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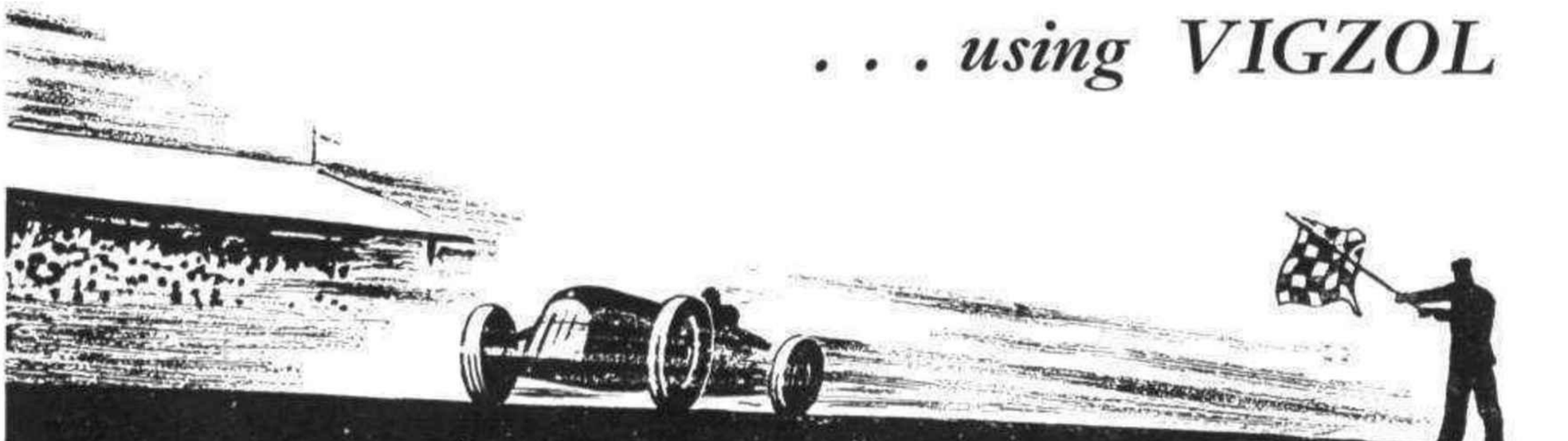
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VOL. XXVII No. 1 TREND OF RACING CAR DESIGN JANUARY, 1951

MOTOR SPORT

INCORPORATING **SPEED** AND THE BROOKLANDS GAZETTE

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MATTERS OF MOMENT

A VERY HAPPY NEW YEAR !

This is a very appropriate issue in which to wish all our readers—they have multiplied exceedingly since the war—a very happy New Year and all the motor sport they could wish for during 1951.

There is no doubt about it, motor sport has "arrived," not only in this country but all over the world. Six-figure crowds pour to our Silverstone circuit to watch important races, vast entries are received for rallies—470 for the recent *Daily Express* 1,000-mile Rally and 600 would-be entries from Britain for this month's Monte Carlo, for instance—trials are as popular as ever, and many of our leading newspapers not only cover motoring competitions but put up substantial money prizes.

The B.B.C. is putting more motor sport on the air than ever before, television and news-reel cameras are a familiar sight at motoring fixtures, and a new tolerance is growing up between sports-car drivers and the police and public. Club membership has risen far beyond pre-war proportions, many useful one-make clubs have come into being, and between them these bodies publish some excellent magazines, notably those hardy pioneers the *V.S.C.C. Bulletin* and *Bugantics* and the newer, beautifully-produced *Top Gear* of the S.S.C.C. The more historic kinds of motor car are well catered for in all their various forms.

Motor sport is, indeed, more popular than it has ever been before and, international politics permitting, the forthcoming season should be even more successful than the great year of competitive motoring to which we raised our beer mugs or champagne glasses last night.

This is a time when Good Resolutions are made—and usually broken. It is perhaps, opportune to suggest a few that should be made now and adhered to throughout 1951.

Here we go :—

(1) *Starting Money*. Organisers should pay this generously at the major British events. Significance is lent to this resolution by a recent note we have received from Barclay Inglis, stating that the Eight-Clubs (Hants and Berks, Harrow, Cemian, Chiltern, 750, Lagonda, Lancia and A.C.) have, after meeting all expenses in respect of their Silverstone race meeting last June and paying each member club a nominal sum, been able to return to each competitor 17s. in each 20s. spent on entry fees. Such an achievement shows careful planning and efficient organising and this creditable pioneering towards less-expensive racing should make this year's Eight-Clubs' Silverstone Meeting (June 2nd) an exceedingly popular fixture. Incidentally, shame on H.M. Customs and Excise for attempting to extract their "pound of flesh" from this innocent amateur entertainment, and renewed credit to Inglis for staying their hands.

If "starting money" can be paid thus in respect of a private meeting whose sole revenue came from car-park fees and sale of programmes, how can organisers of National and International races which attract tens or hundreds of thousands of paying spectators have the face to demand entry fees and refuse starting money to drivers, without whom no meeting would be possible? Fit subject, this, for a 1951 Resolution !

(2) Arising from (1), it is high time the crippling *Entertainments Tax* levied on motor-race tickets be reduced to the level of the deductions demanded from promoters of football and similar sports.

(3) The *Government*, having rendered the motorist about the most heavily-taxed citizen in the land, must make a resolution not to increase the exorbitant Petrol Tax and to abolish the grossly unfair 25s. per h.p. tax on pre-1947 cars.

This tax imposes a most unfair load on those of us who, through no fault of our own, are unable to take delivery of post-war products. Letters to the national and local newspapers and to your M.P. will aid the passing of this long-overdue resolution ! Demand now a flat rate tax of £10 on all cars, retaining, of course, the tri-car £5 rate. Rearmament has to be paid for, but Mr. Gaitskell estimates the annual revenue from taxes on private motorists to amount to £98½ million, so we are justified in believing we already contribute our share !

(4) *Insurance Companies* should make a resolution not to take unfair advantage of compulsory third-party cover. To inflate premiums on old cars and even to refuse cover, irrespective of an owner's accident-free driving record, will, if uncurbed, give an excellent opening for the nationalisation of this branch of the insurance profession. The Government, aided by discontent on the part of the vast numbers of citizens who own cars more than ten years old, could very logically, in seeking to remove motor insurance from private companies, refer to the illogical situation whereby an annual Road Fund licence is issued against a cover-note valid for a week or a day. We disagree with nationalisation but we also disagree with the

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Reports of Recent Events

MAIDSTONE & MID-KENT M.C. BOSSOM TROPHY TRIAL (November 12th)

BOSSOM TROPHY.—A. G. Imhof (Imhof Special).
FOUNDER'S CUP.—K. E. O. Burgess (Burgess).
CLASS A CUP.—R. E. Lang (Austin Seven).
CLASS B CUP.—G. Pentony (Cyclops).
CLASS C CUP.—A. E. Rumfitt (Allard).
FIRST-CLASS AWARDS.—Hardman (Dellow), Waring (Dellow), Cotton (Cotton), Biggs (Ford), Price (Price Special).
SECOND-CLASS AWARDS.—Hollingsworth (Ford Special), Faulkner (Mercury), Lawson (Lotus), Day (Dellow), Smith (M.G.-Ford), Roberts (Falcon), Lilley (A. W. Special), Brown (Dellow).

LEICESTERSHIRE C.C. JOHN BULL TROPHY TRIAL (November 18th)

This trial attracted an entry of 34 cars, including competitors from S.U.N.B.A.C. Shenstone, and Nottingham clubs.

The course, after recent rain, proved difficult, and stopped everyone at one section or another.

Bolt Wood (1) proved too good for every entry except H. H. Mayes (L.C.C.), one of the earlier competitors who went over the top in fine style in his Mayes Special, and repeated the performance at Springfield Farm (2) where he was equalled by only two others.

Other sections which took their toll were College Farm, Owston Wood and South Croxton, and competitors were finally sorted by a timed reversing test in Skeffington Woods, and a timed circuit among the hills and hollows on top of the hill at Springfield Farm.

Results :

L.C.C. TROPHY (Best performance).—E. B. Wadsworth (Ford Special), 24 marks lost.
JOHN BULL TROPHY (Best performance by L.C.C. member).—I. G. Williams (Dellow), 36 marks lost.
FIRST-CLASS AWARDS.—D. Baxter (Dellow), 28 marks lost; V. Ostroumoff (Dellow), 32 marks lost; E. J. P. Reynolds (Dellow), 36 marks lost.
SECOND-CLASS AWARDS.—Brown (Dellow), 36 marks lost; H. F. Brayshaw (Brayshaw Special), 44 marks lost; M. A. Hopkinson (Bancroft Special), 44 marks lost.
TEAM AWARD.—L.C.C.: I. G. Williams, H. F. Brayshaw and H. H. Mayes (Mayes Special).

COVENTRY & WARWICKSHIRE M.C. GOLDEN GOBLET TRIAL (November 19th)

This was an all-day event, and was held over an extremely difficult course.

Results :

GOLDEN GOBLET and REPLICA: G. Arbuckle (Austin Special), 34 marks lost.
LADY'S AWARD: Miss Cornthwaite (Morris Minor), 135 marks lost.
FIRST-CLASS AWARDS: M. E. Shanks (M.G.), 55 marks lost; A. Farrar (M.G.), 63 marks lost; R. S. Henson (Hillman), 65 marks lost.
SECOND-CLASS AWARDS: H. M. Harper (M.G.), 68 marks lost; P. J. Simpson (Healey "Silverstone" Special), 79 marks lost; H. S. Wolseley (Austin Ten), 101 marks lost.

There were fourteen entries for this event, and three retirements.

BRISTOL M.C. & L.C.C. ROY FEDDEN TROPHY TRIAL (November 25th)

ROY FEDDEN TROPHY.—C. L. Bold (1,080-c.c. Bold), marks lost.
ALEXANDER DUCKHAM CUP.—T. C. Harrison (1,172-c.c. [illegible] Harford), 0 marks lost.
THE DAPHNE TROPHY.—L. Onslow-Bartlett (996-c.c. Bartlett), 35 marks lost.
THE J. H. KING CUP.—F. B. Radford (1,172-c.c. Radford), 15 marks lost.
THE BASIL BARBER MEMORIAL TROPHY.—J. Clegg (1,172-c.c. s.c. Clegg), 0 marks lost.
THE CLUB CUP.—A. G. Imhof (1,172-c.c. s.c. Imhof Special), 5 marks lost.
THE JAMES RUSSELL SHIELD.—"Northern Lights" Team (Clegg, Phillips, Harrison).
BEST IN TEST A.—C. L. Bold, 23 sec.; *Runner-up:* Harrison, 23.2 sec.
FIRST-CLASS AWARDS.—Waring (Dellow), Grump (Marden Special), Francis (H.R.G.-Mercury), Price (Price Special), Ostroumoff (Dellow), Best ("PB" M.G.).
SECOND-CLASS AWARDS.—Biggs (Ford), Burgess (Burgess), Oliver (Oliver), Phillips (Oliver), Rawlings (Vanguard Special), Morrish ("PB" M.G.), Bollom (Dellow).

NOTTINGHAM S.C.C. NIGHT NAVIGATION TRIAL (November 25th)

With a thick blanket of fog forecast all over England, competitors could not believe the clear moonlit frosty night with which they were blessed. About 50 cars of all types took part, the last competitor leaving Lea Pool Garage, Redhill, at about 11 a.m. A magnificent meal awaited them at the "Elm Tree" Inn at Hoveringham on the River Trent, for the consumption of which everyone was allowed one hour. They were sent off on a route which included a "Colonial" section after which they made their way to Holmpierrepoint, near Nottingham, where everyone disbanded at about 4 a.m. A most successful event!

Results :

THE HOOLEY TROPHY (for best outright performance).—D. F. Ryder (M.G. "TD"), 3 marks lost.

GENERAL CLASSIFICATION

CLASS I (open cars under 2,000-c.c.).—1st: J. S. Hollins (Morris Eight); 2nd: J. H. Ashton (M.G. "TD"); 3rd: G. Middup (Riley Gamecock).
CLASS II (closed cars under 2,000 c.c.).—1st: L. J. Epton (Ford Ten); 2nd: H. Knight (Hillman Minx); 3rd: E. H. Ashton (Ford Ten).
CLASS III (open cars over 2,000 c.c.).—Merged with Class IV.
CLASS IV (closed cars over 2,000 c.c.).—1st: B. Williams (Austin A70); 2nd: M. J. Andrew (Riley open 2½-litre); 3rd: L. A. Twigger (Bentley 3-litre).

KENTISH BORDER C.C. SPORTING TRIAL (November 26th)

VISITOR'S CUP: G. Imhof (Imhof Special), 98 marks.
COMMITTEE CUP: M. Lawson (Lotus), 92 marks.
HARVEY CUP: A. E. Day (Dellow), 92 marks.
ALEXANDER TROPHY: W. Waring (Dellow), 98 marks.
TEAM AWARD: Messrs. Imhof's, Burgess' and Appleton's "Candidi Provocatores."
FIRST-CLASS AWARDS: Biggs (Ford Ten), Crump (Marden), Price (Price Special), Spence (Spence).
SECOND-CLASS AWARDS: Brown (Dellow), Vero (Dellow), Sheep (Dellow), Cotton (Cotton), Stark (Dellow).

V.S.C.C. BISLEY MEETING (November 26th)

See "Vintage Veerings" for report.

VINTAGE CARS UNDER 1,500 C.C.—1st: W. P. H. Lockhart (1924 "12/50" Alvis); 2nd: K. G. O. Dixon (1927 Austin Seven); 3rd: D. H. Gahagan (1926 G.P. Bugatti).
VINTAGE CARS OVER 1,500 C.C.—1st: L. Murray Austin (1929 Lancia Lambda); 2nd: Capt. Castle (1926 Rolls-Royce Twenty); 3rd: H. Birkett (1930 Type 44 Bugatti).
NON-VINTAGE CARS UNDER 1,500 C.C.—1st: R. L. Odell (1933 Riley Nine); 2nd: Miss Peggy Lambert (1948 "1,100" H.R.G.); 3rd: O. S. Gwatkin (1934 Austin Seven).
NON-VINTAGE OVER 1,500 C.C.—1st: H. C. Bradford (1950 Austin A90); 2nd: Major Tullock (Hudson Special).

CHILTERN C.C. CHILTERN HILLS TROPHY TRIAL (December 3rd)

CHILTERN HILLS TROPHY (best performance): J. C. Smith (Bartlett).
FIRST-CLASS AWARDS: Biggs (Ford Ten Special), Day (Dellow).
SECOND-CLASS AWARDS: Hancock (Dellow), Miss Price (Price Special).

SUNBEAM-REGISTER TREASURE HUNT (December 9th)

The Sunbeam Register, which now lists over 180 Wolverhampton Sunbeams, held a Treasure Hunt starting and finishing at the "Lambert Arms," Aston Rowant, which attracted a good entry of these cars, the eldest of which was Carter's 1915 army staff tourer. Apart from being a treasure hunt in which certain objects as elusive as a bus ticket, a Highway Code and a platform ticket (this area being one in which British Railways allow *free* access to most of their platforms!) having to be collected, competitors had to find their way round a 45-mile route by solving "clues" as well as by searching for map grid-references, and undertake a simple hill-test. They were also called upon to acquire knowledge of local "geography," such as the age of Dinton Castle, the numbers of telephone and post boxes, and the make and type of the bacon-slicing machine in the village store at Towersey. And they were shaken profoundly at the first point, where navigators had to board a train on the local single-line railway and their drivers had to solve alone the problem of where and how to recover them! We understand the organisers felt a little guilty at thus encouraging motorists to subsidise British Railways, hastily pointing out that the fare involved was only 5½d.!

Anthony Heal turned up in his immaculate twin-cam 3-litre to see Mrs. Boddy start the competing Sunbeams off on their adventure, and as the mild December afternoon wore on the Clerk of the Course had to drive about very slickly in a 1950 Sunbeam-Talbot 90 convertible to keep in touch with the Wolverhampton cars. In the end, only three "crews" completed the full course.

Results :

1st: J. M. Maxwell, Navigator Mrs. Maxwell (1930 Twenty-Five drophead coupé), 218 marks.
2nd: L. A. Dopping-Hepenstal, Navigator S. R. Webb (1929 Sixteen coupé), 189 marks.
3rd: F. W. Joyce, Navigator A. J. Joyce (1933 Sixteen saloon), 168 marks.

BERKHAMSTED M.C. & C.C. LOCKHART-BOSSINGHAM TRIAL (December 10th)

PREMIER TROPHY: G. Pentony (1,450-c.c. Cyclops), lost no marks.
MEMBERS' CUP: G. L. Hancock (1,172-c.c. Dellow, s/c).
SIMMONS CUP (best 750 c.c.): R. E. Lang (747-c.c. Austin).
1,100-C.C. CLASS: D. Wyburn (747-c.c. D.H.G.-Austin).
UNLIMITED CLASS: V. S. A. Biggs (1,172-c.c. Ford s/c).
FIRST-CLASS AWARDS: J. C. Smith (1,172-c.c. Bartlett), M. H. Lawson (1,172-c.c. Lotus), D. W. Price (1,172-c.c. Price Special).
SECOND-CLASS AWARDS: P. D. Brooker (1,172-c.c. E.R.P.), S. V. Lewis (1,175-c.c. Ford).

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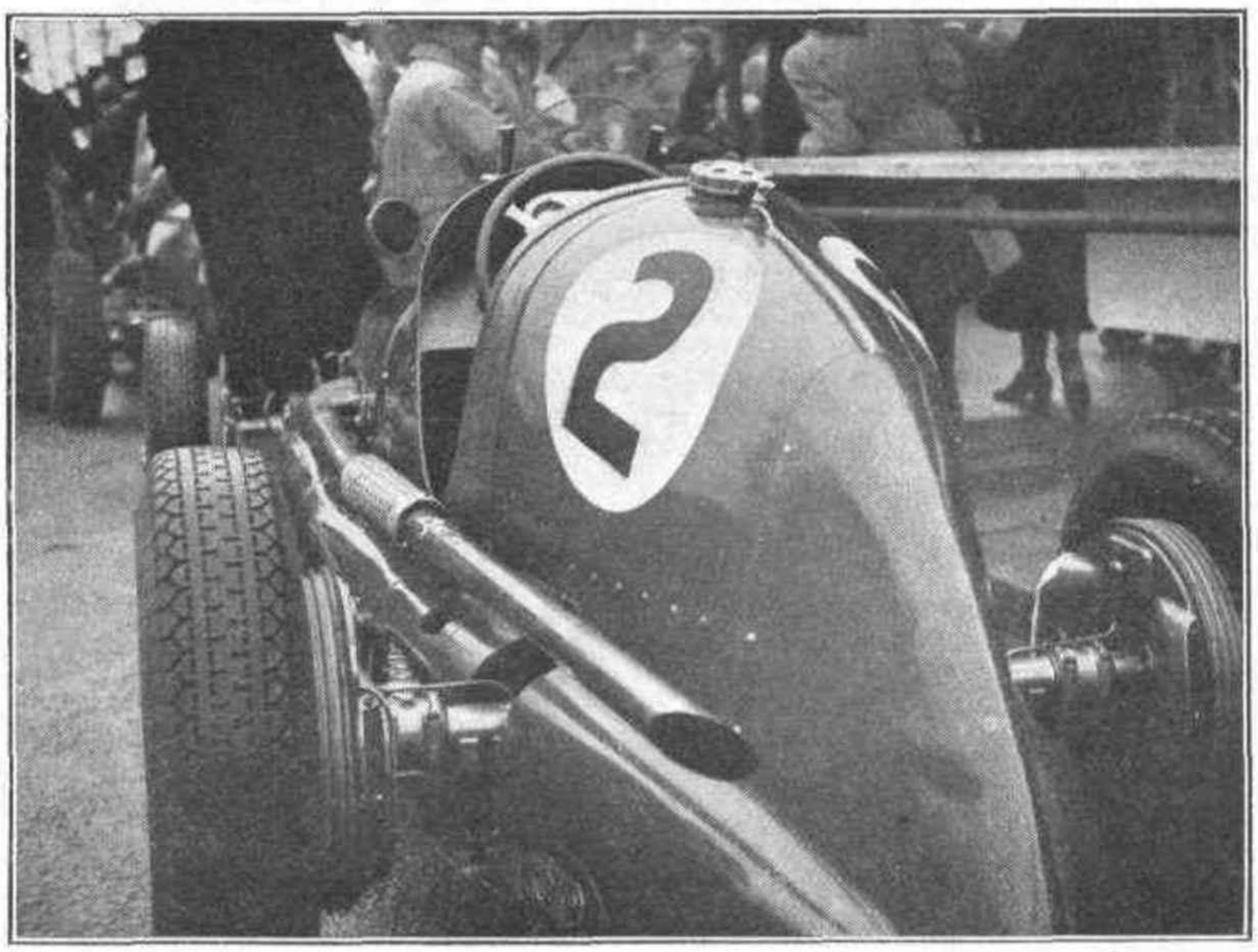
The Trend of Racing-Car Design

THE year 1950 has proved to be one of exceptional interest in respect of all forms of motor-racing and, for the first time in the history of the current Formula I, the mixing of blown and unblown cars has been really justified. We have seen great interest being taken in all three European Formulas, the re-entry of German cars and drivers into International racing, the full acceptance of 500-c.c. racing and, at Indianapolis, record after record was shattered.

Whichever form of motor-racing one looks at it has been an outstanding season, both technical and otherwise, while the increase in club events in this country has reached unforeseen limits. It is, quite naturally, in Formula I that true design plays a large part, for here we have cars planned as complete entities for the express purpose of going as fast as is possible, expense being of secondary importance; in other words, Formula I is the game for factories to play and not the private individual, and quite rightly so. The Formula II, however, is another matter, and although many factories give it very serious consideration it is still possible for the semi-private owner to support this type of racing with a fair chance of success. Consequently, Formula II is in a very healthy state as regards competition and entries. The newly-introduced Formula III, while still being in its infancy, has, nevertheless, proved very popular, although so far it has not attracted any serious factory-interest, so that the enthusiastic amateur can still play at 500-c.c. racing among his fellow men.

Although the present three Formulae run until 1953, people are already discussing freely the arrangements for the next, and many are advocating an unsupercharged Formula, similar to the existing Formula II, mainly on the grounds of the lower costs. If this comes about it will be most unfortunate, for it will mean that the private owner will have no chance at all in Grand Prix racing and unless he turns to 500-c.c. racing he will be out of the game. The main Formula must obviously be designed to attract the big factories, such as Alfa-Romeo, Ferrari and perhaps Mercédès-Benz, but whatever rules it may conform to we must not lose sight of the usefulness of the present Fornula II, not so much by its present definition as by its mere existence. When the new Formula for the factories is settled it must be ensured that a second type of racing is provided for the semi-private owner and the smaller firms. 500-c.c. racing will presumably stay with us for good, in some form or other.

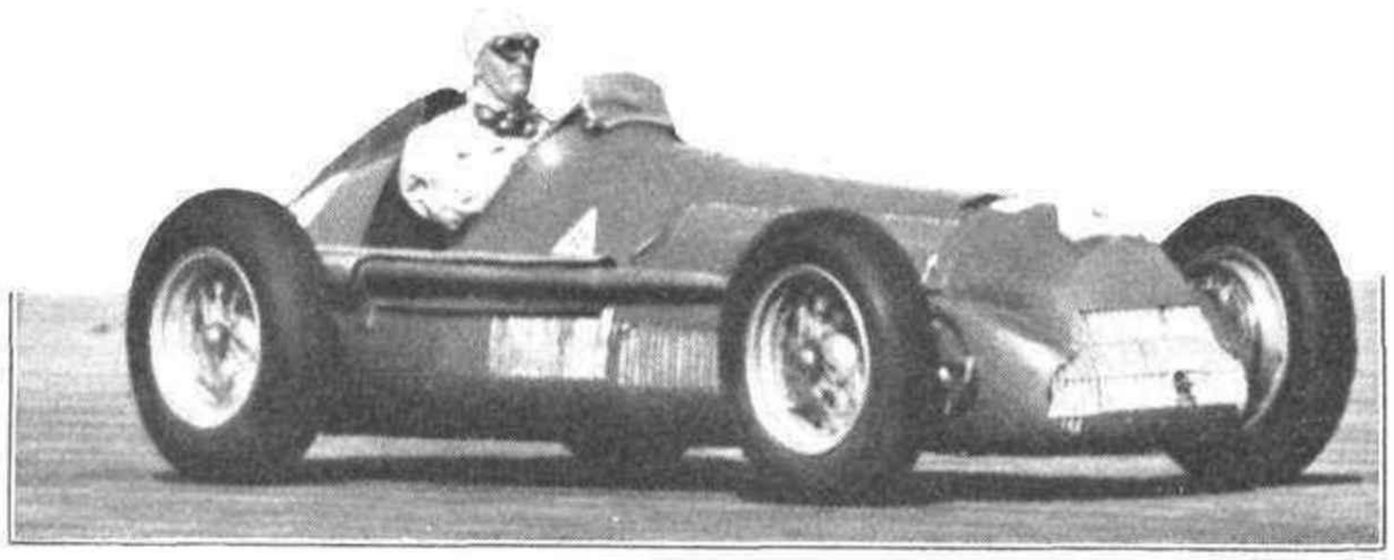
Considering the 1950 activities in Formula I we find that although there were nine makes participating, there were in fact only three new ones appearing for the first time. These were our own B.R.M., the unsupercharged Ferrari and the Milan. From the point of view of engines the B.R.M. was the only really new model to appear, for the unblown 4½-litre Ferrari, while new, was in reality a



development of their well-tried V12 lay-out, and the Milan used the Speluzzi modification of the Maserati engine tried out at the end of 1949. Alfa-Romeo, Maserati, Ferrari (supercharged), E.R.A., Talbot and Alta all used developments of their 1949 designs, and a new name appeared in Formula I in the Simcas from the Gordini stable. The last-named, while being a new entry into this class of racing, were supercharged versions of the well-known Formula II cars. Taking the 4½-litre Ferrari as a new engine we find it was, along with the 16-cylinder B.R.M. engine, the only new innovation during the 1950 season. Completed too late to take part in any races was the 4½-litre V12 engine from O.S.C.A., so we can say that Formula I produced three new engines over the past season. All the other participants continued to modify their existing designs, and in many cases it became increasingly obvious that development was reaching its limit.

