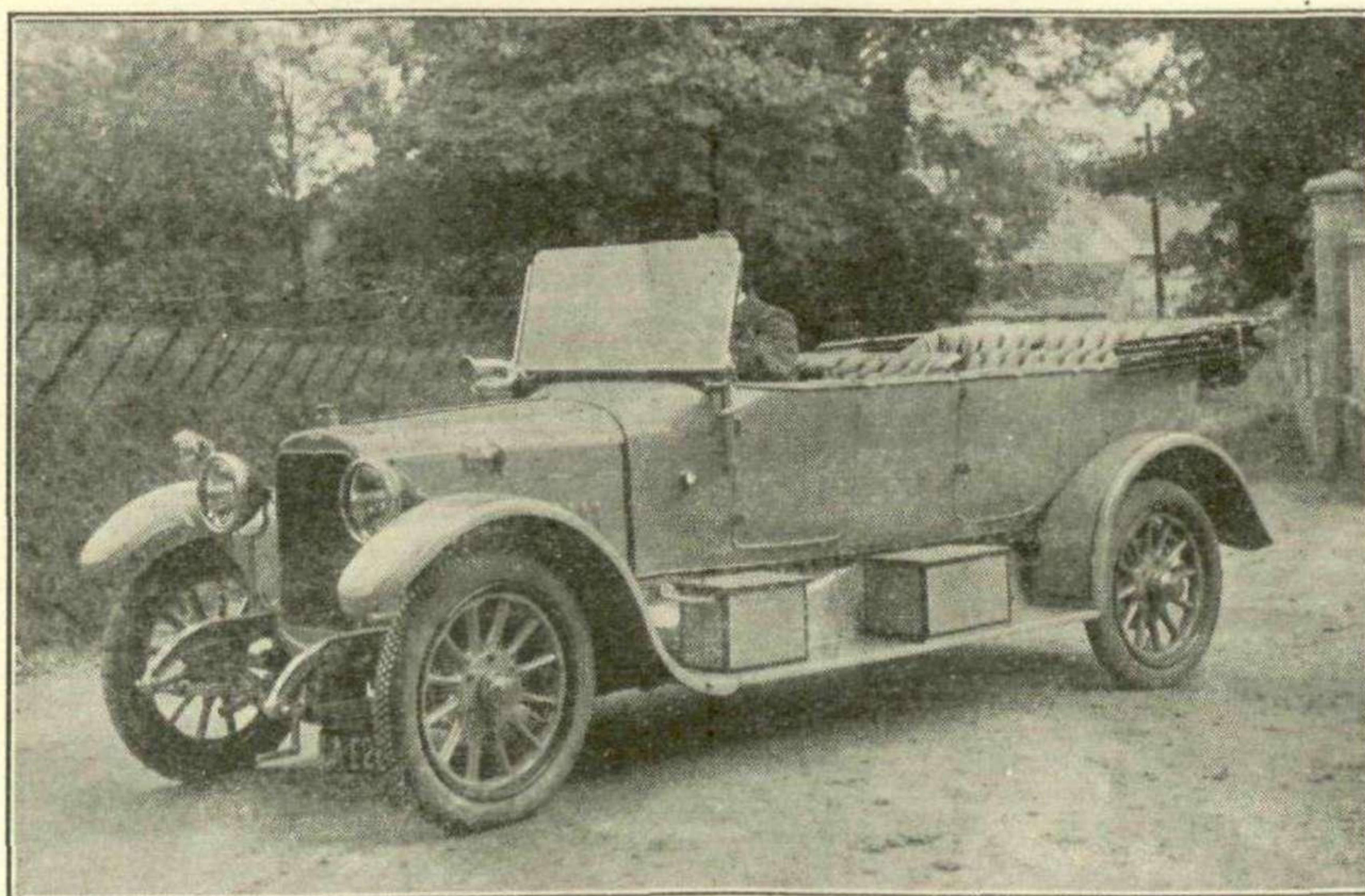
The crankshaft ran in three bearings, and drove the camshaft by silent chain. Cooling was by pump and fan, and the dynamo was driven by Whittle belt from the crankshaft.

A single dry-plate clutch and three-speed gearbox were mounted in unit with this engine, and ratios were 4.5, 7.92 and 13.19-to-1, reverse being 13.19 also. The propeller-shaft was enclosed in a torque-tube, with a spherical joint behind the gearbox. The semi-floating rear axle had spiral bevel drive, a two-star bevel differential, and the casing was fabricated from two steel pressings welded together.

Rear suspension was by cantilever springs, the front springs being asymmetrical semi-elliptics as on the larger models. Brakes were fitted on the rear wheels only, separate sets of fabric-faced shoes being employed for each system. Brake drums were of aluminium with shrunk-in steel liners.

Bolt-on steel artillery wheels were shod with 815 by 105 tyres. Steering was by worm and sector, and the right-hand gear change had no visible gate. Wheelbase was 9 ft. 10½ in. and track was 4 ft. 3 in.

The 14 h.p. was continued in 1923 with considerable engine modifications. The block now became a separate iron casting, magneto ignition with manual advance was adopted, the dynamo being incorporated in the magneto drive on the near side of the engine. A fan was



RUGGED AND SPACIOUS.—The 1920 Sunbeam Sixteen tourer offered comfort and easy running in the Edwardian style, its design owing much, naturally, to the pre-1914 Sunbeams.

optional, and the valve cover was deeper and more square-cornered. The track was increased by 3 in., the brake drums were steel pressings, and the foot brake shoes were faced with cast iron.

1924

The year 1924 saw the introduction of a wide range of models, comprising new "12/30," "16/50" and "20/60" cars, whilst the 14-h.p. was considerably modified and became known as the "14/40," and hence either set or followed the prevailing fashion in nomenclature.

Of the "12/30" little need be said. The catalogue stated that it was introduced in response to the demand for a smaller version of the 14-h.p., but this demand must have been more vocal than actual, as very few of this model were built. Bore and stroke were 68 by 110 mm. (1,598 c.c. and 11.4 h.p.), the block and crankcase was a monobloc iron casting, but the layout was otherwise identical with the 14-h.p. The clutch, gearbox and rear axle were standard 14-h.p. parts, but the final drive ratio was 4.9-to-1. Tyres were 765 by 105, the wheelbase 9 ft. 7 in., and the track 4 ft. 6 in.

The general design of the "14/40" remained similar to the 14-h.p. car, but the bore was increased to 75 mm., raising the capacity to 2,120 c.c. and the R.A.C. rating to 13.9 h.p. A new inlet manifold did considerably less violence to the mixture flow than hitherto.

The gear-change now had a visible gate and a reverse catch. Rod-operated four-wheel brakes, without servo assistance, were available at £35 extra.

An attractive sports four-seater was marketed, for which 50 b.h.p. at 3,000 r.p.m. was claimed. Power claims up to about this time should be regarded with slightly raised eyebrows, as the dynamometer equipment available was probably somewhat bucclic!

The chassis layout of both the "16/50" and "20/60" models was scaled up from the "14/40," wheelbases being 10 ft. 9½ in. and 10 ft. 11½ in., and tracks 4 ft. 7 in. and 4 ft. 9 in., respectively. The LWB "20/60" had a wheelbase of 11 ft. 5½ in.

The "16/50" was a six-cylinder of 70 by 110 mm. (2,540 c.c. and 18.2 h.p.), and the block and crankcase were cast in one. Push-rod operated o.h.v. were used, with double springs. The crankshaft ran in seven bearings.

The "14/40" clutch, gearbox and back axle were used, but Rudge-Whitworth wire wheels shod with 820 by 120 tyres were fitted.

The new six-cylinder "20/60" had the same bore and stroke as the "14/40," giving 3,181 c.c. and 20.9 h.p., and had an aluminium crankcase with a separate iron block. Push-rod o.h.v. were used, as on all Sunbeams henceforth, with the notable exception of the 3-litre. The layout of auxiliaries on all these push-rod engines was similar, comprising a silent chain drive inside the timing-case, extended to the near side of the engine. The water pump was mounted either in front of, or behind, the timing-case, and a rearward shaft extension drove the dynamo through a vernier coupling, a similar coupling behind the dynamo driving the magneto.

On the "20/60" the transmission consisted of a single dry-plate clutch con-

veying the drive to a unit-mounted four-speed gearbox. Gear ratios were: Normal: 4.5, 6.5, 9.9 and 18.1-to-1; reverse 16.7-to-1; and L.W.B.: 4.77, 6.9, 10.5 and 19.1-to-1; reverse 17.7-to-1.

The 1924 range was completed by the "24/70," which was described with the earlier-80 by 150-mm. cars.

1925

A simplified range of three models was offered in 1925, comprising the "12/30," the "14/40" and the "20/60." The only major chassis changes were the adoption of worm and nut steering and four-wheel brakes as standard on the "14/40." The few "12/30s" that were built continued to rely on the more gentle retardation provided by rear wheel brakes.

The power output claimed for the "14/40" was 41 b.h.p. at 2,800 r.p.m., on a c.r. of 4.6-to-1. The wheelbase was increased by 1 in., and a much more comprehensive range of bodywork was marketed on both the "14/40" and the "20/60" chassis.

The famous 3-litre was announced as a sports racing car in the spring of 1925, and by finishing second in that year's Le Mans race, ahead of the Bentleys, may be said to have justified its design. In view of the results of the Bentley-Sunbeam match race at this year's B.D.C. Silverstone meeting, it seems that this model can still hold its own against the 3-litre Bentley. (Any comments from Bentley owners?) As the 3-litre was not offered for sale until the 1925 Motor Show it will be described amongst the 1926 models.

1926

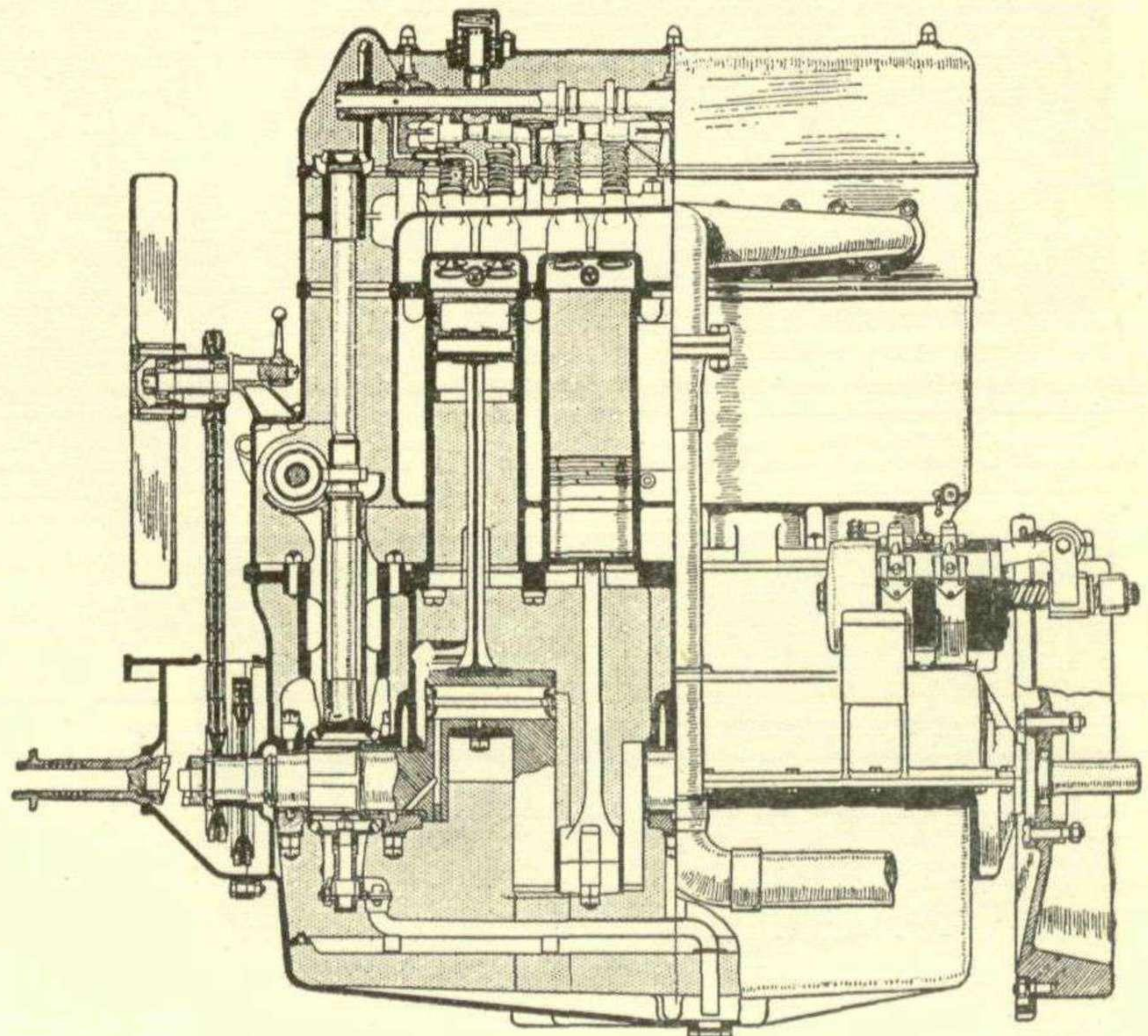
The "12/30" had by now died a natural death, and the 1926 range comprised the well-tryed "14/40" and "20/60" models, supplemented by a new straight-eight called the "30/90," and the 3-litre.

Few changes were made to the "14/40," but body weights having risen, as body weights have a habit of doing, a 4.72-to-1 axle ratio was used for open cars, and a 5-to-1 axle for the saloon. The "20/60" was virtually unaltered.

The layout of the new straight-eight followed the usual recipe, although an embryonic form of cruciform frame bracing was employed behind the gearbox, consisting of two channel pressings mounted back to back, with their legs spanning about one foot of side-member length. The cantilever rear springs were very massive, and double Hartfords were fitted all round. The chassis was made in two lengths: 11 ft. 5½ in. for open cars, and 12 ft. 3 in. for closed models, the tracks being 4 ft. 9 in. and 4 ft. 11 in., respectively.

The engine in each case was a straight-eight with push-rod o.h.v., and of normal Sunbeam design. The very robust crankshaft ran in nine bearings, and carried a large vibration damper at the front end. The camshaft was driven by gears from the front of the crankshaft. The crankcase was of aluminium, and the block was a separate iron casting. The cylinder head was in two portions, each covering four bores, and carried two tulip valves per cylinder. Double valve springs were used, and the auxiliary layout followed normal Sunbeam practice.

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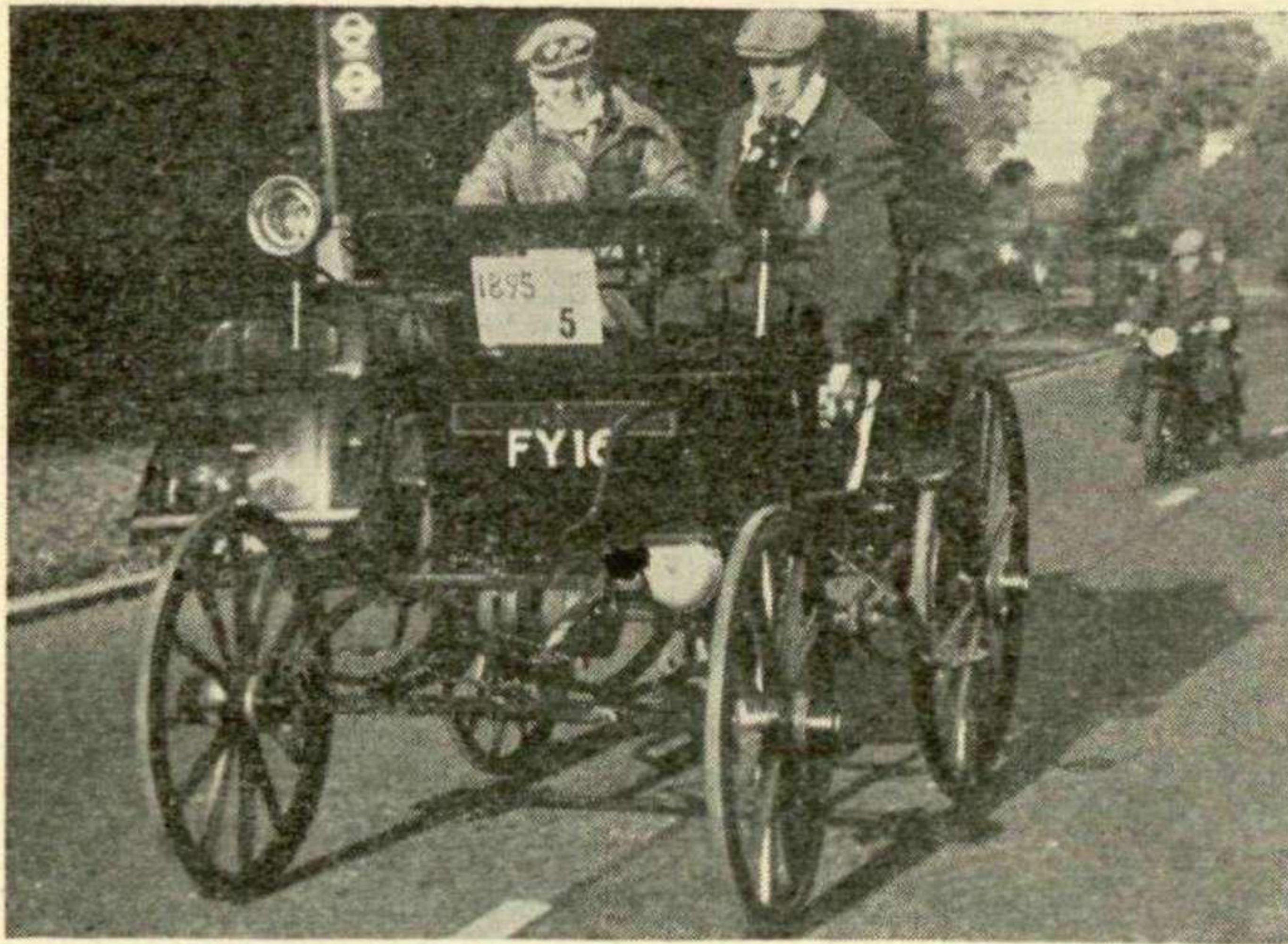


[By courtesy of "The Autocar."]

SINGLE O.H. CAMSHAFT engine, Type OV, as installed in certain Sunbeam chassis during 1922.

MOTOR Pictorial

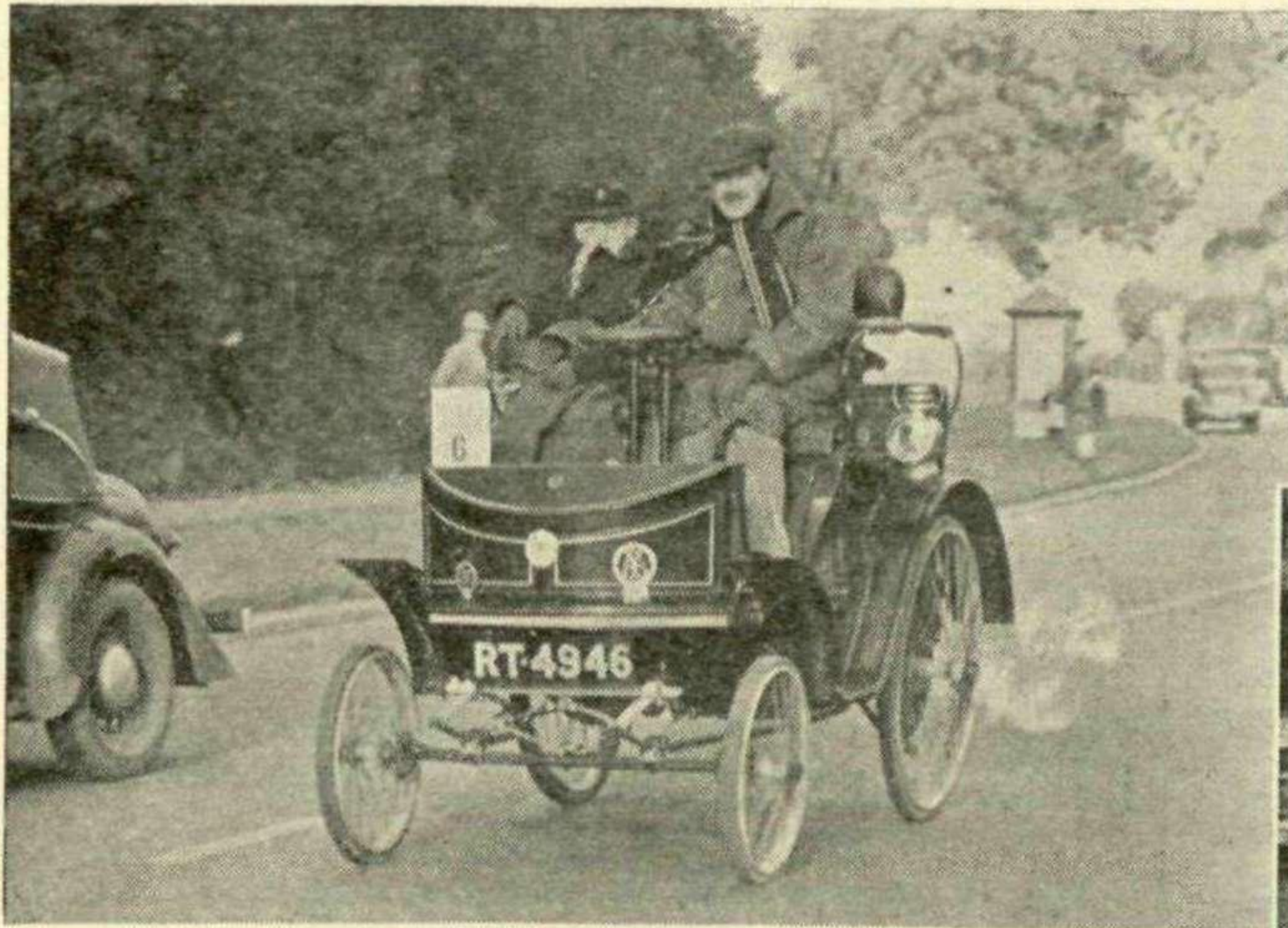
R.A.C. VETERAN RUN, BRIGHTON



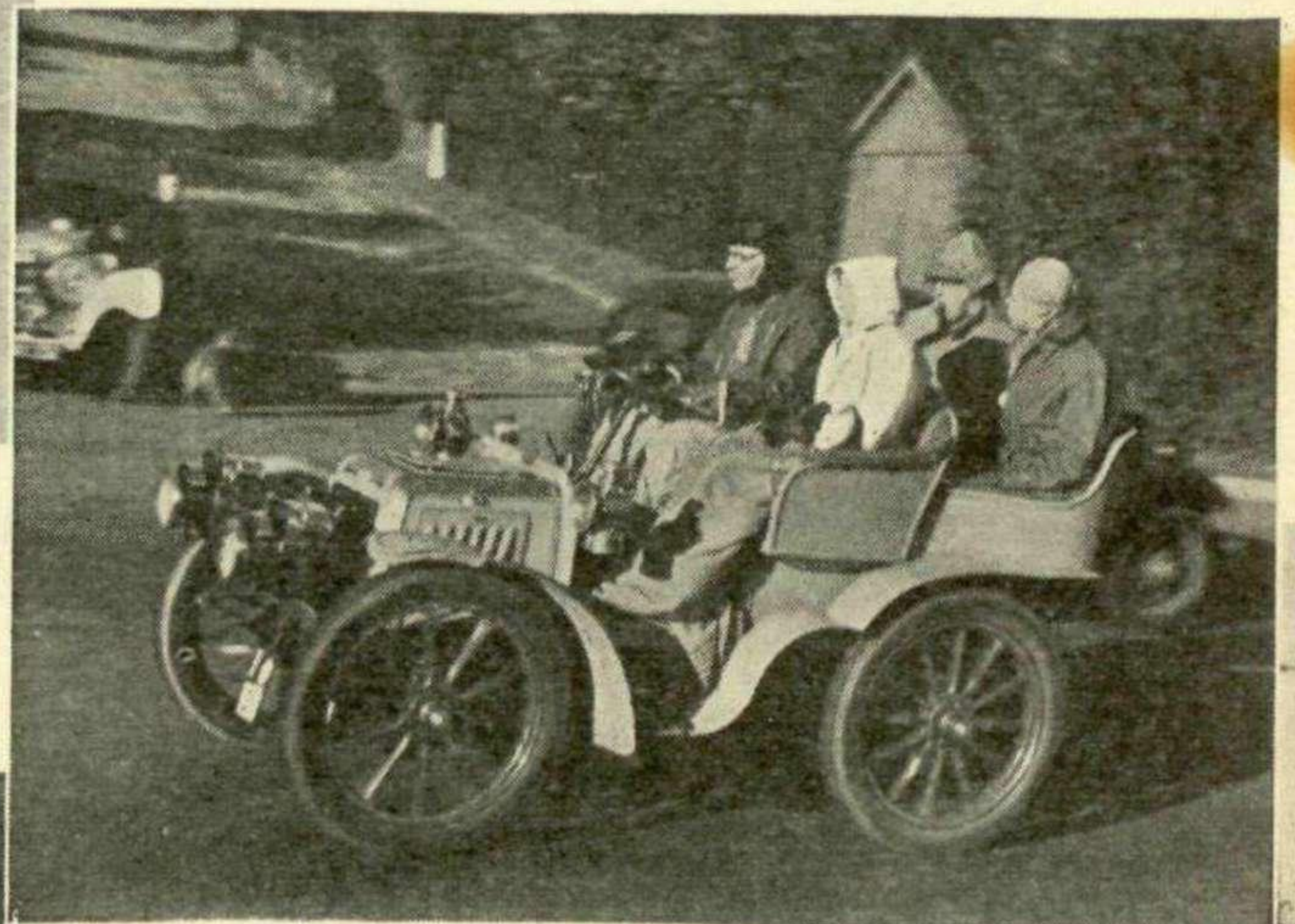
A REALLY STOUT EFFORT.—S. E. Sears (left of picture) and E. S. Berry going well in the 1895 Lutzmann, which got to Brighton, finishing only slightly late and on Pool petrol.