Among the supercharged cars, Alfa-Romeo and Maserati, in particular, shared a large crop of engine failures due, it would seem, to safety-factors being reduced; while E.R.A. and Alta appear to have been fighting a losing battle against power output. Milan failed to make any real impression, having seemingly commenced where Maserati appeared to have finished. Ferraris did not give very much attention to their twin overhead camshaft, two-stage engines, having the fabulous 4½-litre up their sleeve, and Simca with its already highly-tuned four-cylinder could not hope to achieve a great measure of reliability in blown form. In the unblown field of Formula I the most outstanding thing has been the introduction of the Ferrari, which has proved beyond all doubt the equality of the blown 1½-litre/unblown 4½-litre Formula. Talbots produced a further version of their six-cylinder Lago engine but, while quicker than last year's models, it was completely overshadowed by the Ferrari. As mentioned, O.S.C.A. have now joined the Formula I ranks with an unblown 4½-litre which appears, on paper, to be quite up to Ferrari's new and very high standard for unblown Formula I engines. Technically, the B.R.M. engine is the last word in the supercharged capacity; so far it has been unable to produce anything like its theoretical form, but there is no reason to doubt that by the end of the present Formula it will be leading the way in the supercharged category.

Between now and 1953 engines are obviously going to have more and more cylinders, with, it would appear, twelve as the mean. The four-cylinder seems unlikely to last much longer, while the six has only been supported by Talbot and E.R.A., the latter never having been designed for the existing Formula anyway, while the eight exists only in straight form, used by the all-conquering Alfa-Romeos. Ferrari must by now know more about the design of twelve-cylinder engines than anyone, while B.R.M. continue with sixteen. Talbot toyed with sixteen cylinders on paper but have kept to six for practical purposes, and their future would appear to be bound up in eight cylinders in vee-formation, Tony Lago having purchased the two C.T.A.-Arsenal cars, with a view to incorporating parts of them with parts of his Talbots. With the "158" Alfa-Romeo at the end of its development, the firm are turning their attention to



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THE "158" ALFA-ROMEO still remains the most successful car in Formula I racing. Now superseded by the "159" model, it is doubtful whether the Milan firm will retain their supremacy in 1951 in view of the recent change of events in this class of racing.

twelve cylinders, horizontally-opposed, while the revolutionary Cisitalia using the same layout now looks like being run, as it is said that the Argentine Equipé have purchased the car.

On the question of supercharging, in Formula I there seems to be a pretty general line of agreement. Firstly, in two-stage layouts in order to achieve the necessary boost essential to the 200 b.h.p. per litre which is the present order of power output from the blown 1½-litres. Secondly, both stages are of the Roots supercharger type. The only dissentient to this has been B.R.M., with their centrifugal two-stage layout, but it is slowly becoming obvious that they picked the wrong type of supercharger for road-racing. Simca used the English four-lobe Wade supercharger, but only in single-stage form, Milan also running their new car with one blower to begin with. After running a single Roots-type supercharger in 1949, Alta fitted a two-stage layout for the past season and intend continuing with it. Again B.R.M. have provided the only new layout in supercharging, but it did not prove successful, so that two stages of Roots-type blowers would appear to be the ideal layout for a Formula I car.

Twin-overhead camshafts operating inclined valves are now accepted fact for any serious Formula I car contender of the smaller capacity, and these are used by Alfa-Romeo, Ferrari, Maserati, B.R.M., Alta, Milan and Cisitalia. Among the unblown engines single camshafts suffice, as on Ferrari and O.S.C.A., while Talbot adhere to push-rods and rockers.

Among suspension units the leaf-spring still retains its popularity, being used by Alfa-Romeo, Ferrari and Talbot both back and front, while Maserati and Milan use this medium at the rear only. Torsion-bars have gone right out of fashion, being used only by Milan, at the front, Cisitalia and Simca. After much experimenting with swing axles Ferrari has turned to the de Dion layout, also used by B.R.M. and Milan, while Talbot, Simca and Maserati retain normal one-piece rear axles. Alfa-Romeo made no changes in their swing axle design, nor did Alta change their wishbone and compressed rubber layout. On the question of gearboxes it is generally agreed that a "crash" or synchromesh type is the most suitable, but Talbot still adhere to the Wilson preselector type. As far as the number of forward speeds the gearbox should contain is concerned, Ferraris dropped from five to four, B.R.M. used five, Alfa-Romeo, Talbot, Maserati, Milan and Alta retained four. Hydraulic brakes, of course, go without saying, and wherever possible are of the two-leading shoe type, although B.R.M. once more paved the way for new development with three-leading shoe brakes.

Carburation on the Formula I unblown engines is a question of adaptability rather than design, downdraught instruments being the obvious choice for the V12 engines of Ferrari and O.S.C.A., while Talbot changed for 1950 from downdraught to horizontal. In all instances three carburetters were used.

As regards ignition, B.R.M. once again was the exception that proved the rule, for it was alone with Lucas coil-ignition units, all other cars using magnetos, while Talbot and Milan used two plugs to each cylinder, in the former case having twin magnetos in front of the engine, and in the latter twin magnetos on the rear of the camshafts. As with so many things on the B.R.M. engines, the ignition was revolutionary, in having four separate coil units, one driven from each camshaft, with an accumulator mounted in the tail. Another instance in which B.R.M. stood alone was in the situation of fuel tanks. In all cases fuel was carried in the tail, but B.R.M. supplemented this with a saddle tank over the driver's knees, in like manner to that employed by Mercédès-Benz in pre-war days.

While competition in Formula I has been of a high order during 1950, one cannot say that it has produced very much in the way of design trends, with the exception of the outstanding feats of the 4½-litre Ferraris. In the past it has been generally accepted that the unblown Formula I car could not hope to compete on level terms, as regards power output, with the blown 1½-litres. The idea of mixing the two types of engine originated in 1938 with the Formula which stipulated 3-litres blown and 4½-litres unblown, and after the war this was changed to 1½-litres blown and 4½-litres unblown. All the time the blown cars were way ahead on power output and have remained so until the end of 1950 when Ferrari produced 330 b.h.p. from a car with which Ascari won the Barcelona race. When it is remembered that this Ferrari engine is only the second attempt at designing a 4½-litre unblown racing engine from scratch, the other being the pre-war V12 Delahaye, it is not so surprising that its power output compared favourably with the blown 1½-litres.

Since 1938 the unblown Formula engines have all, with the exceptions mentioned, been developments of engines which were basically sports engines. When Delahaye built their V12 in 1938 it was done with the express idea of building a Grand Prix car and not of building a production sports-car. At the time it developed 250 b.h.p., which was more than any of the 1½-litre *voiturettes* of that time, but not as much as the 3-litre blown cars. Ferrari, with their 330 b.h.p. from the 4½-litre, have progressed in a similar way to the blown 1½-litres, their power being among the highest of contemporary power outputs. It was pretty obvious that the Talbot engines, while excellent as racing versions of a production engine, could not hope to compete on power output with engines designed purely for racing such as the Alfa-Romeo or supercharged Ferrari, but that if any firm got down to the matter of building a purely racing 4½-litre unblown, it should be quite capable of holding its own with supercharged 1½-litres. For some time now the Americans have shown this to be possible at Indianapolis, for their 4½-litre Meyer-Drake (Offenhauser) four-cylinder engines have always been well up on power output, and in 1950 the unblown 4½-litre swept all before it, racing against blown 3-litres. These Meyer-Drake engines have all been built for the express purpose of producing as much power as possible, expense being of no account, and consequently their unblown engines have been in advance of anything seen on the Continental road circuits until the introduction of the Ferrari engine. To many people the performance of the new Ferrari came as a shock and some even felt that perhaps all the firms who had supported the blown 1½-litre school of thought were wrong, and that they should have been building unblown 4½-litres. Whether that is true or not we shall have to wait and see, but undoubtedly Ferrari has made one of the most outstanding contributions to racing-car design and it is quite likely that some people will follow their example, wishing they had thought of the idea earlier.

That, then, is the position of Formula I racing at the end of 1950; the blown 1½-litres still hold sway, but only just, and there would appear to be a distinct swing over to the unblown engine of larger capacity. It may be due to the lower cost of producing the engine, the expense of superchargers, inter-coolers, etc., compared to that of induction manifolds and three or more carburetters, though whether 350 b.h.p. is more easily obtained from a small blown unit or from a large unblown unit, only those who do the designing can hope to know. Having seen Formula I engines grow in complication with the peak in the B.R.M., the C.T.A.-Arsenal, and the Cisitalia, it

would seem that a reversion to comparative simplicity, with the unblown 4½-litre, is about to take place.

While Formula I has not seen a great deal in the way of new design, this cannot be said of Formula II, for the technical interest here has been outstanding. Apart from the sweeping onslaught by Ferrari in this category, keen German participation has been evident, while English activity with 2-litres has been most encouraging. There has still been no interest whatsoever in the supercharged 500-c.c. side of Formula II, all cars being in the unblown category, varying from the maximum of 2 litres down to 998 c.c. Power units are very much an open question in Formula II, ranging from the two-cylinder 1,100-c.c. J.A.P. engine to the twelve-cylinder Ferrari engine. After toying with modified six-cylinder B.M.W. engines, the Germans produced two entirely new power units for this Formula, the first a single o.h.c. six, designed by Ernst Loof for Veritas, and the second a V8 with two o.h.c. to each bank designed by Küchen for Falkenhausen to fit into his A.F.M. cars. These two engines are entirely new and indicate that widely divergent views on Formula II power plants exist in Germany, which should make for very keen rivalry. The V12 Ferraris have more or less had things their own way in this class, and so satisfied with their 60-deg. layout are they that there is no sign of any changes being made. Also from Italy comes the little four-cylinder 1,350-c.c. O.S.C.A., which, though unable to compete against all-comers in this class, has put up many spirited performances.

A new angle on Formula II was supplied by the Argentine Equipé when they fitted a 4 CLT Maserati chassis with one of the sports A6G Maserati engines, this being the 2-litre six-cylinder. It appeared to be quite a practical proposition and it is very likely that more of these marriages will appear during 1951. Simca has remained faithful to the four-cylinder layout, his cars being virtually unchanged from 1949, still of 1,490 c.c., and there has been no indication that he has progressed towards a full 2-litre. From this country the greatest opposition has come from the excellent H.W.M., the product of John Heath and George Abecassis, and they, more by reason of necessity than design, have retained the well-proven four-cylinder Alta engine for their cars. Another English Formula II car which should appear regularly during 1951 is the Connaught, and, like the H.W.M., it uses a proprietary power-unit, also of four cylinders, this being the 1,760-c.c. Lea-Francis, which they modify considerably to suit their own requirements. Greatly influenced by Coopers, the J.A.P. firm produced a brand new V-twin design, of 1,100-c.c. capacity, for use in the Cooper car, and on the smaller circuits it has proved a very serious competitor in this form of racing.

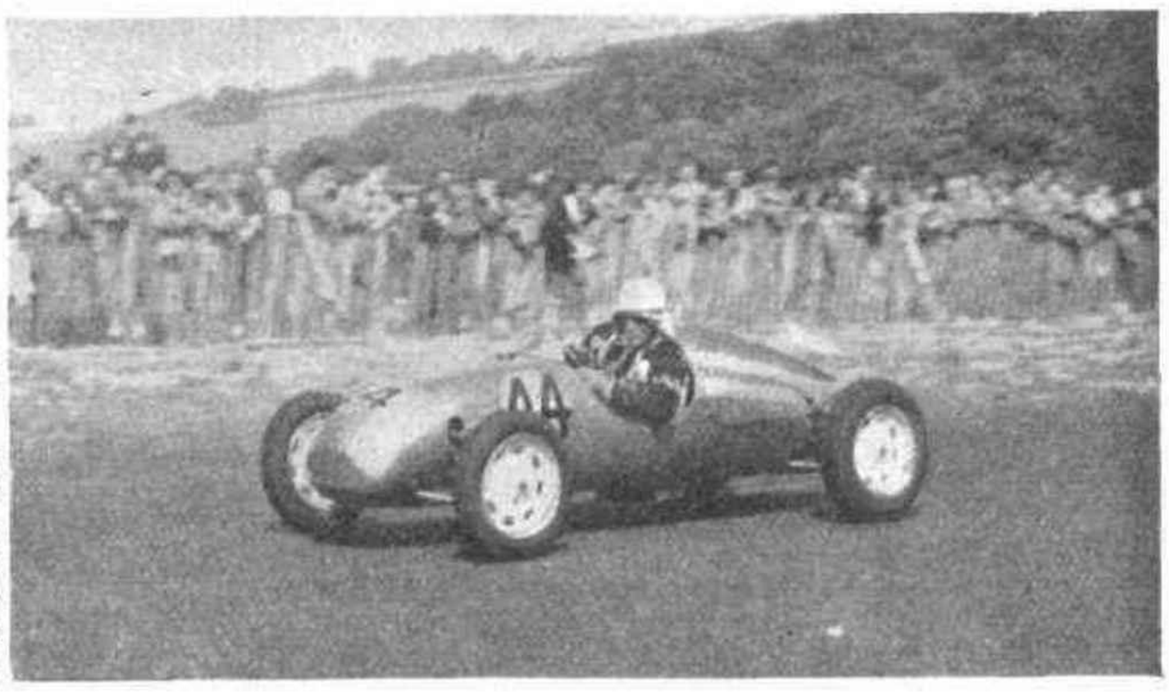
At the moment the greatest interest for Formula II lies in the four-cylinder power unit, but it cannot be taken as an indication of the trend of design, for in many cases it is a question of no other choice. The real trend of Formula II engine design is indicated by the new A.F.M. with its fairly complicated V8 engine, and it can safely be said that, as in Formula I, the firms capable of designing new engines will tend towards more and more cylinders, and the cars show every sign of becoming as advanced and complicated as their Formula I brethren, with a multiplicity of cylinders, carburetters and camshafts. However, competition in this category is very keen, the future looks exceedingly healthy, and three contenders from this country are most encouraging.

As far as a chassis for Formula II is concerned there is a great deal more freedom of design and always the accent is on light weight. The German cars use small-diameter tube lattice-work construction, while O.S.C.A., Ferrari, H.W.M., Maserati and Connaught use a straightforward chassis frame constructed from two large-diameter tubes. Cooper are alone in using a box-section chassis frame. Springing mediums, as with Formula I cars, still show great interest in leaf-springs, these being employed front and back by Ferrari, Cooper and H.W.M., while Veritas, A.F.M., Simca and Connaught use torsion-bars. Coil springs are adhered to by O.S.C.A., Simca, Maserati and A.F.M. for the front. So important is the matter of power-to-weight ratio in this class of racing and consequently a reduction of unsprung weight, in order to keep the roadholding under control, that alloy road wheels are finding great favour, being used by A.F.M., Veritas, Connaught and Cooper. It is interesting to recall that many people tried alloy wheels on the big cars at Indianapolis, but they were found to develop fatigue cracks too easily and were subsequently discarded for the time being. In Formula II, the speeds being lower, the alloy wheel has proved quite successful and is a line of development that will undoubtedly grow.

The actual suspension systems employed in Formula II show a most interesting line of thought, for all the cars in regular competition in this class use some form of wishbone independent suspension at the front. Ferrari, A.F.M., Veritas, Connaught and O.S.C.A. use double wishbones, with the springing medium attached separately, while H.W.M., Cooper, Simca and Maserati use a single wishbone with a tubular member or the springing medium as the second support, but in all cases the i.f.s. is on the wishbone principle. At the rear, opinions differ greatly, from one-piece axles to de Dion layouts, and it is the latter that design tends towards, for it is used by Ferrari, A.F.M. and Veritas, while H.W.M. will be using this layout in 1951. Hydraulic brakes are, of course, unanimous and in most cases are of the two-leading-shoe type. Cooper, Connaught and A.F.M. utilise a one-piece casting for wheel and brake drum in the interests of cooling and weight-saving.

Formula II has a very strong future before it and fully justifies being kept separate from Formula I; in fact, it may even oust Formula I from its position as the major type of racing. If it does so this will be unfortunate, for, as mentioned earlier, it will no longer be possible for the small firms and private owners to compete. There is no doubt that competition between *makes* is the surest way of ensuring progress, and competition within the various countries has an even farther-reaching effect. With A.F.M. and Veritas in Germany, and H.W.M. and Connaught in England, these two countries should be well in the running in forthcoming Formula II events. Simca, although virtually alone in France, need little encouragement, while Ferrari's present position will ensure every effort by that firm to remain at the top. Whether O.S.C.A. will take more interest in this type of racing is rather unlikely now that they have shown very practical interest in Formula I. When Formula II began it looked as though it might be possible to compete with modified production cars, but the way things have turned out it is now necessary to design a full Grand Prix car if serious participation is intended. The trend of Formula II design has quite definitely gone towards more complicated machines and consequently more expensive ones, which in some ways is to be regretted, but it is inevitable that progress in design must of necessity bring with it greater financial outlay.

The new Formula III, in its first year on the International Calendar, while having proved very successful, cannot be said to have developed to any great extent beyond the 500-c.c. racing previously confined to this country. In the majority of cases it has been a case of the English drivers and cars extending their racing to other countries, with very little serious opposition from other parts. The successful Coopers have had such an influence on Formula III that the majority of cars are modelled along their lines, the Dutch Beels-Specials and the Swedish Effyhs being cases in point, while many privately-built cars from



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THE COOPER 500 has led the way in Formula III design as well as in the actual racing.

Belgium and France follow this layout. The most outstanding examples of differences of opinion are shown by Emery in this country with the F.W.D. Emeryson and the French F.W.D. D.B. cars.

There is no doubt that the ingredients of a forward-seated driver with motor-cycle engine and gearbox at the rear of an all-independent chassis provide the most satisfactory answer to Formula III. While this layout has held sway it does not mean that it will always do so, nor does it mean that it is the ideal layout, but as yet no one has produced an alternative that has been so successful. Without exception the very efficient racing motor-cycle engines of today have proved the most suitable power units for Formula III, and with the characteristics of such engines it has been necessary to employ racing motor-cycle gearboxes, in order to make the fullest use of the power output. While there have been numerous rumours about newly designed 500-c.c. engines of car-type, none of these have so far appeared, and the motor-cycle engine delivering its power *via* a sprocket and chain still remains favourite. Through using proprietary power units the question of engine design has not really entered into Formula III, for it has been mostly a case of using what constructors could get. So far the double overhead-camshaft Norton engine has proved the most desirable, but due to the scarcity of such power units the dirt-track J.A.P. still remains the most popular engine in use.

The Cooper type of suspension system, using wishbones and transverse leaf-spring, is widely followed by 500-c.c. builders, but variants are double-wishbones and rubber bands on the Emeryson, trailing arms and rubber in torsion on the Rhiando-Trimax and multiple leaf-springs mounted transversely on the Effhy. Braking systems are invariably standard Lockheed 2LS layouts, as produced for Morris cars and the like, while in many cases alloy drums with bonded liners are used. Alloy wheels are very popular but not universal, two notable exceptions being the Parker Special and the J.B.S., both of which use wire-spoke wheels, which prove as light and more capable of standing rough usage, such as motoring on the grass.

Up to now Formula III has remained essentially for the amateur racing man, there being no official factory entries in this category, and in consequence the competition has remained very even, but whether that will last is another matter. While there are no definite signs of any factories taking an interest in Formula III there are many possibilities, and it is to be feared that once this happens Formula III, like Formula II, will advance with great strides, taking with it the increased-cost factor.

It is encouraging that in the three existing Formulae none has remained completely static over the past season, and the way that all three are developing indicates that the categorising of racing in this manner was a wise step on the part of the F.I.A. Before leaving the trend of racing-car design it may pay to cast an eye towards Indianapolis, where great strides have been made since the war. Possibly these advances have been due to the knowledge gained by study of European cars that have found their way to the U.S.A., such as the eight-cylinder Maseratis or the various Alfa-Romeos, but whatever the cause, the present-day Indianapolis car is no longer the rather ungainly-looking freak that we used to know. Apart from power output, great attention has been paid to body-shape, low-drag and frontal area, as well as to chassis and suspension design. It is interesting that the unsupercharged four-cylinder engine of 4½ litres held complete mastery at the last 500 Miles Race and that the supercharged 3-litres were unable to stand the pace. The all-round improvements in design on Indianapolis cars had the effect in 1950 of putting the qualifying speeds up to an almost unheard of height, so high in fact that of the fastest qualifiers in past years only three would have got into the 1950 race. Of particular interest at the last Indianapolis was the performance of the supercharged six-cylinder Cummins Diesel, which qualified at 129.208 m.p.h. This performance was well up to that of the majority of the petrol-engined cars, and the subsequent records that were taken at over 165 m.p.h. at Utah indicate that this type of high-speed engine has very great possibilities.

THOSE "LE MANS" CADILLACS

Work will be starting soon, if it hasn't already commenced, on the Cadillacs which Briggs Cunningham intends to race at Le Mans this year, having qualified last year. Some further details are now to hand relating to the 1950 cars and by them the measure of this year's American challenge may be judged. From an absorbing article in *Road and Track* by the late Sam Collier we glean that the saloon Cadillac reached about 4,700 r.p.m., equal to some 117 m.p.h. at the end of the Tours straight, and White House was taken at 4,000 r.p.m. It was a practically standard car with Burrell two-carburetter manifold, conventional in place of hydramatic transmission, air-scoops for the brakes and a 35-gallon extra fuel tank in the boot. The engine suffered badly from the low-octane French petrol. Fuel consumption was expected to be 12, but actually worked out at about 6 m.p.g., and resulted in running out of petrol away from the pit. French shock-absorbers were fitted before the race to steady the back end and Marechal head and fog lamps used to supplement the American ones. Firestone road-racing tyres were employed, but when hair cracks were discovered in the walls special Dunlops were flown out in case they were wanted. The ordinary jack sufficed for wheel changes.

The aerodynamic two-seater body of the other Cadillac was designed by H. Weinman of the Grumman Aircraft Corp., after wind tunnel tests. It looked very wide but was actually 3 in. narrower than a normal Cadillac. The construction was alloy panels clipped to a chrome-moly. steel tube framework that incorporated a crash-frame. Ducts at the front, scoops at the back, led air to the brakes on the enclosed wheels and standard Cadillac brake drums with Alfin cooling fins were used. Link two-way radio was carried and besides oil and water thermometers and rev.-counter the facia carried six thermo-couples, four for the brakes, one for the transmission and one for the back axle, so that a very efficient temperature check was possible.

The engine was prepared by Frick-Tappet and had five carburetters. The exhaust pipes emerged each side of the body, flush with the tail side-panels. The battery was carried in the tail, the oil filter in the near-side front wheel well. The chassis was standard Cadillac with manual gear-change.

EMPHASIS ON "SPORTS CARS"

—continued from page 11

a clue to the gauge of its alloy sheeting by sensuous ripples, no matter. Whoever owns the car next—when I tried it Derrington had it up for sale at £725—will be able to get through traffic very easily indeed with no fuss or bother, incidentally using mostly top and third gear. Reaching the open road he or she will enjoy impeccable handling, the company of a crisp exhaust note, perfect visibility, and performance that will dispose of most things. The FIAT engine pinks on the lesser sort of Pool petrol and thrives on "Octol." It isn't over-sensitive to spark-advance, doesn't run-on, starts promptly with minimum choke, and oil goes through it at 40 lb./sq. in. with the revs well-up. It remains smooth right up to 6,000 r.p.m., 6,500 if you will, and is admirably carburetted by a single downdraught S.U. topped by a flat air-cleaner. Altogether, this Staddon/Derrington experiment had worked out well, and emphasises that if you can really "add lightness" high performance can be wooed without recourse to a multiplicity of camshafts and superchargers and such like complications. Derrington is likely to build another of these cars or two, to the same pattern, but with a bit more luggage room and, to the girl-friend's relief I suppose, doors to the body, and a hood. Incidentally, these doors will be hung from the chassis to obviate stressing the tubes of the body frame. Very nice little cars they should be!

I had hoped to continue this happy story with an account of a drive in the Cooper-M.G., but it wasn't ready when we had to close this issue early for Press on account of the Christmas vacation. Never mind, it has turned exceedingly cold again and they tell me it's going to snow. But it is my intention to return to this pleasing subject of *real* sports cars in the very near future.—W. B.

For anyone who wants to identify the 1950 American cars there is Clymer's latest "Catalog of 1950 Automobiles" ($2). The technical data is *most* comprehensive. The same publisher does a "Chevrolet Owner's Handbook" ($1.50) covering the 1929 to 1950 models.

* * *

The Allard Motor Company regrets that it can no longer delay the inevitable increase in the prices of current models, consequent upon higher costs of raw materials and all components.

The new prices came into effect from Monday, November 13th, 1950, and will be as follows:—

K.2 two-seater £999, plus £278 5s. purchase tax; Saloon £1,050, plus £292 8s. 4d. purchase tax; J.2. two-seater £1,100, plus £306 6s. 2d. purchase tax.

RALLY-RUMINATION RESUMPTION

Some Further Thoughts on the "Daily Express" Event

THE Editorial in last month's MOTOR SPORT on rallies has produced the following correspondence. It would seem that we were somewhat hasty in assuming that competitors in modern cars find a 1,000-mile run on British main roads at a 25-m.p.h. average boring. On the other hand, car manufacturers can hardly persuade themselves that such a competition represents much of a test of a present-day car, while the Bugatti O.C. seems to share our opinion so far as the boredom factor is concerned, for in its recent Welsh Rally it sought to obviate tediously-low average speeds and delays at checks.

Clubs already cater for owners who seek to preserve their cars, with treasure hunts, map-reading point-to-points and *Concours d'Elegance*, etc. If an entrant is prepared to pay a bigger entry fee, leave his hearth and office for several days, and burn many gallons of heavily-taxed petrol in a rally, we should have thought he or she would have wanted a *motoring* contest rather than an event in which they could compete equally well, given the time and the inclination, on bicycles or roller skates.

However, our job is not to poke fun but to reflect the opinions of the motor sport public. So we publish below the views of four representative correspondents on this subject, but feel entitled to express our views on the points raised, which we do below these letters :—

Sir,

In the December issue is shown a photograph of a taxi taking part in the *Daily Express* Rally, and the question is put "what is the general feeling about taxis in events of this kind?" The answer is—why not? The presence of taxis emphasises the stupidity and ease of such events, especially where two drivers are allowed.

I am, Yours, etc.,
Ludlow. C. A. L. MEREDITH.

* * *

Sir,

I was disappointed in your views on the *Daily Express* Rally. The majority of us have to be content with reading about sporting events and an occasional visit to one in person, but not one in a thousand ordinary motorists has the time, or money, to compete in these events, and one becomes rather tired of being a spectator; then out of the blue a Rally is announced in which ordinary cars can compete, and sections excluded that might damage their cars, in nearly every instance the very car on which their livelihood depends. Can you wonder that the entry list was complete in no time and I believe over 700 actually applied? I cover in my daily round about 20,000 miles a year, all within a three-mile radius; can you not see the allure of a 1,000 miles all-in-one swoop in good company, all with a spirit of enthusiastic adventure?

I run a 1935 3½-litre Bentley and lavish much loving care on it, but drive it very hard. However, I wouldn't take it at speed on a trials road. I have no doubt it would do it without harm, but I care for it too much to try to wreck it and would feel no satisfaction at bouncing it over boulders. Let us have more of this type of Rally for ordinary mortals, who can still admire the expert at Silverstone or some grim Welsh hill, but who knows he will never be in a position to compete himself.

Thank you for the pleasure MOTOR SPORT gives to an ordinary motorist.

I, am Yours, etc.,
Ashby-de-la-Zouch. M. G. BAKER, M.R.C.S., L.R.C.P.

* * *

Sir,

The remarks regarding the recent 1,000-mile Rally cannot be allowed to pass without comment.

Surely as a restricted event, organised for the benefit and enjoyment of the invited clubs, the Rally well and truly achieved its purpose, and MOTOR SPORT would hardly, in good taste, have ruminated on the Rally in such a ashion if this had been understood.

After all the Rally, very rightly, was made up with a mixture of family cars, sports cars and specials, even vintage cars, driven mainly by novices in competition events. If the event was so absurdly easy, it is strange that so many eminent drivers failed to tie for awards. Becquart and Secret, although not running as competitors, failed to finish the course, and other well-known British names failed the "Oh! so simple" final tests.

The report contained elsewhere in the December issue that a competitor was said to have ascended Bwlch-y-Groes at 70 m.p.h., passing other cars, is a further instance of an apparent lack of knowledge. Conditions as well as the regulations made such a "feat" impossible.

Finally, as one who participated, I would humbly point out that there is a difference between a rally and a reliability trial and in neither event is sheer speed necessary or desirable.

I am, Yours, etc.,
Crawley. L. JENNER.

* * *

Sir,

I sincerely hope that your remarks in "Matters of Moment" will not discourage the M.C.C. and other clubs from holding events similar to the 1,000-mile Rally.

Unfortunately, I was unable to enter, but I have spoken to many people who did compete—some of them experienced rally drivers, and others novices—and all of them enjoyed it very much.

Speaking for myself, I enjoy competitive motoring, but I certainly cannot afford to risk wrecking my car, either by driving it to death or by taking it over the edge of a precipice (a la Alpine Rally). Nor have I any very strong desire to break my neck.

To win an award in an event of the nature of the "1,000 miles" calls for considerable skill in driving and navigation, and is an excellent test of the reliability and roadworthiness of an ordinary touring car. Your suggestion that a trials hill should be included in the R.A.C. Rally next summer fills me with horror!

A rally is not a trial, and the type of car which is usually entered for a rally is not a trials-car. Mr. R. H. Lambert would not, I imagine, think of entering his 1929 Standard for a trial, or for your suggested hybrid horror which I shall call by the suitably horrible name "Tri-ally": why should he, and others like him, be deprived of motor sporting events in which even if they don't win an award, they can compete, as he did, with credit?

I am, Yours, etc.,
London, S.W.5. ROGER SNOWDON.

* * *

After thanking Mr. C. A. L. Meredith for his support, so neatly expressed, we pass to Dr. M. G. Baker's letter. The M.C.C. Rally suited him admirably, as it suited the 470 who entered. Fair enough! But his personal skill and the prowess of his 3½-litre Bentley would surely be better proved by tackling a few of the milder rough bits and/or taking more elaborate final tests than were presented at Torquay.

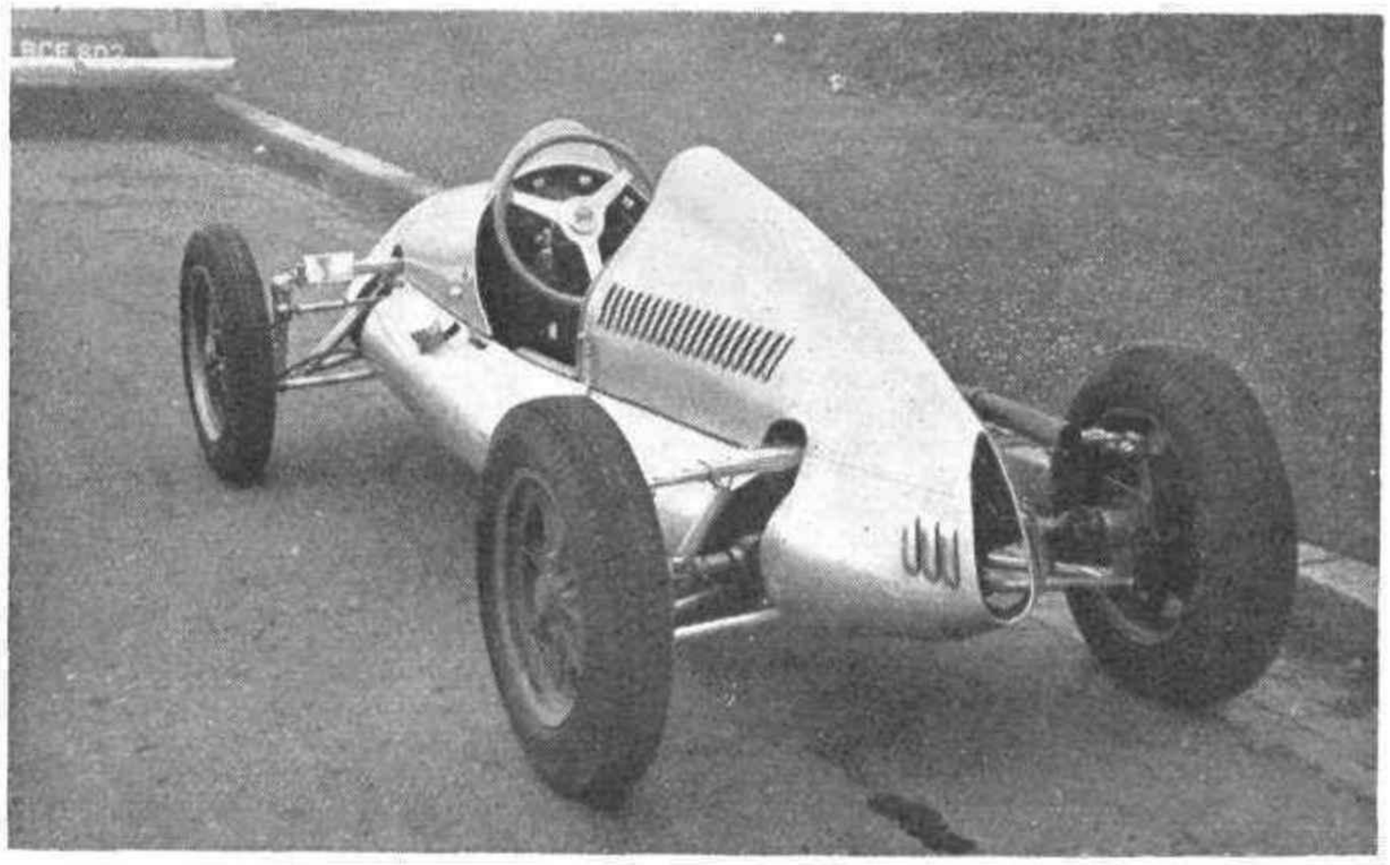
Mr. L. Jenner, too, expresses a perfectly fair opinion, but has failed to realise that it is generally accepted that organisers, competitors and spectators all prefer a rally to be won on the road-section than in the final tests. From the official results we observe that out of 428 starters only 104 were late or failed to finish the road-section. Amongst the cars that came through without loss of marks were R. H. Lambert's Standard Nine, a 3-litre Bentley, a 4½-litre Invicta and other vintage cars. Mr. Jenner has taken us rather too literally in respect of Moss's Bwlch ascent; if the DB II Aston-Martin didn't take the famous Pass at 70 m.p.h., at least it was pretty slick.

In reply to Mr. Roger Snowdon, there are trials hills and trials hills. Rally drivers do not want to climb muddy gradients, perhaps, but surely the 1950 cars should be able to survive one attempt at the sort of things which light cars on very small-section, beaded-edge tyres were asked to tackle for several days on end in the Welsh and Scottish Trials twenty-five years ago? The R.A.C. British Rally next June will presumably be intended to test the endurance of cars as well as drivers, and in that case it must of necessity be tougher than the very pleasant but comparatively easy *Daily Express* affair.

BRIGHTON

In the list of 1950 race results in the last issue we gave second place in the Brighton Speed Trials as a tie between McAlpine and Rolt. These drivers actually tied for *third* place, J. B. Norris (Alta) being second. Will those readers who retain this page for reference please make the necessary correction.

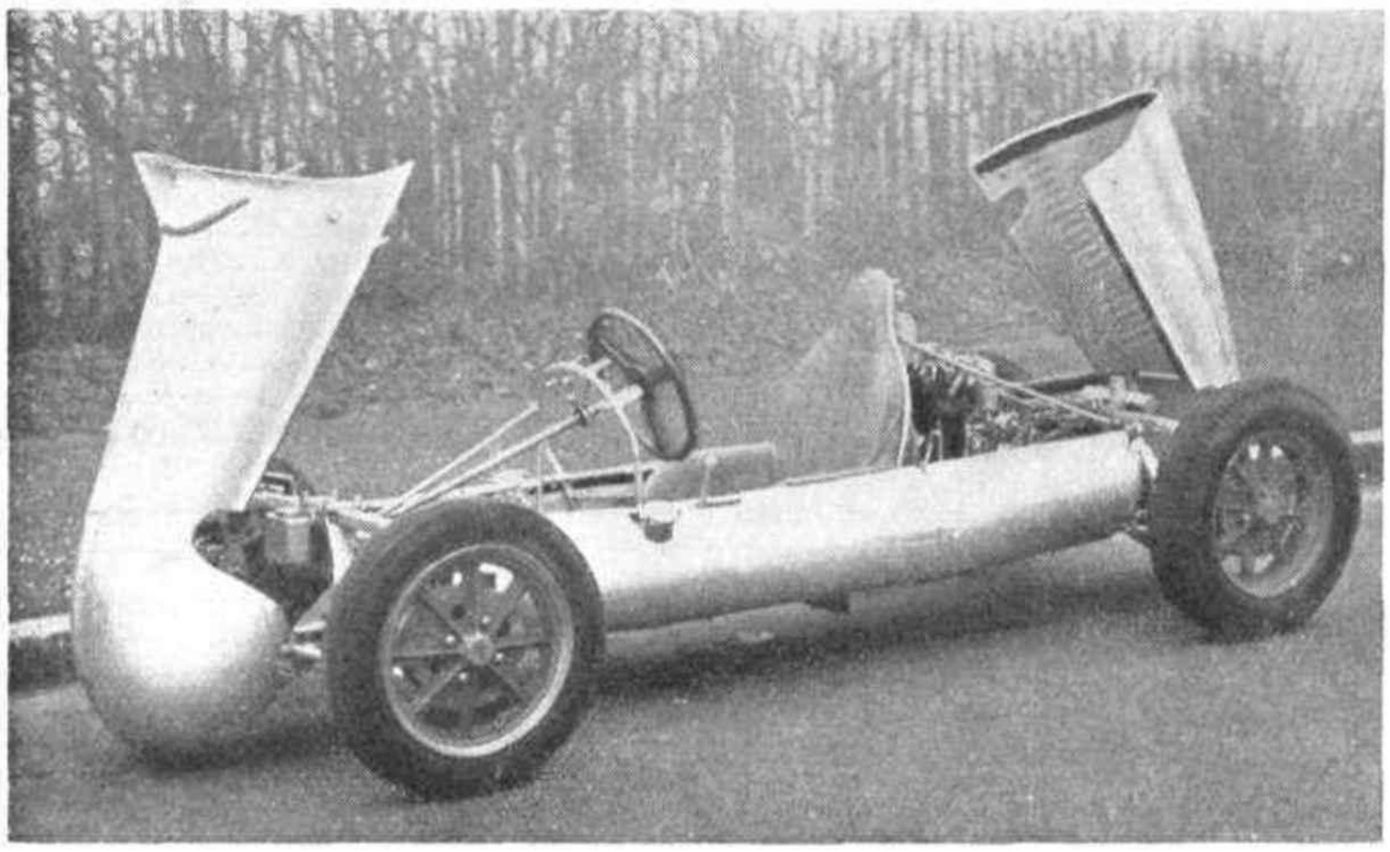
A MODIFIED COOPER 500



FROM the point of view of the chassis the 1951 Cooper remains virtually unchanged, retaining the box-section frame with transverse leaf spring and wishbone suspension at each end. The Norton or J.A.P. engine, fitted to customer's requirements, is still mounted at the rear, as is the motor-cycle gearbox. It is in the design of the bodywork that the 1951 Cooper differs and, while this has been mainly a question of improving the looks of the car as well as accessibility, it has at the same time provided a much stiffer chassis and consequent improvement in roadholding. Previously the strip steel formers for the bodywork have been welded direct to the chassis frame and the aluminium panels attached thereto. On the new car short tubes rise from the side-members at approximately 2-ft. intervals and to these is welded another tube of small diameter, running parallel to the frame. The object of this tube is to form the basis for the bodywork, for the fuel tanks, which are now slung outboard of the chassis and along each side of the cockpit, are attached to this tube, while the nose and tail of the car are each in one piece and rest on the top of this longitudinal member. In building the body in this fashion the chassis frame was automatically stiffened throughout its length, with a subsequent improvement in stability. The cockpit is now much more compact and the sides hold one firmly in the driving seat. The squab and headrest are all in one piece and the seat cushion is nicely shaped to give support under the knees.

The short lever for the gear-change protrudes through the cowling surrounding the off-side petrol tank, the filler of which protrudes a little farther forward, while on the near side a "matched" hand-brake lever protrudes in a like manner. A tubular framework carries the dashboard and steering column and the whole nose cowling is hinged about a line on the front of the chassis by means of a "piano-type" hinge. When the nose is swung forward the front suspension, pedals, braking system and steering are all readily accessible. Similarly, the complete tail hinges about a line on the rear of the chassis, thus giving unobstructed access to the engine and gearbox and all other components beneath the cowling. The familiar Cooper headrest is retained and is blended very nicely into the tail, the actual fairing being hollow. The car has been designed to take the V-twin and the tops of the cylinders will comfortably fit into this space. The entire cooling air for the engine is obtained from a scoop under the belly of the car, and behind the seat squab is mounted the oil tank, which acts as a deflector for the incoming air, at the same time keeping the oil cool, on the dry-sump power units. Although the characteristic Cooper grille is retained on the front of the car it serves no purpose other than giving the car a finished look and, conscious of the fact that their cars are seen in many European countries and represent this country, the Coopers have kept a watchful eye on the aesthetics of the new model.

At the time of viewing the new car it had already covered over 100 miles of testing at Goodwood and the second new model was well under way. Also in the making, and nearing the chassis completion stage was a highly exciting two-seater road car using a forward-placed, transversely-mounted, 1,100-c.c. J.A.P. twin, with a special crankcase cast with a flange to take a bell-housing. To this is fitted a Jowett Javelin gearbox and a Hardy-Spicer propeller-shaft drives to the E.N.V. differential. Frame and suspension units are as on the racing cars, while, as with the new "500," rack and pinion steering of Cooper manufacture is used. This new road car will be bodied on the lines of the well-known M.G.-engined two-seater and should prove an extremely lively vehicle, some 65 b.h.p. being produced by the J.A.P. engine on normal pump fuel.



Arrangements have been made for branch organisers and branch secretaries, *i.e.*, two officials from each B.R.M.A. branch, to visit Bourne and Folkingham during the winter. Twenty-five branches will be accommodated at each visit.

If branch secretaries have not received notification of these arrangements, will they please write to the Hon. Sec., B.R.M.A., 113, Park Street, London, W.1.

Over 200 B.R.M. Association branches are now in active operation. Write for the address of your nearest branch, and help support this national project.

* * *

K. D. McDowall, 1, Halesworth Road, Lewisham, S.E.13, hopes to form a Singer Car Club, catering especially for the earlier sports models. Will those interested please contact him at the above address ?

EMPHASIS ON "SPORTS CARS"

IN these times open cars are conspicuous by their rarity, and all of a sudden it struck your Editor that the majority of his readers probably deplore this fact and expect him to champion what few genuine sports cars remain. It was his bad luck or illogicality that prompted this thought when the thermometer was falling and the first snow of winter was imminent. However, true enthusiasm should be able to surmount personal discomforts and so it came about that at 7 o'clock on a frosty December morning I climbed into No. 1 of the open "built-for-a-purpose" high-performance cars that I was looking forward to sampling—V. W. Derrington's special ex-Staddon "1,100" FIAT.

This brief, stark, doorless two-seater was illustrated and briefly described in MOTOR SPORT last August. Dick Staddon, after befriending, for a while, another real motor-car in the form of a Type 37 Bugatti, decided to have a "special" based on comparatively modern practice. In this he may or may not have been influenced by D. G. C. Collins, who got quite surprising results from a cut-down FIAT Balilla saloon. Knowing that Derrington had been persuaded by the late Robert Arbuthnot to forsake Lancias for FIATs and that he had had plenty of experience of them and spares to hand, Staddon bade him build a car to the required recipe.

Suffice it to say here that the FIAT Balilla was so basically adaptable that the main aids to urge were the feather-weight Lester body, an alloy head, Laystall crankshaft, 9 to 1 compression ratio and special manifolding. The FIAT channel-section frame stiffened by the prop.-shaft tunnel was deemed adequate, and short enough with its saloon wheelbase of under 8 ft. not to need abbreviation. The FIAT i.f.s. likewise fitted the scheme nicely and the standard 4.6 to 1 axle ratio and gearbox ratios were retained. The 1,089 c.c. engine had the merit of being outstandingly light and willing for its size.

When I had opened my bleary eyes sufficiently, on the aforesaid occasion, to see this car, it appealed to me at once as handsome, functionally efficient and capable of passing for a Continental product. The lack of doors made it necessary to clamber about a bit in getting behind the wheel, but personally I shouldn't use such a car for shopping and I like the extra rigidity which absence of doors gives to a lightweight body. Within the first hour's driving I decided that I liked more than the appearance of this FIAT. For one thing, it very definitely performed, for another it was so very much in sympathy with its driver. When slippery roads bade us reduce speed I still liked the car enormously, better, indeed, than the last modern car I had tested beforehand.

A weight of about 11 cwt. allied to an engine that revs freely and has commendable power for its size works wonders. The rev-counter simply rushed round to indications of 4,500-5,500 r.p.m. and acceleration was, to use an overworked word, immense. A speedometer 65 was not the limit in the useful third-gear, it was the normal speed at which one changed into top. And in top 80 m.p.h. was the habitual indication on clear roads. Now I never trust speedometers and I'm suspicious of rev-counters, particularly belt-driven ones like that on this FIAT, which eventually had hysterics before passing-out with nobeltitis, and I had no chance of timing the car. I can only tell you that the maximum I achieved, fold-flat screen erect, was 4,800 r.p.m., which, with the 5.00-15 tyres, equals 80 m.p.h. The rev-counter probably lagged a bit, for the speedometer indicated almost 90; and it felt like it. I believe Derrington reckoned on over 90, but he probably lowers the screen and lets the breezes blow. I should dispose of this very vivid performance by putting the acceleration somewhere between that of a Meadows-H.R.G. and Harry Lester's M.G., which is no insult to Staddon's conception of what a motor-car should be.

Over and above its performance, this was such a jolly car to drive. It pulled away from absurdly low speed in top gear, and accelerated to a healthy roar from its exhaust. The smooth, light accurate steering was geared absolutely as I like it and had just the right amount of castor-action—neither too much nor too little. Road shock was not transmitted back and on straights the car ran very true. In cornering you just didn't think about over- versus under-steer, because the FIAT went round impeccably with just the obvious amount of wrist movement for a particular corner—again, neither too much nor too little—and having fun, the tyres protested practically not at all. I never gave a thought to roll, which suggests this must be about the most roll-free car I have driven for a long time. Yet the ride was very decently comfortable all the time.

One especial charm was to glance at the rev-counter when the m.p.h. seemed to be somewhat hectic and discover that the little o.h.v. four-cylinder 68 by 75 mm. engine was lolloping round quite soberly at not more than four-thou. A comforting thought, and one which made me believe Derrington's claim—actually it was Staddon's, relayed—of a regular 36 m.p.g. Another feature, which December emphasised, was the snugness of the cockpit, achieved by rather crude but indubitably effective mica sidebits rivetted to the windscreen frame.

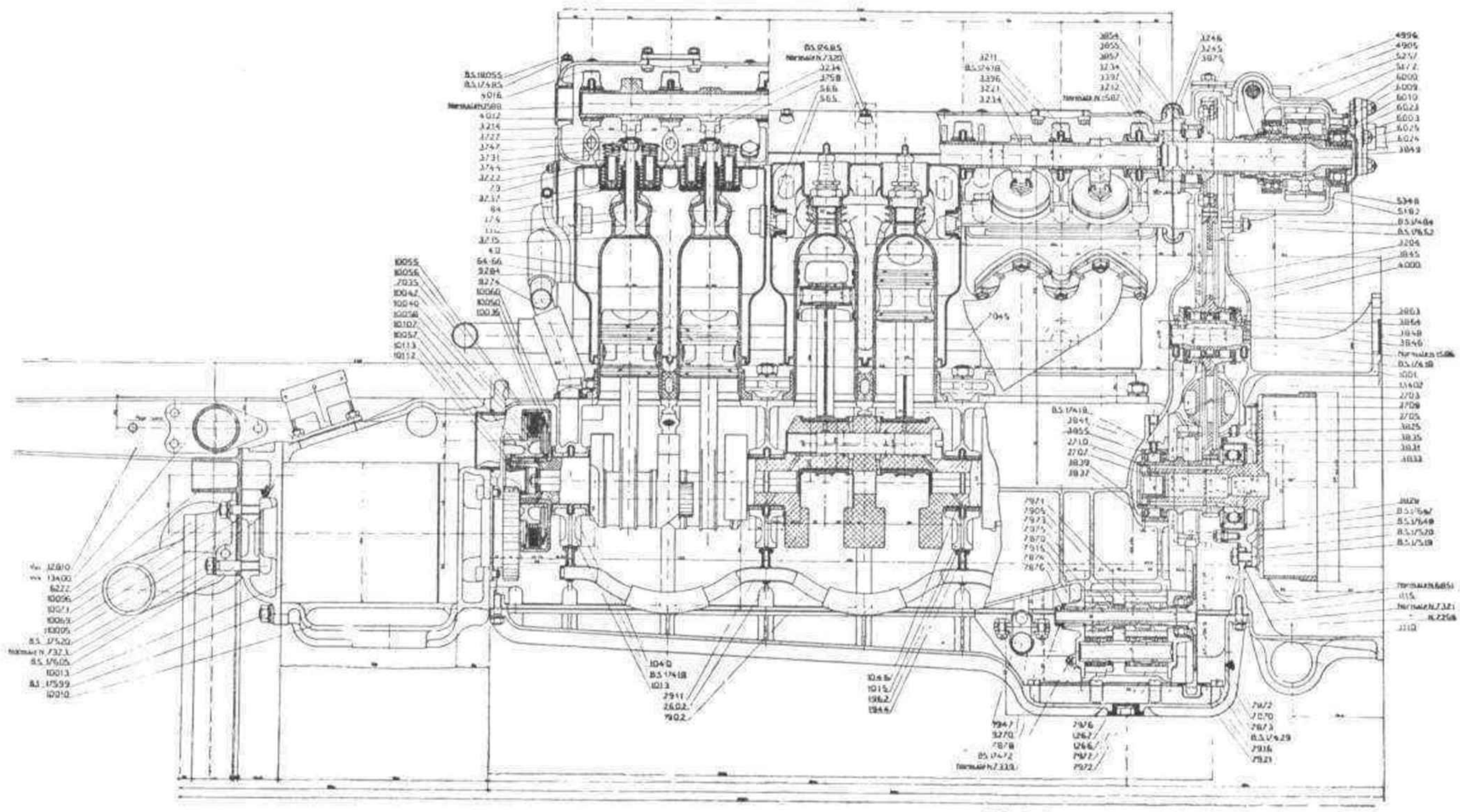
There were, I must admit, a few snags. The brakes, never very powerful unless you stamped on the pedal, lost fluid towards the end and made a journey through the West End an outsize nightmare. The clutch wanted to slip and the remote gear-control, if well placed, was a thought vague, at all events for the ham-handed, causing me to change smartly into neutral at a critical moment when I was chasing a fellow-scribe in a distinct hurry and an S.M. 1,500 saloon. The saloon won. To engage reverse a separate little lever had to be felt for down by one's feet. A faulty exhaust-joint made our eyes water, the screen wipers were sleepy and finally slept, handbrake, thermometer and horn were on strike, the pessimistic fuel gauge made us spill petrol when refuelling, and perhaps the minor controls—pull-out knobs for ignition advance, choke and starter, and an elusive dipper switch—should be dismissed as a thought crude. But why worry? This car will most likely pass into the hands of someone who will enjoy its company almost as much in the garage as on the road. Really good performance has to be paid for, in heavy fuel consumption, frequent routine maintenance or in other ways. This FIAT is light on fuel, so if sometimes things have to be tightened up and if the body rattles a bit and the crocodile bonnet gives

Continued on page 8.