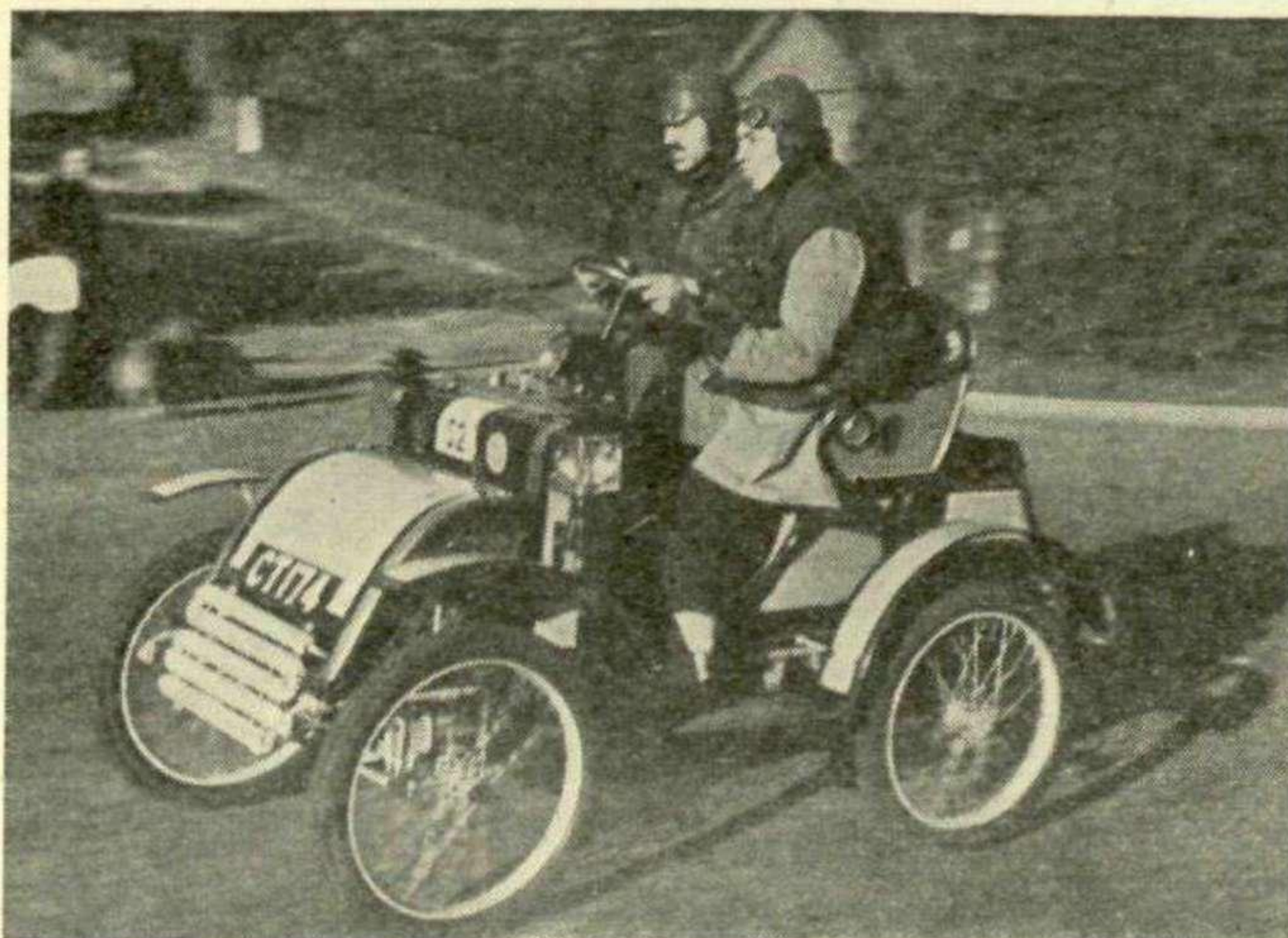
VOITURETTE.—Peter Hampton driving his effective and immaculately turned-out 1902 5½-h.p. Peugeot, which his wife followed in their Type 46S Bugatti.



OLD FRIEND.—It was in this sort of Hurtu dog-cart that Motor Sport went through the 1937 run. F. J. Pidgeon's 1897 example is here seen turf-turfing through this year's event.



ALL SEATS BOOKED.—Sam Clutton occupies one of the seats in Alec Hodsdon's ex-de Knyff 15-h.p. Panhard et Levassor on the Brighton Run.



ONE OFF.—G. W. Wingate's 1901 4.9-h.p. Pick doesn't provide much passenger accommodation, but is nearing Brighton strongly, all the same.



TWO OF THE SMALLER—G. W. Wingate's 1901 5-h.p. Corre and the F. J. Pidgeon's 1901 5-h.p. Corre of the same year, in close competition. Corre lost a wheel after a

SPORT Report

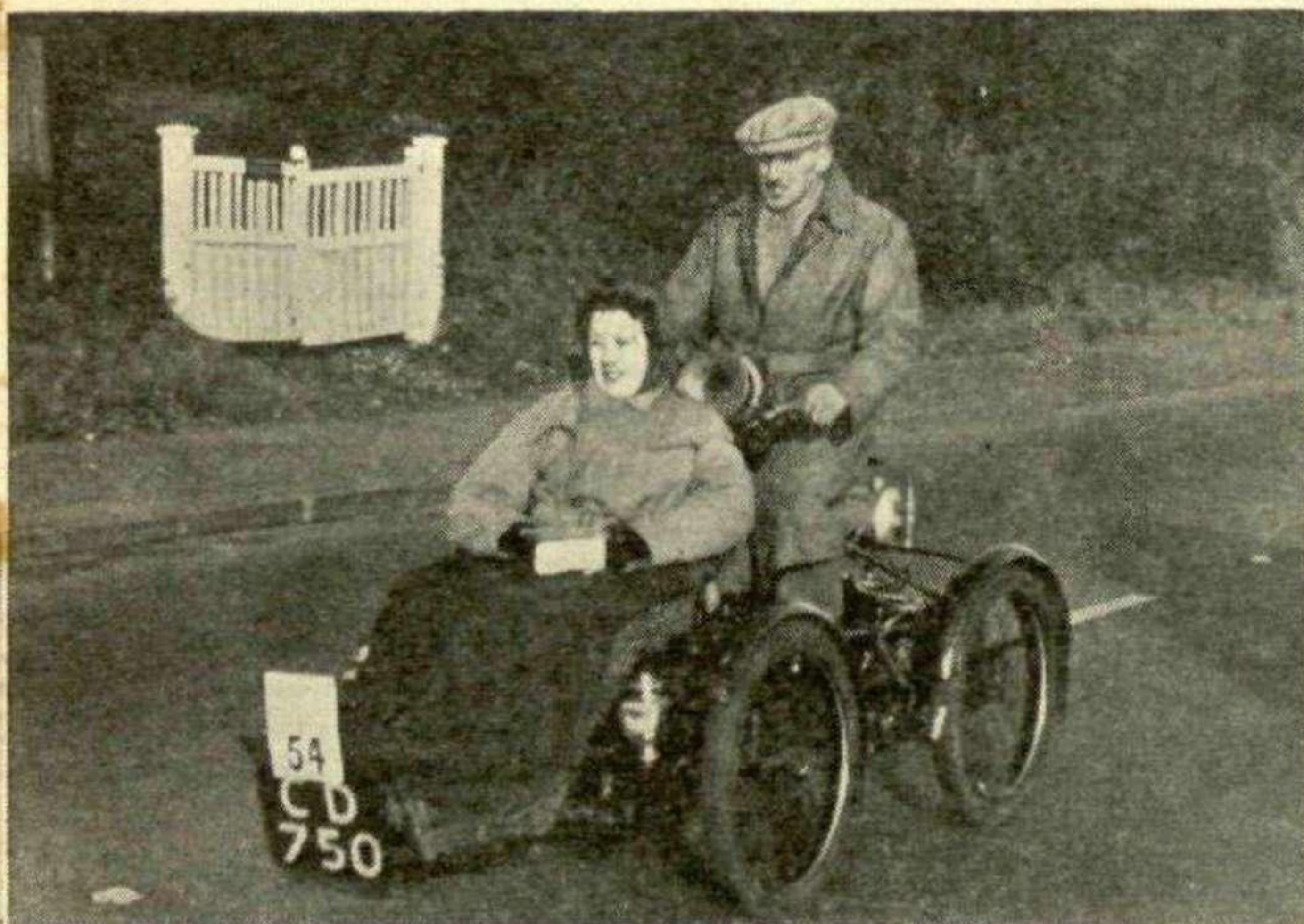
HARROW C.C. COTTINGHAM TROPHY TRIAL



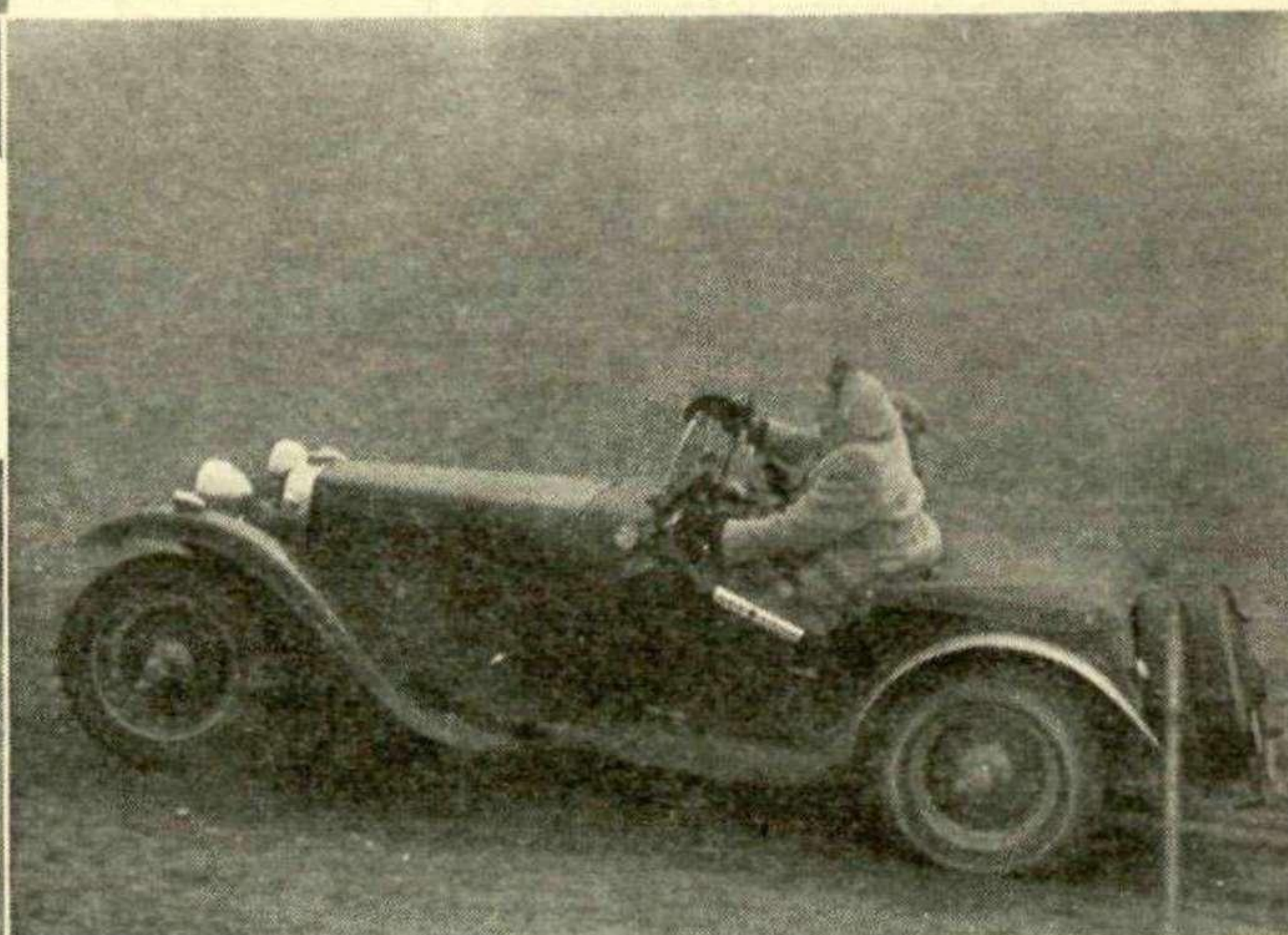
THROUGH THE FOG TO VICTORY.—W. H. Waring's supercharged Dellow tackling one of the grass-grown tracks in the Harrow C.C.'s Cottingham Memorial Trophy Trial.



TYPICAL TRIALS SPECIAL.—A. G. Imhof's Imhof Special, runner-up in the Cottingham Trial, and winner of the Cottingham Trophy, has its blown Ford Ten engine centrally located and the rear wheels sprung independently.



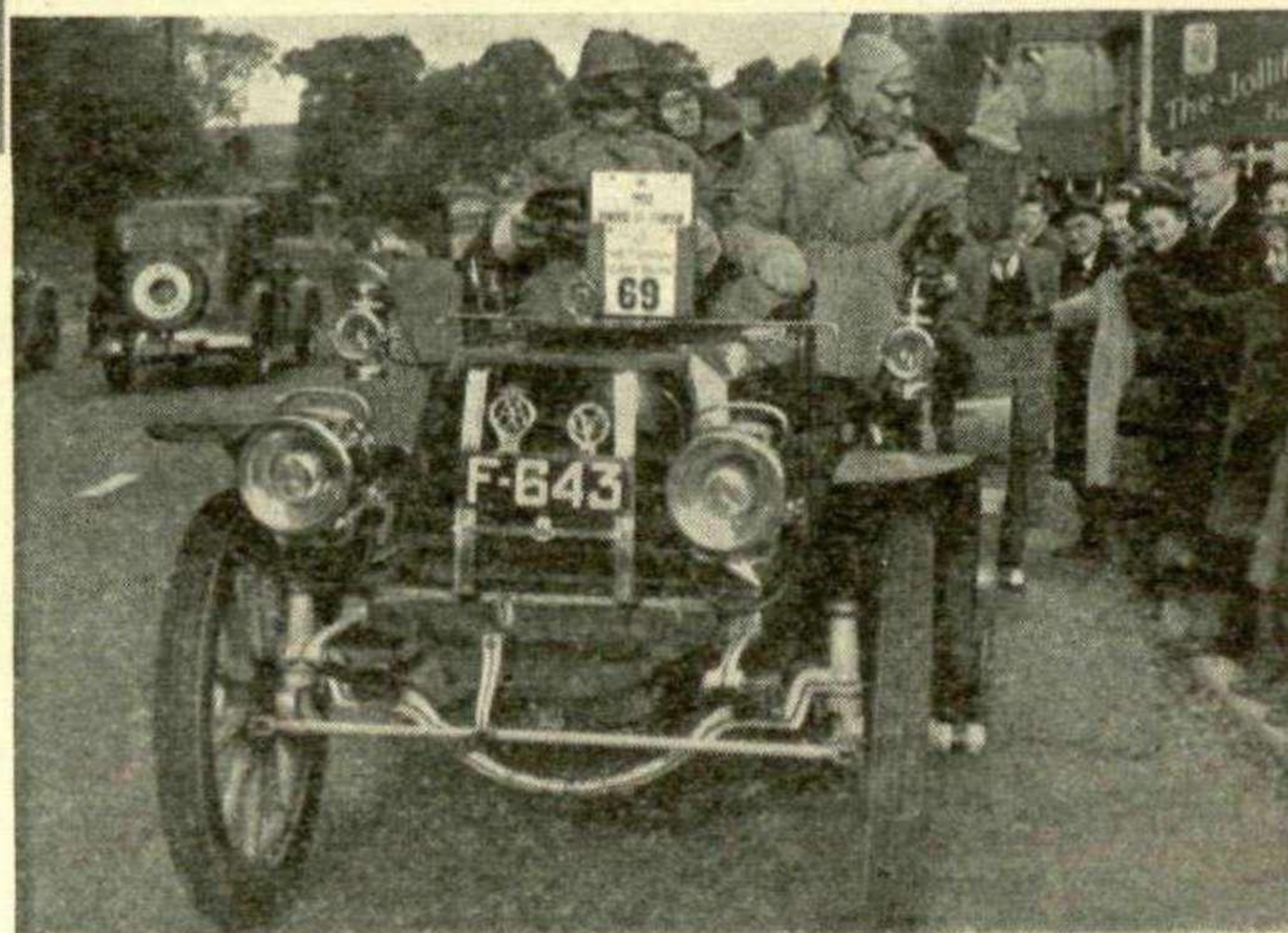
HILL-STORMING H.R.G.—Several of these cars were entered for the Cottingham Trial, but their luck was not of the best this time. The "bouncing" ability of the passenger often brings success, and this driver certainly cannot complain that his passenger is not trying!

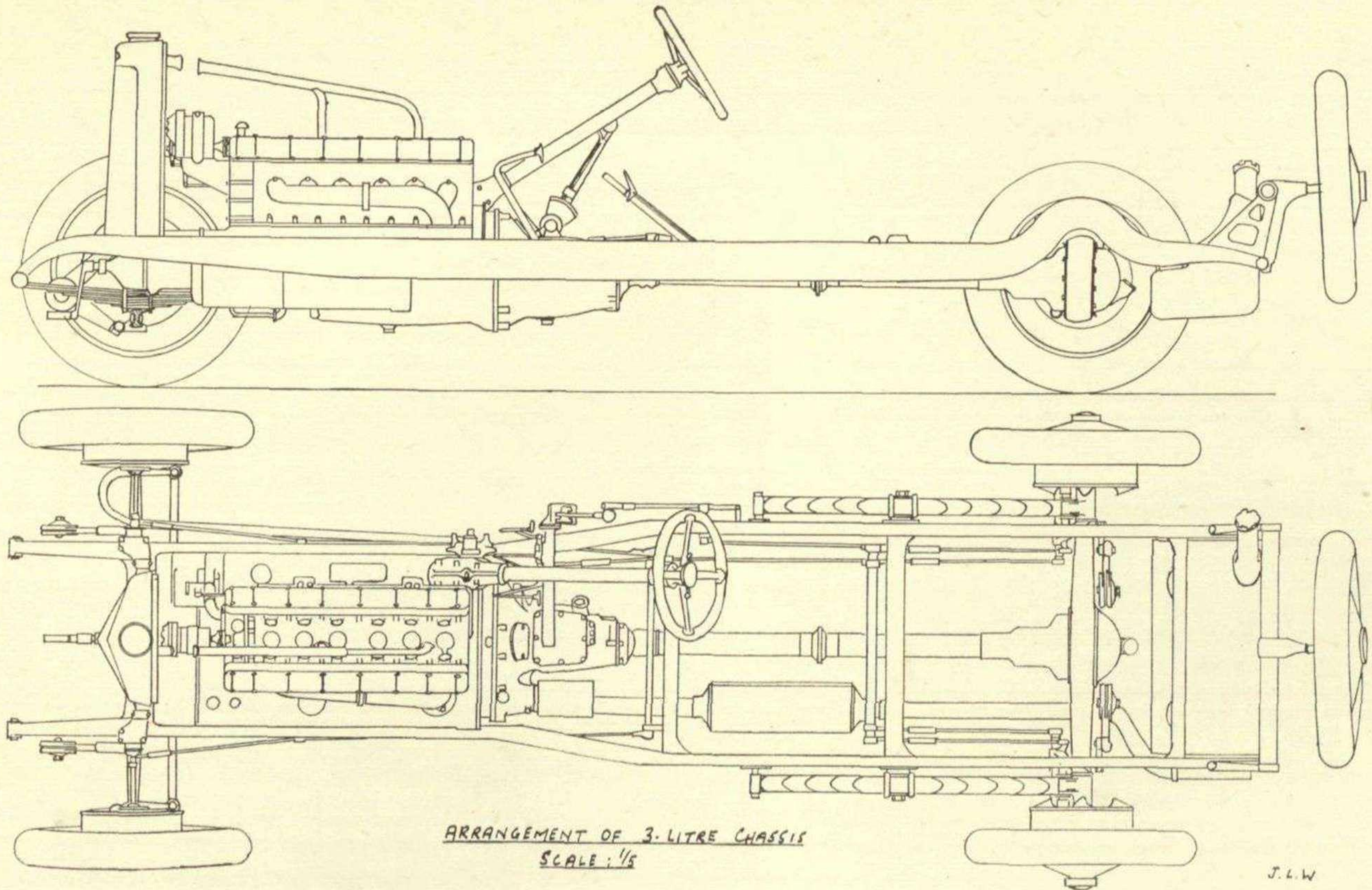


FINES.—C. G. H. Dunham's Wilkinson/Foord 7-h.p. Darracq plying on Purley Way. The driver was injured in an accident and retired.

FUN FOR THE PASSENGER, TOO.—G. W. Goodall's 1901 3½-h.p. Royal Enfield makes light work of its load, along the Brighton road. Alas, it failed to reach the seaside.

CONFIDENT CREW.—Geoffrey Frank's 1902 Panhard et Levassor moving off after their "coffee-stop," the Editor in the sternsheets and everyone showing the confidence which the car justified subsequently.





TWIN OVERHEAD CAMSHAFT 3-LITRE.—A side and plan view of the chassis of Sunbeam's most outstanding sports car.

The stroke was 120 mm., and the bore for both lengths of wheelbase was originally 80 mm., giving a rating of 31.7 h.p. and a swept volume of 4,826 c.c. The bore for closed models was soon increased by 5 mm., giving 35.9 h.p. and 5,447 c.c.

A double plate clutch conveyed the power to a four-speed gearbox with r.h. control, but the gear-change on the "eights" lacked the delightful ease of almost all other Sunbeams, owing to the rotational inertia of the very heavy clutch. Ratios were 4, 6.05, 9 and 15.01-to-1 for open cars, and 4.77, 7.17, 10.73 and 17.9-to-1 for closed models.

The spiral-bevel rear axle had fully floating hubs. Four-wheel brakes were used, and the operating gear incorporated a gearbox-driven mechanical servo. This car and the 3-litre were the first Sunbeams to have a slightly vee'd radiator.

The 3-Litre

This famous model captured (and has held) the imagination of enthusiasts to a greater extent than any other Sunbeam product, presumably because it was the only out-and-out sports type produced at the Wolverhampton factory, and was so obviously based on advanced racing-car design. It was not originally intended as a serious production model and the first ("E") sanction was for only 25 cars. The engine was a six-cylinder of 75 by 110 mm. (2,916 c.c. and 20.9 h.p.). The crankcase was an aluminium casting, and the crankshaft ran in eight bearings, one being in front of the timing gears.

The separate block was of cast iron,

with fixed head. Two valves per cylinder were inclined at 90 deg. in the hemispherical combustion chambers, and were operated by twin o.h.c., through the medium of rocking fingers. The camshafts were driven by a gear-train at the front of the engine, the B.T.H. CE6 magneto being driven by a small separate gear-train between the main camshaft driving gears. The whole gear train, consisting of eleven helical wheels, was driven from the crankshaft through a form of spring drive. This gave rise to a phenomenon known as the "spring-drive period," usually between 1,700 and 2,000 r.p.m., when the backlash in all the helical wheels set up a terrifying clatter, more particularly after a certain amount of wear had taken place.

The valve gear was enclosed in two cast aluminium covers. These camboxes were plain on "E" series cars, and ribbed on all later models. "E" series cars have finned exhaust manifolds, but all later cars have plain ones.

The crankshaft originally fitted was of straight carbon steel, and was unsafe above 4,000 r.p.m. Nickel-chrome cranks were introduced early in the "F" sanction, and as far as possible, all earlier cars were modified.

A brief digression into the subject of Sunbeam engine and chassis numbers may be of interest. The company's policy was to introduce new models when needed and not specifically at the Motor Show. A sanction would be issued for the construction of a certain number of cars of any given model, and these cars were given consecutive unit

numbers. As a sanction could run over two or even three years, a suffix letter was added to the unit number to indicate the year of manufacture. Hence "E" cars were built in 1925, "F" cars mainly in 1926, and so on. As engine and chassis manufacture were not in step, it was quite common for, say, an "F" engine to be fitted in a "G" chassis, in which case the chassis number would become, for example, 1400 GF.

Reverting to the 3-litre, on the original "E" cars the water was transferred across the block from the pump via a circular-section pipe cast in between numbers 2 and 3 cylinders. This pipe left insufficient metal between the bores, and caused the block to crack at this point, and on all subsequent cars a pipe of flattened cross-section was used.

Engine data :

Compression ratio 6.4-to-1. Ignition advance 45 deg.

B.T.H. CE6 magneto. Two Claudel-Hobson AZP carburetters.

CARBURETTER SETTINGS :

	Sunbeam settings			Claudel-Hobson settings		
	Power	Compromise	Economy	Power	Compromise	Economy
Choke ...	30	28	26	30	28	26
Main jet ...	280	240	200	290	280	220
Power jet ...	70	70	70	75	75	75
Idling jet ...	95	95	95	95	95	95

The three Sunbeam settings gave identical power curves up to 2,400 r.p.m., at which speed 72 b.h.p. was developed. The "power" setting gave 90 b.h.p. at 3,800 r.p.m., falling to 80 b.h.p. at 4,400 r.p.m.; the "compromise" gave 85 b.h.p. at 3,800 r.p.m., falling to 77 b.h.p. at 4,400 r.p.m.; while the "economy" setting gave 82 b.h.p. at 3,600 r.p.m., 79 at 3,800, and 72 at 4,400. The Claudel-Hobson settings all gave 65 b.h.p. at 2,200 r.p.m. The "power" setting gave 97 b.h.p. at 4,000 r.p.m. The "compromise" gave 93 b.h.p. at 4,000 r.p.m., and the "economy" setting, 88 b.h.p. at 4,000 r.p.m., from which it would appear that "Hobson's choice" is best for maximum output, but at the expense of petrol coupons. (But it seems open to doubt if the figures claimed for the Claudel-Hobson settings were ever realised, and doubtful in the extreme if the substitution of a 290 for a 280 jet would be worth 7 b.h.p., particularly having regard to the fact that Claudel-Hobson calibrate their jets by flow value and not by size, and the difference is therefore very slight.)

Valve timing:

I.O.: 8 deg. b.t.d.c.; I.C.: 47 deg. a.b.d.c. (.012 in. tappet clearance; .350 in. lift).

E.O.: 44 deg. b.b.d.c.; E.C.: 18 deg. a.t.d.c. (.015 in. tappet clearance; .356 in. lift).

This very exciting engine was fitted into a chassis which could (and did) carry an elegant town carriage body. The wheelbase was 10 ft. 10½ in., the track 4 ft. 7 in., and the layout the normal Sunbeam one of a frame of channel-section members, sharply kicked up over the rear axle, with asymmetrical semi-elliptic front springs and cantilever rears, all damped by Hartfords. The "E" series frames all fractured at the front spring shackle bracket, and all later frames were reinforced. It is a pity that this advanced engine was not seen in a chassis better suited to it; nevertheless, maximum speed was in the order of 85 to 90 m.p.h.