[MOTOR SPORT *copyright.*

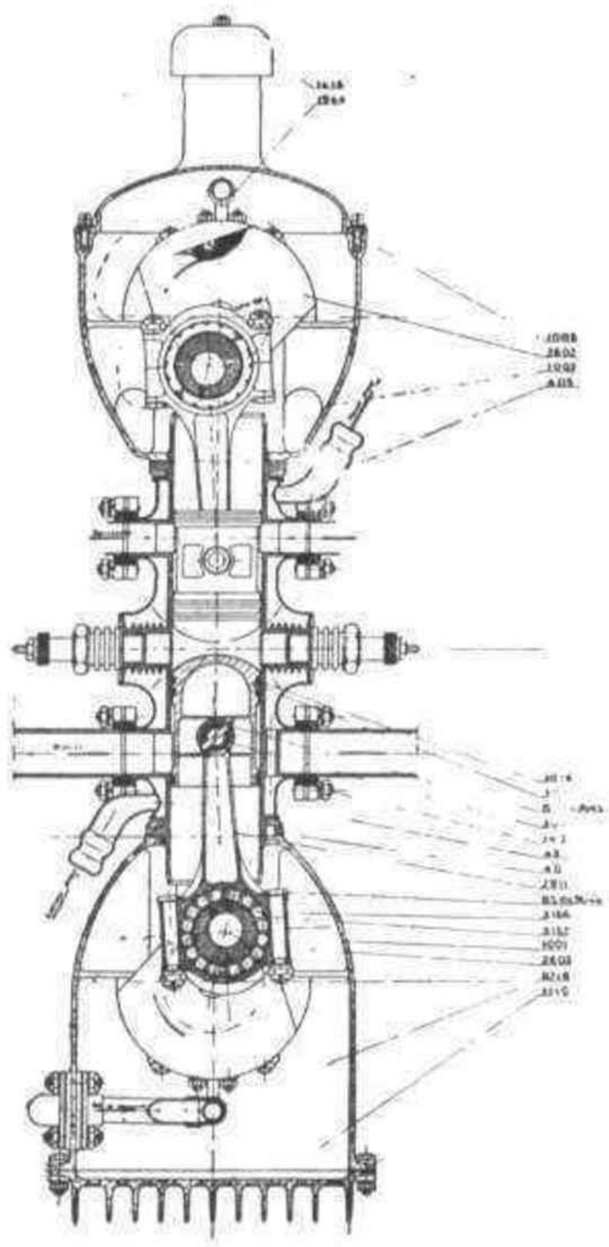
"SIMPLICATE AND ADD LIGHTNESS."—The clean body lines of the Derrington FIAT conceal a lightweight chassis propelled by a willing little engine.



[Blocks by permission of the "Antique Automobile."

Above : The 1½-litre Type 406 twelve-cylinder twin-crankshaft engine which FIAT used on one occasion only, at the Milan Grand Prix in 1927, when Bordino won in the rain at over 94½ m.p.h.
Below : A sectional end-view of the Type 451 opposed-piston two-stroke FIAT engine.

The last FIAT racing engine described is the mysterious type 406 1½-litre with two six-cylinder blocks in line and geared-together crankshafts. Destined for the model 806 car, development on this engine was begun in 1927. With it FIAT won the last G.P. race in which they ever appeared, on the car's sole appearance. The occasion was the 1927 Milan Grand Prix—Bordino won his heat at 92.88 m.p.h., the race itself at 94.57 m.p.h., beating Campari's P2 Alfa-Romeo and lapping at 96.59 m.p.h. on a wet course. So the details *Motor Italia* provides and the *Antique Automobile* translates are of exceptional interest. The bore and stroke were 50 by 63 mm. and the cylinder structure as before, with a single crankcase for each row of three blocks of two. The inclined o.h. valves were of 30 mm. overall, 27 mm. face dia., and had a lift of 7 mm. Each had three guided springs. Valve operation was by three o.h. camshafts, the centre one actuating the inlet valves of each bank, the outer ones the exhaust valves, *via* fingers in each instance as in the other FIAT engines. The camshafts, running in plain bearings, were driven from the rear of the crankshaft, *via* Oldham couplings, by one very large and five small spur gears on anti-friction bearings. A Roots supercharger was mounted centrally at the front of the engine and driven from the r.h. crankshaft by a pinion meshing with one of the actual rotor gears, *via* a multi-plate clutch. Three pinions united the two



crankshafts, which were of built-up type by Hirth, running each in four plain bearings. Normal plain big-ends were used. The main and big-end journals were 40 mm. in dia., the former 30 mm. long except for the front bearing, which was 32 mm. long, the latter 41 mm. The connecting rods were 5.118 in. long, or over 2 times stroke.

The pistons were again supported by their rings, of which there were two per groove, in three grooves per piston; 18 mm. sparking plugs extended well into the hemispherical combustion chambers. The oil pump, at the back of the engine, ran at less than engine speed.

Vaglienti had a hand in the design of this remarkable engine. It weighed 381 lb. and the model 806 car in which it was installed turned the scales at just over 13 cwt. Maximum speed is quoted as 149 m.p.h. The engine developed 175 b.h.p. at 7,500 r.p.m. and 187 b.h.p. at 8,500 r.p.m., figures that are truly remarkable. A test in July, 1927, shows 160 b.h.p. at 8,000 r.p.m. at a manifold pressure of 12.52 p.s.i., the temperature of the compressed mixture being 162° F. (72° C.). This was an experimental engine and it is confidently stated that the aforementioned 187 b.h.p., equal to a power/weight ratio of over 1 h.p. per kg., was subsequently attained. Compared with the present-day 1½-litre engine with two-stage supercharging, which gives 300-400 b.h.p. on special fuels, the output of this 1927 twelve-cylinder FIAT unit still ranks as exceedingly noteworthy.—W. B.

RUMBLINGS

Unusual A.M.

Some time ago Stanley Race sent us the accompanying photograph of a most intriguing Aston-Martin owned by W. F. McNab Meredith of Preston. Outwardly it looks like a 1936 1½-litre "Ulster" until you notice the "power bulge" on the near side of the bonnet, clearly seen in Race's picture of the car at the start of the Lanes. A.C. Davis Sporting Trial last year. His other picture shows the reason for this exciting bonnet-bulge—there is a belt-driven Centric compressor to be found when you raise the bonnet.

It seems that this blower installation was put on by the car's previous owner, H. Porter-Hargreaves. There is also a story that he, someone from the Feltham factory and Maurice Toulmin were wintering in Switzerland in 1936 and that Porter-Hargreaves bought the car on the spot, together with its entry for the Mille Miglia. The rumour proceeds that George Eyston shared it with an Italian driver in this race, but our records seem to indicate that the only Aston-Martin which appeared in the Mille Miglia in 1936 was driven by Clarke and Faulkner. It retired with "fuel trouble."

This Aston-Martin is certainly a rare specimen and we are not sure that there isn't something odd about the engine! So we present this mechanical New Year problem along with the historical one below. No doubt someone will very soon clear up these mysteries!

* * *

Matter for Debate

Motoring historians work under difficulties, for contemporary reports of races and descriptions of cars seldom tally in respect of the less obvious details, and sometimes even major facts are in doubt. All praise, therefore, to such authors for the high standard of accuracy, or should we write veracity, they have achieved. With this desire for accuracy they will no doubt wish to discuss a point raised in an Air Mail letter which MOTOR SPORT has received from the well-known motoring artist and journalist, Bob Shepherd, of Sydney, who is at present engaged in presenting Grand Prix cars down the years in pen and picture to readers of *Australian Motor Sports*. The point Bob raises is a startling one. He can find no evidence that the famous *monoposto* Alfa-Romeo racing car of the 1932-35 period was ever officially termed a "P3" but was, in fact, the "Tipo B."

The relevant part of Shepherd's letter reads as follows:—

"During the war someone in your country seems to have decided that the *monoposto* Alfa-Romeo racing car was a Type P3. All his disciples have apparently accepted this without query.

"Now, sir, what authentic data have you to claim that the *monoposto* Alfa-Romeo is a Type P3?

"I have in my collection photographs of all the racing Alfas—factory photographs from Milano—and each one has the model type printed on the photograph. The 1924 2-litre cars have always got 'Tipo P2 Gran Premio' and so on through the types 308-312-316, etc., and on *every* photograph of the *monoposto* is 'Monoposto Tipo B Gran Premio.' Now is it reasonable to suppose that they would not put on 'P3' if it were authentic? Also, why miss out the 'Monza' when following the P2 with the supposed P3? Was that car just an orphan, to be ignored in the supposed train of 'P' models? If the theory of the 'P3' is correct, then surely the 'Monza' should be known as such, as the next model in the line, neglecting, of course, the non-series twelve-cylinder car of 1931.

"Also, for the information of your readers, the 'Tipo 158,' when it was altered in design and outline in 1939, was known as the 'Tipo 158B,' and the later bulbous-nosed cars as raced at present as 'Tipos 158C' and '158D.' Authority for the above data is the official Alfa-Romeo journal *Alfa-Corse* and also factory information.

"Hoping the above will at least result in some interesting discussion and wishing you and MOTOR SPORT all the best for 1951.

"I am, Yours, etc.,
"BOB SHEPHERD."

We do not propose to take sides in this matter, beyond remarking that those books and reports written in times contemporary with the *monoposto* Alfa-Romeo which we have consulted seem to refer to the car as a "Tipo B" and not as a "P3." On the other hand, when the car was included in a series of articles on 1934 racing cars which MOTOR SPORT ran that year the car was described as a "P3." So whether an historian's miscount has resulted in the introduction of a fictitious Alfa-Romeo type which has no official existence, or not, we leave to the historians. Our correspondence columns are open if anyone wishes to confirm or contest this interesting issue.

MATTERS OF MOMENT—continued from page 3

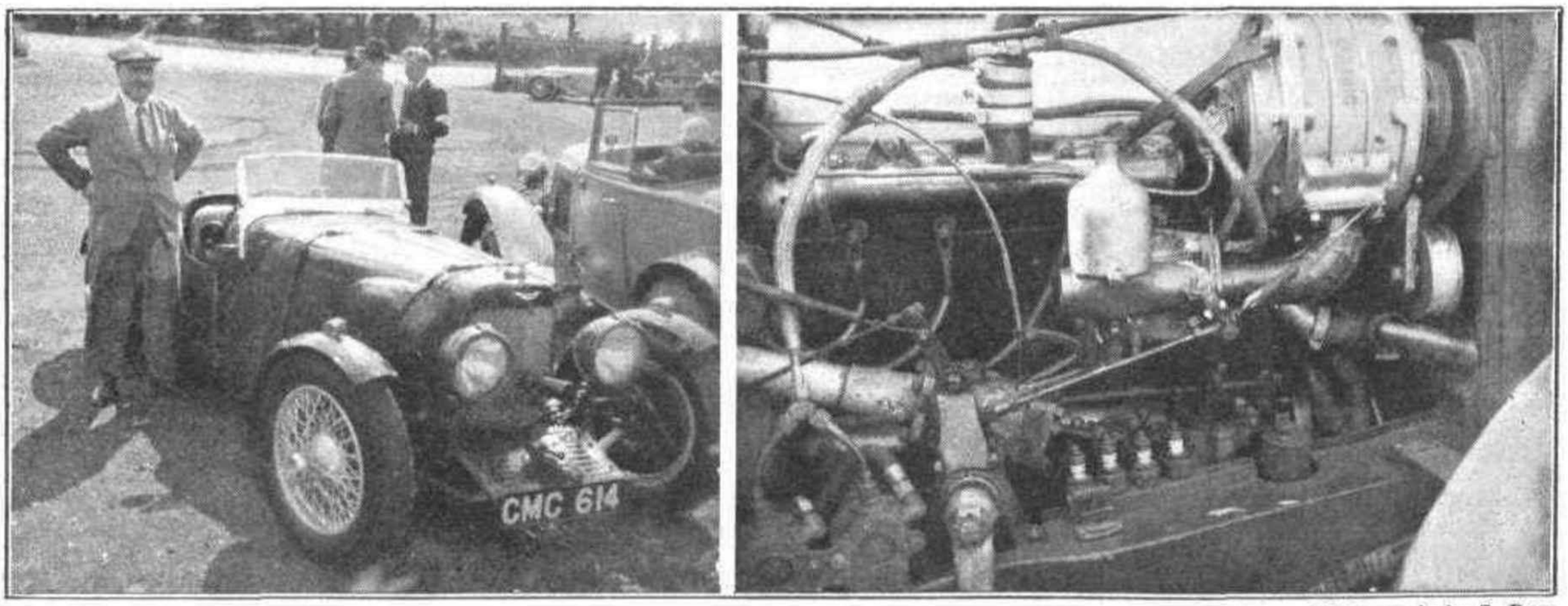
impossible minimum-cover insurance rate often charged on the older cars. Perhaps if motorists removed *all* insurance transactions, business and private, from offending companies the profession as a whole might be induced to make and keep this important resolution.

(5) Finally, the one cloud on the 1950 race-horizon so far as British enthusiasts were concerned, namely, the failure of the B.R.M., might well be swept from the 1951 sky, providing the *B.R.M. Trust* makes a New Year Resolution to "iron out the bugs" in its organisation and function during the coming season with something of the courage and efficiency which characterised John Heath's Formula II H.W.M. team last year.

With these few suggestions in your hands we look ahead to another great year of motor sport. On Easter Monday, March 26th, the trials we are enjoying at present will give place to racing. The go-ahead B.A.R.C. will open the 1951 season with a meeting at the excellently-conducted Goodwood circuit.

After this the season will really warm up, with B.R.M. meeting strengthened opposition from Italy, Formula II and III racing contested more keenly than ever and club meetings in this country, including the inexpensive 750 Club Formula events, thriving strongly.

It would indeed seem that (politicians permitting) MOTOR SPORT'S readers, wherever they may be, are assured of a Very Happy New Year.



[*Photographs by S. Race*

***ULSTER AND BLOWER.**—The Aston-Martin and its Centric-supercharged engine which sets something of a poser—see paragraphs above.*

CHAIN CHATTER

by "CARROZZINO"

OVER the past season there have been three unsuccessful attempts at ultra-high speed on two-wheels, all with the object of setting up a new maximum speed record for motor-cycles. That all three have been unsuccessful was due to lack of knowledge of high-speed aerodynamics when applied to a vehicle relying upon balance for its stability. Obviously the subject is a very vast one and also one fraught with difficulties, such as alternating air currents, that cannot be produced in a wind-tunnel. The three men concerned in these attempts at 180 m.p.h. or more deserve the highest praise for their courage in taking on an extremely hazardous task. Noel Pope, Bob Berry and the American Roland Free are all men with a great deal of high-speed motor-cycling knowledge behind them, as well as practical knowledge, and yet all three attempts at record breaking with a streamlined shell surrounding the motor-cycle ended in failure due to the machine getting out of control and crashing. What is most incredible is the fact that in each case the rider escaped serious injury and yet they were all travelling at about 150 m.p.h. when they crashed. In each case the trouble was caused through air currents upsetting the stability of the machine, although wind-tunnel tests had shown the streamlining to be near perfect.

Without wishing to detract from the efforts of the three riders concerned, it must be wondered at that Ernst Henne put up the existing record of 174 m.p.h. before the war on his B.M.W. and was using a streamlined shell. It would appear that the Germans knew quite a lot about the stability at high speed of aerodynamic "eggshells." In mentioning Henne's records it is interesting to reflect that after many tests with a completely enclosed model, his actual records were taken with the top hatch removed, leaving the rider's head and shoulders in the air-stream, so presumably the B.M.W. concern did not know all the answers on streamlining and stability.

It is easy for us who have never travelled more than half as fast to say we hope they will not give up their endeavours to solve this problem. One does so with all sincerity, for there are not many men who are willing to "delve into the unknown" as these riders have been doing, and having had the bad experience of coming off at such high speed no one would blame them for saying they had had enough. If this year sees further attempts at the "maximum" by any of these men, and I feel more than one will have another attempt, we must certainly give them every assistance and acknowledge to the full their bravery, while equally brave will be anyone having a first attempt, knowing what has happened before.

* * *

With the Autumn Congress of the F.I.M. now over and the calendar of events for 1951 arranged we can view the future more clearly. Among the important items at the Congress was the long-overdue re-admission of Germany into the F.I.M., which means that not only can German riders and B.M.W., D.K.W. and N.S.U. compete in European racing once more, but that other riders can go to Germany for racing. While Germany has no Grand Prix date for 1951 she has other dates for ordinary International Road Race Meetings and undoubtedly her teams will compete in the Classic events outside her own frontiers. There are to be ten events in the list of Classics to count for the World Championships, and among them are two newcomers, the Spanish event and Albi, the latter counting as the French Grand Prix. Whether the Spanish event is to be held on the Montjuich or Pedrables circuit is not yet clear, but if it is at the former a great deal of work will have to be done to make it suitable for a Grand Prix event. As a circuit meeting Barcelona's Montjuich Park is ideal, but that is as far as it goes. With so many Classic events on the calendar it is not surprising that the time between some of them is very limited and with the Belgian, Dutch and French events on successive week-ends commencing early in July, the factory teams are in for a busy time. Similarly, the Swiss Grand Prix is followed very closely by the T.T., and it looks as though the Swiss event will consist solely of Italian teams and the T.T. of English ones.

* * *

An important change in F.I.M. ruling, which should have quite an effect during the coming season, is that the sidecar class is now limited to 500 c.c. as against the past 600 c.c.. While being a break from tradition it is a very worthwhile one, for not only will private owners have more makes to choose from, but we may see more interest being shown by manufacturers. At the end of last season M. V. Agusta were toying with the idea of a works sidecar entry, while B.M.W.s are certain to try. Whether this reduction to 500 c.c. will encourage anyone like A.J.S. to try three wheels is not known, but one of the snags of the past has now been removed.

For the regular circus rider the removal of the rule forbidding a machine to be ridden twice in one day will be most welcome, for it will mean that a man with a quick 350-c.c. bicycle will now be able, once more, to pay his way round the Continent by doing two starts at each meeting instead of the one enforced during 1950.

* * *

Books on motor-cycling matters are very few and far between and certainly good books on the subject. The well-known scribe in *Motor Cycle*, Ixion, has written the history of motor-cycling from the beginning until the present day and this "Motor Cycle Cavalcade" is certainly full of interest, for it is written not by an observer of the pioneer days of motor-cycling but by an actual pioneer himself. It really is a very full story of the motor-cycle in all its aspects and should appeal to all types of two-wheeled rider. A more complete book on motor-cycling it would be hard to visualise and it fully justifies a place on the bookshelf among the well-known Badminton Series. Priced at 10s. 6d. it is a nicely produced volume of the standard that one normally associates with the house of Iliffe.

* * *

The recent spell of icy weather must have sorted out the true-blue motor-cyclist from the occasional user, for there can be no more arduous job than riding a solo on sheet ice. While sliding to earth with the machine is not too worrying in itself, the inability of following four-wheelers to steer or stop causes a big deterrent to ice riding. On the other hand, fit a sidecar to your solo and you have what must surely be the perfect vehicle for snow and ice. A recent 100-mile run on sheet ice with a fast 500-c.c. and sidecar convinced the writer once again that three wheels are the best wear. With direct steering and no possibility of lost motion between the hands and the road wheel, the sidecar is fantastically controllable. Even a very good car does not come up to a sidecar for responsiveness of steering, for the necessary gearing down from the steering wheel to road wheels causes a time lag when controlling a vehicle that is literally skidding all the time. Also, it has to be a very good car with sufficient power to steer with the rear wheel and the throttle, which any 500-c.c. motor-cycle can do. While many people feel that insurance companies are not just, their 50 per cent. reduction for sidecar machines does show that they have a very good idea about road vehicles.

* * *

Last month the Annual Press Trial for the Carbon Cup was run, this being the one event of the year in which motor-cycling scribes have an opportunity to show the world that they are motor-cyclists. An excellent entry of 24 was received and it included many motoring writers who showed great courage in turning out under the foulest of weather conditions. C. E. Allen, who writes for the *Leicester Evening News* and was the founder of the Vintage M.C.C., was the outright winner. "Carrozzino" lived up to his name by riding the Sunbeam sidecar outfit used by Harold Taylor in the I.S.D.T. While very unsuited to mud-plugging and narrow paths, the Sunbeam performed extremely well on the road and proved to be a very quick point-to-point outfit, even though it was never pushed beyond the 65-m.p.h. mark. Once again we fully appreciated the sidecar outfit as we hurried back through the dark and pouring rain, for visibility from behind a saloon car windscreen was very low, while the clear view from the saddle made for great safety, even if the rain did not make for comfort. Further, the ability of a "chair" to be deflected from its path with great rapidity eliminated the normal solo nightmare of unlit bicycles and wandering pedestrians.

WE HEAR

It seems that the Blakes have succumbed to an offer from America and that our oldest genuine racing car, the 1903 Gordon Bennett Napier, is leaving the country of its birth. R. Barker has been preparing it for shipment. A pity. Apparently one of the Austin vans of the B.R.M. caravan ran out of road during the journey back from Barcelona and the Commer Avenger mobile workshop had to come to the rescue. A 1907 Clement-Talbot chassis and a 1922 Morris Cowley chassis were auctioned at Newbury last month. A quantity of model-T Ford spares in their original wrappings are available in London. Amongst those who will engage in 500-c.c. car racing next year will be Harold Daniell, who, at 40, has retired from motor-cycle racing, after winning the T.T. for Norton in 1938, 1947 and 1949 ; he will drive a Kieft. Incidentally, the 1951 Norton team will consist of Duke, Lockett and Dale.

During the State visit of H.R.H. Queen Juliana and Prince Bernhard of the Netherlands last November, Hendon aerodrome was closed to enable the Prince to try an XK 120 Jaguar round the perimeter track. He drove the car fast and held a 90 m.p.h. slide ; afterwards he referred to racing cars he has driven in discussing the comparatively soft suspension of the Jaguar. A Manx-tailed Amilcar was noticed in Cirencester recently. A 1923 " 8/18 " Humber two-seater has come to light in a shed on a Pembrokeshire farm, where it has been lying for some years, and, more exciting, there is said to be a vast 1907 Sheffield Simplex two-seater in a garage near Dublin.

During the Veteran Car Run to Brighton last November it seems that Mr. Edmund Duncan drove down the route, until he broke down, in a Cyclon three-wheeler bearing a V.C.C. number plaque appertaining to an earlier event. He carried a pair of bellows for the purpose of amusing the crowd by using them to cool his engine and for his pains got his photograph in the national Press!

It has been confirmed that the Austin A40 which recently took Class F records from 15,000 kilometres to 10,000 miles and seven days at Montlhéry broke at the same time the equivalent French national and Montlhéry local records. This adds ten records to the bag, making Austin's total, since April, 1949, 171—any challengers? V. W. Derrington hopes to restore the fabric-bodied Salmson that he used to race at Brooklands for this season's club races. He also has an A.B.C. two-seater which he may one day introduce to a V.S.C.C. meeting. Another twin-cam Salmson with sports two-seater body and uncowled radiator is undergoing overhaul at his works, where a FIAT 500 engine with genuine Testadoro push-rod, inclined o.h.v. head awaits installation in what should be an altogether outstanding " mouse." Capt. A. J. Ayers, R.E., is rebuilding a 1928 " 12/28 " Citroën and seeks advice.

The Sam Collier Memorial six-hour Grand Prix of Endurance sports car race was scheduled to take place on December 31st at Florida.

Club News

THE R.A.C. AND THE TURBINE

The following announcement has been issued by the R.A.C. :—

In view of the progressive development, of the gas turbine engine and its possibilities as a power unit for road vehicles, the Royal Automobile Club has found it necessary to make a statement on the position to date.