The single-plate clutch and four-speed gearbox were unit-mounted, and ratios were 4.5, 6.0, 7.43 and 14.32-to-1, with 10.65-to-1 reverse. Torque-tube transmission was employed, to a ¾-floating rear axle. Cycle-type mudguards, in conjunction with the tall, narrow, V'ed radiator and narrow body imparted a very rakish appearance.

The standard bodywork was an open four-seater with very sporting lines, which sold for £1,125. Also available in 1926 was a four-door, six-light Weymann saloon.

The blown version of this car appeared in 1928 and will be described under that year.

Phase IV

DESIGN STABILISATION

1927

The drawing office must have been very busy during 1926, as three new models appeared in the 1927 programme. The range comprised: a new Sixteen "six" to replace the "14/40"; a new Twenty to replace the "20/60"; an additional model, the Twenty-five; the 3-litre and

the Thirty straight-eight were continued with minor changes; and the L.W.B. Thirty, also little changed, was renamed the Thirty-five.

To dismiss the last three models in a few words, the 3-litre tyre size became 31 by 5.25 in. instead of 820 by 120; the Thirty had 33 by 6 in. tyres instead of 895 by 135, and the Thirty-five had 35 by 6.75 in.

The new Sixteen had a six-cylinder, four-bearing engine of 67.5 by 95 mm. (2,040 c.c. and 16.95 h.p.). This engine was originally laid out with 65.5-mm. bore, and was to be known as the "14/60." Presumably the performance did not come up to expectations, and the extra 2-mm. bore was allowed on production cars.

The block and crankcase was a monobloc iron casting, with the sump joint on the centreline of the crankshaft, which ran in four white metal bearings and had a vibration damper at the front end. The timing gears were helical spur wheels, the camshaft wheel being of "Fabroil." The valve gear consisted of barrel tappets, tubular push-rods and rockers, and double springs were used.

The aluminium pistons carried three compression rings and a scraper, and the hollow gudgeon-pins were clamped in the H-section rods. The detail layout was typically Sunbeam, with the manifolds on the off side, and the auxiliaries arranged along the near side. The oil pump was fitted in the front end of the sump, and was driven by a helical gear from the crankshaft timing wheel.

The carburetter was a Claudel-Hobson V.36, and Delco-Remy coil ignition was adopted. The compression ratio was 5.7-to-1, and the engine gave 44 b.h.p. at 4,000 r.p.m., and 89 lb.-ft. of torque at 2,300 r.p.m.

Valve timing was:—

I.O.: 8 deg. b.t.d.c.; I.C.: 62 deg. a.b.d.c.

E.I.: 49 deg. b.b.d.c.; E.C.: 11 deg. a.t.d.c.

The drive went *via* a unit-mounted single-plate clutch and four-speed box, which gave the rather peculiar ratios of 5.3, 8.72, 12.12 and 20.94-to-1, and reverse 15.76-to-1. The gearbox was very neat, with the selector rods at the side to reduce height.

The chassis was normal Sunbeam of 10 ft. 3½ in. wheelbase and 4 ft. 7 in. track. Bolt-on steel artillery wheels carried 4¼ in.-21 in. tyres.

The new Twenty engine was also a four-bearing "six," and followed closely the design of the smaller car. Cylinder dimensions were 75 by 110 (2,916 c.c. and 20.9 h.p.), the same as the 3-litre, but this purely touring engine had a detachable head and push-rod valve gear.

The valve timing was not so conservative (almost Fascist!) as most bread-and-butter Sunbeams, and gave 35 deg. of overlap. The figures were:—

I.O.: 12 deg. b.t.d.c.; I.C.: 56 deg. a.b.d.c.

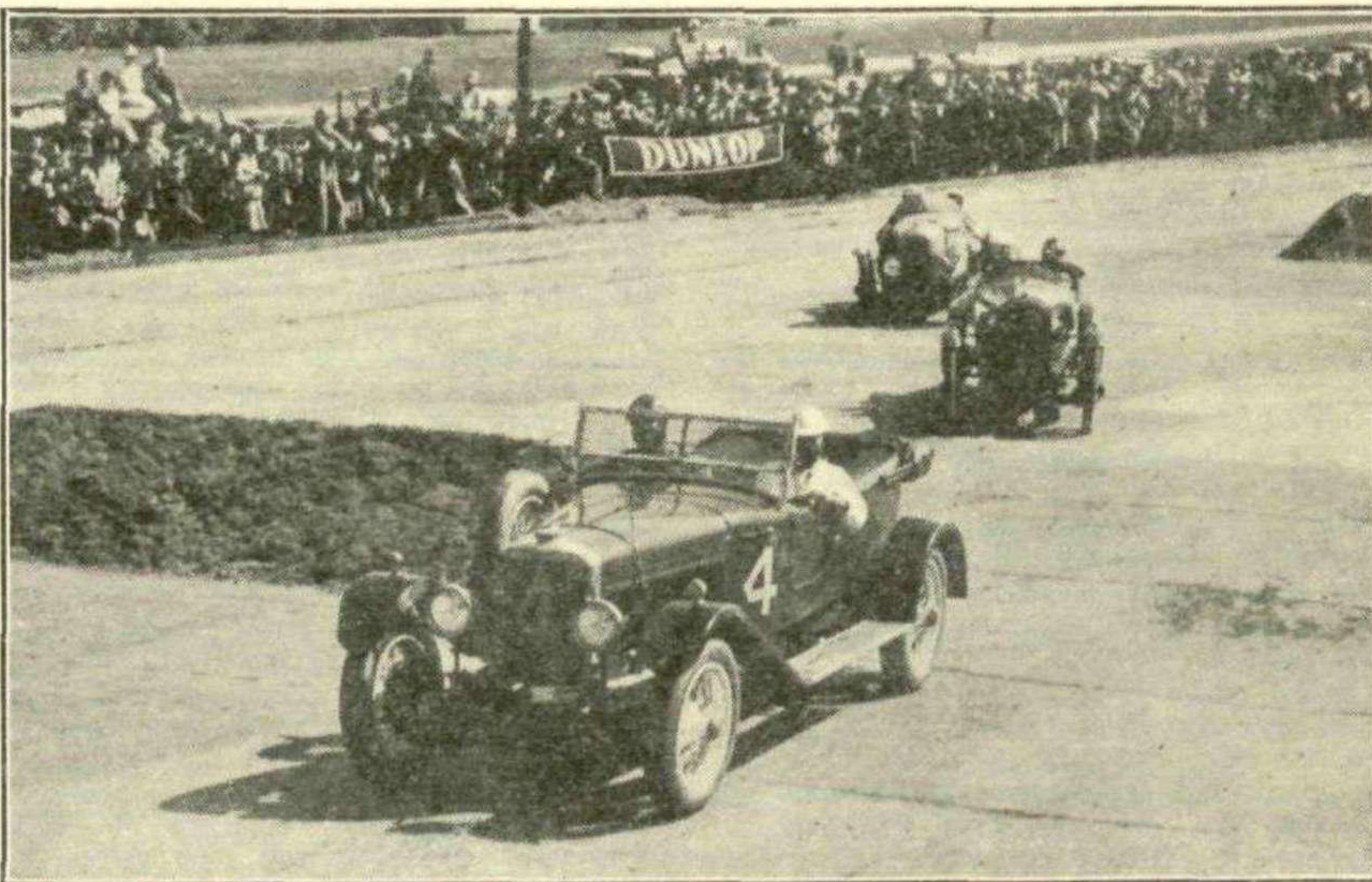
E.O.: 45 deg. b.b.d.c.; E.C.: 23 deg. a.t.d.c.

Compression ratio was 5.5-to-1 and peak power was in the region of 55 b.h.p. at 3,600 r.p.m., although this model was sometimes referred to as the "20/70."

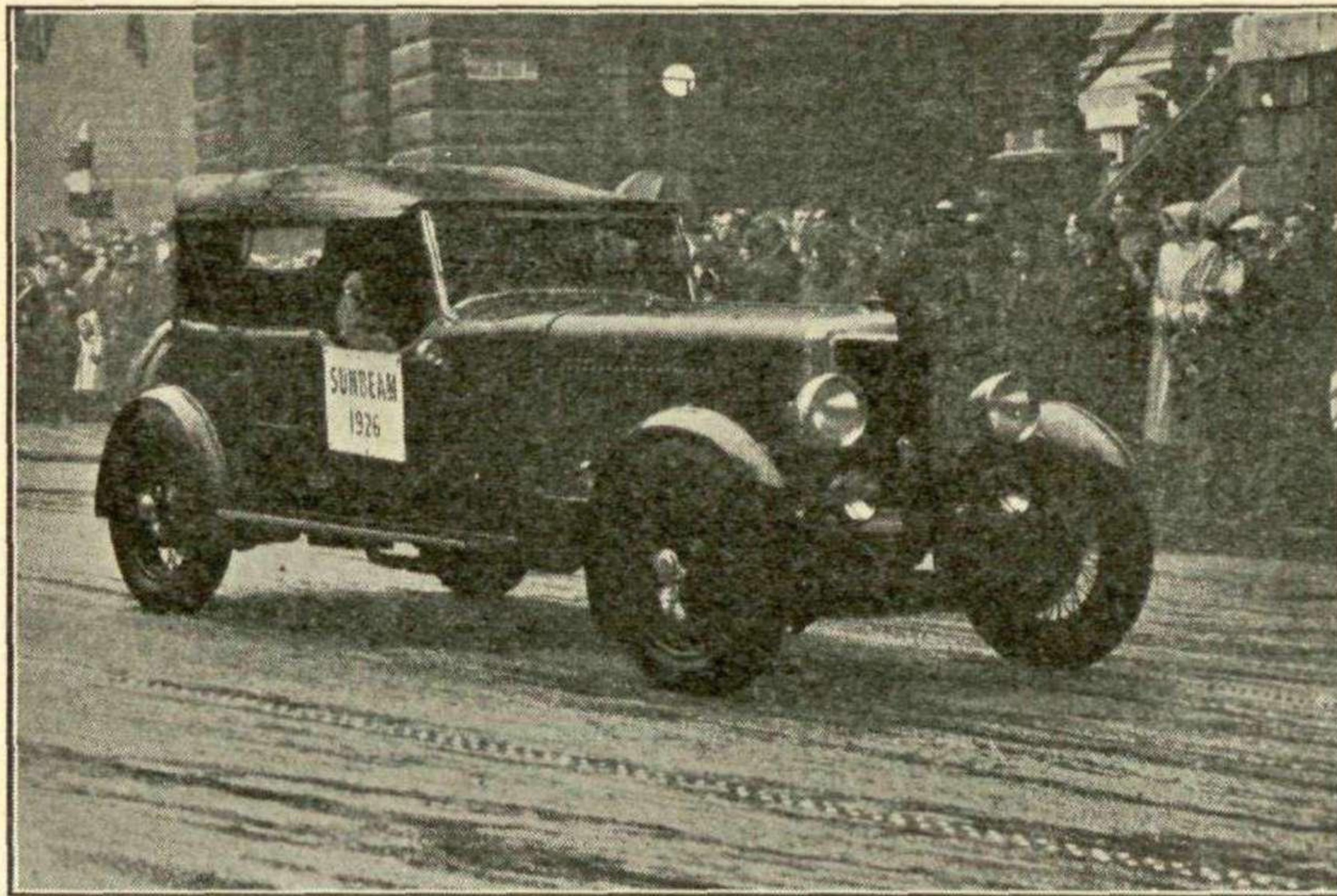
Incidentally, Sunbeam nomenclature bore only superficial resemblance to Treasury rating, the Twenty, for example, was at various times rated at 20.9, 23.8, 18.2 and 19.8 h.p.!

This new Twenty engine had a Claudel-Hobson V.42 carburetter and a B.T.H. CE6 magneto, and was mounted in unit with a single-plate clutch and four-speed gearbox, the gear-change being on the right-hand side as on all models up to the 1934 Show. The ratios were more normally spaced than on the Sixteen, being 4.7, 7.9, 12.9 and 18.8-to-1, with 16.54-to-1 reverse.

This chassis again followed normal practice, and had a wheelbase of 10 ft.



A 3-LITRE SUCCESS.—George Duller driving in the 1927 Essex Six Hours Race at Brooklands. His 3-litre twin overhead-camshaft Sunbeam covered the greatest distance, 385 miles, winning the Barnato and the Pass and Joyce cups.



TOPICAL.—This picture shows Anthony Heal's 3-litre Sunbeam being driven in this year's Lord Mayor's Show by John Wyer, with the Editor of MOTOR SPORT as passenger—proof that one of the authors of the accompanying article and one of the cars are still actively amongst us. This 3-litre is interesting as being a standard car, with the cycle-type wings, those at the front turning with the wheels, normally fitted.

4½ in., a track of 4 ft. 7 in. and the wire wheels were shod with 31 in. by 5.25 in. tyres.

The design of the Twenty-five engine perpetuated the earlier features of an aluminium crankcase with a separate cast iron block. Bore and stroke were 80 by 120 mm. (3,617 c.c. and 23.8 h.p.), and power output was 72 b.h.p. at 2,900 r.p.m. The 65-mm. dia. crankshaft ran in seven bearings, and drove the camshaft by silent chain.

The push-rod valve gear was unremarkable, as was the valve timing of:—

I.O. at t.d.c.; I.C. : 50 deg. a.b.d.c.

E.O. : 40 deg. b.b.d.c.; E.C. : 15 deg. a.t.d.c.

Ignition was by B.T.H. CE6 magneto, and mixture was supplied by a Claudel-Hobson AZP.1 carburetter. The unit-mounted clutch and gearbox gave ratios of 4.5, 6.08, 12.4 and 18.0-to-1 for open cars, while reverse was 12.6-to-1. The long-wheelbase chassis for closed cars had a 4.73-to-1 axle ratio. Tyres were 33 by 6 in. The chassis was a scaled-up version of the normal layout, and was supplied in two lengths: 10 ft. 11½ in. for open cars and 11 ft. 5½ in. for closed types. Track was 4 ft. 9 in.

To be continued.

BOUQUETS AND BRICKBATS

THE THIRD MEETING OF THE CLUBS, held at the R.A.C. on November 18th, gave organisers and competitors a chance to hand the R.A.C. Competitions Committee verbal bouquets, followed by numerous brickbats.

The meeting was opened by Prof. R. G. H. Clements, M.C., M.Inst.C.E. (Senior Vice-Chairman, R.A.C.). In his opening remarks he spoke at length about the vast undertaking that Silverstone represented and the great responsibility that it was to the R.A.C. [we feel Brooklands in 1907 must have been an even greater responsibility to Mr. Locke-King!].

The general trend of the remarks by the Club's representatives was one of complaint, rather than suggestion, and Silverstone came up for much discussion.

The main grievance was that the cost of running events at Silverstone was too high, and this was supported by the B.R.D.C., the Hants & Berks M.C., the A.C. Owners Club, the Maidstone & Mid-Kent M.C., and the 500 Club, many of whom had had practical experience of running meetings at the airfield. The Bentley Drivers Club and the Bugatti Owners Club representatives both felt that a financial statement should be issued by the R.A.C. in respect of the first Silverstone season, while the Hants & Berks M.C., supported by S.U.N.B.A.C. and the A.C. Owners, felt that any profits shown by the R.A.C. from Silverstone meetings should be used to subsidise smaller club meetings held there. The B.R.D.C. felt that more time should be allowed on non-race days for private owners to practise and the Darlington and District M.C., supported by S.U.N.B.A.C., thought the whole attitude of the R.A.C. over Silverstone was

too dictatorial [loud acclaim from the assembly].

While it was appreciated that the R.A.C. and the A.C.U. were collaborating more than in the past, there were many matters which could be improved by their joint action, in particular the method of issuing competition permits for combined car and motor-cycle events.

The compulsory 5s. National Competition Licence was mentioned more than any other topic and the meeting was very much in favour of its abolition, S.U.N.B.A.C. leading the movement. Much ill-feeling was apparent over the fact that the R.A.C. had stated in correspondence that its introduction was welcomed by the majority of clubs, whereas the meeting proved the contrary.

The use of airfields other than Silverstone for race meetings was widely discussed and pleas for circuits in the West, North, North-West and Scotland were put forward, suitable aerodromes being cited. This led Sqd.-Ldr. Day (A.C.U.) and the Darlington & D.M.C. representative to lodge complaints that their proposed airfield meetings were refused permits.

The Brighton & Hove M.C. asked that their Speed Trial be reinstated as an International fixture, although S.U.N.B.A.C. doubted the status of most of the so-called International meetings held in this country. Many clubs desired to see racing and the organisation of races made less costly, but the Hants & Dorset C.C. gave a warning note, when they mentioned that their Blandford meeting required an outlay of £3,000 and had shown a loss. The B.R.D.C. put forward a sound suggestion, to the effect that the R.A.C. Touring Department might delegate one

man to deal with arrangements for drivers taking racing cars [and motor-cycles?] abroad for Continental meetings.

Before the meeting adjourned for tea Earl Howe summed up, answering as many points as he could. The question of the Competition Licence was out of the hands of the R.A.C. as it was now an International requirement of the F.I.A. The Silverstone balance sheet could not be dealt with by the Competitions Committee [the "buck" was passed to the R.A.C. Executive Committee, who, of course, were inevitably not present]. His Lordship expressed the view that it was a mistake to have too many circuits and events. Col. Barnes was called upon to reply to the Silverstone queries. It would appear that the number of paying-gate meetings held there was dictated by the Police, due to traffic arrangements [a strange situation, this]. He supported Earl Howe's plea, to avoid overloading the calendar and having too many circuits.

Prof. Clements presented the awards for the 1949 R.A.C. Hill-Climb Championship and the 1949 Championship Trial to Sydney Allard and Ken Wharton, respectively.

The Championship Trial came in for comment, many people considering that October was the wrong time in which to hold it. Scrutineering was criticised by S.U.N.B.A.C. and the Hants & Berks M.C., as not being consistent. The existing Trials Car Regulations were discussed freely, in particular the accommodating of passengers beside the driver, even in four-seater cars.

The Scottish Sporting, Ulster, Pathfinders and Derby, Lancia and M.G. clubs all aimed their brickbats

Continued on page 514

VOITURE FAMILIALE POUR L'ENTHUSIASTE

TOWARDS the end of last month, by courtesy of Mr. H. M. Johnson, we took an evening drive in his Citroën Six saloon with Wade-Ventor supercharger installation. The appearance of the car intrigues, even seems mildly aggressive in a purposeful sort of way. As the unusually long wheelbase forecasts, there is ample room inside for five grown-ups. This, then, is a comfortable family car, but after driving out of London as far as Maidstone, during the evening traffic peak, we realised that not only are all the splendid qualities of the "Light Fifteen" reproduced in this latest front-drive car from the Citroën factory but that in spite of its capaciousness it is able to shame many so-called sports cars in the matter of performance.

Mr. Johnson, who formerly owned, Darracq, Rolls-Bentley and Studebaker cars, bought this Citroën and drove it about 1,000 miles in standard form. He decided that he liked it and took it along to Pat Whittet & Co., Ltd., to have some additional urge instilled. The Ventor blower installation fits in very neatly with the under-bonnet scheme. A Type R 020 four-lobe supercharger is mounted high up on the near side and driven from the front of the camshaft in two stages, first by chain enclosed in a neat alloy casing and thence by short triple belts running over spring-loaded jockey pulleys. An S.U. carburetter behind the blower feeds *via* a curved inlet pipe and a large-bore delivery pipe passes from the blower, behind the engine, to the centre of the six-branch inlet manifold on the off side, where a blow-off valve is hidden beneath the delivery-pipe/manifold junction. At the back of the engine the main oil feed is tapped to provide drip-feed lubrication of the rotor gears and the driving chain. Ki-gass injectors enter the delivery pipe on the off side and here also it is tapped for the boost-gauge line. The pulley on the camshaft having been sacrificed for the chain sprocket, a new belt drive has been devised for fan and dynamo. The supercharger blows at 4 to 4½ lb./sq. in. at maximum speed; the compression-ratio of the engine has been lowered from 6.7 to 6.4-to-1. To obviate valve bounce ⅛-in. packings have been inserted beneath the valve springs and a Fram filter and Runbaken Oil Coil are fitted. The engine is otherwise the standard 3-litre Citroën unit evolved some years ago for lorry propulsion. The bonnet has been felt-lined to absorb noise and a boost gauge and oil and water thermometers have been added to the unobtrusive square-dial instruments on the right of the standard fascia panel. Hand ignition control is a standard fitting.

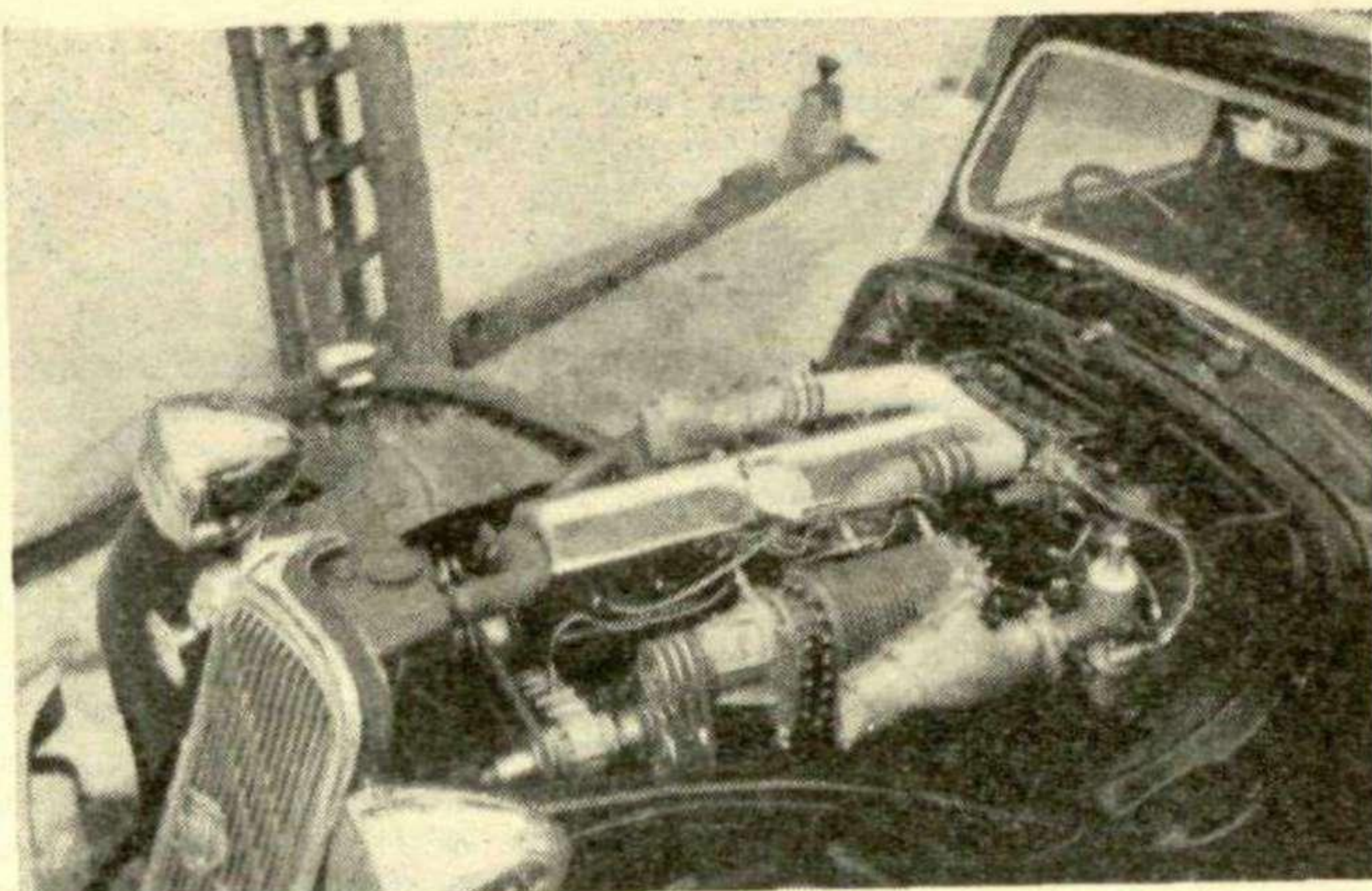
As a result of adding a Wade-Ventor installation to the Citroën Six a very good motor car has been rendered outstanding to a point of being unique. The engine responds instantly to the throttle and acceleration is most impressive both by reason of its degree and its

continuity. As soon as possible you get out of the 13.24-to-1 bottom gear and in the 5.62-to-1 middle ratio of the facia-controlled three-speed box, the car surges cleanly forward up to an easy speedometer 60 m.p.h. Although top gear is as high as 3.87-to-1 and the car weighs 26 cwt. unladen, speed continues to build up just as rapidly as in second gear, the engine as smooth as a turbine and inaudible except for a faint hum from the blower. On the over-run things are just as smooth and unobtrusive.

The true maximum speed is probably in excess of 90 m.p.h., and on traffic-infested roads 70 to 75 m.p.h. was the usual gait. The feeling of absolute security up to maximum speed is most pronounced. As with the "Light Fifteen," however, so in this "Six" speed as such is subordinate to the delightful manner in which the car gets on with its job. The steering is so obviously connected to the front wheels and so pleasantly high-g geared that its heaviness is no disadvantage. The Lockheed brakes require fairly heavy pressure but are free from fade. The ride is so level-keel that it ensures complete confidence when cornering or standing on the brakes in an emergency, and the suspension so effectively absorbs road shocks that to ride in any seat in this car is to realise how much the French knew about motor car design fifteen years ago and how sadly our designers lag behind. For the Citroën Six derives its delightful riding and handling qualities from front-wheel-drive, low build, torsional suspension, and rigid one-piece construction, features which caused English eyes to goggle at the Citroën Twelve away back in 1934 and have enabled Citroën cars to serve ordinary Frenchmen as such satisfactory utility motor-cars ever since. It may even be said that the "Six" has more refinement of running than its famous contemporary the "Light Fifteen."

Moreover, as it has been naturalised, the car we tried has r.h. drive and spares and service were available from Staines.

In his blown Citroën Six Mr. Johnson has a profoundly inspiring car. The supercharger, now that its bronze and steel rotor gears are bedded in, imparts merely a low hum to the under-bonnet silence and apart from that only a little



TAILOR-MADE INSTALLATION.—The Wade Ventor supercharger fits neatly with under-bonnet scheme on Mr. H. M. Johnson's Citroën Six.

resonance and wind-roar, more noticeable in the back than in the front seats, proclaim the sort of performance that is being delivered. After the wire-mesh radiator grille no serious overheating has been experienced, and during our drive the water temperature did not exceed 75°C. The blower belts have lasted about 5,000 miles. Castrol XL oil and the plugs supplied with the car are used, and a double S.U. pump now looks after the fuel feed. Fuel consumption has scarcely increased since the engine was blown, 16 to 17 m.p.g. being normally obtained; 10 per cent. benzole is added when available. The only serious trouble in 5,000 supercharged miles was clutch slip, which Monaco of Watford cured by fitting different linings, which sweetened the action. Oil pressure, when hot, is 30 lb./sq. in. at 70 m.p.h.