For some years the R.A.C. has been considering various aspects of the post-war development of the gas turbine and other methods of propulsion, and its representative on the Commission Technique Internationale put forward a suggestion as long ago as October, 1948. A meeting of the Engineering and Technical Committee of the R.A.C. was held in February, 1950, when it was decided that the Club would be prepared to carry out an Official Trial of a gas turbine-engined car, if requested by a responsible manufacturer to do so. Futhermore, it was agreed that practical methods of rating the gas turbine engine should be explored, with a view to the submission of the most satisfactory method to the C.T.I. for official recognition.

Early in March, the R.A.C. was, in fact, approached by a well-known manufacturer, who requested a Certified Trial of a car fitted with a gas turbine power engine. This trial was held on March 8th at the Motor Industry Research Association's proving ground at Linley, Nuneaton, and the R.A.C. issued a certificate in respect of this car. On the following day the R.A.C. made available the circuit at Silverstone, where the car's performance was demonstrated to members of the Press.

After examining several possible methods of rating, a recommendation was immediately prepared and submitted, at the first available opportunity, to the Federation Internationale de l'Automobile at their meeting held in Paris on October 4th, 1950.

The Commission Technique Internationale of the F.I.A. examined with great interest the report by the R.A.C. and adopted the method proposed by the Club, *thereby making it the only official proposed rating applicable to the gas turbine engine IN ITS PRESENT STATE OF DEVELOPMENT.*

The rating proposed by the R.A.C., and accepted by the F.I.A., is as follows :—

" The area, in square centimetres, of the air inlet to the compressor, measured in a plane perpendicular to the compressor axis, at the leading edges of the first rotating vanes.

The report of the R.A.C. has been sent to all National Automobile Clubs, for study and remarks concerning the principle and application of the R.A.C.'s proposed rating.

The B.A.R.C. also announces that Power Jets (Research and Development), Ltd., have become their technical advisers for gas-turbine car competitions. The B.A.R.C. £1,000 prize for the first car thus powered to complete 36 miles of the Goodwood circuit at not less than 60 m.p.h. still stands. It was announced in 1946 but so far has not been contested. The B.M.C.R,C. has also announced a similar contest for gas-turbine motor-cycles. Goodbye pistons?

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1954 RACING FORMULA

The R.A.C. sent to interested parties the following letter relating to a possible new Formula I applicable to racing when the present Formula ends, which, it should be noted, will, according to this announcement, be at the end of 1953 :

The Federation Internationale de l'Automobile is considering the composition of a new formula to govern the eligibility of cars in international Grand Prix races, and the Royal Automobile Club has been asked to submit the views of this country in advance of a conference to be held in Brussels in February, 1951.

Under immediate consideration is Formula I, the present requirements of which are due to expire at the end of 1953, unless international agreement is reached for their continuance. Formula I now specifies that cars shall be fitted with an engine of a swept volume of not more than 1,500 cubic centimetres if supercharged, or 4,500 c.c. if not supercharged, and no other restrictions are imposed.

It may at this point be worth recalling that the other internationally recognised formulas are Formula II for cars having an engine of a swept volume of not more than 500 c.c. if supercharged and 2,000 c.c. unsupercharged with no other restrictions, and Formula II for cars having unsupercharged engines of not more than 500 c.c. swept volume, and weighing not less than 200 kilograms.

In considering possible alternatives to the above, restrictions may be conveniently imposed as under, either singly or in a combination.

1. Weight
2. Swept volume of engine
3. Use of a supercharger
4. Type of fuel
5. Consumption of fuel mixture

We are writing to you as a party likely to be interested in these proposals and would ask you to submit to the R.A.C. in writing prior to December 31st, 1950, your views as to the Formula it is most desirable to adopt from 1953 onwards. The R.A.C. will collate such views submitted and intends to call a conference of interested parties for further discussion prior to the submission of any proposals to the F.I.A.

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MOBILE REPAIR SHOP

" The equipment is as important as the racing cars " is the dictum of most successful stables. So it is of interest to examine in detail the mobile workshop presented by a number of clubs, under the sponsorship of the Midland A.C., to the B.M.R.R.T. and which accompanied the B.R.M. to Barcelona.

The workshop body, designed and built by Wilsdon and Co., Ltd., of Solihull, is mounted on a Commer Avenger coach chassis with under-floor engine and fitted with an Eaton two-speed axle. The equipment consists of a self-starting 230-volt petrol generating set, a compressor set and tank mounted on a special frame underneath the body, both being easily accessible by removable panels on the outside of the body. Inside, on the near side, are benches, vices, surface plates, an arbor press, etc., and a 4½-in. Boxford lathe. A radial drill is mounted on one of the benches, as well as a tool grinder, all machine tools being motorised. On the off side are mounted steel storage cupboards, control board for the generating set, and battery charging ; and cable winders for inspection lamps. At the rear end are carried the oxy-acetylene bottles and torches, spare wheels and pit refuelling apparatus.

Fluorescent lighting is installed inside the vehicle, and in addition special batteries supply current for pilot lights to be used when the generator set is not running.

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CRANLEIGH & D.M.C. & C.C.

This Club held its first Annual General Meeting on November 17th, 1950, at its H.Q., Windmill Inn, Cranleigh. It was attended by approximately 50 people. The Chairman was Mr. S. Crisp, who conducted a very successful evening's business. New officers were elected as follows :—

Chairman : Mr. F. Butcher
Secretary : Mr. R. Clare
Treasurer : Mr. C. Crowther
Motor-cycle Capt. : Mr. T. Leighfield
Motor car Capt. : Mr. R. Warner
General Committee : Mr. D. Gahagan
Mr. W. May
Mr. G. Howard

Hon. Sec. : R. Clare, 1, Coneyhurst Lane, Ewhurst, Surrey.

MORE CASTROL SUCCESSES 1950

BRITISH EMPIRE TROPHY RACE
1st

AUSTIN A40
36 U.S.A. STOCK CAR RECORDS
10,000 MILES IN 10,000 MINUTES

500 c.c. 100 MILES RACE
1st

GOODWOOD MOTOR RACES
5 Firsts

MANX CUP RACE
1st

R.A.C. T.T. RACE (2000 c.c. Class)
1st

ALL WON ON Castrol WAKEFIELD MOTOR OIL – the Masterpiece in Oils

BERKHAMSTED M.C. & C.C.

The Club's annual dinner was held on November 18th at the "Kings Arms" Hotel, Berkhamsted. About one hundred members attended. After a very enjoyable dinner and presentation of awards by Mrs. Rivers Fletcher, some of those present danced to the music of Alec Miller's band, while the remainder sampled the various potent brews which the worthy Mr. Johnson, of the "Kings Arms," produces for such occasions, and discoursed mightily on the future of motoring sport, the Show, tuning, and all the controversial subjects beloved of enthusiasts. The party broke up in the very small hours, and a motley bunch of motor cars dispersed into the wind and rain of the November night. Hon. Sec.: E. Wrigley, 173, Hendon Way, London, N.W.2.

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W. HANTS & DORSET C.C.

Nearly three hundred members and their guests were at the Grand Hotel, Bournemouth on November 24th, for the dinner and dance. The Club's Chairman, C. B. K. Milnes, took the chair, and the guests of honour were Earl and Countess Howe. Among the other guests were: the Chief Constable of Bournemouth, Capt. Bennett; Alderman A. H. Little, and the Commandant of Blandford Camp, Lt.-Col. Sherman, R.E.M.E.

In his speech proposing the toast of Motor Sport, Earl Howe said that the sport had never been so popular in this country as it is now. Before the war, in one Monte Carlo Rally, there were twelve British competitors; this year, for the seventy entries allocated to this country, there had been no fewer than six hundred applications. Before the war, the Royal Automobile Club issued about one thousand competition licences a year; in 1950 they had issued more than five times as many.

Turning to racing, Earl Howe said that airfield events were being held in many parts of the country, and were a reasonable substitute for the real thing, which is racing on normal roads. They did have one serious disadvantage, and that was that they encouraged a slovenly form of driving because of the width of the track and because drivers knew that if they did make a mistake they were unlikely to hit anything. In consequence, when they went abroad and took part in road racing, they were at a disadvantage.

When the Blandford circuit first came into use he welcomed it as the only place in Britain where a driver could gain experience. Earl Howe said that he considered this track to be a really good one, and he deplored in strong terms the remarks which had been made about the Blandford circuit and about this Club. These remarks had been made by people who knew very little about motor racing, but they had unfortunately received very wide publicity. Those who knew all the facts knew that this censure was unjustified, and Earl Howe concluded by saying that he was very glad to learn that there was every possibility of racing at Blandford being allowed again in 1951. As may be expected, these remarks obtained a very warm reception from everyone present.

D. B. Tubbs proposed the toast of The Club in one of his usual amusing speeches, although he was serious long enough to say that a club which doubles its membership in 1949, and then doubles it again in 1950, has achieved something. He pointed out that the West Hants and Dorset C.C. is the only territorial club in the country to be granted an International permit for its race meeting. Another point he made was that although the club holds a full-scale race meeting, and in the Knott Cup, organises one of the few classic trials, it also caters well for the member with an ordinary car. The Victor Ludorum Trophy for 1950 was won by Peter Walters in a perfectly normal Morris Minor, because he competed in every event the club ran that was suitable, and so amassed more points in the year than those who had run more spectacularly in one or two races. The Club's President, Mr. G. R. Hartwell, replied to the toast.

The toast of The Guests was proposed by Mr. B. Peters, who said that whatever the Club had done had only been possible because of the co-operation it had received from many people: the military authorities, the local authorities, the Press, and from those, especially Mrs. Reea Deacon, who had helped financially in the past when the Club's ambitions had been greater than its bank balance. In reply to this, Alderman Little said that the Bournemouth Corporation would do everything in its power to help when it could. "For Rally special tests," he said, "where is there anything better than the Undercliff Drive?" [Such official support for motor sport is extremely helpful and encouraging.—Ed.]

After the speeches, Mrs. Milnes presented the prizes won during the past year, and the evening finished with dancing until 1 a.m.

Hon. Sec.: R. R. Mountford, 606, West Cliff Road, Bournemouth, Hants.

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THE 1950 B.R.D.C. AWARDS

The Committee of the British Racing Drivers' Club has made the following awards for 1950:—

The Club's Gold Star for Road Racing goes to 21-years-old Stirling Moss, whose 1950 victories include winning the *Daily Express* 500-c.c. Race in a Cooper and the Tourist Trophy race with a Jaguar XK 120. He drove a 2-litre H.W.M. in many Continental races with considerable success, notably in the Grand Prix of Bari, where he finished third to Farina and Fangio, both of whom were driving Alfa-Romeos.

The Richard Seaman Trophy, presented to the club this year by George Monkhouse for annual award to the British driver gaining the greatest number of marks on the Gold Star marking system in foreign races, also goes to Stirling Moss.

The E.R.A. Club Trophy, awarded annually to the British driver who, driving a British car, has put up the most meritorious performance in an international road race run outside the British Isles, has been awarded jointly to George Abecassis and Lance Macklin for their performance at Le Mans, where they were co-drivers of the Aston-Martin which tied for first place on handicap.

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DECEMBER QUIZ

For the first time since this pictorial bi-monthly quiz was started we seem to have stumped everyone. Not a single reader recognised the car shown in last month's issue. That is not to say that they didn't try! By far the largest preponderance of attempts specified an early Rolls-Royce, one reader even hoping that we had unearthed a picture of a presumably experimental 1½-litre model, while another voted for the 1911 Brooklands Rolls-Royce, which was, however, a much more streamlined affair. Next in popularity were Napier and Lancia, and we admit the early Lancias of the Trikappa era did bear some resemblance. Other makes specified were Hispano-Suiza, Sizaire-Berwick, Isotta-Fraschini, Darracq, Bignan, Ceirano, Opel, Vinot, D.F.P., Itala, A.B.C., Mercédès, La Buire, Crossley, Diatto, Vernon-Derby and Berliet—of which we can see a likeness to the last-named!

In fact, the car was a 1917 Stutz "Bulldog," which was a rarer animal than the Stutz "Bearcat" of roughly the same period. The photograph was sent to us by Mr. W. H. Barnes, who says that the car was once owned by T. B. André and that it had a 40-h.p., four-cylinder Winconsin engine, back-axle gearbox, a top gear of 2½ to 1, a 48-gallon fuel tank in the tail and a self-starter that really worked. The small brakes apparently limited the performance potentialities.

ODDS AND ENDS

W. E. "Wilkie" Wilkinson, late of Bellevue Garage, Rotol and Parnell's racing shop, has settled down in Edinburgh in association with David Murray in acquiring Merchiston Motors, 12/13, Merchiston Mews, Edinburgh. Specialising in Rolls-Royce and Bentley repairs, "Wilkie" and Murray hope also to open a racing shop in the old Bellevue tradition, which will be good news for a great many competition drivers who remember the results achieved by Wilkinson before the war.

* * *

Vauxhall Motors announce that the price of their Wyvern and Velox saloons was increased by £20 last October, making the present prices, £395 (plus £110 9s. 5d. p.t.) and £450 (plus £125 15s. p.t.), respectively.

* * *

As Leslie Johnson, Stirling Moss (Mk. VII Jaguars) and C. Glenie (Austin) are unable to start in the Monte Carlo Rally, J. A. McLaughlin (Riley), C. F. Bartlett (M.G.) and E. H. Channon (Morris) take their place. There are thus 20 British makes entered. Sixty-four of the British entries are scheduled to start from Glasgow, four from Monte Carlo and two from Lisbon. St. Christopher be with them all!

* * *

Stirling Moss has accepted a directorship of the Kieft Car Construction Co., Ltd., and is likely to be seen frequently at the wheel of Kieft cars in the coming season's races.

HANDLING QUALITIES

by

R. C. SYMONDSON

A Well-balanced Survey of How Fast Cars Should Steer and Corner.

MORE and more frequently do we meet the expressions "understeer" and "oversteer," and it seems doubtful whether some people who freely use these expressions understand what they mean. One might indeed rudely assert that a shocking lot of nonsense has lately been talked and written about these characteristics.

Before going any further, therefore, let us attempt to define over- and understeer briefly. If a car is proceeding straight along a level road in no side wind and it is pushed sideways by a giant finger applied to its centre of gravity, it may turn towards the giant; it is then said to "oversteer." If it turns away from the push it is said to "understeer." A car which understeers tries to regain its former course (not its former *track*) if it is deflected therefrom (by bumps, by the driver turning the wheel, or by a side wind—though in the last case the giant's finger acts through the centre of [wind] pressure not the c. of g.). A car which understeers is, therefore, directionally stable and is easier for the driver to control than one which oversteers and, therefore, requires constant steering wheel movements to keep it on its desired path.

Now it is by no means unknown for a car to understeer on the straight, but to oversteer when cornered fast. In this case the designer has built into it sufficient features to ensure that when running straight the car will try to continue in a straight path, but has neglected to allow sufficiently for the fact that under severe cornering conditions the car will roll, leaf springs will bend sideways, shackles may do the same, rubber bushes will deflect and in general the location and direction of the road wheels will be distorted from their designed positions to an extent and in a direction sufficient to make the car try to turn a sharper corner than the driver's movement of the steering justifies. Cars which are a handful at speed on the straight but which corner well can also be called to mind, and these illustrate the opposite effect, *i.e.*, they oversteer on the straight and understeer on corners.

Of course, skidding is not in itself anything to do with the phenomenon under discussion. It is a matter of adhesion; a car which skids its tail round under the slightest provocation is a nuisance, but, until the breakaway occurs, it may well be an "understeerer." Cars with no differential provide a good illustration of this.

It may be worth while to see if it is possible to lay down a list of desirable handling qualities for all cars. The cognoscenti and others may interject "*understeer*" and "*oversteer*" at appropriate intervals down the list.

(1) A car must go straight without undue attention at all speeds and on all surfaces.

(2) Road wheel reaction at the steering wheel must be no more than very slight.

(3) Backlash at steering wheel must be almost non-existent. (How lamentably few makers achieve this!)

(4) Steering must be reasonably high geared (very low gearing is dangerous in an emergency, apart from other considerations). Terms of reference relating *turns of steering wheel to deflection in* degrees of road wheels are called for: the old "number of turns from lock to lock" is inadequate owing to variations in lock on different cars.

(5) Steering must be reasonably light. Again, accurate terms of reference are called for, *e.g.*, foot pounds at steering wheel rim required to deflect road wheels to produce a given radial acceleration at a given car speed.

(6) Steering should have slight but not excessive self-return action.

(7) Steering must be positive at all speeds. To the driver there must be no apparent "spring" in the steering gear as a whole. Nor must he find it necessary to move the steering wheel appreciably further to deflect the car a given amount when travelling fast than he does when travelling slowly; nor, again, must he find that a quick movement of the steering wheel fails for an interval of time to affect the course of the car.

(8) The steering must naturally never, never wobble or shimmy or tramp. It should be unnecessary to "wrestle" with the steering wheel in order to make the car hold a desired course on a bend.

(9) The car should not roll appreciably. Rolling is always uncomfortable and, if not actually dangerous in an emergency, will spoil a car's ability to "dodge."

(10) The car must have good adhesion, *i.e.*, not skid easily. The back end should break away just before the front end does so—but *never the reverse*, except perhaps under very heavy braking.

(11) The car must remain docile and controllable when the driver has made a misjudgment, *e.g.*, coming too fast into a rough and badly cambered bend.

(12) The car must be able to "dodge" under the driver's control, *e.g.*, the car as a whole must react quickly and controllably when the driver swerves.

(13) The car must not feel "reluctant" to go round corners. Nevertheless, as the car is cornered faster (*i.e.*, as the "breakaway" point is more closely approached) the turning force required at the steering wheel must slightly increase. On no account must the driver find it necessary to do any "unwinding" of the steering wheel when the required rate of turning has been established. (It is here assumed that skidding has not been provoked.)

(14) When the car skids its rear wheels, it must be easy for the driver to correct the skid without calling for frenzied work. The car should not stop skidding suddenly nor with a lurch; nor should it have a *propensity for* "skidding the other way" as soon as the initial skid is corrected.

It will probably be fairly well agreed that we all want handling characteristics such as the foregoing. Many of them are interdependent, quite naturally. A good many of us know too that a very few of the cars produced in the "pre-soft springing" era could match up very well with these requirements (all right—I admit I am a Bugatti owner!) Of the remainder, few were very seriously unsafe because wheel travel was strictly limited, especially at the front end of the car.

But now soft springing, with big lightly damped road wheel movements, has come to stay, and there is no question that both comfort and road adhesion at high speeds have in general improved as a result. The problem, therefore, is: can our desirable handling qualities be incorporated in a car with modern suspension? So far, with horribly few exceptions, designers have apparently been obsessed with the very real danger of producing a car with very soft springs and oversteering characteristics and have, therefore, provided us with unresponsive machines with spongy feeling steering—cars which have to be dragged round corners. They have thus produced safe and well-sprung cars, but have robbed us of much—indeed, far too much.

Various devices have been adopted by designers to ensure "understeer." One of these is, when using half-elliptic rear springs, to tilt the spring upward towards the rear. Thus when the car rolls the "outside" end of the axle is pulled forward as it rises: the inside end at the same time is pushed backwards as it drops. The axle is, therefore, pushed out of line in a direction which tries to prevent the car going round the corner. Another such device is to arrange the steering "geometry" so that when a front wheel rises on "bump" it turns slightly outwards and when it drops on rebound it turns slightly inwards. Thus when a car negotiates, say, a left-hand corner and commences to roll, the outside front wheel turns, without instructions from the steering wheel as it were, slightly to the left. The inside front wheel similarly turns slightly to the left and the car, therefore, tries to straighten direction until the driver either applies more lock or slows down so that the car ceases to roll.

There is obviously much more than this in the design of the complete car affecting handling characteristics. But still, some of us may dare to think that tricks of this sort are rather beastly and, further, we may wonder whether the rapid tyre wear frequently experienced with post-war cars can be partly caused thereby. Especially as we are told that the lateral scrub of the front tyres on the road due to track variations with most modern suspension linkages is nothing we need worry about (though perhaps we do wonder about this too).

If the best of the "cart spring" handling characteristics could more frequently be combined with the modern "flat ride" I think a lot of us who are interested in driving would be much happier. As a step in this direction could someone whisper to design staffs that whilst we agree that understeer is better than oversteer, nevertheless and notwithstanding, understeer is a bad fault and is one from which post-war cars suffer?

3,000 Miles With a 2½-Litre Riley Drophead Coupe

T. G. Moore, at one time Managing Editor of "Motor Sport," tells of his Experiences with a much-discussed British Car.

SPORTS-CAR drivers appear to be divided into two camps, those who favour the flexible springing and easy riding which characterise many of the post-war models, and those who prefer the firmer ride and the more direct steering of the vintage and pre-war eras.

My own problem was to find a modern replacement for a pre-war 3½-litre car, with similar performance, greater economy and the advantage of i.f.s. The post-war 2½-litre Riley appeared to possess all these characteristics, and when the drophead model was announced I decided to take the plunge.

I was lucky in obtaining delivery of one of the first coupés to be released for the home market, and though the car seemed rather small in comparison with my old car, I felt well satisfied with the lines and the general finish. The tan-coloured hood affords a pleasant contrast to the medium green of the bodywork and the light brown leather upholstery and body trim. The facia board and the window rails are finished in walnut veneer, with two useful interior lights. No door pockets are fitted but there is a parcel shelf under the facia board running the whole width of the car. The v-shaped windscreen, unfortunately no longer fitted with a panel which can be opened, gives a wide field of view, and both front wings are visible from the driver's seat. All controls come readily to hand, and the steering column is adjustable for length.

First impressions of the car on the road were rather unfavourable, as the steering was very heavy and the springing harsh. There was, however, a steady improvement in both these respects after the first 500 miles. The engine was partly run-in when delivered, and it required considerable restraint to keep the speed down to 40–45 m.p.h. The engine loosened up steadily as the miles went up, but best results were not obtained until the car had done 3,000 miles.

With 600 miles on the "clock," my wife and I took the Riley over to the Continent and there covered over 2,000 miles, touring in Holland, Germany and Denmark. The neat lines and compact appearance of the car made a good impression everywhere we went. School-children in all three countries seemed to be intrigued by the three letters on the number-plate and also on the A.A. plaque. In towns and villages everywhere we were, indeed, greeted by chants of "M-M-N, G-B.M."

Fast straight roads in all three countries gave one a good opportunity of appreciating the car's wide speed range. With the hood down there was no more effort or impression of speed at 80 m.p.h. than at 40, and the engine is well silenced at all speeds. With the hood up there is a fair amount of wind noise at speeds over 70 m.p.h., probably caused by the external hood-irons, which project from the otherwise smooth lines. The highest speed attained under substantially neutral conditions was a speedometer 94 m.p.h., which I estimate as an actual 87–88 on the road. With high-octane fuel or the addition of a proportion of benzol other owners tell me they get a genuine 90 m.p.h. The speedometer was 4 m.p.h. fast at 60 m.p.h. and 6 m.p.h. fast at 80 m.p.h.

Most of the main roads encountered were in good condition, but we struck an unpleasant section of treacherous pavé, known to British Army drivers as "Black Cobbles," between Hanover and Hamburg. We stopped here to give help to a Dutch driver whose Citroen had been swept off the road by a skidding lorry, and then set off as fast as we dared to the nearest town in order to call up an ambulance. Most cars were keeping their speed down to a steady 30 m.p.h. on the slippery wet roads, but with the Riley it was possible to exceed 55 m.p.h. without getting into difficulties.

Back once again in England, the emphasis turned from smooth high-speed touring to general handiness on twisting and often congested roads. Here too the Riley showed up well. The car corners steadily and holds the exact line required, helped occasionally by a touch of throttle to neutralise the under-steering tendency of the suspension. The gears are obviously there to be used, and make it easy to attain a high average speed, with an encouraging surge of power from 3,000 r.p.m. upwards.

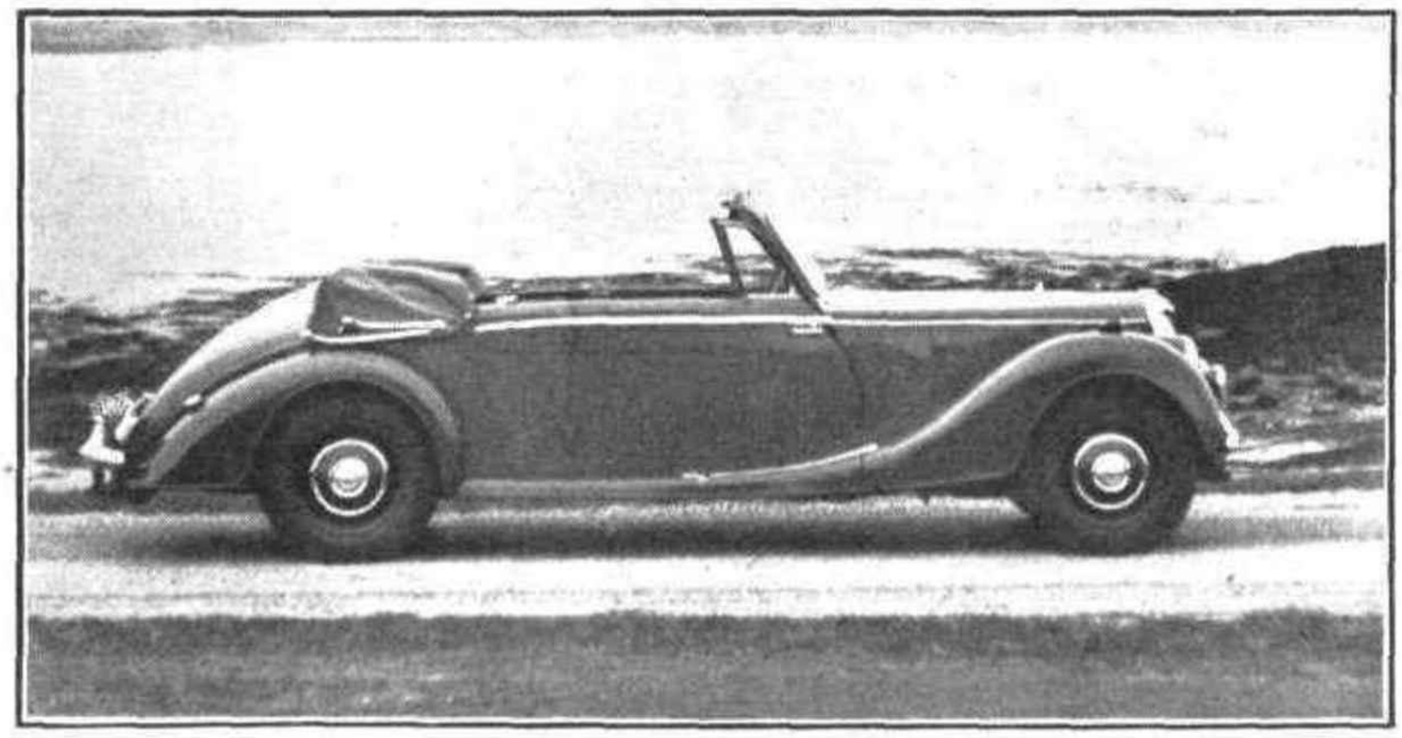
The top-gear performance is quite reasonable for a four-cylinder sports car, and the engine pulls smoothly down to 20 m.p.h. On "Pool" one cannot expect much acceleration from that speed, but from 40 m.p.h. one gets a good response without bothering to change down. A local main road hill with two bends and a gradient, according to Tapley, of 1 in 13, can be climbed comfortably in top gear.