In spite of its 10 ft. 1½ in. wheelbase the car can be thrown about with impunity. An American Bosch radio is fitted and tyres are 185/400 Michelins.

No car is perfect, as Mr. Johnson is the first to admit, but the snag-sheet relating to his present car is a very short one. Bottom gear is too low, and an additional gear between middle and top, with the latter a still higher ratio, would be an improvement, as at present the Citroën is a top-gear car. Hunting at idling speeds is evident to a slight degree due to supercharger surge, which is common to many blown engines, and the car sometimes suffers from a very slight "flat-spot," noticeable when opening-up from low speeds. The accelerator pedal has rather a long movement, and clutch engagement is rather difficult.

After which you return to the opinion that here is one of the few truly-great quantity-production cars of the present day. That such a bold statement is no exaggeration can be appreciated when to the foregoing remarks are added the facts that Citroën still refuses to streamstyle or aerodyne his cars, and that the doors of the all-steel body swing easily on their hinges and allow entry and egress with a minimum of contortion.

This Citroën is a roomy family saloon, endowed with additional speed and acceleration by reason of a mild boost, and it would do some of our designers a power of good to drive it.—W. B.

A 30



ANYONE who motors as the enthusiast must surely give some thought to the roads his car traverses and derive pleasure therefrom. It may be a case of appreciating long, well-surfaced straight stretches of main highway, on which the full speed of your car can be realised in safety, or you may be one of those mortals who "avoid the red" whenever possible in getting from one place to another. Either way, the roads are complementary to your car, and of unflinching interest.

Whenever I have enough petrol to motor up A.30—the road from the West—as far as the first convenient Underground station, Osterley Park, I am thankful, going home again in the evening, once I have passed over Staines Bridge, for surely the route thereafter is one of the nicest exits from the metropolis? The road is mostly straight and well-surfaced and stately houses lie behind the hedges, beyond the neat footpaths. Ribbon building hasn't so far overtaken this main artery, although a bit of a rash has broken out recently opposite the T-junction where the road from Ascot joins. Yes, A.30 is enjoyable, although it is a reflection on how severely petrol is rationed that the run as far as Hartley Wintney now seems quite a journey, whereas pre-war this was where you caught the traffic when returning from the West country and all thoughts of fast driving went by the board from there onwards. The straightness of A.30 is relieved by appreciable hills after the Egham and Bagshot by-passes, both of which reduce buses and commercial vehicles to a crawl, while there is another appreciable rise from Blackwater on to the level, dead-straight Hartford Bridge flats, flanked to-day not by highwaymen but by the aerodrome which relieves London Airport if the weather turns tricky. Thinking of this road I never fail to wonder what it was like twenty or thirty years ago—after all, if you enthuse over a vintage car, surely you should know what kind of roads it traversed in its youth? Sometimes, instead of turning off at Chiswick roundabout along the traffic-lamped arterial section I carry straight on through Isleworth and Hounslow. I then begin to wonder where the old aerodrome on Hounslow Heath was situated.

Re-reading that entertaining book "Airman Friday," by William Courtenay, I recall that it was from here, in November, 1919, that the Smith brothers took off in a Vickers "Vimy" and flew to Darwin in 29 days, winning a £10,000 prize offered by the Australian Government. It was here also that Handley-Page had their aerodrome, which constituted the first London airport, from which the first cross-Channel London-Amsterdam air service left in that same year. Yet where exactly was this historic aerodrome? To-day the road that I imagine must have taken you past it is flanked by suburban villas for miles after one has shaken-off the shopping centre of Hounslow itself? There is one bleak open area, conspicuous by a glimpse of fairground vehicles parked on the left-hand side of the road. Was it here that these fascinating early aeroplanes had their being, and what was the scene like in those far-away days? If it seems curious

that I should enquire, may I hasten to explain that I'm not all that old!

Continuing along A.315 over a former Roman road, we rejoin A.30 where the sheds, or at night the lights, of London's present airport can just be glimpsed away behind you to the right. Staines itself is busy, congested, and sometimes pervaded by a sickly smell of linoleum. Over the bridge you might hope to catch the atmosphere of those M.C.C. trials of the early nineteen-twenties, which used to start from here. Alas, the spot is disfigured by a vast traffic roundabout which seems to cause more confusion than existed before it came into being, while the name "Lagonda" has vanished from the factory beyond. If you are driving a vintage car it seems a point of honour, as you press westwards, to go through Egham and Bagshot and not round them. Yet I suspect this Great West Road looks very different now from what it did to competitors in, for instance, the "Exeter" of 1921. There is enthusiasm and interest in some quarters in study of early maps, so why not a move to discover actual photographs of our roads as they were before they changed almost out of recognition? Quite recently, in conjunction with an article on early Sunbeam cars, the author sent me a photograph of a 1921 "Light Sports" tourer at Munslow Aston, near Wenlock. On the back my correspondent had pencilled a note to say that the narrow, muddy road depicted is now B.4368, quite a busy secondary route with an excellent surface. "Our roads have improved" is his comment. Yes, improved, and also changed. Getting back to A.30, I suppose that the level crossing at Sunningdale where the Ascot-Reading loop cuts the road, caused as irritating hold-ups in the early days as it does to-day, but that steam instead of electric trains claimed their "right of way." Until very recently, however, no traffic signals obstructed you at the bridge over the Ascot-Aldershot loop line where A.322 from Bracknell forms the leg of the T-junction, and at which bridge, I believe, Earl Howe had a considerable accident in his Mercedes-Benz some years ago. Who, by the way, decides when traffic lights are essential? They must cost the taxpayer money and they absorb labour to erect, and they can go wrong, as these very lamps did at the junction in question soon after they were installed. So I hope accident statistics decide the issue and not a mere official whim. Not that in my frequent journeyings along A.30 I have ever seen any unpleasantness at this point, so that I resent this intrusion of the man-made into rurality, particularly as it denies me the one-time pleasure to be had from turning out of A.322 on to A.30 with the minimum of delay compatible with checking that the road was clear in both directions, or of remonstrating with anyone who carried out this manoeuvre right in my path when I was hurrying homeward over the bridge

on A.30. Traffic lights, like those rather prominent if neat name-plates with which the Southampton County Council seems determined to proclaim every one of its towns and villages, disfigure the countryside and add another alteration to our roads, useful as both these innovations may be to the A-to-B-and-lets-get-on-with-it traveller. Previously you could drive from Staines down A.30 for miles—certainly as far as Basingstoke—and encounter only three sets of automatic traffic signs, two of which were in the town of Camberley. Now the score is four sets, and if ribbon building engulfs the highway, shopping centres will develop, congestion will increase, and, lo, more and more signals will be deemed necessary to control drivers whose only desire is to get clear of such areas with a minimum of delay. The advance guard of such developments is seen in those clean white kerb-stones and generous pavements which the aforementioned County Council, for one, is feverishly erecting along quiet side roads and village streets, where for hundreds of years grass-grown verges have sufficed—why, oh why, is such work permitted in an age when economy of materials and manpower should be rigidly observed?

Yes, our roads have changed and our towns, too. Now it seems, our villages and rural areas must be changed as well. Even routes seem to alter appreciably with the passage of time, as witness that taken by Evelyn Ellis when he drove his Panhard-Daimler four-seater dog-cart from Micheldever near Winchester to Datchet in July, 1895, sixteen months before it was legal to drive a motor car on English roads—Micheldever, along the "well-made old London coaching road" to Basingstoke, Mapledewellhatch (food, and water for the engine), Blackwater, "up some very steep hills" to Bagshot, to Sunningdale, Virginia Water (lunch and oil), Englefield Green, "down steep hills" to Windsor and Datchet. Look that up on your present-day map and you will see what I mean. Incidentally, writing of this journey in the *Saturday Review* dated July 20th, 1895, Frederick R. Simms remarked that 133 horses were passed on the road and that the 56 miles were covered at a running time average of 9.84 m.p.h. The cost in petrol was about 2s. 6d. Roads, and times, have indeed altered!—W. B.

ALFA-ROMEOS—continued from p. 513
 plugs from the crankcase and clean out all sludge, using methylated spirits as a solvent if necessary. Wash out afterwards; the plugs may prove somewhat tricky to refit.

With English coachwork the pear-shaped rear fuel tank was sometimes lowered slightly, but normally it sat on brackets above the chassis, the spare wheel being carried on these brackets.

Early in 1932 a few detuned second-series chassis came to England fitted with gearboxes having synchro-mesh on third gear. These chassis were usually supplied with Italian two-seater coupé bodies and about the same time a 10 ft. 2 in. wheelbase "Gran Turismo Supercharged" chassis was made, also with the synchro-mesh third speed and with the springs mounted outside the side-members.

RUMBLINGS

In spite of the fact that this is nearly A.D. 1950, letters still arrive in numbers at the MOTOR SPORT offices extolling vintage cars. The other day we fell to wondering

The Vintage Car

just what it is that gives "true-believers" such a glow of real pleasure to own and motor in aged cars. This warm glow experienced by the vintage-car enthusiast is a very real one. It got the Vintage Sports Car Club off to a fine start in the nineteen-thirties when ownership of a new car meant opening the garage doors to a chromiomed bird-cage, and look where that Club is today—vast membership, full-time secretary, and some "moderns" let in on sufferance and not at all essential to continued existence. Now, we can understand enthusiasm for the immortals—G.P. Bugatti, "17/50" Alfa-Romeo, old-school Bentleys and the like. But what of those lesser, yet sound, old cars of no very pronounced apparent character? We are thinking of comparatively sober touring cars. There were lots of them in the mid-twenties, so quite a few have survived to this day. You know the kind of thing—solid, sensible, yet undistinguished and all rather like one another until you probe for details. What, then, is the point of owning such a car, if it hasn't independent suspension, or twin overhead camshafts, or an unusual cylinder arrangement or "banana" tappets, or a light-alloy block or some distinctive something or other to which you can claim to have taken a fancy?

Well, in the first place there is the essential fitness for purpose and stolid dependability of the old tourer. Then there is pride to be taken in its solid, "real" radiator and adequate mudguards when you leave it in a parkful of shabby tin-wear. There is a surprising degree of comfort in its roomy interior. And there is pleasure in knowing you can handle effectively a gearbox devoid of "aids to ladies" and that you are able to use safely the earlier idea of brakes and (high-g geared) steering. Withal, the thing is cheap to buy, cheap to run if you tax it for pleasure only (in spite of the unfair dispensation of the £10 tax) and there is no purchase tax to forfeit to a Government of which you may or may not approve. It is rather nice, too, to project yourself back into a healthier, happier era every time you leave your neon-lighted, televised lounge for the garage, and to dig about in dog-eared motoring journals to discover just where your car fitted into the scheme of things when it glistened new in somebody's showroom.

MOTOR SPORT isn't turning into a vintage-car gazette, any more than usual. It's just that we believe there is joy to be had from "12/50" Alvis, Austin Twelve, Bean, "Redwing" Riley, "22/90" Alfa-Romeo, 2-litre Ballot, "14/40" Vauxhall, "14/40" Sunbeam, "14/40" Delage—we are becoming engulfed in this "14/40" nonsense again!—and similar outwardly-rather-dreary cars which are seen on our roads more often than might reasonably be expected. Certainly it seems there may be no two ways about it—either you own "vintage," or you own a modern car, forgetting those dreadful half-and-half productions that were the outcome of trying to sell the birdcage before the rubber-mountings and the dried-milk fittings without the built-in heater and radio. Or have we said the wrong thing?

At all events, whether you own old, half-and-half or new, doubtless, with us, you breathed again when Mr. Attlee announced on October 24th that the "basic ration" will be unchanged up to next May. Note, however, that petrol went up in price the next day, whereas cigarettes and cinema seats did not, and, having remembered this fact, tell your M.P. that, as a motorist, you expect a square-deal up to, and after, the General Election. Otherwise, whether you own a vintage, an unmentionable or the most modern of cars, one day it may not be very much use to you, except as something to polish from time to time in its garage . . .

* * *

In a world not entirely free from trouble and strife the great Monte Carlo Rally happily is scheduled to take place again this winter, and already, in the various countries The Monte Carlo involved, people are digging out odd garments, preparing complex time schedules and route books and going about looking for de-misters, de-icers, interior heaters, de-ditching gear, and more and more lamps for the cars they propose to drive in what is the greatest rally of all and a superb winter endurance test of both man and machine.

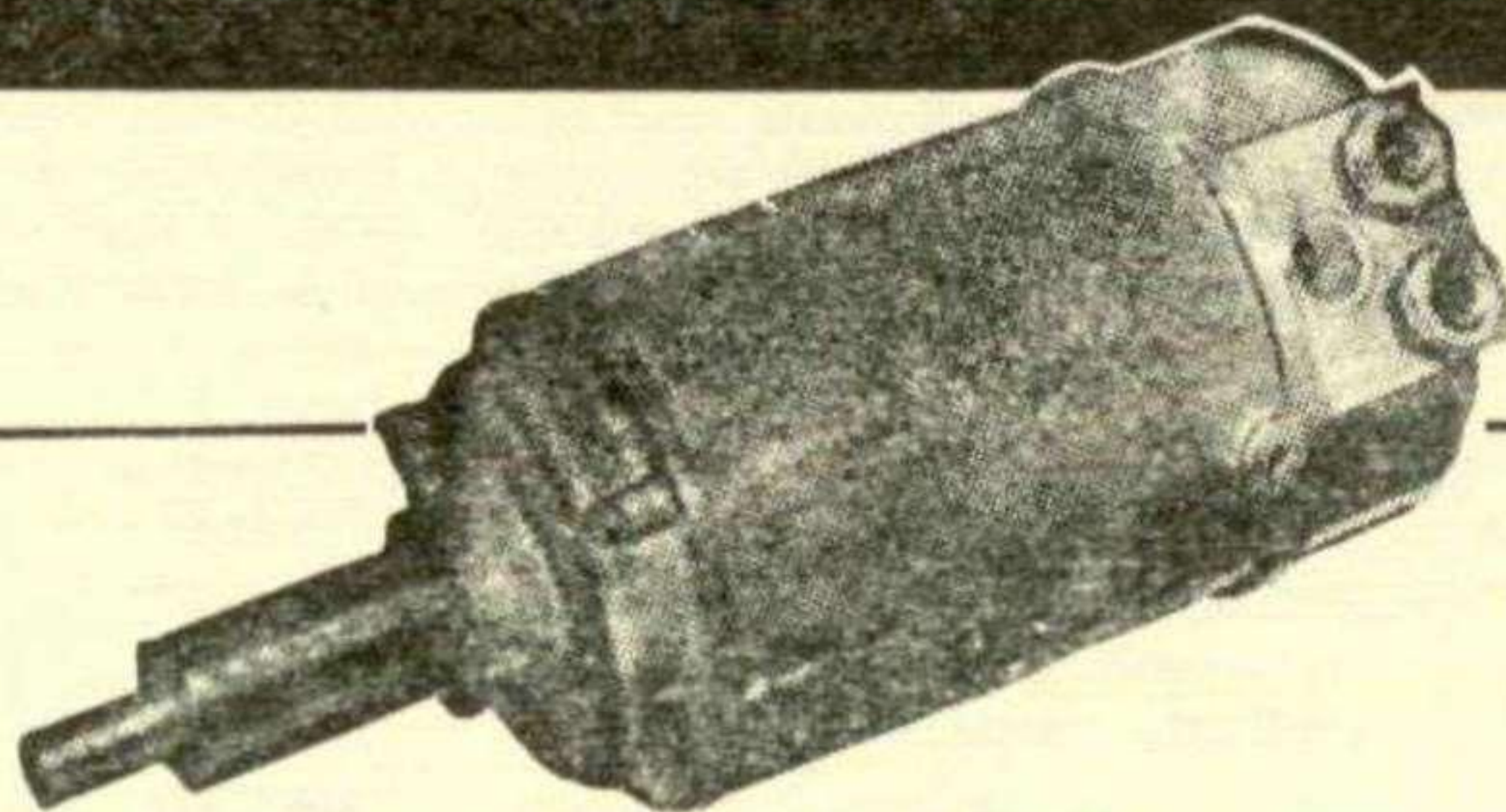
The 1950 event occupies from January 22nd to the 29th, and the starting points are Glasgow, Florence, Lisbon, Oslo, Prague, Stockholm, and Monte Carlo, all routes taking equal marks this time. The main route is Monte Carlo, Digne, Grenoble, Geneva, Berne, Strasbourg, Luxembourg, Liege, Venlo, Amsterdam, The Hague, Brussels, Rheims, Paris, Nevers, Lyons, Digne, Grasse and back to Monte Carlo—a neat 1,900 miles, and the very names have magic in them and make you want to get cracking. Glasgow starters join the main route at Luxembourg. Entries at single fees have closed, but, if you have a suitable car, a crew, and 15,000 francs, entry may be made up to December 6th, to the International Sporting Club and A.C. de Monaco, via the R.A.C.; 1950 competition licences are required.

The 1950 event is confined to 230 entries and is for standard cars, sans superchargers, with saloon, cabriolet or "all-weather" bodies conforming to certain dimensions, and at least 30 of the type must have been sold by November 1st this year. Open bodies are barred but there are certain "mods" you can do to engines. The usual driving tests in the (usual) sunshine will happen at Monte Carlo after the road section, and the entry is divided into 750, 1,100, 1,500 and over 1,500-c.c. classes. There is also the regularity and speed test for those who have come through that far without losing marks. Hotchkiss won this year. Next year?

* * *

Early next year S. C. H. Davis retires from his position as Sports Editor of the *Autocar*. After engineering training at "the Daimler" in Coventry, Davis joined the editorial staff of the *Automobile Engineer* and later transferred his activities to the *Autocar*. His value to the publishers, Iliffe & Sons, has been incalculable. He turned his pen with equal facility to descriptions of new cars, technical articles, road-tests, news-items,

THE WIPAC VERTICAL MAGNETO



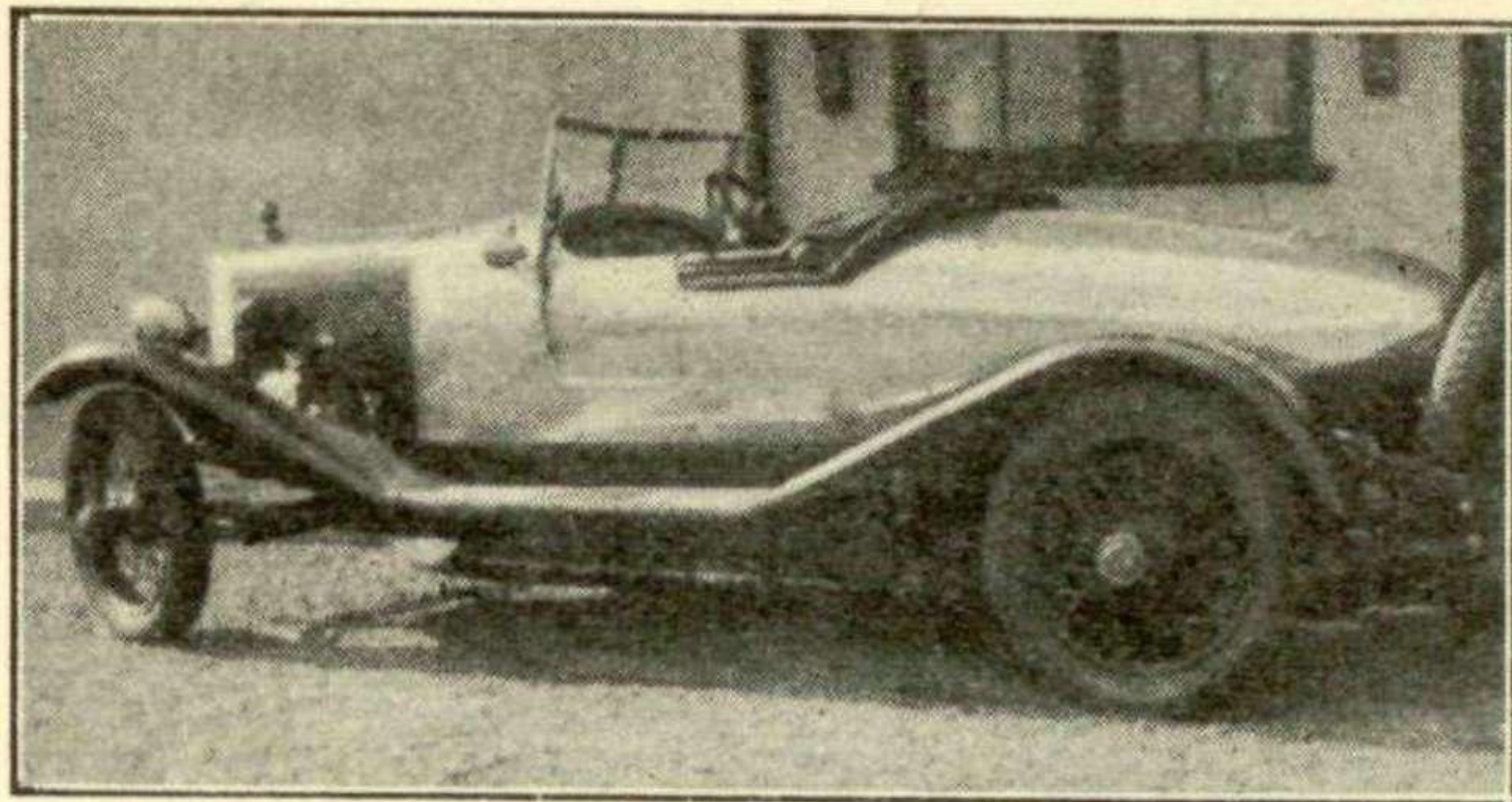
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DECEMBER QUIZ.—Make and type on a p.c. by December 10th please, so that we can publish the names of the knowledgeable in the January issue.

reports of competitive events, show reviews and the like. His straight-forward writing is discernible in all manner of places in old issues of the *Autocar*. As Sports Editor he ran a weekly feature that made the Sport and its participants live very vividly for at least one keen schoolboy. More than that, Davis replied individually to letters from those avidly eager to take some part, however humble, in the greatest Sport of all. In consequence, enthusiasts, young and not so young, followed every facet of his career and came to regard him as their personal friend and hero.

How many millions of words Davis has written, straight-off on to the paper in longhand, or dictated for the *Autocar* not even

he can know, and how he has kept so fit through it all that, to-day, approaching sixty years of age, he is still game for long drives across Europe in the grip of winter and similar arduous exertions, is something of a mystery.

But perhaps Davis' greatest asset to his paper was his actual, frequent participation in competition events. He drove in races at Brooklands, Ulster, Phoenix Park, and above all at Le Mans, in Austin, Alvis, Lea-Francis, Sunbeam, Invicta, Riley, Bentley and other cars. He was to be seen in trials, record-attacks, the Monte Carlo Rally, the veteran car run to Brighton . . . He drove mainly sports cars, but showed the same skill when handling the old V12 Sunbeam and the "Speed Six" Bentley round Brooklands.

It is this practical experience of racing which makes "Sammy" unique amongst leading contemporary motoring writers. While in hospital following his crash in the Invicta in 1931 he dictated his book "Motor Racing," which remains one of the best of its kind, whether as entertainment for the knowledgeable or for the wife or girl-friend to read as an introduction to the Sport.

We wish Davis a happy retirement. The mind boggles at the thought of who is fitted to succeed him, for to take on the mantle of Sports Editor of the *Autocar* after Davis' great regime is indeed a responsibility, not lightly to be undertaken.

* * *

We hope there is nothing ominous in the fact that we have not received a progress report on the B.R.M. project from the British Motor Racing Trust Production Committee since last April. Rumour has it that the 1½-litre flat-sixteen engine has completed many hours on the elaborate test-bench at Bourne and that a complete car exists, but the position remains veiled in secrecy. We all hope to see a B.R.M. team competing in the Grand Prix d'Europe at Silverstone on May 13th next year.

CHOOSING AND TUNING A RILEY NINE

THE notes in the October issue on "Riley Nine Recognition" aroused so much interest among prospective purchasers of these still-popular cars that it is opportune to add a few further comments.

If you are contemplating the purchase of a Riley Nine it pays to check the oil pressure when the engine is properly warmed-up. If it is low and if you hear noises like piston slap, it is probable that the oil is being released straight back to the crankcase *via* cracked main bearings. These main bearings wear well for some 60,000 to 100,000 miles, but pieces of white metal tend to break away and to extend from the inside of the bearing to the oil-supply groove. Incidentally, as these bearings are sleeve-type, their replacement will entail dismantling of the engine and replacement or remetalling of the sleeves—you cannot, as a temporary expedient, merely "take-up" the wear.

The Riley Nine has the merit of running astonishingly well even when the bores are appreciably worn, while even with slack big-ends oil-pressure is well maintained if the main bearings are sound. Nor does the engine indicate its need for a rebore by excessive smoking or loss of oil. In other words, apart from discovering the state of the main bearings, it is not easy to ascertain the wear in other parts merely by observing the oil-pressure and general symptoms. Incidentally, a dirty relief valve or a strained oil pump can also give low oil-pressure, but usually the main bearings will be at fault. The normal pressure is 40 to 50 lb./sq. in. and one turn of the

release valve screw should cause an alteration of 10 lb./sq. in.

So far as engine noise is concerned, the timing gears *may* be worn, but they are actually seldom at fault. It is worth while checking that the springs which control camshaft end-float have not been omitted when assembling the two plates in the cage containing three balls, beneath the bronze housing in the timing cover. Other sources of noise are worn dynamo bearings, traceable by removing the dynamo to see if the noise will cease, a worn dynamo-driving dog, which should receive the attention of a welder if the dynamo bearings are found to be sound, or broken camshaft damper springs, discoverable by lifting the cylinder head. These springs should be proud of the block when the head is off; replace only by genuine Riley spares.

So far as increasing the power of a standard Riley Nine engine is concerned, a popular dodge is to replace the inlet camshaft with an exhaust camshaft, but if this is done use a camshaft from an engine of the same series, as the ends of Riley camshafts vary appreciably. Otherwise leave the camshaft settings alone. The standard timing should be: inlet opens at t.d.c., exhaust opens 55 degrees after b.d.c. With the dynamo dog slots vertical, the two "O"s on the crankshaft pinion should mesh with the tooth similarly marked on the idler wheel and the camshaft pinions mesh with the double-marked teeth on the idler.

A Solex carburetter seems to give good torque at low speeds, but an S.U. gives better general performance. A pre-1936 engine with Solex carburetter will respond

well if a 22-mm. choke is used, with jets 10 per cent. larger than those specified. Leave the compensator alone, and only use a larger one if the mixture is rich at high engine speeds. With standard camshafts, twin 26-mm. S.U.s give excellent results, starting tuning with D8 needles. When an exhaust camshaft has been substituted for an inlet one or if a genuine "Brooklands" engine is used, twin 30-mm. S.U.s give the best maximum speed. The 26-mm. S.U.s can sometimes be salvaged from the later Morris Minor or from 1935-38 Morris Eight engines, or those from an M.G. Midget can be used if a taper washer is fitted at the flange to bring the float-chamber level. If such carburetters are adapted, load their pistons with Plasticine until the pistons just give maximum choke-opening at full r.p.m., then cast a ring of the same weight as the Plasticine to fit on the tops of the pistons, when weaker needles can be used without causing spitting back.

Valves and valve gear, if set correctly, will stand up to normal tuning and the straight-through cotter is quite satisfactory even if stronger valve springs are employed. Increasing the compression-ratio results in slight roughness on pre-1933 engines, makes the exhaust more noisy, but improves the "urge." The maximum desirable is about 7.75 to 1 even with benzol in the fuel. Pistons, and proprietary replacements to raise the compression-ratio, interchange pretty freely between different models and years, but note that the 1936-37 "Monaco" and "Merlin" engines have different pistons, some 9 mm. greater from gudgeon-pin to crown than the others.

VINTAGE VEERINGS

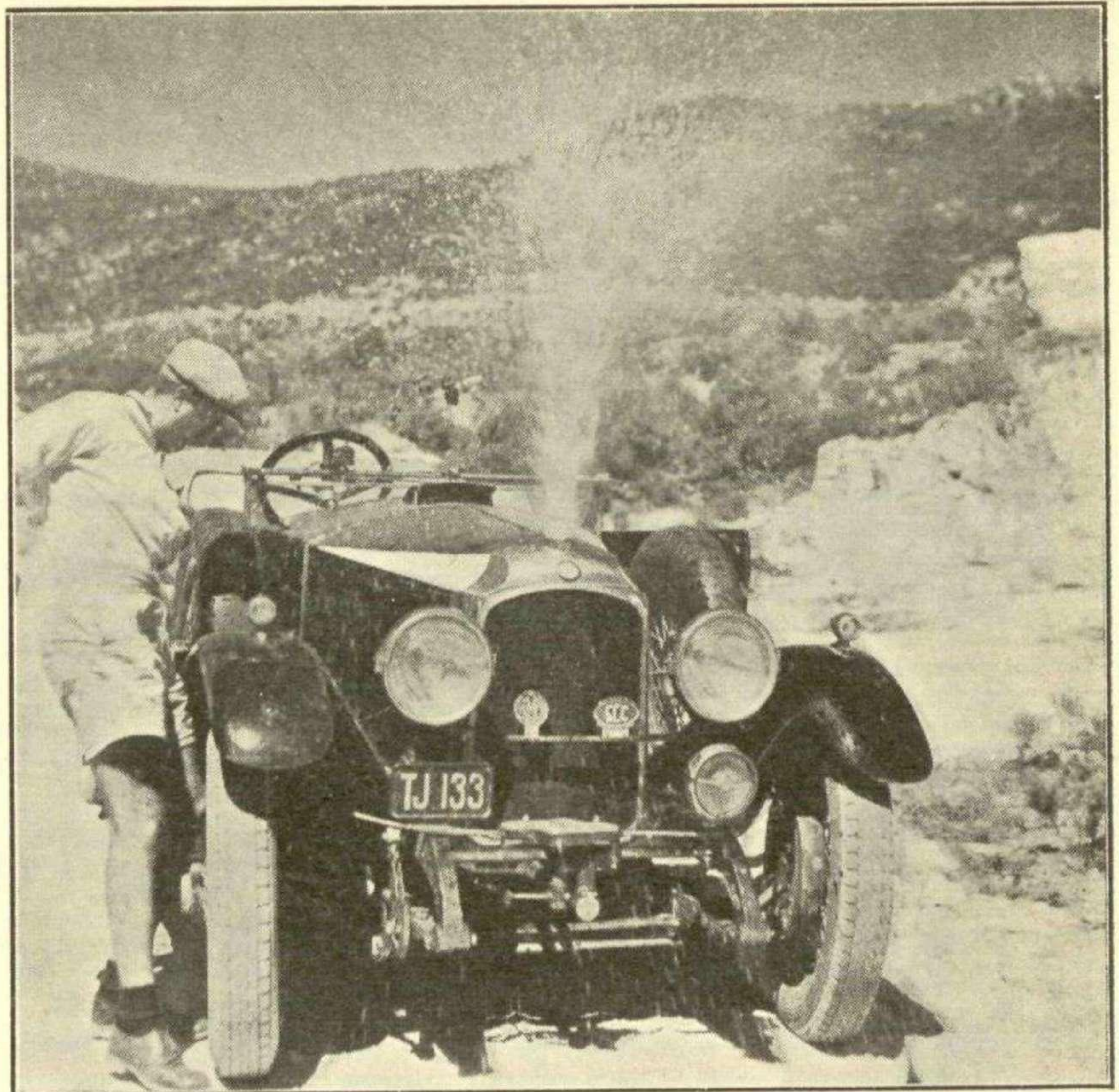
FROM Donald Gill come some interesting notes about his "23/60" Vauxhall. Not only is he getting much pleasure and satisfactory service from one of these fine vintage cars, but a friend of his this year took a Continental holiday in a 1924 "23/60," covering 2,000 miles and climbing no fewer than nine Swiss passes, the Stelvio included. The only trouble was three punctures. These cars certainly have a definite appeal of their own and Gill's enthusiasm is infectious. He writes:—

"Less well known than the '30/98' or '14/40,' the '23/60' Vauxhall is a car in the best Vauxhall tradition, and quite worthy of the vintage enthusiasts' interest. It is, of course, a touring car with no high speed potentialities, but it does its touring in the inimitable 'big four cylinder' manner that has such enduring fascination.

"My car is OD 481, and was first registered in July, 1923. The original log book is missing, but the early owner or owners must have looked after the car well. In the early 1930's she came down in the world and for a while plied for hire in the streets, but this must have paid, for she retired from active motoring in 1936. Early in 1947 she was bought by an engineer who restored some of time's ravages and had some excellent motoring with her, and who reluctantly sold her to me in September, 1948. Her undershield still contains some walnut shells left behind by a family of squirrels who lived there during her retirement.

"Mechanically the car appeared to be in good condition when I took possession, a demonstration run enslaving me immediately the high geared slow revving characteristics, accompanied by dignified pops from the carburetter until the engine was warm. I drove her home, 110 miles, and was delighted. A roundabout half a mile from the starting place taught me all I needed to know about the brakes, and otherwise all seemed well. I have now covered over 2,500 very pleasant miles and done almost nothing except routine greasing and oiling.

"As the type does not seem to be very well known a few details may be of interest. It was manufactured between 1922 and 1925, and bore the same relationship to the famous 25-h.p. Vauxhall as the OE '30/98' does to the E model. The engine is a 95 by 140 o.h.v. four-cylinder almost indistinguishable externally from the '30/98' engine, but rather different internally, chiefly in having a Lanchester Harmonic Balancer in the centre of the crankshaft. The engine and gearbox are mounted in a sub-frame which makes running very smooth at ordinary speeds. The chassis is of normal Vauxhall type, very whippy, the three cross members serving merely to hold up the radiator, to hang the back



TEA UP!—Another "23/60" Vauxhall—apart, that is, from the two referred to in the text—seen at the summit of the 6,100-ft. Zwartberg Pass, South Africa's most spectacular climb; so the presence of a little water vapour is excusable. This "23/60" is a 1925 model owned by R. H. Hunter. In 1947 he completed a successful holiday tour of 3,600 miles from Johannesburg to Capetown and back with no trouble of any sort and even the afore-mentioned climb did not bring it down below second gear.

of the sub-frame from, and to support the rear petrol tank. They also keep the side members in a fairly constant relationship to one another on smooth roads! Wheelbase is 10 ft. 10 in. and I still use 880 by 120 tyres and the original wheels. Chassis weight with petrol, oil and water is 27 cwt.

"One of the attractions of the car to me are the number of generic Vauxhall chassis parts that go back to 1914 and earlier. The steering wheel with its brass control levers, the gear lever and many other details, including I believe such items as the steering gear and gearbox themselves, are unaltered from Edwardian times.

"Top gear is 3.6 to 1, and road speeds in the respective gears at 1,000 r.p.m. are 7.5, 12, 19 and 28.5 m.p.h.. Maximum speed should be about 65 m.p.h., though I have never reached more than an indicated 60 m.p.h., but the speedometer drive is of a kind that might easily slip; 40 m.p.h. can readily be obtained in 3rd gear, but the charm of the car is, of course, the effortless top-gear performance from 5 m.p.h. upwards. In ordinary circumstances, one lets in the clutch with the engine ticking over and 2nd gear engaged, and changes straight into top gear at 12 m.p.h. Cruising speed is anything

up to 50 m.p.h., above which speed the steering wanders a little on bumpy roads. Petrol consumption is about 18-20 m.p.g. Other features are the whittle-belt-driven dynamo under the passengers' seat, which gives far less trouble than on the faster '30/98,' and the world's worst headlamps!

"I haven't mentioned the brakes. There is a most satisfying long handle for the back wheel brakes and a pedal-operated transmission brake 'for emergencies,' as the handbook so quaintly says. Even in emergencies, however, there is little risk of precipitation of an unwary passenger through the windscreen, unless one actually hits the 'emergency.' Oil from an overfilled gearbox worked havoc with the foot brakes decelerative powers. Much work and horrid blasphemy have resulted in some improvement, but time alone will show how permanent this improvement is.

"For someone who yearns after a real Vauxhall, but for one reason or another is denied a '30/98,' the '23/60' commends itself as a not at all unworthy substitute for non-competitive motoring, and the preservation of a few more examples of the type would be definite gain to the vintage world."

WE HEAR

K. C. Radburn, F.S.M.C., F.I.O.O. retains his keenness for Salmsons, but, conceding to his wife's request, has purchased a "San Sebastian" coupé model. He would like owners of vintage Salmsons to communicate with him with a view to starting a Salmson Register. His address is: 67, London Avenue, Radford, Coventry. A reader who owns two 3-litre Bentleys and a 4½-litre Bentley bought a 1923 11.4-h.p. Humber two-seater at a farm auction sale, recently for £10. He now uses it for business motoring, averaging some 1,200 miles a month and wouldn't part with it for many times the purchase price. The car is original except for well-base wheels and tyres and gives 2,000 m.p.g. of oil and 23 m.p.g. of petrol, the latter probably capable of improvement. The brakes, although merely external contracting on the rear wheels with a foot transmission brake, are quite effective. C. J. Sare has unearthed an early Adams in very nearly complete, if rusty, order and would like to exchange it for something interesting and vintage, together with his 1931 Singer Junior saloon. Colin Campbell has bought from Blake's of Liverpool a very beautiful 1932 "100 m.p.h." 4½-litre Invicta two/four-seater. The car seems to be standard, apart from both friction and hydraulic shock-absorbers to both axles, but the new owner would be very glad to hear from previous owners. The car is Reg. No. NV 1061, chassis no. S 112A, engine no. 7661. The gearbox possesses a "chatter" yet appears to be in good order, but advice would be welcomed. Incidentally, Blake's also had for sale the ex-Lace T.T. 4½-litre Invicta. W. J. Oldham has acquired a beautifully-preserved 1910, 38-h.p. Daimler. He also has an as-new 1927 Austin Twelve saloon and uses an early Austin Twenty truck on his farm. The October issue of the Hants and Berks M.C. Bulletin gave an amusing account of their Night Navigation Rally, which attracted 56 entries and is obviously a mixture of college students' "rag" and a gala night out for motoring types—just the thing to induce a little cheer in these cheerless times, until "cheer" itself is nationalised. Anthony Curtis has been spending part of the winter doing sums. He estimates that from Easter to the end of the racing season, installing Antone public address at thirty car and motor-cycle events, he assembled over 800 loud-speakers, laid more than 30 miles of wire, equivalent to ten laps of Silverstone, and walked, as a staff of four, an aggregate of 400 miles—a real job of work and, adds Tony proudly, "not a single breakdown." A 1923-4 "11.9" Lagonda, rusty but nearly complete, is reported at a scrapyard at Brampton, possibly useful for spares.

The Rootes Group Manufacturing Division has issued a nicely-produced book on the Rootes Group Training Schemes, which anyone concerned with the future of young people should study. It is available from Devonshire House, Piccadilly, W.1. If you want lessons on how to draw cars, racing cars in action and repose included, buy "How to Draw Cars," by Frank A. A. Wootton (The Studio Ltd., 3s.). It is full of instructive

Club News



pencil drawings of cars and some very fine completed drawings. If some of the racing cars have rather "castory" wheels and proceed in clouds of dust, their general presentation is of a high standard, which this neat little book should assist you to attain. R. Gordon Sutherland has succeeded S. C. H. Davis

FIXTURES FOR DECEMBER

- 1st.—Brighton & Hove M.C. Buffet Dance, Grand Hotel, Brighton.
- 2nd.—Bugatti O.C. Prize-Giving, Kempinski's Cellar, Swallow Street, W.1, 6.30 p.m.
- 3rd.—N.W. London M.C. CLOSED INVITATION GLOUCESTER TRIAL, COTSWOLDS.
- 4th.—Hagley & D. L.C.C. Closed Winter Trial.
N. Midland M.C. Closed Winter Trial, North Derbyshire.
Rhyl & D.M.C. Trial, Wales.
- 6th.—N.L.E.C.C. Talk by W. M. Couper, "Green Man," Edgware, 7.30 p.m.
- 8th.—M.C.C. Dinner-Dance, Criterion, 7 p.m.
- 9th.—B.R.D.C. Dinner and Prize-giving, Park Lane Hotel.
- 10th.—Bristol M.C. & L.C.C. CLOSED INVITATION ROY FEDDEN TRIAL, COTSWOLDS.
- 11th.—Chiltern C.C. Closed Invitation Trial, Chilterns.
Maidstone & Mid-Kent M.C. Closed Committee Cup Trial, Kent.
W. Hants & D.C.C. Closed Christmas Trial.
Severn Valley M.C. Closed Trial, Wrekin.
- 14th.—Aston-Martin O.C. Social.
- 15th.—Bristol M.C. & L.C.C. Dinner and Dance, "Berkeley," Bristol.
- 18th.—Sheffield & Hallamshire Closed Christmas Trial, Derbyshire.
- 26th.—M.G.C.C. Closed Invitation Trial, Gloucestershire.
- 27th.—Bentley D.C. Party, "Old Talbot," Ripley.
- 30th - 31st. — M.C.C. CLOSED "EXETER" TRIAL.

in the presidency of the Aston-Martin Owners' Club.

Leyland Motors, Ltd., have drawn our attention to an article in the November issue of the *Leyland Journal* which describes the successful experiments of a Liverpool firm of haulage contractors in filling the tyres of their Leyland tractors with water mixed with chloride of lime, in order to obtain greater wheel adhesion. All sorts of other advantages appear to have followed this novel form of tyre inflation, so trials drivers and Monte

Carlo Rally competitors may find the matter of interest. John Cooper has been elected President of the A.C. Owners Club. "Peterborough," in the *Daily Telegraph* of November 3rd, announced that Lord Hartington has given the N. Midland M.C. permission to organise a Rally at Chatsworth, on April 1st next year.

The 750 Club's suggestion for "unblown 750-c.c." racing next season between cars built of near-standard Austin Seven components is resulting in a lot of interest. In addition, three enthusiasts plan to run (not in these 750 Club events) three unblown 750-c.c. cars powered with Douglas "Drone" or lined-down Douglas "Sprite" light aeroplane engines. Modified pistons to give a 12 to 1 compression ratio, using J.A.P. fuel, are spoken of and early experiments have been very encouraging, and not in any way expensive.

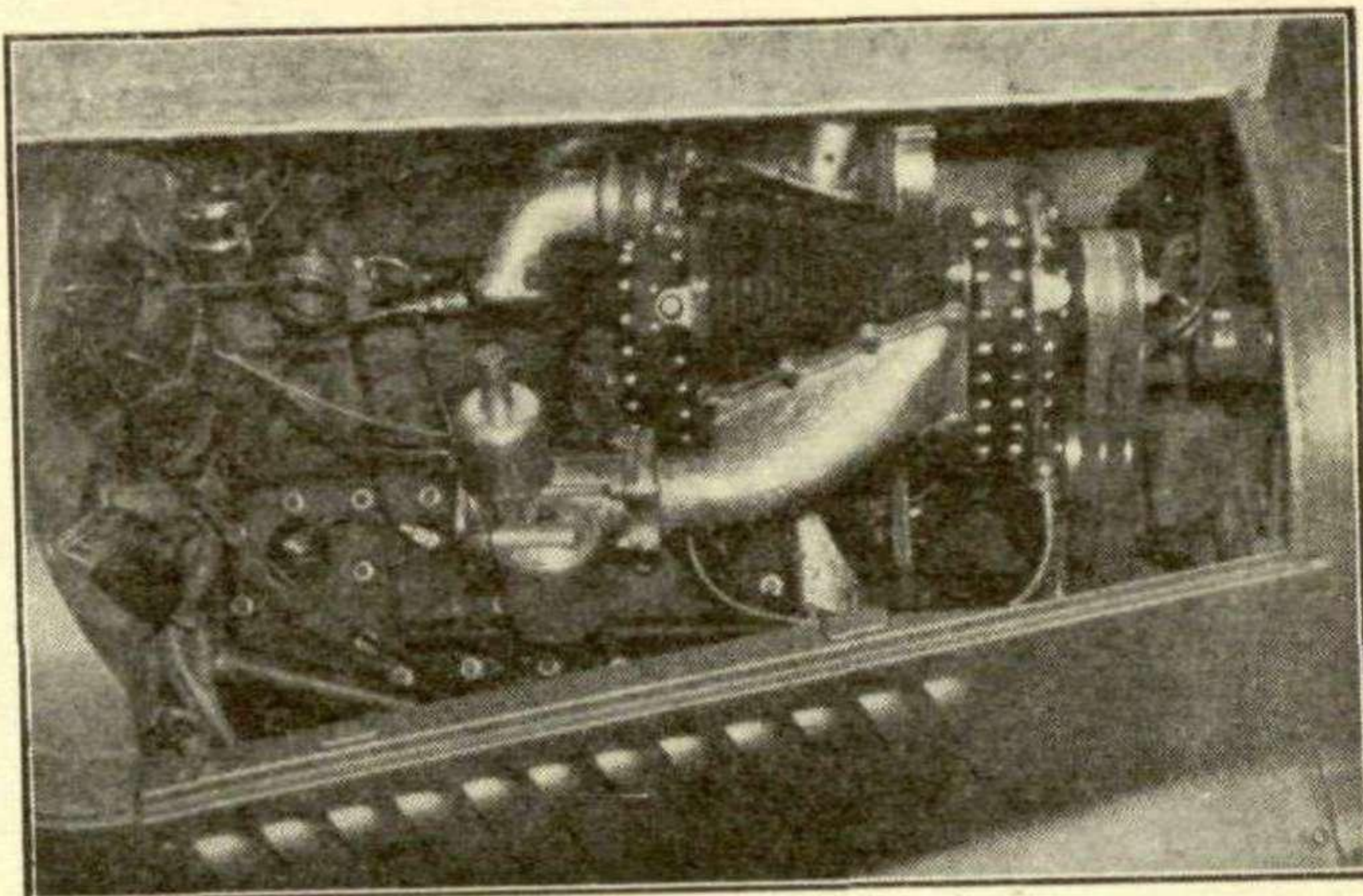
A 1923 Deemster is being rebuilt in Sussex. Will England ever become really motor-minded? On the morning after the Lord Mayor's Show a country school-teacher opening her paper in a London-bound train, said, "Oh dear, an accident in the Lord Mayor's Show. Still, the casualties weren't very serious (21 injured). But they shouldn't have the Show in November, because of the possibility of car-skids." Now the speed of the lethal vehicles involved was mostly 5 m.p.h., with an absolute maximum of 10 m.p.h. Heal's Sunbeam was in bottom-gear throughout. Oh well!

Out in Wellington, D. A. Bartlett, 148, Oxford Tu Ext, Hutt City, is rebuilding a 1927 "14/40" Vauxhall and promises to write to anyone who will correspond with him about these cars. Amongst the latest "converts" to the charm of the modern Morris Minor are Stirling Moss and John Wyer. H. J. Lotery is rebuilding the 1,750-c.c. "Zagato" Alfa-Romeo illustrated in last month's issue and would like to hear from past owners (BGO242) and G. Wilson, L.D.S. owns two 1,750-c.c. Alfa-Romeos, one believed to be a 1929 Show model, but now with a twin-cam Tipo 6C engine installed and the other a 1932 Tipo 6C four-seater drop-head. He, too, would like to learn more of these cars; registration Nos. GE 8270 and ETN 627, respectively.



THE LORD MAYOR'S SHOW

Those who risked pneumonia to watch this year's Lord Mayor's Show were rewarded by a fine procession of veteran, Edwardian and vintage cars. These included a 1898 Benz, the Thornycroft Steamer, Rootes' Sunbeam-Mabley and 1907 Humber, a Riley tricar, a tiller-steered Jowett with suspiciously modern-looking distributor, a model-T Ford, Sears' yellow "Silver Ghost" Rolls-Royce landaulette, a T-head Austin tourer, the 1922 Austin Seven, a 1914 Hillman, a 1923 11.9 h.p.-Lagonda, the Val Doone's 1924 "30/98" Vauxhall and Heal's 1926 3-litre twin-cam Sunbeam driven by Wyer, with the Editor of MOTOR SPORT as passenger. There was also a single-cylinder Rover, but it succumbed early, while the Riley stopped for a plug-change, the Jowett retired and the Austin Seven boiled. The public



Here is another example of a special Wade installation, this time on an Allard two-seater, designed, manufactured and fitted by the Little Men from Lightwater.

Installations like this, including all special castings, etc., can be designed and built within about one month from date of order. This service is unequalled anywhere else in the country and the methods used are unique.

If you are interested in supercharging you will be more than repaid for the trouble of a trip down to Lightwater.



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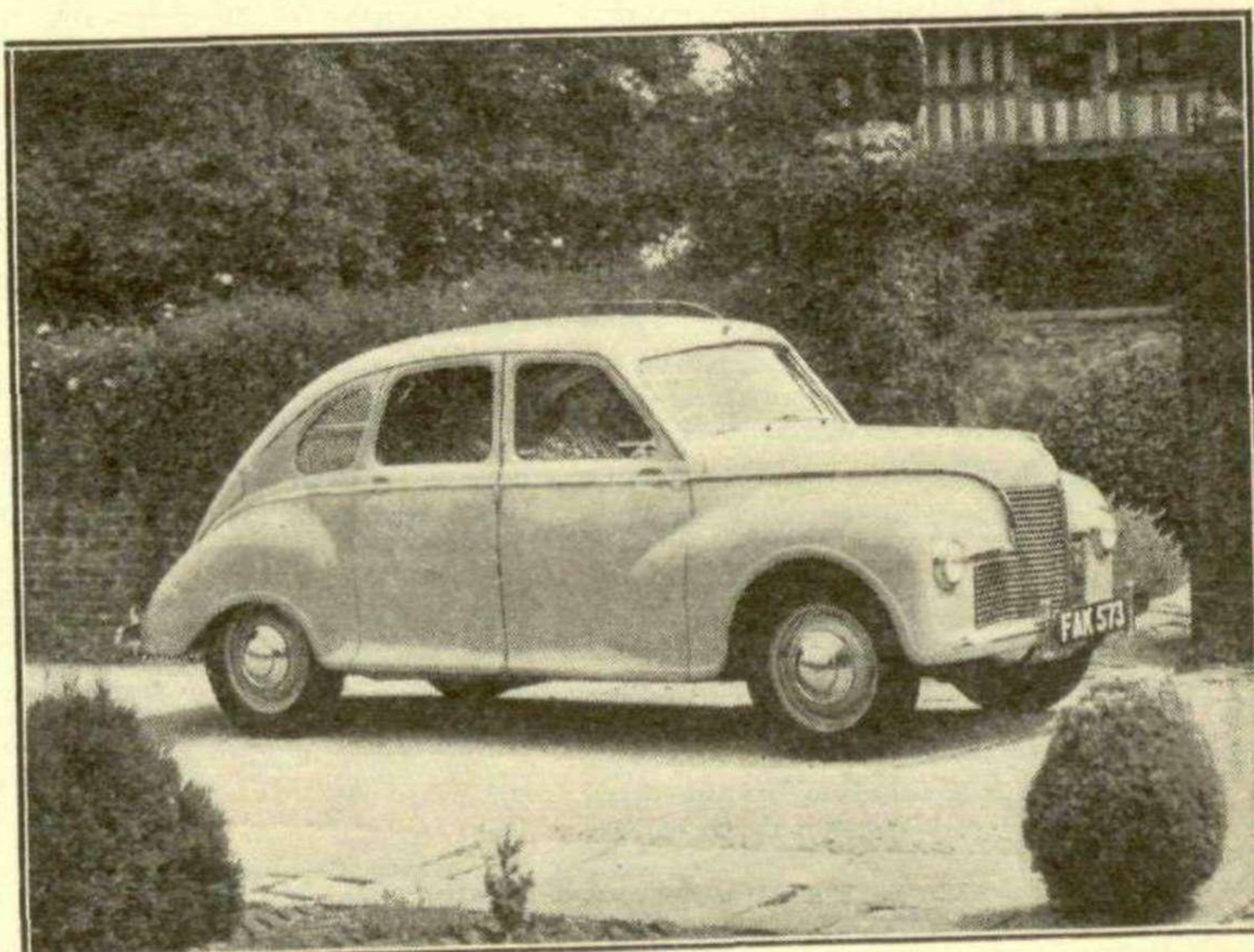
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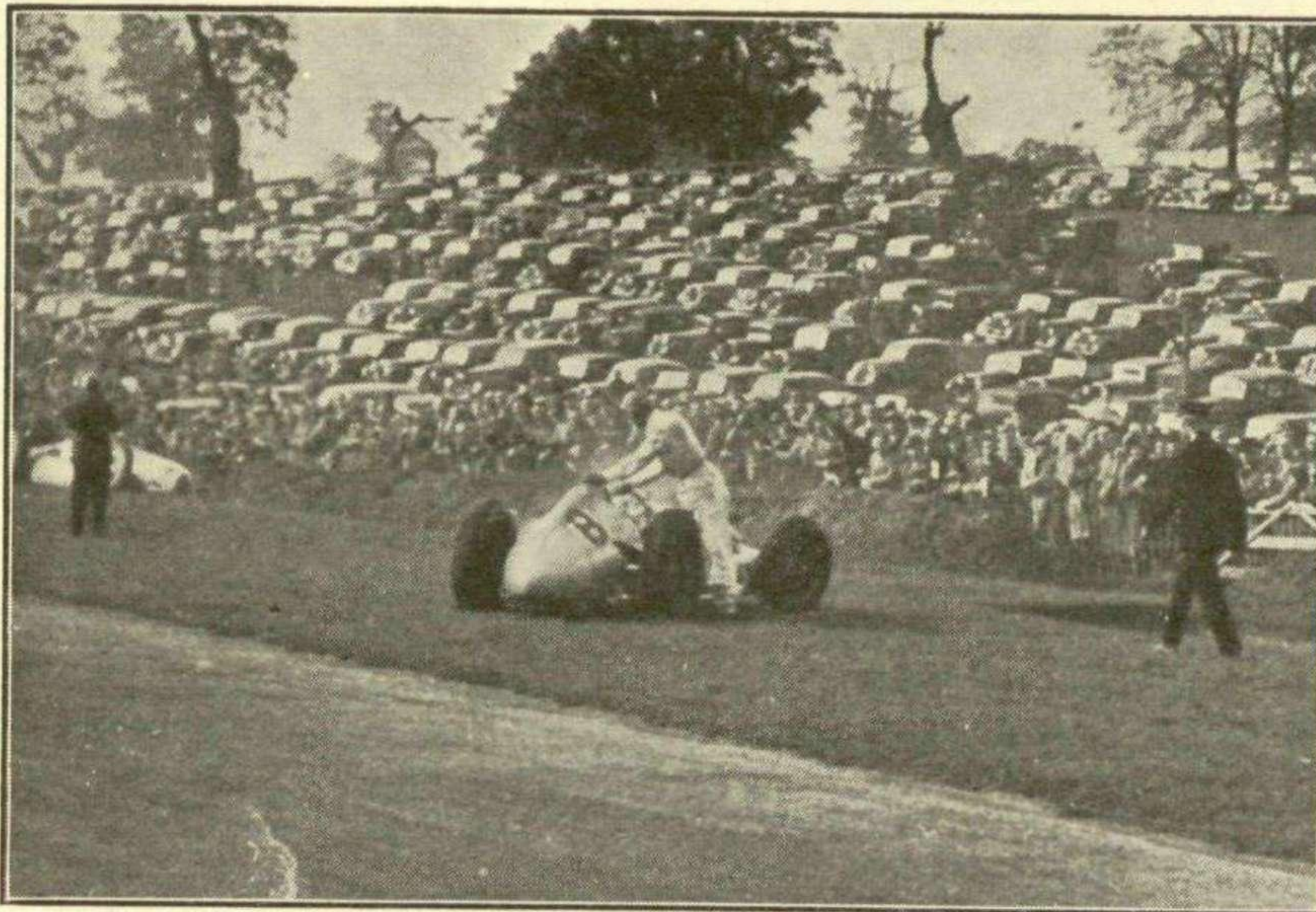
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AND
MAINTENANCE



at our SERVICE DEPARTMENT : 22-23, GROSVENOR CRESCENT MEWS, HYDE PARK CORNER, S.W.1

SLOANE 3094



EPISODES FROM HISTORY—1. Dick Seaman endeavouring to push his Mercedes-Benz back on to the road after the "oil patch incident" during the 1938 Donington Grand Prix. The race was won by Nuvolari's Auto-Union at 80.49 m.p.h. and Seaman finished third.

appeared to appreciate the old cars and it was all the greatest fun. The speed of the procession was exceedingly slow, with frequent stops—London just doesn't seem able to get traffic through its streets quickly, even with roads closed for an occasion such as this! Note that roads can be closed for purposes such as this. And that this time it was the horses which had the accident.