The valve gear tends to be noisy if not kept properly adjusted, and there is a certain amount of engine movement when the engine is idling. On the road these effects are no longer noticeable, and from 40 m.p.h. onwards, except for a mild engine period at 2,200 r.p.m. (45 m.p.h. in top gear), the engine is as smooth as a "six."

The engine will run up to over 5,000 r.p.m. without valve bounce, but it is wise to keep down to the maker's suggested maximum of 4,700 r.p.m. At these revs. the maximum speeds in the gears are 24, 41, 63 and 90 m.p.h.

A rev.-counter can be supplied at extra cost, and would prove a good investment for anyone who intends getting the full performance out of the car.

In the Continental countries already mentioned, the petrol is, if possible, slightly worse than English "Pool," and the Riley pinked freely whenever the throttle was used at all vigorously. On returning to England



The Riley in a summer setting. [Photograph by T. G. Moore

the local service station adjusted the contact breaker to give a slightly smaller gap, which has reduced the trouble without apparent falling-off in the performance. "Running-on," a fault common in post-war high-efficiency engines, is still irritating, and it seems that nothing can be done about it on present-day fuel.

One of the best features of the car is the gearbox, with its short, stiff lever only six inches below the rim of the steering wheel. Synchromesh is fitted on top, third and second gears, but does not interfere with double-declutching. Third to top is a semi-racing change when required, and a quick snick from top to second is a great help in getting clear of traffic congestion. On earlier "2½s" the clutch tended to drag, causing grating noises if the pedal was not fully depressed. This trouble has been overcome on the latest models, and the clutch frees itself with a short movement.

The brakes are quite adequate to the speed of the car. A fair amount of force is required to get the full effect, but in use they have proved reliable, with no tendency to swing. The braking distance from 30 m.p.h. was 33 feet.

As has already been said, the suspension is firm, and the car can be cornered really fast without any trace of rolling, and without any tendency to hop on corrugated surfaces. Springing is if anything improved with four passengers or the equivalent weight of luggage. Tyre pressures are rather critical and need to be checked weekly.

The steering is high-geared, about 2½ turns from lock to lock, and combined with a strong castor action and wide-section tyres makes for heavy work when parking or on a long, fast journey over twisty roads. You get quite a jar through the steering wheel if you hit a pot hole at speed, but minor irregularities and corrugations are not felt. On balance, the feeling of control and directness between the steering wheel and the road more than compensates for the extra exertion on corners, and enables the driver to place his car exactly where he wants it alike at full speed on the straight and on fast bends.

The driving position is comfortable, with all controls within easy reach and with ample head room. In summer the front of the car gets warm, even with the hood open, particularly so the driver's left foot, which rests on a platform on the clutch casing. For some obscure reason scuttle ventilators are not fitted on the coupé body, but can be obtained from the makers. The alternative is to have an air-conditioning outfit installed.

The back seat is wide enough to seat three people at a pinch, and is fitted with a movable central arm-rest Leg room is quite reasonable, but the centre of the floor is obstructed by the propeller-shaft tunnel. Head room for a six-foot passenger in the back seats is about one inch. Separate winding windows in the rear quarters give a good field of view even with the hood erected.

A useful assortment of instruments is provided, grouped on a compact panel on the dashboard. A rev.-counter with a small clock embodied in the dial can take the place of the large clock fitted as standard. The water temperature keeps steady at 75–80 degrees. Oil pressure drops to about 40 lb /sq. in. during fast running, but the oil consumption remains constant at 2,500 m.p.g. The petrol gauge with its three indications of "full," "half," and "empty" is unreliable for the last quarter of its range. The instrument lighting is unnecessarily strong, and the warning light for the "high" position of the head-light beam was positively dazzling until I modified it with some of my wife's nail varnish.

The head lamps give a driving light sufficient for a safe 65 m.p.h. The near-side light is fitted with a two-filament bulb, which supplies the dipped beam. A similar lamp can be fitted into the off-side head lamp, and thus by plugging in or out one of the connections in the wiring harness one can change in a few seconds from one dipping beam to two, a great convenience when visiting the Continent. The fog-lights are wired to a three-way switch, allowing one or two to be used as required.

Petrol consumption varies widely in accordance with the way in which the car is driven. Steady running at 40–45 m.p.h. gave 26 m.p.g., high-speed touring at 60–80 m.p.h. brought it down to 19–20 m.p.g., while fast local runs in hilly country reduced it further to 15 m.p.g. The tank holds 12½ gallons, but the inaccuracy of the gauge makes it unwise to exceed 200 miles before refilling.

The drophead body proved a great joy when touring abroad. The hood can be folded down in less than a minute, and fits flush into a well behind the back seat. When putting it up I had at first some trouble in hooking it back in position, but found that by first tensioning one of the external hood-irons it fitted readily into place. The windscreen is supported by an extension of the front body panels, which come far enough back to house a pair of sun-visors. The hood is located on the windscreen panel by a rubber-bushed pin, and locked in position by two substantial carriage catches. The hood was well tested in some of the heavy thunderstorms encountered in Denmark, but remained watertight under all conditions.

When the hood is down it occupies part of the luggage boot. With the boot lid closed there is only room for one large suitcase and a number of smaller packages, but by fitting straps and running with the lid half open the capacity could be greatly increased. My own solution is to cover the back seat with a canvas sheet tailored to fit, which allows six substantial suitcases to be carried well within the car's wheelbase. The spare wheel is carried in a separate compartment.

Four external jack sockets are fitted to the chassis, and so wheel-changing can be carried out with the minimum of disturbance and dirt.

A last word on maintenance. Although the bonnet is pretty full of engine, the accessories, coil, petrol pump and so forth are so placed that they can readily be reached by opening one or other of the top bonnet panels, and valve clearances can also be checked without difficulty. The two top panels, and if necessary the side panels also, can be removed, giving access to all parts of the engine. The oil-filler and the dip-stick might with advantage have been extended higher up, but with care can be reached without soiling the clothes. Chassis maintenance is confined to the eight greasers on the steering and the front suspension, one on the water pump and the three nipples on the transmission. These latter are best tackled with the car over a pit or on a garage lift.

After four months' use under varied conditions I find that the Riley does provide what I want, a very useful turn of speed and a good response to driving technique on the open road combined with easy starting, simple maintenance, and an absence of fussiness in traffic. As a dual-purpose car it would be hard to beat, and at present-day prices offers distinctly good value for money.

THE 2½-LITRE RILEY DROPHEAD COUPE

Engine : Four cylinders, 80.5 by 120 mm. (2,443 c.c.). R.A.C. rating, 16.06 h.p.
Valves : Overhead at 90 degrees. Push-rod-operated from two camshafts.
Ignition : Lucas coil.
Carburetters : Two S.U., Type H.4.
Petrol pump : S.U. electric.
Electrical system : Lucas 12 volt.
Clutch : Single dry-plate.
Gearbox : Four-speed-and-reverse.
Ratios : Top : 4.11 to 1
3rd : 5.83 „ „
2nd : 8.86 „ „
1st : 15.0 „ „
Speed at 1,000 r.p.m. in top gear : 19.5 m.p.h.
Suspension : Front wheels : Torsion bars with transverse links. Rear wheels : half-elliptic.
Steering : Rack and pinion.
Brakes : Girling. Front wheels : two-leading shoe hydraulic. Rear wheels : mechanical.
Tyres : Dunlop 6.00 by 16.
Wheelbase : 9 ft. 11 in.
Track : 4 ft. 4¼ in.
Weight : 28 cwt.
Ground Clearance : 7 in.
Acceleration on "Pool" Petrol :
0–50 m.p.h. 13.6 sec.
0–60 „ 18.6 „
0–70 „ 26.5 „
Price : Drophead coupé : £995. plus £227 2s. 9d. purchase tax.
Makers : Riley Motors, Ltd., Abingdon-on-Thames, Berkshire.

A 100-M.P.H. TRACK?

The Motor Industry Research Association is emphatic that Britain needs a track where sustained speeds of 100 m.p.h. can be accomplished. So it proposes to spend £150,000 on modifying the Lindley Proving Ground into a suitable track, asking the tax-payer to contribute £50,000 *via* the Government. What a pity the Industry took no steps to save Brooklands, which cost the country nothing, but the late Mr. H. F. Locke King some £250,000 of his own money in 1906/7.

VINTAGE VEERINGS

***

THE vintage "high spot" at the close of the 1950 season was the Vintage Sports Car Club's party at Bisley. It is one of those fixtures which should be a dismal failure yet is always a tremendous success. Only real enthusiasm and a very strong desire to compare one another's vintage cars could bring people to this cold, damp, cheerless venue in late November. This year the entry was a record and it is significant that, although post-1930 cars were permitted to take part in the series of driving tests that characterise this meeting, the ratio of vintage to non-vintage (I nearly wrote "vintage to horrid") was 54/20. In the up-to-1½-litre vintage class five Austin Sevens were down to do battle against three "11.9" Lagondas, two Bugattis, two Rileys, a Morris Minor, a Frazer-Nash, a "12/50" Alvis, an Alfa-Romeo, a Standard, a Lea-Francis, a Humber and Wrigley's "8/18" Talbot, the last-named proudly entered as a *Clement*-Talbot. Moreover, one of the Rileys was a 1923 disc-wheeled 11-h.p. two-seater, and one of the Bugattis none other than Peter Hampton's 1910 Type 13, the immaculate condition of which we marvel at anew each time we see it (but what a pity someone has at some time walked on its polished copper petrol tank).

The sensation of this category was Denne's 1912 Humber, a stark two-seater in "early racer" trim and magnificently turned out, although, to be honest, we do not know whether it is a genuine Brookland's job or merely a replica.

The over-1½-litre vintage entry comprised mostly old favourites, with a preponderance of Lancia Lambdas, of which Murray Austin's bright red example did its manoeuvres very slickly indeed. The oldest car present was Hutton Stott's 1903 Lanchester and one hopes that its health and constitution are up to this kind of thing. There was a newcomer, Sturgeon's 1924 3½-litre Lorraine-Dietrich tourer, a compact car for its engine size, which had been discovered under a dust sheet in Isleworth, where an old gentleman of 93 had had it in store for twenty years or so.

No one takes the tests at Bisley too seriously and in the fog of November 26th you did not always notice that they were taking place. We did, however, notice the steady ascent of the test hill by Cuthell's 1912 Alfonso Hispano-Suiza, in contrast to which Dr. Ewen stalled the engine of the 1908 Itala at the re-start. Turner's unlikely-looking Sunbeam Twenty saloon did this test very competently. In acceleration the "8/18" Talbot was obviously superior to the "11.9" Lagondas, of which two were 1922 specimens, and Wood did prodigious things with the gear-lever of the 1923 Riley. Hutton-Stott should be able to earn a good living with a barrel-organ should the circumstance arise, for starting his aforementioned Lanchester on the handle is excellent training, unless on this occasion the compression had escaped via one of the "tweakers"! Incidentally, drivers were required to sprint quite a long way to their cars in this quick-starting test and rumour had it that the R.A.C. steward was apprehensive lest drivers should develop heart failure while accelerating away.

As we have said, the tests are really only subsidiary to the general party-atmosphere at a V.S.C.C. Bisley (the results, however, appear in the proper place elsewhere in this issue) and interest is lent by the intriguing vehicles that gather in the parking places. This time we encountered a Type 40 Bugatti with Jarvis two/three-seater boat-tail body reminiscent of a "Wensum" "30/98," two slim Amilcars cocking-their-cowls at a nearby much-chromiumed M.G., a 45-h.p. Hispano-Suiza saloon, Kent Karslake's 27-h.p. saloon of the same famous make, an "11.4" Humber all-weather, a "14/40" Humber saloon, and a very "real" blood-red "2.3" Alfa-Romeo, amongst others. Our own transport was provided by a 1926 Delaunay-Belleville limousine which is very massively made yet, once we had warmed-up its carburetter and selected a low-enough cog, proved able to pull itself up the steep hill onto the road with more aplomb than we had anticipated, notwithstanding its own great weight and the fact that two families were snugly enseonced in its rear part. Its brakes worked quite well, too, the pedal not only activating shoes in ribbed drums on the front wheels but also others inside a brake on the transmission. Moreover, this stately carriage, for all its wooden wheels, boasts centre-lock hubs, an o.h.c. engine, and the forerunner of all subsequent versions of quick-action radiator filler caps.

So pleasant memories of Bisley 1950 linger, not the least of the fun being the very earnest "vintage conversations" heard on all sides during the afternoon: "Of course, a year later they had *detachable* wheels, old boy," "I have a set of low-pressure wheels for ordinary occasions but you will see (this with fervour) that I'm on my high-pressures today," and "I'm not so sure, though, that you can take a really pretty girl out in a vintage car"—this last after a glance inside Bradford's Austin A90.

* * *

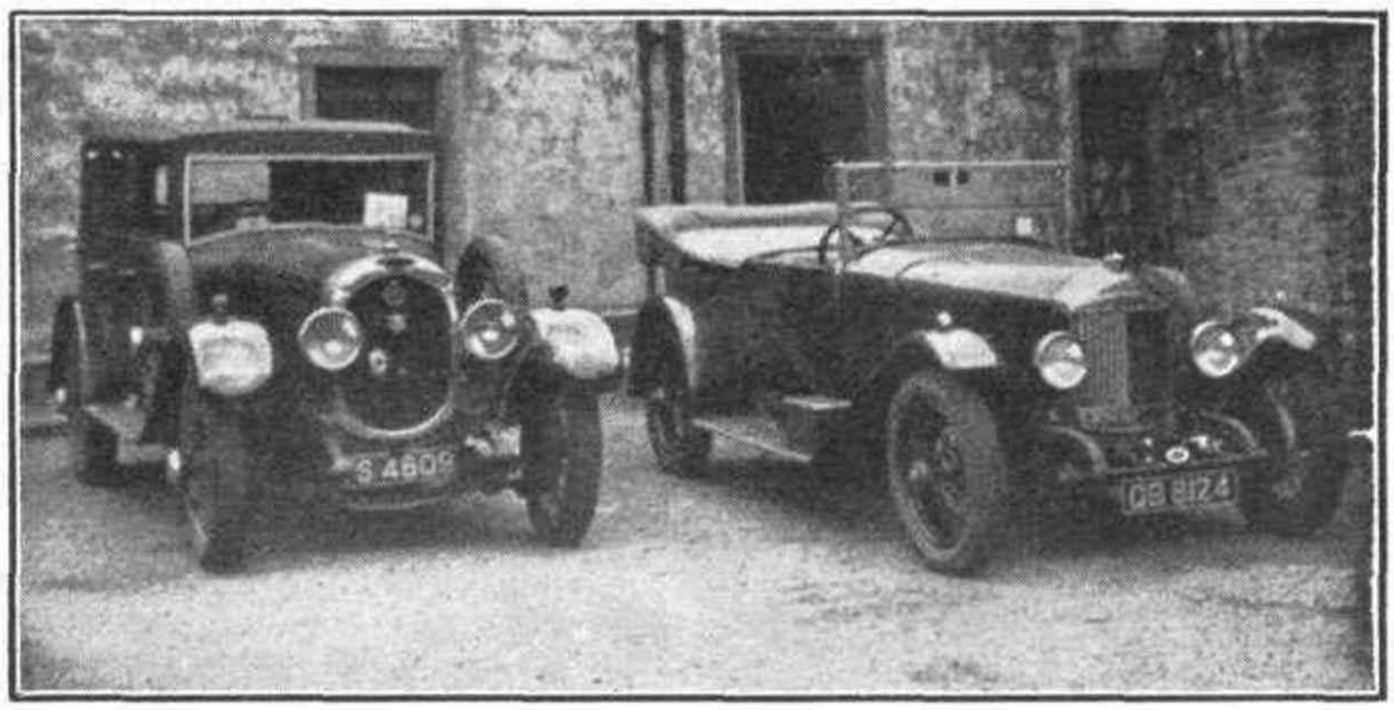
"Yet, despite all this, the Twenty Rolls has something which modern cars seem somehow to lack, for it had *character*. It was calm and assured, as majestic in performance as an innings by George Gunn—quiet, unhurried, precise. I suppose it did occasionally break down, just as I suppose that George Gunn did occasionally get out for a duck, but I am glad to report that I have never been present on one of these melancholy occasions . . ." H. E. Blyth, writing in *Men Only* of his 1926 Hooper-bodied Rolls-Royce two-seater, bought in 1934 for £200.

* * *

And now let's deal with an accumulation of vintage mail, shall we?

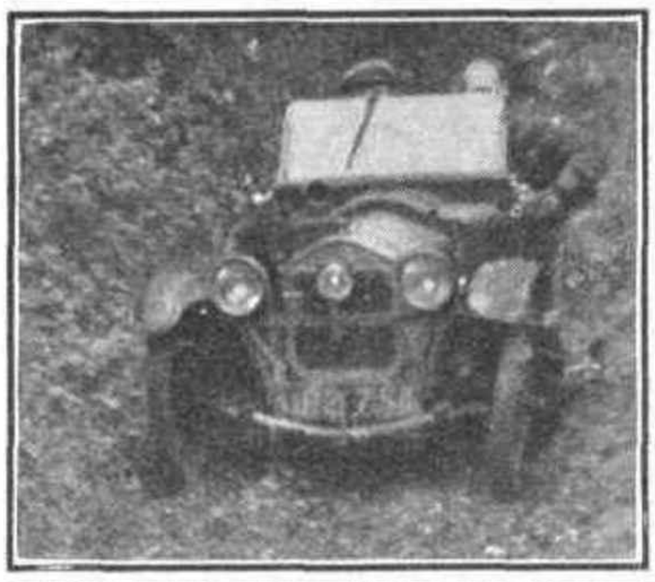
Sir,

I was very interested to read in "Vintage Veerings" for September that Barry Eaglesfield has had to sell his



[*Photograph by George Brooks*

VINTAGE FRATERNISATION.—Scott-Moncrieff's 1924 Chenard-Walcker (left) meets George Brooks' 1924 "24/90" Straker-Squire after the latter had motored across Europe from Australia and up to Scotland for this meeting. Note the distinctive radiators.



"WOT'S ALL THIS ABOUT VINTAGE SMALL CARS?"—W. Stiles' 1,080-c.c. i.o.e. 1920 Stellite in the Birmingham U.M.C. October Trial. This little car towed a caravan to Scotland last summer and behaved perfectly, unlike the 'van, which was thirty years its junior

Type 37 Bugatti on doctor's orders and has bought a 1929 "9/28" Humber saloon. Though I can only guess the disappointment to anyone who gives up a fast car for a slower one because of inexorable reasons, I think the choice of one of the "Little Humbers" the best that could be made in the circumstances. I own a similar car a year older (a "9/20" Weymann fabric saloon), and though it is not very fast (66 m.p.h. is the fastest I have gone though 50 m.p.h. can be reached easily; above 50 m.p.h. over long stretches can only be got in good conditions), the accessibility of all its organs, the excellent view forward and to the side, the reliability of the car as a whole will, I hope, compensate Mr. Eaglesfield for the relinquishing of his Bugatti. Furthermore, I fervently hope that in course of time the character of his Little Humber will make him as enthusiastic about his as I am about mine.

One can indeed, as you say in your note, Sir, corner at a steady 40 m.p.h. If, however, one corners at a slightly lower speed and at the same time has the misfortune of the outer rear wheel tyre bursting, thus going into a powerful, uncontrollable skid, as I did last week, all is not lost. I struck the grass bank at the side of the road, having turned completely round, with sufficient force to capsize the car, and then the whole car rolled over and over, finally coming to rest on its side. It is true that the battery on its running board on one side and the spare wheel and the carrier on the other took the brunt (I always wondered what they were for!) but neither the massive timbers of the fabric saloon frame nor the driving mechanism were affected, and the fabric was only badly scratched, so that after righting and the necessary attention given, I was able to drive away.

As I clambered out of a window a minute after the accident, and then sat by the roadside awaiting help, I reflected on the comparative safety of the vintage car, for I had seen an acquaintance killed in precisely similar circumstances in a more modern car with a steel body which had shut up on him.

I am, Yours, etc.,
Harpenden. J. A. WILLIAMS.

[Good! But actually "cornering at 40" should have read "cruising at 40."—ED]

* * *

Sir,

We hear little of Crossleys. I have a 2-litre sports saloon which still gives good service and a hard ride, and should be glad to hear of other owners. If it appeals to anyone, I should also be glad to try to compile a register of this marque.

I am, Yours, etc.,
J. L. FRENCH.
149, Horns Road, Ilford.

* * *

Sir,

Isn't it time the praises of the standard Austin Seven Chummy were sung again? Mine was bought in June as a 1928 saloon and was reconverted to its original tourer body, after which two of us toured Cornwall including the 1-in-5 down into Helford. Since then each week it has done about 100 miles and last Saturday 268 miles including 93 miles to the other side of Bath in just three hours. With a petrol consumption of 45 m.p.g. condescending modern owners can keep their 25 m.p.g. sardine tins. "Chitti-Pop-Pop" gets me there just as fast (well, nearly!).

I am, Yours, etc.,
Wokingham. M. C. P. HEWITT.

* * *

Sir,

I was glad to see the Austin Seven mentioned in your correspondence this month. About two years ago I bought, for £15, a 1925 Austin Seven Chummy tourer. The engine was stripped and fitted with new mains, piston rings and inlet valves and guides. Big-ends and ports, both still standard, received no attention. This car was kept in the open and was used daily; it never took more than two revolutions of the cranking handle to start it, however much fog, frost, etc., was present.

I did several long journeys in it and had no trouble whatever. I took it down to Sussex, 170 miles, and used only six gallons of petrol there and back (340 miles at 57 or near m.p.g.) and ¼ pint of oil! On the journey I had the speedometer at 50 more than once, although the instrument could never have been really relied upon, being belt driven from the cardan shaft. I covered the 170 miles in six hours.

I sold the car nearly a year ago and it now covers a weekly mileage of 240, with the odd long journey thrown in, still it has given no trouble. How many of the modern dollar-grin tinware vehicles will last 25 years—a quarter of a century—and still be reliable and economical?

I am, Yours, etc.,
Worcester. J. WALLACE.

* * *

Sir,

It may be of interest to you that I do my business and pleasure motoring in a 1928 Swift 10-h.p. touring car, which has served me so well for 72,000 miles, and still does not smoke. I have fitted glass sidescreens in place of the original celluloid ones, which has helped the weather-combating properties considerably. At present in the process of restoration I have a 1927 Jowett Seven, with right-hand gear change, and a 1930 Swift saloon, but due to pressure of business I do not expect to get them roadworthy until next summer.

Long live MOTOR SPORT,

I am, Yours, etc.,
JOHN B. ALLAWAY.
Reading.

* * *

Sir,

I had a 1924 Alvis "12/40" (50?) some years ago with separate gearbox, clutch-stop, alloy axle-casing and a leather hood. It was a two-seater with two spare wheels at the back, and it was a constant joy to drive.

I am now the happy owner of my third Singer Junior (*circa* 1927, first registered 1928). It has ¼-elliptic rear springs, torque-tube back axle and divided prop-shaft. She corners very well and is reliable, but has little else in favour.

Although I am intolerant of any imperfection in other cars, I have grown fond of this one despite all its shortcomings. For fellow "impecuniasts" I would certainly recommend this honest low-performance tourer of 7.8-h.p.

I do hope Mr. Kenworthy's bad luck with his first car will not bias him against all cars of the same make for ever. Everything went wrong with my first, and it was a make renowned for dependability.

I am, Yours, etc.,
Teddington. OLIVER GRUGEON.

* * *

Sir,

My car is a 1926 11-h.p. Clyno two-seater. I bought it from a farmer in Gloucestershire, who had it stored (underneath rubbish) in a barn. All that was needed was a new gasket and after a time I got it on the road and have used it every day.

In a run to south Cornwall this summer I did 236 miles (in a day) and it did 35 m.p.g. and used one pint of oil. The wiring is double-pole C.A.V., and the tyres are 4.50 by 19. One of them, which is still on, is an Englebert. Hoping that this is of interest to you.