★

HONOURS

The B.R.D.C. has presented T. H. Wisdom with the E.R.A. Club Trophy to commemorate his victory in the touring class of this year's Mille Miglia, driving a Healey. It has also presented a Gold Star to Lt.-Col. "Goldie" Gardner, O.B.E., M.C., for establishing new records in Class I in his Gardner Special.

★

THE "EXETER"

This year's M.C.C. Exeter Trial will probably include Windout, Fingle, Simms and some new hills. Entries close on December 5th, and helpers are needed. Apply to: 26, Bloomsbury Way, W.C.1 (Holborn 7461).

★

RACING AT SINGAPORE

The Singapore M.C.'s Johore Grand Prix, which we reported last month, brought together some interesting cars and emphasises the world-wide interest now taken in motor-racing. H.E. the Regent of Johore opened the course in his V12 Lagonda, following which was his Type 540 K Mercedes-Benz, a 4½-litre Bentley containing Oliver Bertram, who holds the Class B Brooklands lap-record in the Barnato-Hassan at 142.6 m.p.h., and who was acting as R.A.C. Steward, and the Secretary of the Meeting's beautiful 1912 "Silver Ghost" Rolls-Royce.

Amongst the competing cars were a lightened and tuned "TC" M.G., Lim

Peng Han's "TB" M.G./Bugatti hybrid, Kok Kum Woh's 1,100-c.c. F.I.A.T. with F.I.A.T. "1,500" engine, Hellyer's Singer Nine roadster, another 1,100-c.c. F.I.A.T., and a third 1,100-c.c. F.I.A.T. with, however, a Ford V8 engine. One of the smartest of the specials was J. N. K. Moncrieff's Kudensay, with tubular chassis having F.I.A.T. "1,100" independent front suspension, a cut-down Ford back-axle on ¼-elliptic springs, a Ford V8 engine and a home-brewed *monoposto* body on a tubular framework. This car tied for fastest lap, 59.68 m.p.h., with Lim Peng Han's L.A. Special, which also had a Ford V8 engine. Unfortunately the latter's steering wheel came adrift on its splines and a mild accident resulted. The low speed is explained by the severity of the two-mile circuit on public roads, which included five right-angle corners. About 95 m.p.h. was reached along the 7/10th-mile straight. Twenty thousand people are estimated to have attended in spite of a shade temperature of 87 degrees. Good show, Singapore.

★

N.L.E.C.C.

The Christmas Trial will take place on December 18th, over a route of about 25 miles, in Hertfordshire, starting at Edgware about 11 a.m. and finishing near Berkhamsted. Competitors will be confronted in the meantime with six tests and a turkey, Christmas pudding and beer luncheon. Entries have closed. Marshals are needed and will be briefed at a meeting at the "Green Man," Edgware, at 7.30 p.m. on December 14th. Helpers should apply to Mrs. Wilson, 44, Bittacy Rise, Mill Hill, N.W.7.

★

M.I.R.A.

The Motor Industry Research Association has issued its fourth annual report. Work at present in progress includes measurement of noise, influence of valve

material on exhaust valve life with leaded fuels, design and positioning of piston rings, piston ring movement, fatigue strength of cast crankshafts, fuel sprays for i.c. engines, ventilation of public service vehicles, bending and surface fatigue of gear teeth, etc. However, what we find of greater interest is the proving ground at the R.A.F. airfield at Lindley, probably because it is "out of bounds" to racing motorists and journalists. The terms of the M.I.R.A.'s lease of Lindley include a 21-year tenancy with option to renew at 7 or 14 years, at a rental of £2,000 per annum, which also covers occupation of the control tower and three Nissen-type huts having a total floor space of 8,000 sq. ft.—how, one wonders, does this compare with the terms of lease of Silverstone to the R.A.C.? The Ministry of Food retains a few small huts. The M.I.R.A. has been able to sub-let approximately 407 acres of land to local farmers, with permission of the Ministry of Agriculture and Fisheries. This brings in an annual revenue of £588. We mention this because it gives some insight into what a test or race circuit costs in Socialised Britain.

At Lindley considerable repair and renovation of buildings and installation of new services had to be undertaken. There are various circuits marked out on the six miles or more of roadway, and photo-electric timing has been installed on the two 2,000-yard straights. A half-mile stretch of Belgian *pavé* has been laid and further developments may embrace "washboard" roads, a "rippled" road, a dust tunnel, a skid patch and possibly a banked circuit—most of which existed before the war at Brooklands!

★

TRUE

We have drawn attention before to the motoring flavour imparted to the American monthly *True* by its enthusiastic Editor, Ken. W. Purdy. In his October issue he did it again, with a long feature devoted to the Bugatti—"The Fabulous Bugatti" he called it—which included colour pictures of Type 57SC, Type 35 G.P., Type 43A and "La Royale." Altogether an excellent thing, even if one does notice that speeds seem to go up when cars get to America, the maximum of "La Royale" being given as 142 m.p.h., for instance, while there is a suggestion that a Type 57SC electron coupé will show in the region of a speedometer 150 m.p.h.

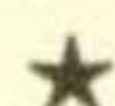
These motoring features in *True* are truly pleasing, and must help materially to foster and maintain enthusiasm for the right sort of cars, in the States. If we lived there we should certainly place an order, so as not to miss any of Purdy's motoring articles. In this same October issue he even has an amusing story about our Joan and Bob Gerard—but Peter Hampton saw it first and is going to reproduce it in *Bugantics*, so we will play fair and let that one remain the property of members of the Bugatti Owners' Club.

★

V.M.C.C.

The Vintage Motor Cycle Club's Rex Judd Trophy for the best speed performances during the year has been won

by F. D. Booth (1930 Ariel). On October 9th a rally was held to Leeds to inspect the wonderful collection of vintage cars and motor-cycles owned by John Ellis. Derek Pickering won a prize for his ride from Coventry on his 1912 Premier, and a special award was presented to Mr. Reed, who is 75 years of age and who rode his 1919 two-speed Scott from York. Earlier this year he covered 340 miles in a day on this machine, and in the rain, too! New members continue to be enrolled, the latest cluster being owners of 1909 Triumph, 1920 Scott, 1920 A.B.C., 1924 Velocette, 1925 Triumph, 1925 and 1926 Scotts, 1926 and 1927 Sunbeams, 1928 Norton, 1928 Ariel, 1929 Scott Flyer, etc. The October "Bulletin" contained articles on "Overhauling an A.B.C." by "Torrens," and on "The Story of the Fastest Side-Valve Single" by V. C. Tait (it was Loweth's 1931 Norton, which did 96 m.p.h.). Gen. Sec.: R. A. Beecroft, 65a, Wembley Park Drive, Wembley, Middlesex.



B.T.D.A.

The Annual General Meeting was held following the M.C.C. Trial at Buxton.

The attendance of some 60 members created a record in this direction and a very enthusiastic meeting followed.

With a membership of 112 before the meeting, 16 new members were accepted during the course of the evening.

With three vacancies on the Committee, the following were elected: Mr. J. Twyford, of Manchester; Mr. K. Rawlings, of Birmingham; Mr. F. D. Dent, of London, which makes a Committee for the coming year of 12 representatives: Mr. M. Toulmin (Chairman); Mr. J. Masters (Hon. Treasurer); Mr. J. H. Appleton; Mr. L. O. Bartlett; Mr. K. E. Burgess; Mr. R. K. N. Clarkson; Mr. R. E. Holt; Mr. G. Warburton; Mr. D. G. Flather (Hon. Secretary).

Another matter of interest which arose was the offer of the Association to assist members who were considering participation in Continental events, such as the Monte Carlo Rally and the "Alpine," and to this end Monte Carlo Rally regulations had been obtained and were distributed at the meeting, and all members who had queries in this connection were asked to approach the Hon. Secretary for possible assistance.

It was also stated that the B.T.D.A. had presented an award to the Monte Carlo authorities to be given to the highest placed of their members in the Rally. Hon. Sec.: D. G. Flather, Standard Steel Works, Tinsley, Sheffield.



MISCELLANY

The Huddersfield M.C., run almost exclusively for motor-cyclists, is considering forming a car section, and running the less barbaric sporting events. Details from: P. Mellor, 2, Arnold Street, Birkby, Huddersfield.

The Public Schools M.C. will meet at 7.30 p.m., at the "Brunswick Arms," Stamford Street, S.E.1, on December 12th. G. H. R. Rice, Plough Inn, Coldharbour, Surrey (Tel.: Dorking 732931) is the hon. secretary.

The new Welsh Counties C.C. appears to be doing very well. It has only been in existence about six months, but has held

"nogs and natters," a scavenge hunt, a talk on Bentleys by Joe Grant, and fortnightly socials. On November 5th they held a gymkhana at Cardiff airport, H. L. Sackson's Austin Sheerline making best performance. Membership is over 70 and new members are welcome at the "Carpenter's Arms," Rumney, any Monday evening or can obtain details from I. D. Williams, "Bryntirion," Hollybush Road, Cyncoed, Cardiff. There is to be a talk on fuels by Mr. Harris of Shell on December 5th, and a rally and hill-climb on Boxing Day. Nice work, Wales!

The M.G. C.C. (S.W. Centre) held its A.G.M. on November 5th. John Thornley attended and presented Morrish with the Slade Challenge Cup for his gymkhana success. The Kimber Trophy Trial will be held in the Mendips on Boxing Day. Hon. Sec.: R. White-Smith, Winterbourne, Gloucester.

Alan Hess points out, in fairness to Stuart and Richards, that his book on the Indianapolis records was *not* subsidised by Austin. A. F. Rivers Fletcher has been appointed Public Relations Officer of the Owen Organisation, which includes Rubery Owen and Co., Ltd., well-known in the motoring world. Dudley Folland's Aston-Martin is being rebuilt at Monaco for next year's sports-car racing, a new body reminiscent of that on the 2-litre Ferrari he raced this year being fabricated, the rear of the chassis provided with extra cross-members, and the 2-litre engine with its four Amals being re-tuned; it gives over 100 b.h.p.

Rex Mays, the famous American driver, was killed last month in a race in California. The S.C.C. of America hopes to hold a sports-car race at West Palm Beach, Florida, on January 2nd. Len Parker has re-built his well-known V12 trials car as a rear-engined vehicle. The November issue of the V.S.C.C. "Bulletin," beautifully produced as usual, effectively captures the Club's enthusiasm for old cars, and contains Clutton's inimitable account of the Earls Court Show. The Point-to-Point run on November 6th by the A.C. Owners and Hants & Berks M.C. was won by Eric Giles (Vauxhall), with Bulmer (Frazer-Nash) second and Birkett (Bugatti) third. The Lagonda C.C. will stage a display of Monkhouse films on German racing (very good, these!) at the "Prince of Wales" tavern, Drury Lane on December 7th, at 7.30 p.m.

The Citroën Car Club has issued an attractive magazine, *The Citroenian*.



WORDS OF VINTAGE WISDOM

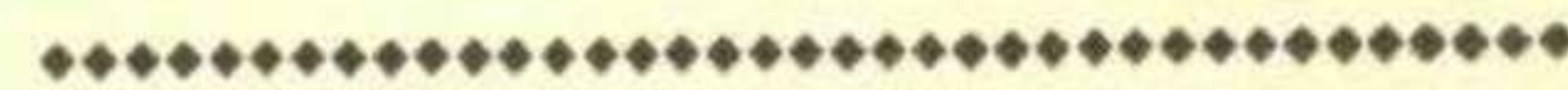
It is with great pleasure that we quote the following paragraphs from an excellent little article by Paul Jennings, which appeared in the *Observer* last October. We defy anyone to despise the vintage cult and deny that it is gaining ground, now that a paper of the status of the *Observer* has printed such an obviously genuine tribute:—

"If there are any critics in the next century, the impersonal age of Aldous Huxley and Orwell, it is possible that they will talk about motor cars as we now talk about cathedrals. Just as experts to-day say that the plain spire at Chartres is 'pure' and the ornate one is 'decadent,'

so these motor critics will speak of the 'great' period of the twenties.

"My car, a 1928 Austin Seven whose number plate bears the apt monosyllable UB, belongs to this period. It is a 'pure' car. Decadence begins when function is overlaid and concealed, when the car ceases to be a system of steel and rubber for getting from A to B and tries to become something else—a flatlet, or a small cocktail bar, with carpets and radio. In UB one never forgets that one is in a *car*. Large pieces of the classically simple engine project companionably through the floorboards. The oil gauge is a button which comes out on the dashboard (the *dashboard*, not the baroque 'instrument panel'). You press this button in, and if it comes out again the oil is all right; in fact the oil is so all right that it squeezes past the button and drips slowly down on to my trousers unless I periodically wipe it away.

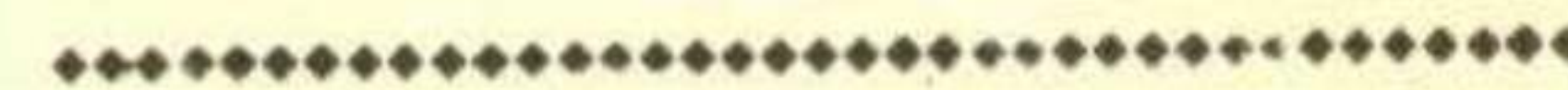
"I can thus never become dangerously absent-minded on the road; I am always reminded that I am in a *machine*. But it is a machine perfectly capable of taking me all round France, where the *garagists* would drop work on the shiny limousines of Belgians and crowd round saying: 'Ah, c'est un Rosingarde.' I used to think this was a poetic allusion to the steed of some legendary hero until I found that the Rosengart is a French make of car, now defunct. I am admitted to the brotherhood of garages everywhere." Incidentally, a keen Austin Seven owner sent us this clipping. He is using the fifteenth Austin Seven in his family, a 1938 "Ruby" saloon, and expresses the hope that the new Austin Seven will soon appear, so that "we will be able to save face amongst the Morris Minor clan." He would like to see more speed, 50 m.p.g., a less-sudden clutch, better steering and hydraulic brakes when the new Austin Seven does appear. And there is news that it may quite possibly be at the 1950 Motor Show . . .



J2 ALLARD

For the benefit of those overseas purchasers who might prefer to fit the more powerful engines not obtainable in Great Britain, the J2 Allard has been designed specially to accommodate such alternative engines as American Ford, Mercury, Cadillac, Ardun and Grancor. Without engine, the new J2 only costs £799 (\$2,306), ex works.

In addition to the extras previously notified, the Cotal four-speed electrical gearbox is now available on this model.



SUNBEAM-TALBOT

—continued from page 505

It is a car of particular interest to overseas buyers. The price is £991 0s. 7d., inclusive of purchase-tax (heater and radio extra), and under unfavourable conditions the petrol consumption was slightly less than 21 m.p.g., giving a range of over 200 miles. The petrol gauge had an unfortunate optimism, showing 5 litres when the tank was bone-dry and as there is no reserve this can entail a long walk. The makers are: Sunbeam-Talbot, Ltd., Ryton-on-Dunsmore, Coventry.

LETTERS from READERS

SENSE FROM THE STATES

Sir,

Your magazine is absolutely the best. I read *Motor* and *Autocar*, but I believe that *MOTOR SPORT* tops them all. Nothing of the sort is published over here and I think it a great pity. On the other hand, to be quite frank, what would we have to write about after all? Most everyone knows all about the Buicks and the Chevrolets and the Dodges, etc., and at best there isn't much to be said for any of them. They are extremely comfortable cars well suited to American smooth roads. That they would be hopelessly lost on the average Continental or British road would be a poor excuse for changing the type of springing used over here.

Added to that, the average American motorist drives a car for transportation only. The "sport" of motoring has long since died out. Thank goodness there still are some people who insist upon getting some fun out of driving an automobile.

Incidentally, you might be interested in some of the results of a recent meeting of the joint Milwaukee and Chicago Regions of the Sports Car Club of America. One of our members has one of the new 3½-litre "XK 120" Jaguars. This car has a little over 2,000 miles on it and perhaps is not yet completely broken in. However, it was run against a Jaguar "SS 100" of perhaps 1937 vintage. The trial was a half-mile standing-start, sprint event. Now that I repeat it, it seems unbelievable, but the fact is this. The old "SS 100" simply ran away from the "XK" and there was no question about it. No doubt the "XK" could show its heels to the old "SS" in top speed, but in this particular event the "SS" was the better car, to everyone's evident amazement.

I need not tell you that my favourite department in *MOTOR SPORT* is "Vintage Veerings." Besides my 1929 4½-litre Vanden Plas Bentley tourer, I have also a "Speed Six" 6½-litre Bentley with owner-driver, four-passenger enclosed coachwork of aluminium, a 1914 Lancia sport-touring, and a 1921 Locomobile "Sportif."

I was interested in Gordon Fairbanks' comments on the DV-32 Stutz and his statement that these cars are rarer in the States to-day than are good "Red Label" Bentleys in England. While it is impossible for me to either substantiate or refute this claim I can tell you without fear of contradiction that old-style Bentleys of any type at all are among the most rare and certainly the most sought-after automobiles in this country to-day. I think I know where most of them are and I doubt very much whether any one of their owners would consider trading his Bentley for a DV-32 Stutz.

I am, Yours, etc.,

Milwaukee, U.S.A. CARL E. MULLER

* * *

R.A.C. OLD-RACERS EVENT

Sir,

In your concluding sentence on the San Diego Veteran Car Races you mention an idea that has been in my mind for some time.

An early racing-car curtain-raiser would I believe be as interesting as a "500" race any day. It need not be slow! Anthony Heal was lapping at 65 or so on the Club circuit on the F.I.A.T. The Itala would be as fast, my Humber's best was 63 m.p.h. with Samuelson's Sunbeam not much slower. The big Delage would be there; and perhaps the F.I.A.T. "Mephistopheles."

On the full circuit the entry might be a little "lost," but I think we know enough of the potentialities of the various pre-1925 racers to permit of a sane handicap...

I doubt whether the wider public appreciates the potentialities of the early "racers" and something of the order of a 30 mile race would be a spectacle as well as of infinite interest to the drivers.

All power to your suggestion.

I am, Yours, etc.,

Stretton, Lancs. KENNETH NEAL

* * *

STRAW BALES

Sir,

With reference to Mr. Cooke's letter in the November issue, surely an important point in connection with the accidents at Silverstone is that the cars concerned were both B-type E.R.A.s, which have a very high centre of gravity. I saw Geoffrey Ansell overturn; but I have also seen "Bira," Ashmore and Bob Ansell go through the bales without a sign of instability. All these three use Maseratis, lower-built than the E.R.A.s.

While everyone must agree that the racing driver's job is to stay on the road, the fact remains that even such famous drivers as Villoresi and Farina have met trouble on the Silverstone corners. Inexperience may have brought about the accidents at Blandford, but I do not think that Bolster, Horsfall and Ansell can be called novices.

I am, Yours, etc.,

Oxford. H. R. THOMPSON

* * *

PRAISE FOR THE RILEY NINE

Sir,

The article "Riley Nine Recognition" in October's *MOTOR SPORT* was very welcome. My own first car was a Mark I open tourer delivered in August, 1927. It had a delightfully smooth, robust and lively engine, perfect steering and, as you say, right-hand change, with a very useful and pleasant constant-mesh third gear. Suspension and braking were nothing to write home about, and there was a tendency to skid easily on a wet surface. My own car had rather a temperamental carburetter, which I had not the skill to keep tuned, and maximum speed was only about 55 m.p.h. An indicated 42 was the happiest cruising speed, but engine and transmission were smooth throughout the speed range.

I fancy you are wrong on one point: my car certainly had a central butterfly-nut adjustment for the brakes under the front floorboard, and my recollection is that they were cable-operated. [Rods were used on early cars.—Ed.] Talking of floorboards: on one occasion a rough road-surface caused the back seat to shake on to the floor, then the board

beneath it to follow suit, and the Christmas parcels to strew the road.

I am, Yours, etc.,

Godmanston, Dorset. W. STUART BEST.

* * *

AN ALVIS-ENGINE SPECIAL

Sir,

I notice that in reporting the Gosport Speed Trials you mention Mr. Edgar's "Alvista," the "ex-Axel-Berg '12/50' engine Redwing." Actually this car first appeared in the V.S.C.C. Gloucester Trial of 1938 as the "Allen Special," driven by my brother.

Between then and 1947 when Axel-Berg bought it, it covered a very large road mileage with complete reliability and great economy (thanks, no doubt, to a 4 to 1 axle ratio with 19-in. wheels.)

The engine is standard except for twin S.U.s, a 0.020-in. solid copper gasket and much lightened flywheel carrying a 'Nash-type clutch. The chassis is mostly 1923 "Redwing," which is, of course, much lighter than the Alvis chassis. Total cost, disregarding personal labour, was just under £35 or approximately the price of a good horn-button these days.

Incidentally, in spite of Mr. Edgar's enthusiasm for Alvis cars, why "Alvista"? There is far more Riley about it so I suggest "Ry-Vita."

I am, Yours, etc.,

Romford, Essex. G. W. ALLEN.

* * *

SEVEN-FIFTY RACING

Sir,

As a result of the article in the September *MOTOR SPORT*, suggesting a racing class for unblown Austin Seven sports cars, I have received 56 letters and many verbal assurances of support. This has established that there really is a demand, and backed by these letters (of which more are required) an approach to clubs holding race meetings will be made, asking them to include races to our formula. Attempts are also being made to secure a venue whereby such invitations may be reciprocated.

The Seven-Fifty Club has elected a sub-committee to deal with the matter, and the formula for the coming season has been finalised:

"Cylinder block, crankcase, gearbox, rear axle and chassis side members must consist of parts from the standard touring or sports Austin Seven range. Stroke must be 3 inches and the bore not more than 2.26 inches. Superchargers and overhead valves are barred. Bodywork must comply with the R.A.C. regulations for Trials and Rally cars current at the time, but the minimum permitted outside width of the body at the cockpit is 35 inches. Full electrical equipment must be fitted, including complete dynamo, starter, accumulator, and at least one headlamp. There must be provision for carrying a spare wheel. The car must comply with the Road Traffic Act, and be driven to the course."

The purpose of this formula is to minimise, by reason of the strict limitation on b.m.e.p. it imposes, the advantages otherwise gained by more wealthy constructors and to ensure that the machines will also be practicable road cars, for the benefit of those unable to operate two vehicles. The organisers will be on the look out for people who have cars professionally built in a spirit of "regs.-dodging" and reserve the right to refuse their entries.

I am, Yours, etc.,

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TYPE 35 BUGATTI, road-equipped, fitted 1,750-c.c. twin-cam Alfa-Romeo engine. Quick, reliable; 25 m.p.g.; well shod. £200 or offer. Wilmer, Officers' Mess, Helles Lines, Catterick Camp, Yorkshire.