I am, Yours, etc.,
Llanishen. R. C. R. MARCH.

FILM REVIEW—

TO PLEASE A LADY

A M.G.M. Film featuring Clark Gable, Barbara Stanwyck and Adolphe Menjou.

We referred briefly last month to the M.G.M. film "To Please a Lady." We have since attended the first night of this film in company with members of the B.R.D.C., so we can tell you some more things about it. The most important is that you must see it. The midget racing is all but unbelievable, not because M.G.M. have ruined it, but, on the contrary, because the excellent "shots" of it remind you of how this fantastically closely-fought racing goes on all over the States. In the film Gable takes part in it as a professional driver. He goes on to drive at Indianapolis in the real Grant Piston Ring Special with which Walt Faulkner broke the Indianapolis lap record before the race, at one time getting in front of Mauri Rose—which must have caused fun if Mauri saw the American pre-view! The filming of the 1950 Indianapolis race is excellent and so is that of Faulkner's successful lap record bid before the race; only in this case you have to pretend he is Gable! The final crash which proves to Barbara Stanwyck that her beau is a "white man" has the merit of being convincing. As for Barbara, she is a lady worth pleasing. The really clever feature is the way the producers have adapted the happenings at Indianapolis to Barré Lyndon's story, the Faulkner record lap immediately before the start for example, instead of vice-versa. As a result you see plenty of genuine motor racing. This film is now showing at the Empire, Leicester Square, and whether you see it there, or locally, don't miss it. Of course, if you wait until it comes to your local cinema you will miss the Empire floor show and you shouldn't do that!

W. B.

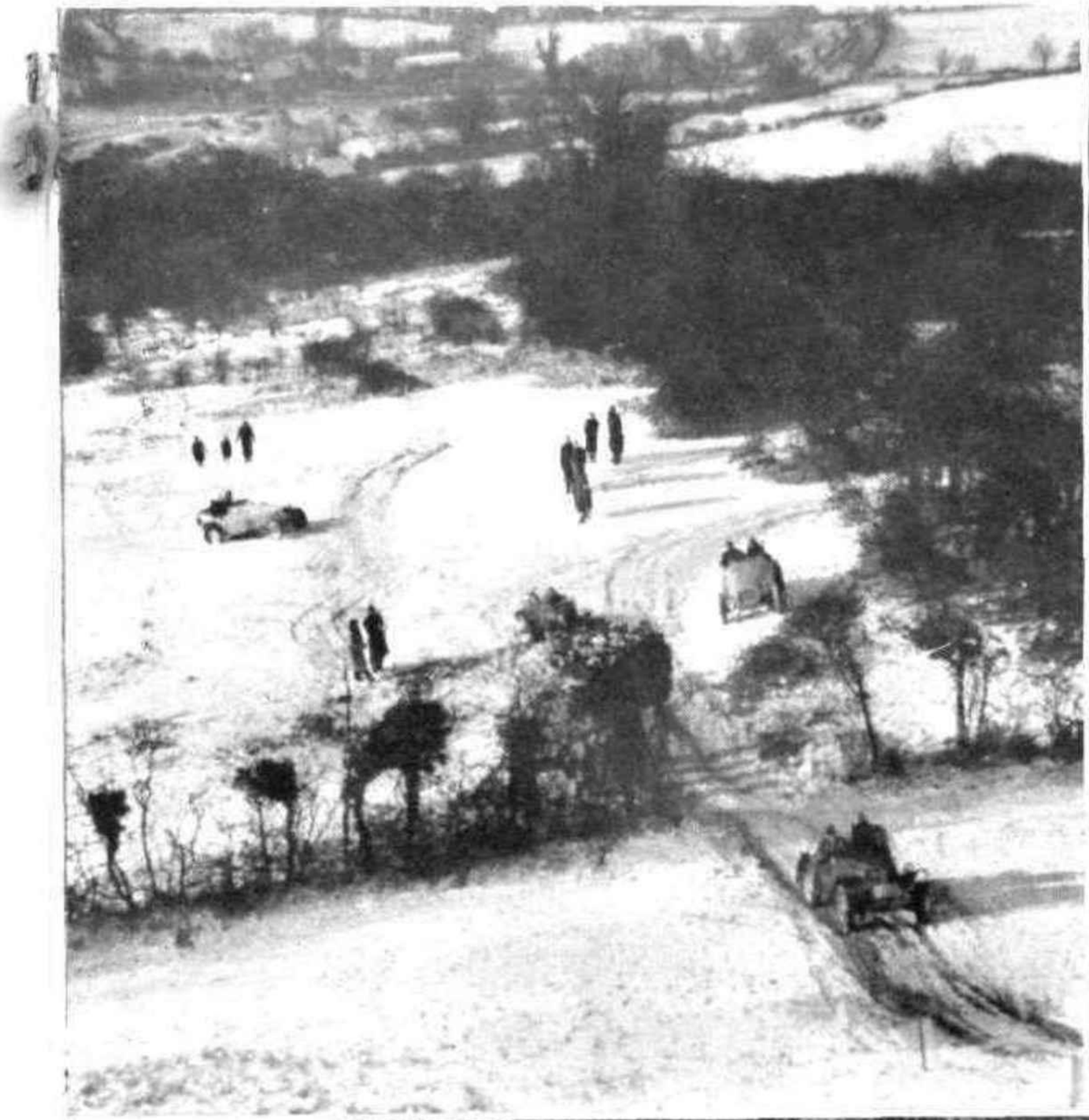
PICTORIAL REVIEW

THE N.W. LONDON M.C. GLOUCESTER TRIAL AND THE R.A.C. CHAMPIONSHIP TRIAL

Left : CHRISTMAS SCENE.—Snow made the approaches to the first four hills in the R.A.C. Championship Trial exceedingly difficult. The severe conditions are well portrayed in this " Christmas scene " secured by the MOTOR SPORT photographer.

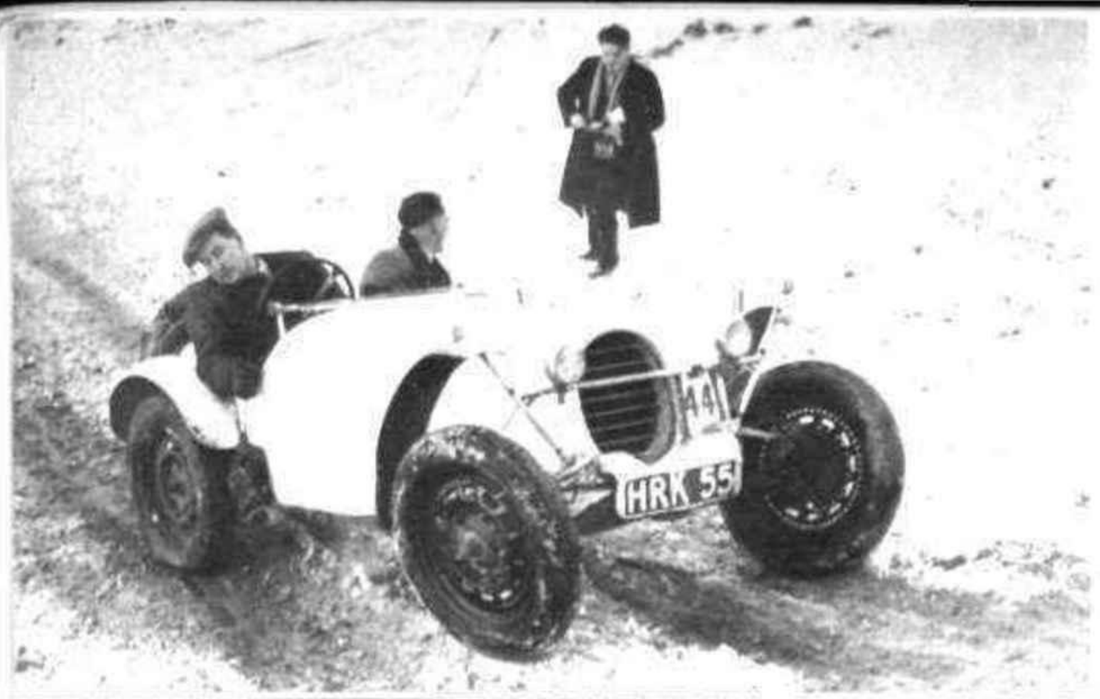
Right : REACHING THE LIMIT of adhesion on " John's Delight " in the R.A.C. Trial is J. D. Sleeman's neat Sleeman Sports. Wharton and Imhof stopped in roughly the same place.

Bottom : CHAMPIONSHIP WINNER SECOND TIME RUNNING.—Ken Wharton, in his new Austin A40-engined Wharton Austin won the 1950 R.A.C. Championship Trial just as, last year, he won it with his Ford-engined Wharton. Note the Ford front axle and suspension, and Morris Minor rack-and-pinion steering of the new car.









RUNNER-UP TO WHARTON.—A. G. Imhof in his Imhof Special coming to rest on "Draper's Two" in the R.A.C. Trial. The blown Ford Ten engine is in the centre of the chassis. Note the drilled front wheels and neat circular radiator cowl.



THIRD PLACE IN THE R.A.C. CHAMPIONSHI fell to R. W. Phillips' Javelin-engined Fairley, he seen on the steep gradient of "Draper's Two." Phillip also gained a First-Class Award in the "Gloucester."



ONSLOW-BARTLETT'S wonderful new rear-engined trials special must have been adequately cooled during the R.A.C. Trial, for its engine is an air-cooled J.A.P. After doing well on most sections the car retired.





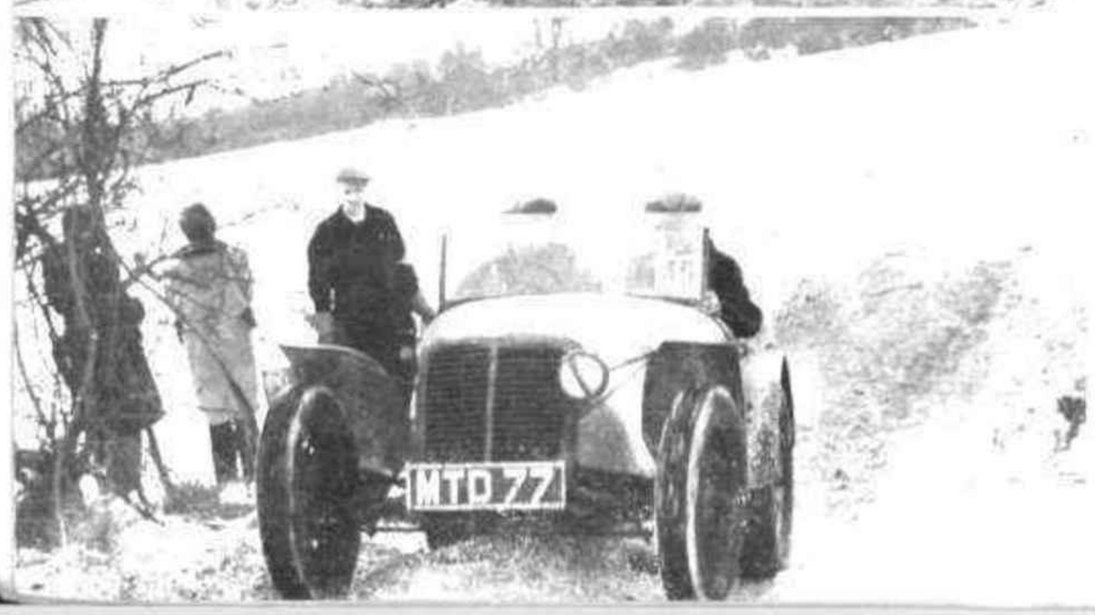
J. E. WILSON'S 1,200-c.c. AUSTIN SPECIAL is here going well in the snowy R.A.C. Championship Trial but it was unplaced in the final results.



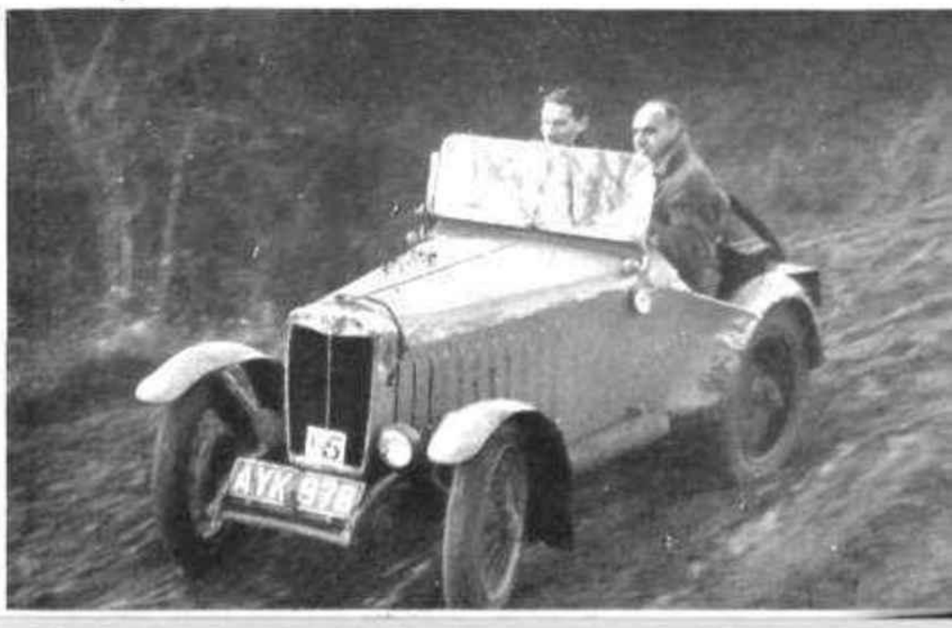
"GASPERS" HELP D. F. H. Cotton and his passenger to combat the cold in the R.A.C. Trial. Their Ford Ten-engined Cotton Special is tackling the "hump" which stopped so many cars at the bottom of "Draper's Two."

GOOD SHOWING! T. C. Harrison's Ford Ten-engined was placed first of the Special Aw

GILBERT BEST can always be relied on to storm trials hills with the best of them in his blown "PB" M.G. Here he is in the "Gloucester," in which he won a Second-Class Award.



UP SHE GOES.—The front wheels of J. Clegg's blown Ford Ten-engined Clegg, which finished tenth in the R.A.C. Trial, clear the "hump" at "Draper's Two."





BEST OF THE THREE competitors from Ireland in the R.A.C. Trial was W. T. Todd. Note his fur hat and the way the spare wheels are accommodated on his 4-litre Humber. He is failing rather early on "John's Delight."



Harford won the Thomas Challenge Cup in the "Gloucester" and ard winners in the R.A.C. Championship.



L. J. OLIVER in his Oliver tackles Cold Slad in the N.W. London M.C. Gloucester Trial and goes on to win a First-Class Award.

NASTY ANGLE through the slime of Cold Slad in the "Gloucester" characterises the passage of G. D. Waldron. His Dellow netted the Team Award with that of Tracey's Dellow and Rawlings' Vanguard.



CARS IN THE "GLOUCESTER" were called upon to attempt Cold Slad with only a very brief run. This picture shows L. G. Evans' Dellow doing so and emphasises the "sticky" conditions. Evans gained a Second-Class Award.



READY FOR THE ROAD BUT NOT ROAD-WORTHY? These cars arrived for the "Gloucester" in this lorry and were unloaded only a short time before the trial was due to start. Opinion is divided on this growing practice of towing or hauling trials cars to the start.



DETERMINATION on the faces of W. H. Waring and his passenger as they tackle the lower part of Cold Slad in the "Gloucester" in the well-known Dellow, which is one of the most potent in the country. However, it wasn't successful on this occasion.



THROUGH COLD SLAD'S GATE and water splash in the "Gloucester." M. Wilde's nice clean Ford Supercharged catches some mud. Only the more skilful got up as far as this.



A TALE OF TWO TRIALS

Cyril Bold Wins the "Gloucester" and Ken Wharton the R.A.C. Championship

THE sport of ascending trials hills is governed by the weather. After many spells of torrential rain the well-run N.W. London M.C. Gloucester Trial, the 32nd of the series, run in the Cotswolds on December 3rd, should have been a "stopper." Overnight frost was probably to blame for the easy state of some of the famous "sections" that graced the 57-mile route. Of 94 entrants, 80 presented themselves at the start at Rodborough Common, some on tow behind nice warm saloon cars, some even in vast lorries, although these latter had admittedly come some distance—we suppose we shall get into trouble if we say we don't like this practice of bringing a special to a trial as if it were a racing car!

We made a lucky choice in spending the day at Cold Slad, because Nailsworth, if still a chassis-twister, was in lenient mood when we looked in on it later, and Fort, Bownham and Ham Mill were not proving difficult. Juniper, too, was comparatively easy and, although Breakheart and Longridge were not so simple, Cold Slad was clearly THE spot.

While waiting for competitors to arrive we were able to reflect on the very interesting cars that are seen on present-day trials. On this occasion Thompson had Wharton's former special, and Beardshaw a replica—or is it *vice versa*?—Imhof his mid-engined special, Smith the former Onslow-Bartlett car—you know, the water-cooled one!—Pentony his re-bodied, well mudguarded Vauxhall/Morris Minor "Cyclops," Michael Lawson the Lotus, Rawlings his Vanguard-engined special, Phillips his Fairley, C. C. Evans the Dacy, Len Parker his rear-engined V8 special. These were joined by newer specials and lots of blown Dellows. The stout Ford Ten power unit propelled at least 56 of the cars entered. Allards and big-engined trials cars seem to have had their day—after all, petrol does cost 3s. 1¼d. a gallon!

The N.W. London M.C. functioned with its customary efficiency, announcing provisional results by 5 p.m., its bi-directional dividing of the entry working well. To return to Cold Slad, where Dennis Dent operated a loud-hailer inter-com., it climbs up a muddy field, snakes through a narrow gate set at a very awkward angle just where there is a deep water splash and meanders up a lane where fearful ruts test chassis and axles to destruction. As we observed, even the local Fordson tractor has its vast rear tyres at zero pressure! At first the hill was greasy, then it dried somewhat, then water came cascading down to embarrass later numbers.

Lots of drivers failed to get out of the first sub-section, but Weston's blown Dumbo proved the hill possible with the first clean ascent, both occupants bouncing in unison. Morrish had wretched luck before this, his blown PB M.G. cutting out momentarily and pausing in the splash; it restarted at once, but had to be deemed a failure.

Mosby's blown Ford Ten followed Western's good example, if anything even more sure, Wilde's blown Ford Ten likewise but less sure, and Harrison's Harford lost way early, but recovered well. Terry sailed up in his Dellow after horrid moments low down, Crump's Marden made it look easy, and Spence's Spence went up beautifully; alas, Mead's blown Allard, making dreadful noises, wouldn't look at it.

Perks, doing a "Raymond Mays" to his Dellow's steering wheel and Cox's special both defeated Cold Slad, and Rawlings actually accelerated up it to such effect that his yellow cap fell into a puddle! After this quite a number climbed clean, Sleeman's Sleeman coming at it fast, but Parker's fantastic affair and Lindon's Morris Eight retired to easier paths, boiling. Biggs' Ford just did it, Vero's Dellow used the "no air in my Dunlops" technique with success (he is Dellow agent at Dulwich) and Evans' Dellow was clean. Not so Jackman's Dellow which spun to a standstill with the speedometer showing over 30 m.p.h., while Imhof blotted his copybook, saying he had selected too *low* a cog. Valve bounce and steaming tyres carried Hinder's S.H.S. just out of the third of the eight sub-sections, but didn't get Pilkinton's Ford quite so high. Towards the end things seemed easier, seven being "clean" in succession and Best's blown PB M.G. really fast. Brayshaw missed his gear in the torsion-bar i.f.s. Brayshaw and Atkinson's bored-out Austin Seven retired with a broken steering wheel. Twenty other cars retired—are trials reverting to their former role of *reliability* trial!

Results:

GLOUCESTER CHALLENGE CUP (best performance of the day): C. L. Bold (1,080-c.c. Bold).

THOMAS CHALLENGE CUP: T. C. Harrison (1,172-c.c. Harford).

COMMITTEE CHALLENGE CUP: K. E. O. Burgess (3,917-c.c. Allard S.).

TEAM AWARD: K. C. H. Rawlings (2,088-c.c. Vanguard S.), G. D. Waldron (1,172-c.c. Dellow s.c.), L. J. Tracey (1,172-c.c. Dellow, s.c.).

FIRST-CLASS AWARDS: E. W. Vero (1,172-c.c. Dellow, s.c.), G. P. Mosby (1,172-c.c. Ford, s.c.), M. H. Lawson (1,172-c.c. Lotus), C. Corbishley (1,442-c.c. C.C.S.), C. E. Crump (1,172-c.c. Marden), E. G. Spence (1,172-c.c. Spence), L. J. Oliver (1,172-c.c. Oliver), A. W. Lilley (1,172-c.c. A.W. Special, s.c.), J. Clegg (1,172-c.c. Clegg, s.c.), L. J. Tracey (1,172-c.c. Dellow, s.c.), R. W. Phillips (1,486-c.c. Fairley).

SECOND-CLASS AWARDS: V. S. A. Biggs (1,172-c.c. Ford), L. G. Evans (1,172-c.c. Dellow, s.c.), N. V. Terry (1,172-c.c. Dellow, s.c.), R. Kemp (1,172-c.c. Kemp), J. Best (939-c.c. M.G., s.c.), R. B. Lowe (1,172-c.c. Dellow, s.c.), E. A. Hay (1,172-c.c. Dellow, s.c.), V. Ostroumoff (1,172-c.c. Dellow, s.c.).

THIRD-CLASS AWARDS: A. G. Perks (1,172-c.c. Dellow), Dr. J. T. Spare (1,172-c.c. Whiteford Special), C. R. Hardman (1,172-c.c. Dellow, s.c.), K. Bagley (1,172-c.c. Bitzerford), G. Pentony (1,450-c.c. Cyclops), H. E. Roberts (933-c.c. Robros), D. F. H. Cotton (1,172-c.c. Cotton Special), A. M. Beardshaw (1,190-c.c. Wharton).

Last year the R.A.C. Championship Trial in the Cotswolds was too easy; this year it was nearly too difficult! With England in the grip of winter, snow on December 16th made the approaches to the first series of hills on Draper's farmland very tricky, and competitors, allowed six minutes to clear them, needed three *hours*! The start was in Montpellier Gardens of the pleasant spa-town of Cheltenham and, strolling round, we noted the wonderful hat worn by Todd, an Irish competitor, the heraldic shield on the side of the Spence, a sprig of holly adjacent to Price's competition number, the liberally-drilled front wheels of the Sleeman Sports with its Miller-like radiator cowl, the reversing lamp and twin spare accommodated side by side on Todd's Humber, Bold s insignia of a hand raised in a compelling "stop" gesture on the Bold, and again pondered on the preponderance of Ford Ten engines. The R.A.C. had received 68 entries, 25 from the South, 35 from the North, five from Scotland and three from Ulster. Of these, 22 had unblown Ford Ten engines, 24 blown Ford Tens, seven V8 Ford power units, the remainder preferring Standard, Vauxhall, Jowett, Austin, Humber, Singer, M.G. or J.A.P. engines.

There was a happy feeling that Cheltenham is tolerant of trials cars, and the R.A.C. had neatly marked each hill with blue "road-signs," had its patrols on duty, and the use of Rodney Road Car Park for the first special test. The two most interesting cars were Ken Wharton's new trials special and Onslow-Bartlett's rear-engined J.A.P. job, which arrived sounding like a self-contained speed trial. The former looks rather like an elongated sports Cooper, very neat, with Austin Seven chassis parts and back wheels, set-back Austin A40 engine, Ford gearbox, Cooper front wheels, Ford front suspension and Morris Minor rack-and-pinion steering. Bartlett spoke awe-inspiringly of not needing his twin B.T.H. magnetos when the engine is hot and of being able to change the ratio of his chain primary-drive between "sections"!

The R.A.C. used an elaborate roller-brake device to check for locked differentials before the start. Cars then proceeded to the special test, rendered difficult by frozen snow. Wharton, his car emiting a "fire-bell" ring from its

Continued on page 39

VETERAN TYPES—XXXVII

by KENT KARSLAKE

A 1901 7-h.p. PANHARD ET LEVASSOR

I do not think that it is altogether seemly to start an article of this sort on a personal note, but it is not completely irrelevant to the subject in hand to remark that this last autumn it occurred to me that it was just twenty years since I wrote the first "Veteran Types" article in MOTOR SPORT, and also just twenty years since I first took part in the Veteran Car Run to Brighton. This reflection made me feel a very veteran type myself; but what was worse than thinking that I had gone to Brighton twenty years ago was to think that I had not gone to Brighton—in the proper style I mean—since 1937. It is one thing to be a veteran, but it is quite another to be superannuated.

In these circumstances it was, to say the least of it, exceedingly pleasant when my friend Mr. Cecil Clutton informed me that Mr. Hodsdon, whom he was accustomed to accompany to Brighton in a Panhard, was proposing to travel this time by steamer and to entrust the Panhard to Mr. Clutton, who most kindly invited me to a seat beside him upon the box. The Run itself, moreover, was to be preceded by a journey to London from Lavenham in Suffolk, in the course of which I might try the Panhard for myself and record my impressions in these columns, so that the whole practically amounted to an invitation to return to a second childhood. I accepted, naturally, with alacrity; experience certainly had taught me that it can be devilishly cold on the Brighton Run, but even apart from this the terms seemed to me to be much less hot than those offered to Faust.