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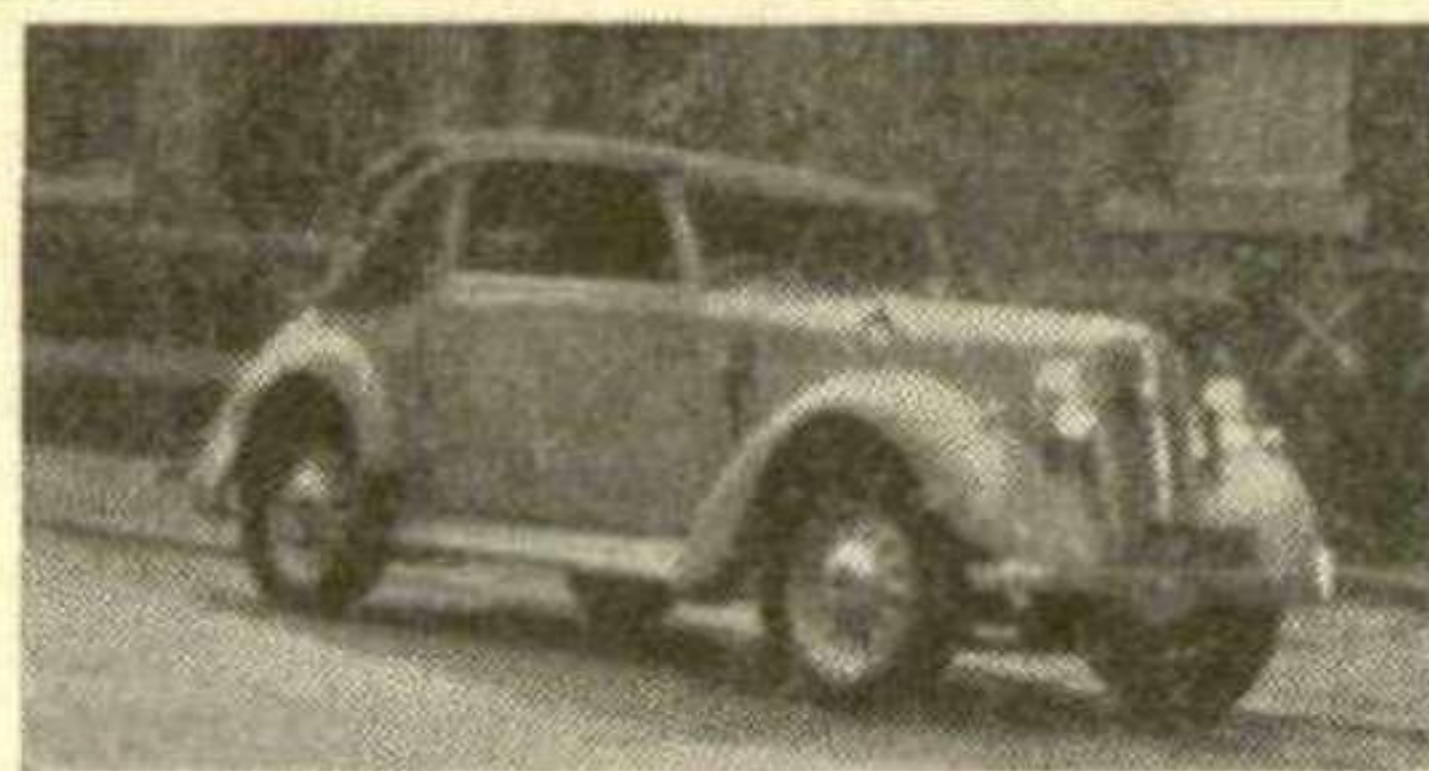
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ALVIS "12/50," 1931, utility body, good running condition. "C" licence, goods and private, unlimited red petrol. Ballamy split axle front suspension, complete, as new, 16-in. brakes, Bentley hubs. Also 1924 "23/60" Vauxhall; excellent mechanically; bodywork good but not completely original. Any offers welcomed. Box No. 493, MOTOR SPORT, 15, City Road, E.C.1.

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V8 TRIALS SPECIAL. Ford 30-h.p. in Riley Nine chassis, no body. Engine little used; five new tyres. £10 tax. £145. R. F. Neame, Corking Farm, Ash, near Canterbury. Tel.: Ash 336.

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£55 OR NEAREST OFFER.—"12/40" Alvis tourer, 1926, needs attention. Please write: Williams, "Delfryn," Oak Drive, Oswestry, Shropshire.

SUNBEAM "DAWN" saloon, 1934. Battery, tyres and body good, wings rough. Spare engine and accessories. Taxed. Three months' basic. £135. Hay, Redwood, Bath Road, Maidenhead. Tel.: 353.

EXCHANGE OR SALE—CASH £210. Singer Nine "Le Mans" 4-seater tourer, spare engine and gearbox. Perfect condition throughout. For Riley Nine saloon or car similar type. Harms, 2, Tennyson Avenue, Twickenham.

AUSTIN SEVEN ENGINE, 1935, clutch, gearbox, all accessories, overhauled, £38 10s. 1938 Hardy-Spicer propeller-shaft, £3 10s. 1935 head, plugs, £1. 12-v. Altette horn, £1. 12-v. S.U. pump, £2 10s. Lagonda rev-counter, £1 10s. South London. S.A.E., further details. Box No. 501, MOTOR SPORT, 15, City Road, E.C.1.

1940 CITROEN special drophead roadster. This magnificent and rare model incorporates the following: 1949 Light Fifteen engine unit with high axle ratio less than 5,000 miles ago, with special high-compression ratio head. Available also is a complete kit of parts to convert engine to 12 h.p. standard specification. Condition of upholstery, mats, etc., perfect. Extras include set special oversize Michelin covers, wheel discs, chrome wing protectors, dual passlights, dual wind horns, many additional instruments, heaters, radio built in to dash, new headlamps, etc. One previous owner only. Owner, acquiring larger car, would accept £625 or cash and small runabout such as F.I.A.T., D.K.W., etc. Seen and tried London/Surrey area. Box No. 502, MOTOR SPORT, 15, City Road, E.C.1.

CAR RADIOS.—One Romac, 12 v., £15; one Philco 6v., £10. Both excellent condition. Tel.: Mountview 9313 (after 7.30 p.m.).

FOR SALE—continued

TRIUMPH "GLORIA" sports saloon, "12/95," 1934, £120, or exchange for 6/10 h.p.; anything considered, cash adjustment either way. 28, Meadow Hill Road, Redditch, Worcs.

EVERY ENTHUSIAST SEEKS one car which can be used for everyday business and at week-ends for sport. Here is one that fills the bill with the exceptional figure of 125 b.h.p./ton at a very reasonable price. 3½-litre Jaguar engine and gearbox in short chassis with full 2-seater body, windscreen, aero screens, hood and side-curtains. A proper car not a "freak" special. £10 tax. Genuine reason for sale. £350. Demonstration within reasonable distance. Richards Bros., Walton-on-Naze, Essex. Tel.: 268.

1½-LITRE SINGER 2-door sports saloon. Excellent condition throughout. Ideal for sports or touring. Six-cylinder o.h.c. engine; 13 h.p. £150. Richards Bros., Walton-on-Naze, Essex. Tel.: 268.

MORRIS MINOR 4.88 DIFFERENTIAL assembly complete; new differential gears; D-type M.G. gearbox, new bearings; black leather motor-cycling coat, 38-in. chest, pre-war, good condition. What offers? Dick Barton, 2, Walmer, Mannamead, Plymouth.

1938 F.I.A.T. 1,100 (508C) 2-seater coupé, "500" type body, metallic-grey. Another similar blue coupé with h.c. pistons, 4.3 axle. Spares include two engines, h.c. pistons, "Mille Miglia" manifold, special manifold with twin S.U.s, dynamo, distributors, front suspension, differential unit, half-shaft hubs and races, steering-box, track-rods, shock-absorbers, hydraulic brake gear drums, wheels, unused tyres, etc. £750. Parsons & Parsons (Garages) Ltd., Potter Street, Harlow, Essex.

ALVIS "SPEED 25" sports tourer, 1937; enthusiast's car. Has done 34,000 miles only and is in exceptional condition for its age. Price £445. Full details on application to Box No. 503. MOTOR SPORT 15, City Road, E.C.1.

BENTLEY 3-LITRE and "Speed Six" chassis. Dismantled and partly rebuilt. Sell as spares or consider exchanging the lot for Austin Ten or Twelve saloon or 2-seater. Full particulars from: Eatough, Hoarwithy, Hereford. Tel.: Carey 53.

ALVIS "12/50" DIFFERENTIALS, 4.7, crown and pinion complete, perfect, £7 10s.; half-shafts, 30s. each; con-rods, 15s. each; cranks, £3 10s.; 16.9 differentials, £7 10s.; half-shafts, £2; state model. "Leaf" "12/40" engine and rear axle spares, new differential pinions, pins and bearings. Riley "12/6" engine and gearbox spares, half-shafts and hubs, £1 10s. Bentley 3-litre pistons; 6½-litre speedo head, perfect, £3; bezel-type switch ammeter, £1. Ex-R.A.F. boost gauges, 10s. 1929 17-h.p. Sunbeam chassis or sell spares. 2-litre Lagonda chassis, less engine and gearbox. Room wanted. Offers for lot or spares. Spares: carriage forward or extra. D. Bagshaw, The Green, Bath Street, Belgrave, Leicester. Please note new address, callers welcome.

VAUXHALL "14/40" (last series) Princetown open tourer; hood, side-curtains complete; mechanically sound; taxed; £75. P. Farmiloe, c/o Andrews Bros. (Maidenhead) Ltd., Raymead Road, Maidenhead, Berks. Tel.: Maidenhead 56.

RILEY NINE "BIARRITZ." Excellent coachwork, upholstery; good runner; magneto; tyres; needs battery. £80. Mayes, 30, Lissenden Mansions, N.W.5.

FINAL FOR 200,000 magnificent motor car photographs. Selection of beautiful samples and catalogue 5s. 6d. G. A. Final, 15, Nashleigh Hill, Chesham, Bucks.

1935 HILLMAN MINX de luxe 4-door saloon. Very clean, mechanically perfect. Would sell or exchange for open sports car. Box No. 505, MOTOR SPORT, 15, City Road, E.C.1.

FOR SALE—continued

1925 BEAN, 1931 MORRIS SIXTEEN. Any offer or will dismantle. Dismantling 1½-litre Singer "Le Mans," some spares available. Bentley, Talbot, Singer and M.G. secondhand spares. G. A. Final, 15, Nashleigh Hill, Chesham, Bucks.

1937 MORRIS EIGHT tourer, 2-seater; very small mileage. Cash or exchange larger car, sports or saloon. Box No. 506, MOTOR SPORT, 15, City Road, E.C.1.

1947 FORD V8, ex-W.D. steel utility. £10 tax. Mileage 9,000. Ideal racing tender. Sell cash or exchange smaller car or van. Box No. 507, MOTOR SPORT, 15, City Road, E.C.1.

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BENTLEY 3-LITRE SPARES for disposal. Separate parts. Box No. 523, MOTOR SPORT, 15, City Road, E.C.1.

1912 CROSSLEY open tourer. This vehicle is not restored, it is original. It has been carefully stored for over 30 years and has been the property of one owner for the majority of its life. Tools as supplied are still in the tool boxes. Side-screens and hood are barely used. Bodywork is in excellent condition. Mechanically the car is completely reliable. It has good tyres and upholstery. Lucas oil lamps and Bleriot gas headlamps as fitted. Delivered anywhere by arrangement. Price £175, at K. N. Rudd, 15, Ambrose Place, Worthing, Sussex. Tel.: 3902.

FOR SALE—continued

SUNBEAM.—Dismantling complete car, 1933-4; 19 h.p.; engine number 131515. Also M-type M.G. block; complete head, pistons and dynamo. Wolseley 12-h.p. block, rebored, new pistons, head, etc., ready for assembly. W. Bishop, 9, Norman Road, Swindon, Wilts.

MERCEDES-BENZ, 1938 model 170V, 14-h.p. 4-door saloon, right-hand drive. Car just completely overhauled, electrical installation modified to Lucas voltage. Regulator and long-range headlamps; many detail modifications to chassis. Body resprayed and rechromed; interior retrimmed; whole car in new condition throughout; genuine 30 m.p.g. Offers. Gath, "Woodcroft," Branlon, Coventry. Tel.: Wolston 285.

OPPORTUNITY FOR IMPECUNIOUS ENTHUSIAST!! Morgan 2-speeder, 1929 vintage; 990 c.c. s.v. J.A.P. air-cooled engine and bodywork (2-seater tourer) in very good condition. Equipment includes dynamo, starter, lights, hood and side-screens. New rear wheel bearings. Taxed and insured six months. Price £50. Write: D. S. Bemister, c/o 94, Strathyre Avenue, Norbury, S.W.16.

MORRIS MINOR, 1929-33, most spares in stock, new or secondhand. 6-v. windscreen wipers, 50s. each; 4-speed gearbox, £5. Hiller & Wrigley, 179, Pen Hill Road, Bexley, Kent.

RILEY 1938 "16/4" overdrive "Kestrel," superb condition. Offers over £500. Seen Manchester district. Blame Sir Stafford. Box No. 509, MOTOR SPORT, 15, City Road, E.C.1.

ROOTS-TYPE BLOWERS, suit up to 1½ litres; require drive and fixing brackets; new, in maker's packing, £7 each. Batteries, 12 volt, 34 amp., Exide, ideal replacement F.I.A.T. 500, new, uncharged, £2 15s. each. Battery chargers: Atlas metal rectifier for 12 volts at 5 amps, 200/250 volt A.C. mains, £3 15s. each. All carriage paid. A. S. Milnes, 76, Heatherfield Road, Marsh, Huddersfield.

MORRIS MINOR S.V. ENGINE and gearbox, complete less dynamo, £20; two front seats, 15s. each; bonnet, 10s.; steering wheel, 5s.; handbrake, 10s.; starting handle, 5s.; petrol tank, £1. Also 12-v. dynamo, reconditioned, £2. Steering wheel "TC" M.G., £2. Morris-Oxford steering column, 10s. 1935 Morris Ten radiator muff, £1. Bradley, Tingley House, Morley, near Leeds.

HERSTON MOTORS, the vintage and sports car specialists of the south, offer: 1939 Rover Twelve sports saloon, very carefully used and in first class order throughout, £550. 1934/5 Lagonda 4½-litre special 4-seater tourer, superb order throughout, recellulosed red, new hood and tonneau, etc.; all new tyres, new batteries; mechanically perfect; snip at £400. 1930 Bentley "Speed Six," open 4-seater, real man's motor; new body, all new tyres; overhauled and recommended at £275. 1934 Wolseley Nine Maltby sports 4-seater, very good condition, all new tyres and battery; bargain at £110. 1933 Riley Nine shooting brake, very good order, only needs seeing, at £115. 1932 Sunbeam Eighteen sportsman's coupé, in as new condition, engine overhauled, and recommended at £125. These and a few late arrivals offered this month. Write, call, or telephone (Swanage 2730). Part exchange a pleasure—personal attention at all times. 409/411, High Street, Swanage, Dorset.

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"TC" MIDGET, 12,000 miles; Newton shockers, Fram filter; economical. £500. Littledene, Lansdowne Road, Angmering, Sussex.

4-LITRE BENTLEY ENGINE, complete all auxiliaries, gearbox and prop-shaft (replaced by diesel). Routledge, Scholes, Leeds.

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FOR SALE—continued

ALFA-ROMEO 1,750-c.c. twin-cam Weymann saloon nice order throughout, new roof and tyres, repainted, reconditioned telecontrols, £155. Bentley 3-litre "Red Label" V.D.P. tourer, in very good condition, with many extras, e.g., rev.-counter, electric fuel pump, fan, permanent jacks, new full-length tonneau cover, good hood, two new tyres and nearly new battery; excellent mechanically, oil consumption nil; £520. Sunbeam "24/70" 1933 saloon, in extremely good condition, only two owners since new, £120. Most exceptional 1927 F.I.A.T. 21-h.p. small landaulette, mechanically really excellent, interior of car as new, very good paintwork, first-class tyres and battery; does 60 m.p.h. and 18 m.p.g. and ready to go anywhere; £70 or near offer. Invicta 1929 high-chassis 4½-litre, open sports 4-seater, mechanically very good, terrific performance, good tyres and batteries, but bodywork rough, though serviceable, £110. Isotta-Fraschini 44-h.p. straight-eight, 1930, most impressive sedanca-cabriolet body by Lancefield, in exceptionally fine condition, mechanical order is amazing; total mileage 66,000, not run since a most expensive engine overhaul; excellent tyres and batteries; a most magnificent carriage for anyone prepared to cope with high running costs for the sake of superb appearance and performance, £125. Engines: 1930 Riley Nine, minus head and one camshaft, £4 10s.; 1933 Sunbeam "24/70," minus timing cover and chain, otherwise o.k., £10; 1930 Chrysler, recently overhauled, with gearbox, starter, and dynamo, £10. Other spares: gearbox and prop.-shaft for 1912-20 Sunbeam 16 h.p., damaged casing but excellent internal order, £8 10s.; set of six newly rebuilt and unused 19-in. wheels for Rolls-Royce "Ghost" or "Phantom," £27; pair of reconditioned Morris Eight carburetters, seals unbroken, £5; Whitworth 20 and 21-in. 55-mm. wheels, B.E. and 21-in. tyres. Large stock of vintage lamps, including a pair of excellent acetylene headlamps at £10, and a pair of good oil lamps at £4. Also magnetos, generators, starters, instruments, etc., and a "21/60" Sunbeam being dismantled. C. J. Bendall, 25, Orchard Road, Stevenage, Herts. Tel.: Hitchin 1108.

SUNBEAM 1932 18-H.P. sportsman's coupé. This car has been rebuilt right down to complete respoking of all wheels. Lined to size (70 mm.) and fitted Martlet pistons. Compression raised to 8:1 without pinking on "Pool" owing to special cooling gallery on head. All ports ground and polished. Very much modified induction with large single downdraught S.U. giving quite astonishing performance. Crank ground and new bearings throughout. Camshaft built up and ground. Body in perfect condition, new tyres, all electrical equipment reconditioned, new radiator. Well over £250, plus owner's work, has been spent on the car (bills available), which has since done less than 2,000 miles. It is in fact better than new. £350. Must be sold before end of year. B. M. A. Smith, Braunston, near Rugby.

FRAZER-NASH SPECIAL. "T.T. Replica" 1935 chassis, 100 per cent. in every detail, fitted Ford V8 engine in first class condition; 3.6 top, 5.1 third, give terrific performance; petrol consumption 25/30 m.p.g. Excellent bodywork recently repainted B.R.G. Six 19-in., two 17-in. wheels, complete set unused driving chains. Genuine reason for sale. Offers wanted. Box No. 510, MOTOR SPORT, 15, City Road, E.C.1.

£75, OR NEAREST OFFER.—Galloway 12-h.p. 5/6-seater saloon, excellent condition, running order; photograph available. Seen Hants. Box No. 511, MOTOR SPORT, 15, City Road, E.C.1.

£17 10s.—MORGAN 3-WHEELER, 1,000-c.c. o.h.v. J.A.P. engine. Started rebuilding but few parts still needed. Sell complete or would dismantle. Kohler, 4, Wellington Street, Edinburgh.

RILEY MONACO, 1934, good condition, £170, or exchange for "Kestrel" or "Lynx," cash adjustment either way. Eccleston, 39, Rowlands Road, Birmingham, 26. Tel.: ACO 2039.

FOR SALE—continued

ELTOS POSITIVE REMOTE GEAR CONTROLS are now available for Ford Eights and Tens, Austin Sevens, 3 and 4-speed boxes. Send S.A.E. to L. Thomas, 32, Reservoir Road, Edgbaston, Birmingham.

ROLLS-ROYCE "Replica." 1936/7 drophead, 22-h.p. 4-seater. Chassis GBM 17. This car was completely rebuilt in 1948 and has since done less than 7,500 miles. Bills available for over £500. First-class machine with fine lines which will appeal to connoisseur of quality workmanship. £900. Box No. 512, MOTOR SPORT, 15, City Road, E.C.1.

1912 AUSTIN, 1,616 C.C. This car has been only taxed for three quarters in thirty-seven years, and is in perfect mechanical condition. It has been beautifully restored, including being completely reupholstered. £125. C. Ashton, "Barnfield House," Penkull, Stoke-on-Trent. Tel.: Hartshill 44981.

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FOR SALE—continued

M.G. PA-TYPE spring-spoked steering wheel, 50s. M.G. trials bonnet, 60s. Two Marechal 8-in. lamps, with brackets, 50s. each. Pyrene extinguisher, 40s. Box No. 513, MOTOR SPORT, 15, City Road, E.C.1.

1933 MARCH RILEY 2/4-seater tourer, cycle wings, rev.-counter, etc. Crank ground July. Exchange 3-seater Frazer-Nash and small cash adjustment, or anything interesting. 1934 Singer Nine van; reconditioned engine not yet run, sound body, etc.; suitable special; weight 11½ cwt.; £70. 4, Selbourne Road, Weston-super-Mare.

M.G. 1934 "J2." Enthusiast's fast, economical, car maintained regardless of expense. Many valuable spares and extras. Nearest £175. Leighton, 25, Coventry Road, Coleshill, Birmingham.

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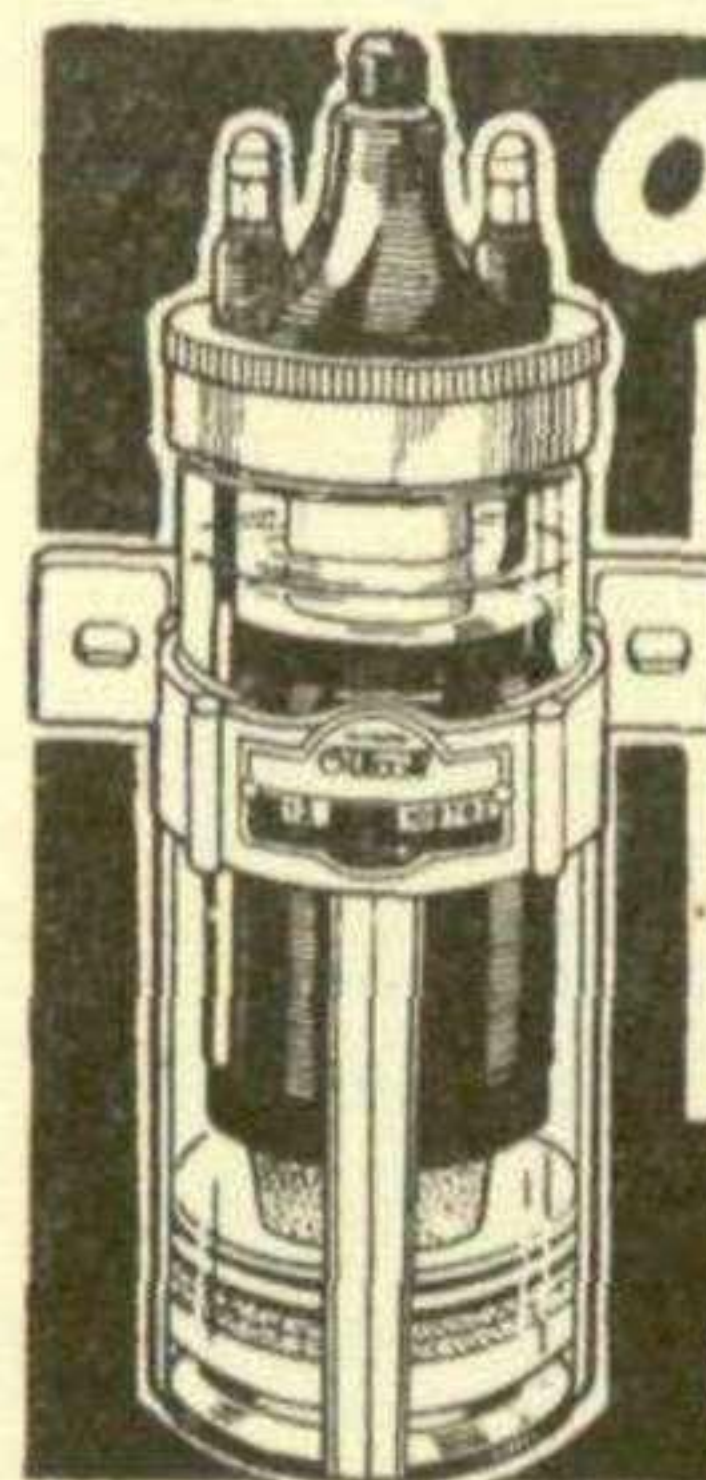
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TYPE 40 BUGATTI sports 4-seater; new hood, battery, radiator, Scintilla, S.U. £125. 82, Harrow Road, Middlesbrough, Yorks.

RILEY NINE drophead coupé, first registered 1935. Good tyres, brakes relined. Owner taken delivery of new Morris Eight. £125. 2, Abbotswood, Guildford. Tel.: 5756.

1934 ALVIS "SPEED 20" 4-seater. Reconditioned engine; new hood. Excellent condition throughout. Two spare wheels. P.100 headlamps. Finish, fawn, red leather. £250, or near offer. White, 8, Ansdell Road South, Lytham-St.-Annes.

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ROLLS-ROYCE, 1926, 20-H.P., original 4/5-seater touring body by Thrupp & Maberley, in excellent condition. New tyres, new hood and licensed to the end of the year. £390. Seen in South London. Tel.: Lee Green 2657.

HUMBER EIGHT tourer, 1926, exceptional condition throughout. £55, or exchange for small vintage saloon. Venning, Vicarage, Takeley, Bishops Stortford.

TO V8 SPECIAL BUILDERS. Ford Mercury engines from £12 10s. Gearboxes, front and rear axles, Lockheed brake types, and all other parts. Also: Ford Ten specials built to order. Wharfedale Garage Ltd., Wharfedale Road, Bournemouth. Tel.: Westbourne 64497.

M.G. 1½-LITRE, MODEL VA, open 4-seater; green; new engine; immaculate. Any trial. £475. James Boothby Motors Ltd., Mary Farm Works, Lowfield Heath, near Crawley, Sussex.

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1½-LITRE RILEY SPARES.—Set 8-to-1 Martlet pistons and rings, +.1 o.s., run 100 miles only, £6; set secondhand B.H.B. pistons, rings and gudgeons standard, 6.8 comp., £1 10s.; 12-v. S.U. pump, new unused, £2 15s.; S.H. cylinder head and eight valves, £3 10s., o.k.; four con-rods, need remetal-ling, £2; two camshaft wheels and idler gear, serviceable, £1; set rockers, secondhand, o.k. £1. C. C. Garlick, 16, Lupton Street, N.W.5. Tel.: Gulliver 3067.

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BENTLEY 4½-LITRE short chassis (9 ft. 9½ in.). Original—not shortened; 4-seater open body by Harrison; 30-gall. slab tank; "D" box; 3.53 B.A. ratio; nil oil consumption; engine and whole car first class; many extras. Seen Croydon. Tel.: Coram, Upper Warlingham 2551, or write: 554, Limpsfield Road, Warlingham, Surrey.

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Complete reconditioned 2-litre Alta engine, ideal for Formula 2 or sprint special. Many improvements and modifications. Ready to fit and race. £250.

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Rootes type blower suitable for 2-litre car. £35. Special 16-in. wheels for M.G. Midgets. Any type of Rudge wheel supplied. New super bucket seats, ideal for sports cars. £3 10s. each.

Of special interest to all H.R.G. owners
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1½-litre Singer six-cylinder gearbox, complete and in excellent condition; 1938 Rover 14-h.p. engine; Ford V8 engine, special propeller shafts, specialist machining, many carburetters and spares for sports and racing cars.

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Four-speed gearbox conversion on exchange basis. £75. Reconditioned engines, pre and post-war models. Reconditioned drive shafts and gearboxes, etc. All spares for f.w.d. models.

H. W. Motors, Ltd., Walton-on-Thames. Tel.: Walton-on-Thames 783 and 1437.

1932 MORRIS 11.9-h.p. saloon. Faithful, reliable car. Bodywork rough. Full tank and nine months basic. £40. Available mid-December. 1932 F-type M.G. Magna spares, crankshaft, valve-cover, eight brake-shoes, five con-rods, etc. £3 15s the lot. Unused Centric 160 blower, new boost gauge, some copper manifolding. £16. Mumford, Tylehurst Close, Forest Row, Sussex. Tel.: Forest Row 252.

A.C. 1934 FIXED HEAD sports coupé on three carburetter competition chassis, body fair, interior shabby, engine rebuilt; new pistons, liners, clutch, front springs, etc. £165. View Tudor Garage, Fulham Road, S.W.6.

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O.M. SUPERCHARGED O.H.V. 2-LITRE. 2/4-seater, alloy body fitted in 1936, with alloy wings. New hood and screens. Brakes relined, new king pins and bushes, new shackles pins and bushes, new valves, springs, valve seat inserts, Roots type blower stripped and reassembled with new bearings and modified oiling system. Dual ignition Scintilla Vertex and Bosch distributor, nearly new tyres and batteries. Bosch lamps, very good red leather upholstery. A really fast car with push-in-the-back acceleration. £325. Hampton Motors, Clarence Crescent, Windsor.

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FOR SALE—continued

AUSTIN SEVEN. New aluminium cylinder heads for standard models in high duty alloy, latest design, 6.2 compression ratio, our own make, £5 each. Racing car trailer suitable 500 or 750, complete, £25. Supercharged single-seater racing Austin, overhauled and prepared, reasonable cash offer wanted. New "Ulster" and "Nippy" spares, most standard model spares from stock. S.A.E. lists. Austin Seven specialists. Cambridge Engineering, Cambridge Road, Kew Green, Surrey. Near Kew Gardens. Tel.: Richmond 2126.

DEWS GARAGES LIMITED offer the following car subject to being unsold. 1936 (November) 26-h.p. supercharged drophead Lammas Graham, fitted Scintilla magneto. Good mechanical condition. Cheap. Further particulars on application to Sales Manager, Dryclough Lane, Halifax. Tel.: Halifax 5467.

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ENGINE AND CHASSIS SPARES for Sunbeam 3-litre o.h.c., 20.9, 16-h.p., and 18.2-h.p. Complete 18.2-h.p., good chassis with hydraulic brakes, truck body, engine has broken piston, cheap. B.T.H. magneto, type CE 6. Horizontal Scintilla magnetos four and six-cylinder. Pair of horizontal Solex carburettors ex 2-litre Bugatti. Sundry Rudge wheels. Spares of all description made to pattern, competitive prices. Downton Engineering Works, Ltd., Downton, Wilts.

1934-5 TALBOT 75 (17.9-h.p.) sports saloon by Darracq in perfect and faultless all round condition. Upholstery is unmarked. The engine and chassis are equally faultless, just having undergone a complete overhaul by the owner. This car has recently been brought to this country from Germany, where it has motored 41,000 genuine miles since new. First registered in England, June, 1949. £10 per year flat-rate tax. Five very good tyres; 20 m.p.g. on Pool petrol. Tel.: Croydon 1537, or write Simmons, 101a, Tamworth Road, West Croydon. £185, or nearest offer by December 17th.

1933 WOLSELEY HORNET Saloon. 1929 Ariel 500 c.c. motor cycle. Exchange 2-seater sports tourer. 20, Green Lawns, Eastcote, Middlesex.

WANTED

1938 RILEY 1½-LITRE "KESTREL" saloon. Good condition essential. Full particulars, lowest price required: Ford, 3, Lampton Court, Hounslow.

AUSTIN "NIPPY" or other small h.p. sports car, 1935 or '36. Not more than £110. Preferably N. England or Scotland, but not essential. Box No. 490, MOTOR SPORT, 15, City Road, E.C.1.

"NA" MAGNETTE SPARES. Engine spares or complete engine particularly. Also blower and manifolds, etc., for above. Please write: R. Pulman, The Chantry, East Coker, Yeovil, Som.

T.T. FRAZER-NASH, Riley "Sprite," "Brooklands" or "Imp," H.R.G., or sports car of similar category. No fancy prices. 66, Downs Cote Drive, Westbury-on-Trym, Bristol.

MARSHALL NORDEC SUPERCHARGER for "TA" M.G., complete with all fittings. Full particulars to: Box No. 491, MOTOR SPORT, 15, City Road, E.C.1.

URGENTLY.—NEW SPARES FOR SINGER NINE "Le Mans" sports tourer, 1937. Gearbox (remote control), reconditioned one would do. Differential assembly, half-shafts, springs, etc., or what you have. Enthusiasts please help where possible. Stanley Knowles, Ash Grove, Elland, near Halifax.

WANTED—continued

FOR TALBOT "105" open sports, 1935: new crown and pinion, differential and half-shafts, new or reconditioned springs, etc., or what you have. Any enthusiast please help where possible. Stanley Knowles, Ash Grove, Elland, near Halifax.

BODY FOR SINGER 9-H.P., 1934, 4-seater sports. Details to Rockliff, 281, Hobs Moat Road, Sheldon, Birmingham, 26.

F.I.A.T.s PURCHASED in any condition if suitable for reconditioning or spares. Overhead valve conversion set wanted for Model 500. Stiles, 153, Billing Road, Northampton. Tel.: 2264.

AUSTIN SEVEN 17-IN. ROAD WHEEL, in good condition. Abbott, 12, London Road, Chelmsford.

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Aston-Martin, Oct., 1936, Mk.II Le Mans long-chassis 4-seater in green. New hood, hood bag, tonneau cover and screens, superlative condition throughout £495

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Lea-Francis, 1932 "12/40" fixed-head coupe. Excellent chassis, re-sprayed silver grey and blue, re-trimmed inside and out, rechromed. Almost as new £195

Tracta, 1929 12-h.p. F.W.D. 2-seater. 4 cylinder O.H.V. engine sleeved, crank reground, clutch relined, magneto, dynamo and starter still under guarantee, battery nearly new. Satisfying sports car performance with reliability and 25 m.p.g. £145

Delage, 1926 14-h.p. open 4-seater in excellent condition mechanically and bodily. Good hood, tonneau cover and hood bag, rear triplex screen, rebuilt wheels. Very good performance, petrol from August £100

Renault, 1913 7.8-h.p. 2-seater. Engine and chassis restored as new, good tyres and bodywork, but only hood frame, petrol from August. Three up, this little car did London-Brighton and return on 13/11/49 (for fun), without involuntary stop, on 3 gallons £100

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HORNET SPECIAL, saloon or coupé, wanted by advertiser in Essex. Must be sound. Up to £125. Box No. 496, MOTOR SPORT, 15, City Road, E.C.1.

REASONABLE PRICE OFFERED for 8/12-h.p. sports car in good running order. Elmtrees, Little Marlow, Bucks. Tel.: Marlow 647.

FRAZER-NASH OR SIMILAR 2-seater sports, condition immaterial, must be cheap. Lancs area. Box No. 497, MOTOR SPORT, 15, City Road, E.C.1.

WANTED—continued

ROLLS-ROYCE coupé. Maximum price £1,000. Immediate settlement. Day, Cliff House, Marine Parade, Leigh, Essex. Tel.: 74190.

RILEY NINE WANTED, any type or condition but not home-built body. 1932 to 1936. Sensible prices please. C. Arnold, 8, Homestead Way, Northampton. Tel.: 5001.

14-H.P. WOLSELEY "Daytona." Also cheap Ford Ten tourer or saloon. P. Weaver, 12, Burton Road, Melton Mowbray.

SMALL VINTAGE SALOON, any condition. Venning, Vicarage, Takeley, Bishops Stortford.

SPORTS OR ANY CAR WANTED cheaply, to rebuild; also spares, books, manuals, photos, mascots, badges, and anything of motoring interest. Box No. 504, MOTOR SPORT, 15, City Road, E.C.1.

ENGINE AND GEARBOX, 12 h.p., o.h.c. or o.h.v. Morris 8-h.p. wheels, 6-stud and Wolseley 14-h.p. rear axle. Condition and particulars to: H. Butt, 38, Verdun Road, Barnes, S.W.13.

TALBOT "10/23" REAR AXLE. Replies to: "Sheriffhales," Rode, near Bath, Somerset.

"MOTOR SPORTS" REQUIRED to complete series: all 1934 except Aug., Sept. and Dec.; Sept., 1940, and Nov., 1943. "Sheriffhales," Rode, near Bath, Somerset.

M.G. "P" BRAKE DRUMS, shoes, back plates; complete axles considered. "J2" petrol tank, windscreen, overhead gear, etc. Box No. 508, MOTOR SPORT, 15, City Road, E.C.1.

RILEY NINE "KESTREL," 1934/5. With or without engine. Good bodywork. Private buyer. Reynolds, 76, Watery Lane, Redditch, Worcestershire.

BUGATTI GEARBOX, clutch and flywheel, required for 1½-litre. Dettmer, 783, Chester Road, Erdington, Birmingham.

ALFA, LAGONDA, ASTON, O.M., or similar, and pre-war 7R A.J.S. Box No. 526, MOTOR SPORT, 15, City Road, E.C.1.

AUSTIN SEVEN DOWNDRAUGHT-TYPE MANIFOLD, one piece, also carburettor to fit. Barrett, 230, Lincoln Road, Walton, Peterborough.

SET OF BRAKE DRUM COVERS for M.G., T-type, believed pre-war maker Ashby. Maynard, Cromer House, Oswestry, Salop.

IMPECUNIOUS EX-OWNER SEEKS really cheap vehicle. Any insurable. 17-jewel wrist chronometer offered part exchange. Riley radiator shell free to first applicant. Box No. 516, MOTOR SPORT, 15, City Road, E.C.1.

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URGENTLY.—Preferably good condition, F.I.A.T. 509 or 509A engine, 1927/31, with or without gearbox. State price required and information regarding condition. Box No. 517, MOTOR SPORT, 15, City Road, E.C.1.

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ENGINE WANTED.—Four-cylinder or small "six." 2,000 to 2,500 c.c., 100 b.h.p. at 5,000 r.p.m. Pump and fan cooling. State price, make, year, condition, measurements, whether spares available. Box No. 521, MOTOR SPORT, 15, City Road, E.C.1.

SPORTS CAR. Age, condition and price immaterial. Full details please: Box No. 535, MOTOR SPORT, 15, City Road, E.C.1.

PERFORMANCE CARS, of 21, Daleham Mews, Belsize Lane, N.W.3, Tel.: Hampstead 8707, have a long waiting list for sports and touring cars of all types and would like to hear from anyone disposing of their car.

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ADVERTISER interested in G.N. and A.V., also bulb horn. Sqn.-Ldr Davey, R.A.F., Welford, near Newbury.

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1946 "TC" M.G. 2-seater, 16,000 miles; black; many extras; brand new tyres	£488
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1927 "TG" Alvis "12/50" tourer, original body	£85
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1934 Riley Twelve "Kestrel," crash box	£145
1936 Chrysler 20-h.p. D.H. coupe, immac... ..	£155
1937 Renault 13-h.p. D.H. coupe, immac... ..	£185
1934 Talbot "65," 14 h.p., saloon; black	£85
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1934/5 ASTON-MARTIN, MK. II, 2/4-seater. Must be 100 per cent. mechanically. Outside appearance immaterial. Engineer will inspect. No dealers. Side-curtains for 1929 Model A Ford. any condition. Box No. 519, MOTOR SPORT, 15, City Road, E.C.1.

£100 OFFERED for "22/90" Alfa-Romeo, "Lambda" "Torpedo," Bentley, Mercedes, or similar vintage. Must be in running order. Box No. 520, MOTOR SPORT, 15, City Road, E.C.1.

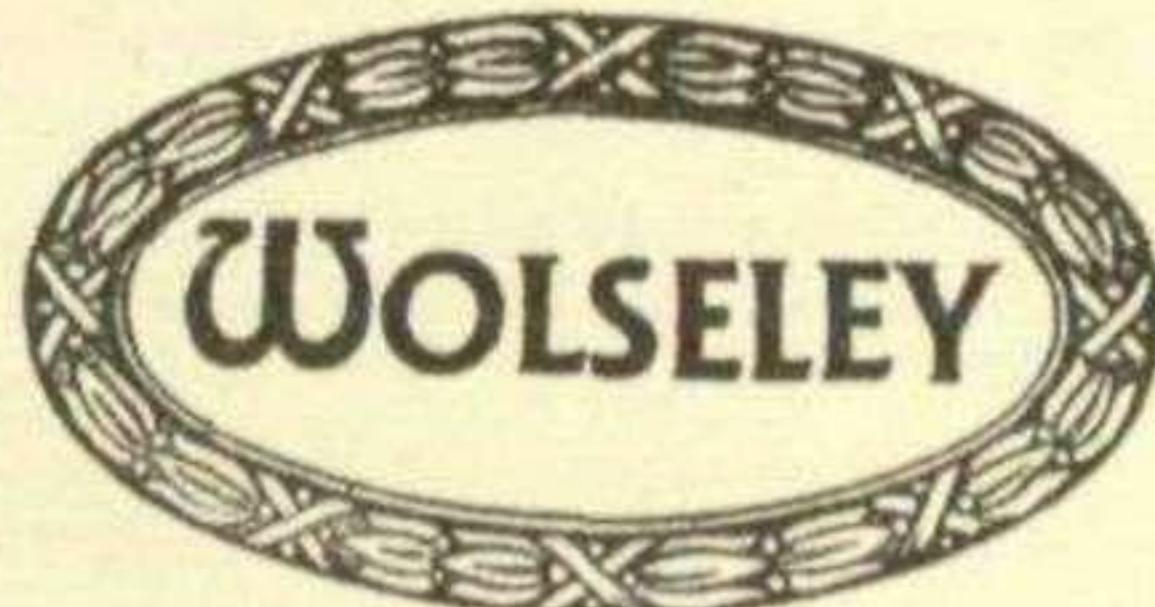
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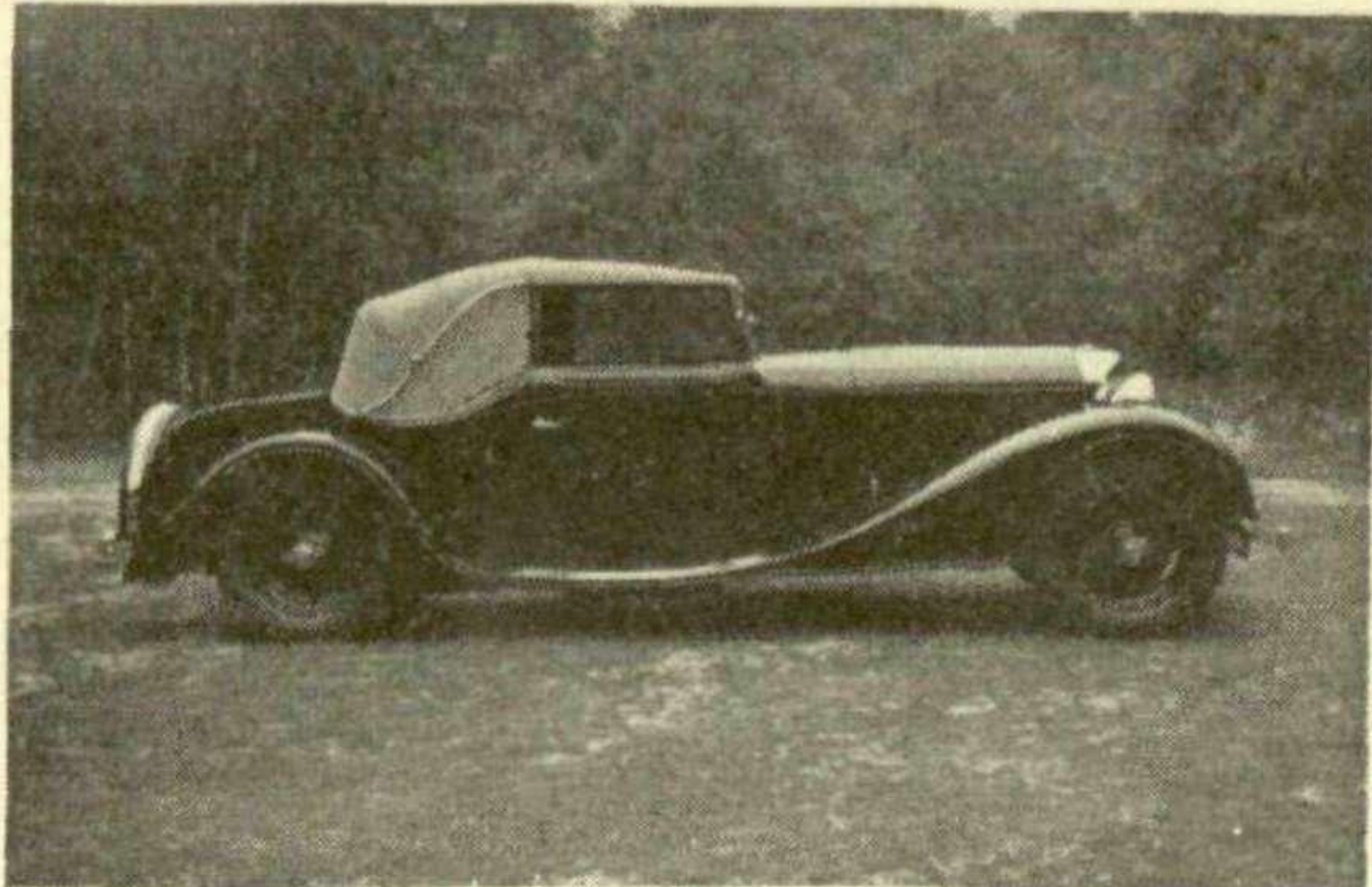
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SPORTS CAR. Drophead preferred, but not essential. Alvis, Jaguar, Invicta, Lagonda Citroen, A.C. M.G., Alfa, Bugatti, Merc. (not a "Special" please!) Condition, age, and distance not important. Write: A. Simmons, 101a, Tamworth Road, Croydon, Surrey, enclosing photograph if possible.

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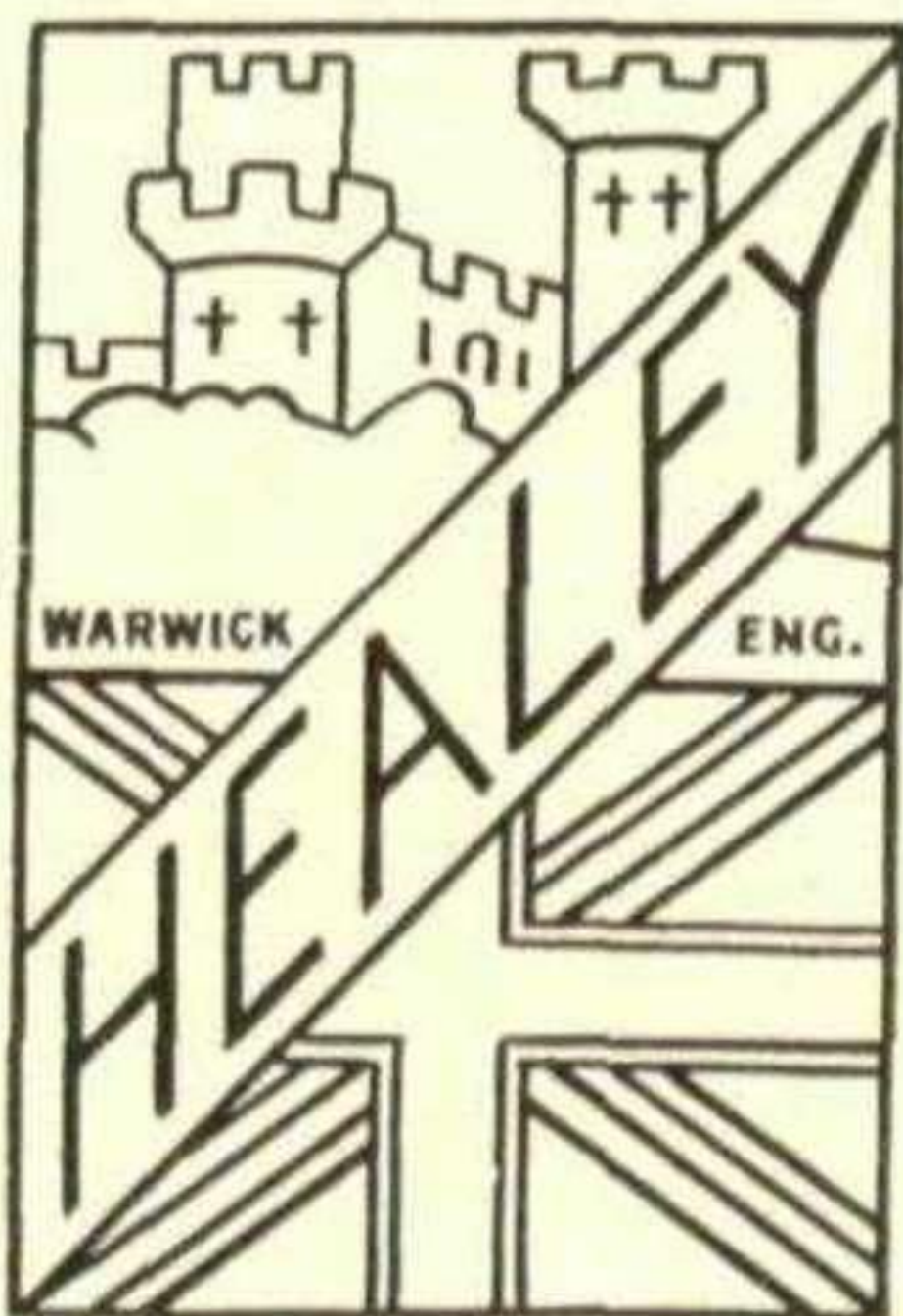
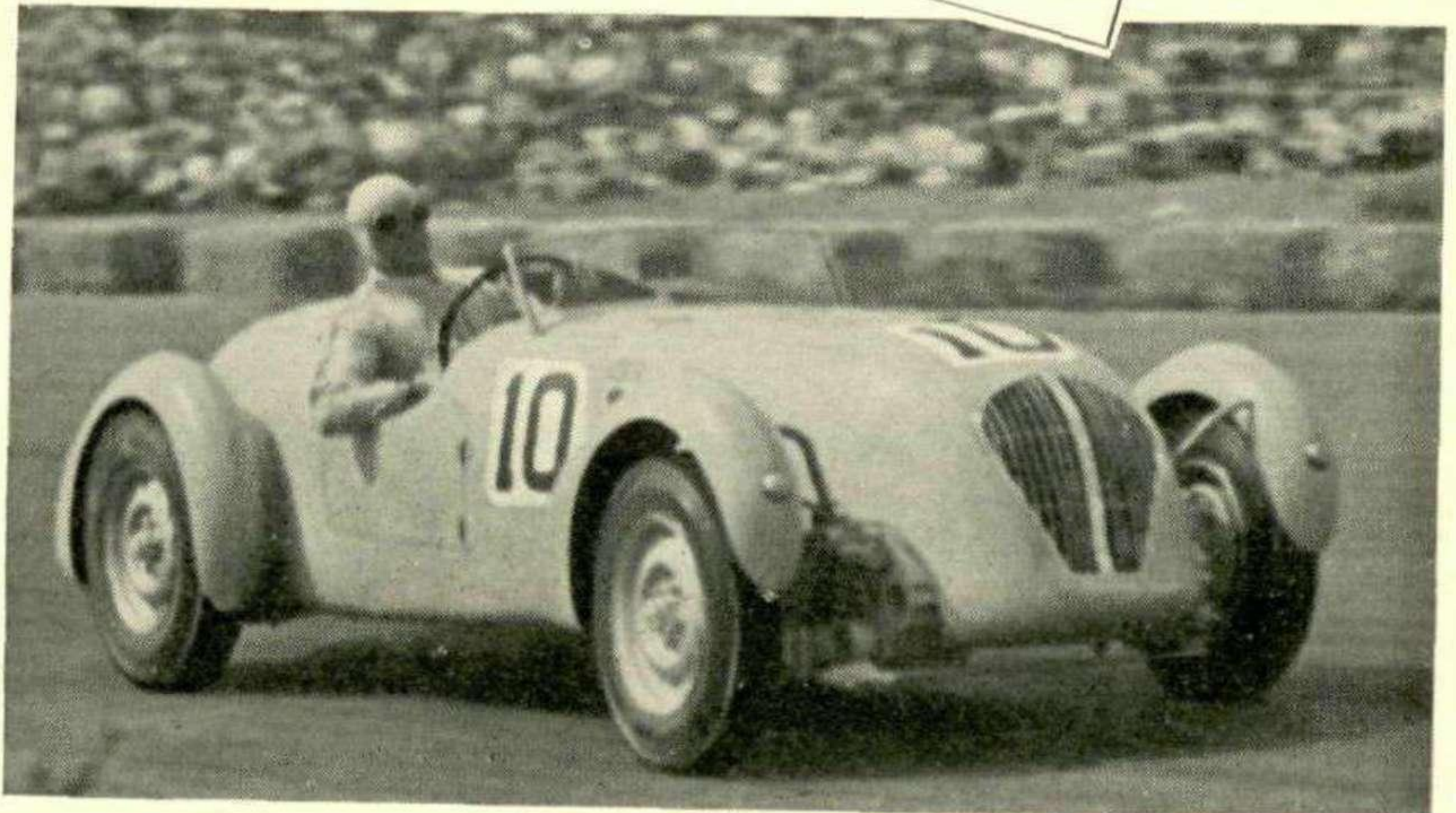
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