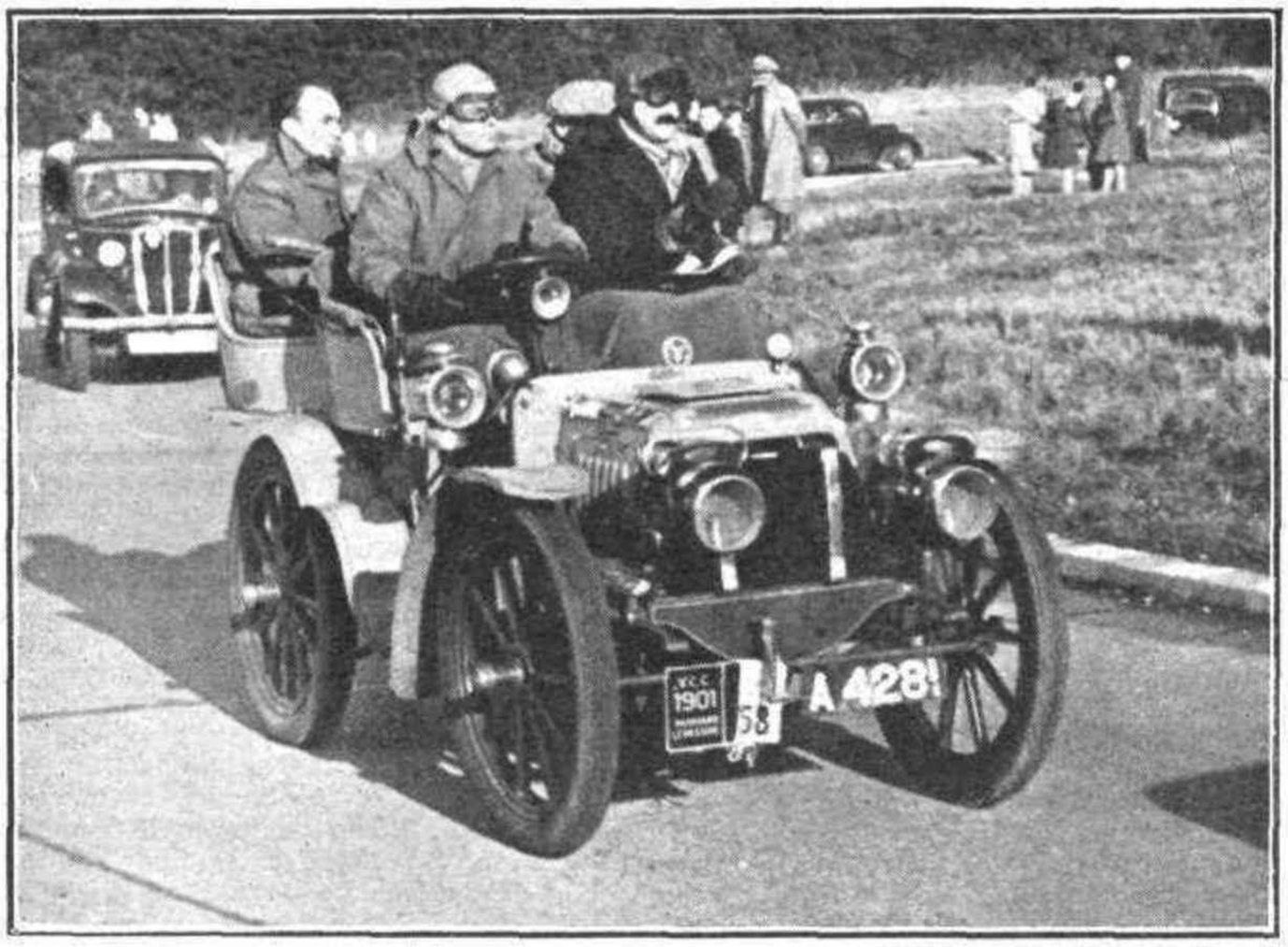
Even in the matter of the cold, too, I felt extraordinarily confident, because earlier in the year a namesake of mine, who over very many years had made our name one to conjure with in the motor-cycling world, had presented me with a coat. True, I have owned coats before, but this coat was something quite out of the ordinary; no less an authority than Mr. D. B. Tubbs, when he saw it at Brighton, declared that but for this visual proof to the contrary he would not have believed that such a coat existed outside the illustrations to the novels of C. N. and A. M. Williamson. Made of the best Irish frieze outside, which is completely impervious to the wet, and lined with the best leather, which is equally impervious to the cold, it stretches nearly to the ankles of a six-foot man and is fitted with a collar which nearly covers his head. When one is protected against the elements by this veritable suit of mail, the heroism of the Victorians and Edwardians recedes to its proper proportions.

The morning of the day before the Run, therefore, saw us at Mr. Hodsdon's house at Lavenham, and whereas London was wreathed in damp and muggy autumn weather, Suffolk was in the grip of a white frost. It was, therefore, with acclamation that we greeted the news that our first business was to light the fire in the Gardner-Serpollet steamer. Built in 1904, this delectable vehicle might easily be mistaken for a petrol car. What appears to be a round honeycomb radiator at the front is in reality a condenser; behind that a conventional bonnet covers a flat-four poppet-valve engine in the Jowett Javelin style; and behind that again is a luxurious side-entrance tonneau body, equipped with a windscreen in front and a lavish leather hood, which when furled, stands up almost vertically behind the back seat. Right down below it at the back of the car, however, is a Serpollet coiled tube "flash" boiler, heated by a paraffin burner; and it was to get the latter going that was our present preoccupation.

The conventional method employed, it appears, is to squirt a lot of methylated spirit about in the burner box, put a match to it, and then go on squirting methylated until the paraffin gets sufficiently interested to burn in true furnace style. To our host, however, this evidently is to be regarded as a somewhat half-hearted method, and he prefers whenever possible to use a gas poker, fed from a Calor gas cylinder. On the present occasion this course proved as effective as usual—indeed at one moment we had flames licking up the back of the car almost to the height of the imposing leather hood—but nobody accustomed to this sort of thing seemed to be in the least bit alarmed, the flames and smoke quickly died away, to be replaced by a reassuring roar from the furnace, and after an interval which I was assured was unusually long, owing to the inclemency of the morning, Mr. Hodsdon announced that he had steam up. After this it seemed almost magical that he had then only to push over a lever to ensure that the engine ran backwards or forwards as required, and to open the throttle for the car to run smoothly out of the garage. By comparison, the paraphernalia of engaging gears and clutches necessary to get internal combustion-engined cars under way seemed extraordinarily crude; but in the course of a subsequent road journey in the Serpollet I came to realise that the skill required of a steam car exponent if he is to get smooth and effective performance, particularly in traffic, is something of which the ordinary driver has no inkling. The former's life revolves around two levers—one of them the throttle, the other a lever which brings into action a donkey-engine whose function it is to send more water to the boiler and make more steam—and so to regulate them that, with a flash boiler containing at any given moment only a minute quantity of water, you assure yourself of a good head of steam whenever you want it, without building up so much that it blows off at the safety valve, requires something approaching a feat of leger-demain. To watch Mr. Hodsdon at the controls of his Gardner-Serpollet is an education and a real feat of artistic enjoyment.

All this, however, is by way of a digression, for our real business was with the Panhard, and to this, once the Serpollet had steam up, we directed our attention. As soon as we pushed it out of its garage into the sunshine of a fine morning, which was rapidly dispersing the earlier mists, it was apparent that this was a most delectable vehicle. Known as *Le Papillon Bleu*, it is painted to match its name, and behind the familiar Panhard bonnet and coiled tube radiator it is fitted with a most elegant rear-entrance tonneau body, the provision of four seats in conjunction with so short a wheelbase being a miracle which some modern exponents of inter-axle seating might dismiss as an impossibility. After the mysteries of steam, moreover, it was something of a comfort to find oneself confronted with a mechanical "system" one could understand, for in all essential particulars the Panhard of 1901 and even earlier is a motor car as it was to become known to later generations and not a horseless carriage. With a vertical engine in front, a sliding-pinion gearbox amidships, and the drive to the back wheels arranged otherwise than by belts, the Panhard almost from the first resembled the motor car of 1951—except, perhaps, those made in America. But as has been previously remarked upon in these columns, these features, which nowadays appear to constitute a part of the law of nature, were for long entirely peculiar to Panhard et Levassor. An examination of all the earlier vehicles taking part in the last Brighton Run is sufficient to illustrate this point. Of them, the Léon Bollée has the engine amidships and belt final drive; the Benz, the Lux, the Lutzmann, the Hurtu, the Star, the Stephens and the early Georges Richard have a horizontal engine at the back, and belt drive; earlier de Dion Boutons have the engine at the back and constant-mesh gears with clutches; the Peugeot has a horizontal engine at the back; the Decauville a vertical engine at the back; the New Orleans and Pieper have belt drive; the Century and Crestmobile are hardly motor cars; and the Locomobile is a steamer. Only the English Daimler of 1900 resembles the Panhard in essentials and that was consciously built on Panhard lines.

In the case of *Le Papillon Bleu*, the vertical engine is a two-cylinder, and in this it resembles the very first "Phoenix" engine, designed by Panhard et Levassor themselves in 1895 to take the place of the Daimler V engine used in their cars in 1894. Whereas, however, the 4-h.p. engine of 1895 had dimensions of 80 by



[*Photograph by Major H. Browell*

IN MOTION.—The 1901 *two-cylinder Panhard et Levassor "Le Papillon Bleu" in the last Brighton Run, Cecil Clutton at its controls, Kent Karslake navigating.*

120 mm., that fitted to *Le Papillon Bleu* admits to 10 h.p. for taxation purposes, which indicates a bore of 90 mm. It is therefore presumably of the 90 by 130-mm. type, which, known as the 6 h.p., made its appearance as the firm's racing engine for 1897. This is a matter of particular interest, because the original owner of *Le Papillon Bleu* was none other than the Chevalier Réné de Knyff; and the Chevalier made his first appearance in the great races at the tiller of one of these original 6-h.p. cars in Marseilles–Nice–la Turbie at the end of January, 1897. Only a month or two ago I was shown a letter which had just been received from this pioneer racing motorist by my friend Mr. Gerald Rose; and having now had the privilege of driving his sometime personal motor car, I feel that I have indeed sat in a seat of the mighty. In 1897, de Knyff was fourth in Marseilles–Nice–la Turbie, fifth in Paris–Dieppe and fourth in Paris–Trouville. In 1898 he was third in Marseilles–Nice, first in Paris–Bordeaux (at 22.1 m.p.h., still on a 6-h.p.), and fourth in Paris–Amsterdam–Paris. In 1899 he was second in Paris–Bordeaux and won the Tour de France, averaging 30.2 m.p.h. for 1,350 miles on his 16-h.p. Panhard. In 1900 he won the Circuit du Sud-Ouest at 43.8 m.p.h. and Nice–Marseilles at 36.7 m.p.h. In 1901 he was third in Paris–Berlin, and in 1902, the first year of the monster 70-h.p. Panhard, he was easily first, from Paris to Belfort, on the first stage of Paris–Vienna, averaging 54 m.p.h. for the 233½ miles. How, later in the race, he broke down when within an ace of winning the Gordon Bennett trophy; and how, in spite of this misfortune, it was de Knyff who insisted that S. F. Edge should not be disqualified and that the trophy should go to England, is an example of sportsmanship which I hope he remembers now with even greater satisfaction than he would a victory. In the Gordon Bennett race of 1903 in Ireland, he was the fastest of the French team, being only just beaten for first place by Jenatzy's Mercédès; and I have always thought that it was the jealousy of lesser men that thereupon persuaded him that he was too old for motor racing and that he should retire. With de Knyff of the black spade beard and his faithful, if diminutive, mechanician, Aristide, who would never ride with anyone else, there went from motor racing one of its most picturesque figures.

It was with such thoughts in our minds, then, that we set about fitting the battery to *Le Papillon Bleu*. The original 6 h.p. of 1897, of course, had tube ignition, but by 1900 the racing cars, while retaining this well-tried system as a standby, were also fitted with an accumulator and trembler coil, and by 1901 both racing and touring cars had made this concession to modernity. Removal of the bonnet, for the purpose of flooding the carburetter and priming, revealed an obviously long-stroke engine, of which the most remarkable feature to modern eyes is perhaps the exposed timing gears and camshaft, which operates the exhaust valves through what appear, owing to their total exposure, to be enormously long tappets. The inlet valves are of course automatic and in the head.

The starting handle rotates the crankshaft through the intermediary of a chain, as a result of which it is offset to the longitudinal axis of the car and must be comparatively short in order to avoid fouling the off-side dumb-iron. For all that, it proved fully adequate for its purpose, and by means of it the engine was set going with consummate ease. The internal combustion of the Panhard, indeed, was got going with considerably greater dispatch than the external sort used by the Serpollet, but, although we were now ready for the road, there was, for better or worse, no question of moving the Panhard off by merely opening the throttle, if only for the very good reason that the Panhard has no throttle. Originally the engine was fitted with a governor, controlled by a pedal-operated decelerator, but the governor has been removed, and the pedal is no more than an ornament. One is left, therefore, as far as engine control is concerned, only with the two famous Panhard twist-grip controls on the steering wheel. These grips, deeply knurled at their outer ends, have to be pulled outwards against a spring in order to disengage them from a fine-toothed ratchet adjoining the steering column, and then turned vigorously and far, in a manner which provides ample exercise for the wrists. On the car under examination, the right-hand one constituted some kind of mixture control, and appeared in practice to be completely without influence on the situation. The left-hand one, on the contrary, which advanced and retarded the ignition, was the sole bulwark between us and an actually constant-speed engine. "In the case of single-cylinder ungoverned engines," says Mr. R. J. Mecredy in *The Motor Book*, published in 1903, ". . . the speed of the engine is largely regulated by the sparking advance lever, and in this connection the novice often labours under the mistake that if he wants to increase his speed he need only advance the sparking lever to do so." As far as the Panhard is concerned, it is a mistake, within limitations, under which this novice still labours.

Only a short time before *Le Papillon Bleu* was built, the typical Panhard was fitted with a side brake lever which also withdrew the clutch, and indeed this interconnection may have been done away with since the car left the factory. I do not think, however, that it can ever have had the separate lever which engaged the reverse gear, all changes being effected by a single lever working on a quadrant, and a single *baladeur*. It is a quadrant, moreover, which offers no temptation to glance down at it in order to look for the next notch, for the simple reason that the notches are underneath it and consequently completely invisible. Until you get to know them, therefore, there is nothing for it but to "feel" the gears. Rather remarkably, however, once you have learnt your way about, it is quite possible to find a sufficient neutral between the gears for downward changes to be made, with only the advance and retard as an engine speed control, by this new-fangled "double-clutch" method. Mr. Clutton, in the course of our journey, proved himself an adept at this performance and even I scored one or two modest successes. On the other hand, as is usual with early gearboxes, to get a silent change up proved exceedingly difficult, unless one was lucky—and strong—enough to press the piano-pedal down so hard that the clutch really disengaged. But then, as Mr. Clutton most aptly remarked, to change gear silently was regarded as pretty sissy by the driver of 1901.

According to the table of mechanical details in Mr. Gerald Rose's *Record of Motor Racing*, the 6-h.p. racing Panhard of 1897 was fitted with "three or four" speeds; and it is most remarkable, if he had experience of both alternatives,

that M. de Knyff, as a director of Panhard et Levassor, should have been content with three on his personal touring car or runabout. That is all, unlike most Panhards, that *Le Papillon Bleu* has, and yet one feels that a fourth would be highly desirable. Top can only really be used if the road is flat and the wind not too unfavourable; second is certainly a highly satisfactory speed; but first is so low that, while even starting on a fairly steep gradient with a full load presents few terrors, resort to it reduces the car to little more than a walking pace, and once one has been forced onto it, as, for instance, through being baulked on a hill, a misfortune which overtook us, believe it or not, more than once on the way to Brighton, all hope of bridging the substantial gap between it and second and of making an upward change has practically to be abandoned until the road flattens out again. An intermediate speed between first and second would, it seems, greatly improve the car's performance.

As soon as one takes the wheel of this Panhard, one cannot help being impressed with the quality of sturdiness for which the marque was renowned in the early days of motoring. The steering wheel, with its twist-grip controls, is a monument of solidity, the side levers are patently more than adequate for their purpose, and the whole car gives such an impression of durability that one is unable, when driving it, to remain surprised that it has lasted for half a century. There is, I presume, no direct drive, and on all speeds there is a soothing hum of pinions, some of which, I imagine, emanates from the unenclosed timing gears, but which is at any rate sufficient in the aggregate entirely to drown the howl of the chains, so that it would be practically impossible to discern, by aural means alone, that they were responsible for the final drive. The steering, too, is impeccable (apart from the fact that, in spite of the typically Panhard track-rod in front of the axle lay-out, the lock is most strictly restricted in relation to the wheelbase), and on several occasions during the week-end Mr. Clutton demonstrated that the car could be safely steered downhill at a speed greatly in excess of that which it is capable of attaining without the aid of gravity. It is, incidentally, fitted with a speedometer, driven off the front wheel, which is as indolent in relation to the true speed as, apparently, practically all modern instruments are optimistic, but which indicates that the car's comfortable gait on a flat road is about 30 miles an hour. The cyclometer, or distance-recorder, has a separate and almost equally imposing dial, and the only other instrument on the dashboard is a gauge which gives pressure readings in metres of water. This, believe it or not, indicates the pressure, in metres, imparted to water—namely the water in the circulating system—by the pump, and acts, incidentally, as a very reasonably accurate revolution-counter. (Why, since we are on the subject, is this instrument so often called a "tachometer"? The word means no more than an instrument for measuring speed, and applies no more specifically where the speed of the crankshaft is concerned than the speed of the vehicle.) Did it not fulfil this function, the gauge, one feels, would be somewhat redundant. The cooling system, apart from the coiled-tube radiator at the front of the bonnet, comprises a tank on the engine side of the dashboard, on the top of which is a filler cap with a hole in it. Through this hole there issues, if all is well, a reassuring wreath of water-vapour; if, on the other hand, the water by any chance should boil, it issues from this orifice and cascades onto the ankles of the front passenger, who, in such circumstances, would doubtless draw the driver's attention to the situation.

However, no such contretemps marred our journey to London, and as dusk was falling we drove into Messrs. Rickards garage near Paddington, where a goodly collection of veteran cars was already assembled. The scene was so enchanting that it was hard not to be distracted, in favour of inspecting the latest arrival, from the important business of refurbishing paint and brass-work; but I am not so sure that the excitement that evening could hold a candle, let alone an oil-lamp, to the drama of the following morning.

Few things, I think, other than the Brighton Run, could drag me, almost cheerfully, from my bed at the dawn of a repellent winter morning; but once we had reached Rickards, one realised that it had been worth it. The air was loud with the panting and wheezing of veteran engines, coaxed from their night's sleep almost as unwillingly as had been so recently their owners, who now added to the din with their shouted instructions to their crews, their unseasonable jokes and their occasional imprecations as they wound feverishly at their starting handles; while above all hung a faint pall of oil—and exhaust-smoke. At the far end of the garage there were characters unconcernedly drinking coffee . . .

We drove through a steady drizzle, in the cold light of dawn, to the banks of the Serpentine, where was assembled all the motoring world and his wife—or what passes for his wife on such occasions. A rude man asked me why I was only standing beside the Serpentine instead of bathing in it; he survived. As our time to start came, the heavens opened and a downpour of hail descended on our heads; and once more we were embarked upon the Run to Brighton. As a matter of fact the weather, running as untrue to form as usual, cleared up before we were even out of London, and for the first part of our journey we were favoured with a beneficent autumn morning of pale sunshine, which, however, shining on the glistening, rain-soaked roads, proved exceedingly dazzling. Nearer Brighton, we were met by a cold and powerful headwind, so that we noticed the crew of at least one early Benz crouched low over the tiller, determined at least to avoid being driven back to London. We rejoiced to observe the steady progress of the Lutzmann; indeed by dint of stopping for a cup of coffee after we had passed it the first time, we were able to rejoice in the observation twice. The Lutzmann, in striking contrast to the Panhard, bears no resemblance to a motor car whatsoever. Since it was taking part in the Run, it is, I am persuaded, a horseless carriage; but it requires quite an effort to expunge from the picture of it the actual horse with which the imagination so readily provides it.

As a result of the abolition of petrol rationing, we were accompanied on our journey by a very large number of modern cars, and from this circumstance it was possible to judge that the advance in the controllability of the automobile has just about maintained the pace required of it. It was in fact obvious that the average driver of a modern car, with its powerful, flexible engine, synchro-mesh gear-change and four-wheel brakes, had very nearly as much control over his machine as had the drivers of the veterans. Thanks to the skill of the latter, accidents were satisfactorily few.

We arrived at Brighton in comfortable time for lunch, to which, I may say, we were fully prepared to do ample justice. So soon as it was over, however, having neither a lorry on which to load our veteran, nor the leisure to defer our return journey until Monday, we set the Panhard in motion once more and started out for London. Night overtaking us as we reached Reigate, we stopped and lit our oil lamps, and by their flickering light proceeded on our way. It is no good telling me that cars do not run better at night; our Panhard that evening gave ample proof to the contrary, and as we finally regained London it was pulling so strongly that we felt that it regarded a hundred miles a day as no more than a warming-up lap. I do not know that I would say quite the same of the crew; but at least, in retrospect, every moment of that journey was a solace to those of us who had missed Marseilles–Nice–la Turbie.

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Branches, which are voluntarily organised, serve as focal points for B.R.M. supporters and will be kept regularly supplied with progress reports on the B.R.M. project. Dances and other social functions are being organised by many branch committees, all with the object of developing local interest in the B.R.M.

Support this national effort by joining your nearest branch—address of Hon. Secretary on application. Officials of sports and social clubs are invited to organise B.R.M. branches amongst their members. Full information from B.R.M. Association, 113, Park Street, London, W.1. Tel.: Mayfair 8240.

The East Anglian M.C. is organising a small champagne rally to Annecy next July, to coincide with the D'Evian Rally through the French Alps. Non-members may be able to participate. Details from: R. K. N. Clarkson, The Chase, Halstead, Essex.

LETTERS from READERS

N.B.—Opinions expressed are those of our correspondents and Motor Sport does not necessarily associate itself with them—Ed.

REAL ENTHUSIASM!

Sir,

Browsing through some old numbers of MOTOR SPORT recently, I came across your write-up on Mr. K. Smith's Speed Twenty Alvis AXX 335.

This car has now come to live opposite to me and, as its owner is called to his labours at the ungodly hour of (*circa*) 7 a.m., its exhaust note provides one of the most pleasant alarm clocks a fellow could have.

Every morning, after a few whinneyings from the starter, that beautiful, crisp crackle breaks out and puts me in a good temper for the rest of the day.

Incidentally, I take no small pride in the fact that, even before I saw AXX 335 in the flesh, I had diagnosed and was quite convinced that the car was an Alvis Speed Twenty—and, mark you, this opinion had been formed at the diabolical hour of 7, an hour which should rightly be classed as part of the night before.

I am, Yours, etc.,

Sutton Coldfield. ALEC. B. TURNER.

* * *

ONE FOR THE OLDER SINGERS!

Sir,

I understand that the Singer sports four-seater had an excellent list of records in trials during the years 1930 to 1934. Certainly they gave the M.G.s of the same period a good run for their money. The four-seater also won the 1,000 c.c. class at Le Mans in 1933 with an extra fuel tank fitted in place of the rear seat.

I feel that the adverse comments now heard about Singers are due to the fact that sports cars are no longer produced, the nearest being the roadster. The firm also suffered a setback, I believe, after a series of steering mishaps.

Parts are a little difficult nowadays for Singers, but it is still possible to get round that.

That comment on the letter from the young man who praised Singers, but said he knew little about cars, was not really fair.

I was glad to see Mr. Ward (November) felt the same way as I do.

I am, Yours, etc.,

London, S.E.13. K. D. MCDOWALL.

[The recent correspondence has concerned the "Junior" and "Porlock" models rather than the later sports Singers.—ED.]

* * *

RECALLING THE SCOTT SOCIABLE

Sir,

I have been a regular reader of MOTOR SPORT over the last three or four years and being a believer in motor cars as distinct from mobile tin boxes, I always enjoy the articles on vintage machinery.

One item of such machinery is, however, conspicuous by its absence from your pages, and bearing in mind its sporting two-thirds sister, I feel you should bring its memory back to those who once enjoyed its multiple back axle, its pre-Girling wedge-operated (?) brakes and its wonderful performance. I refer to the Scott Sociable.

For what they are worth here are a few of my memories of its construction—I have no definite recorded details of its capacity, b.h.p., etc., to my great regret.

Firstly, it was a three-wheeler with two rear wheels and one front wheel on the off side, all of which were easily removed by means of a centre-lock hub with serrated locking plate in the hub.

The chassis or frame was tubular steel (about 1 in., I think) with seven back axles—yes, seven steel tubes cross bracing each other. The near-side wheel had no connection whatever with the off-side one, apart from the seven axle tubes, and I can't remember what its suspension was, if any. The off-side rear wheel was the driving wheel.

Both rear wheels were fitted with rod-operated internally-expanding brakes,



comprising an almost complete band of brake lining merely located by dowels, with a draw-in wedge between the open ends. Thus the available lining area was about 85 per cent. of the circumference of the drum.

The foot brake worked (?) on the off-side rear wheel and the hand brake on the near-side rear wheel, this assisting, if necessary, the turning ability of the car. The pressure required was considerable.

The brake drums were integral with the disc wheels and centre-lock hubs.

The engine was, of course, an off-shoot of the famous Scott motor-cycle, being a water-cooled twin-pot two-stroke of the non-detachable head pattern I believe. The bore was probably about 3½ in. but I don't remember what the stroke looked like. She had a crankshaft with counter-weights, running in rollers (three I think) with roller big-ends.

The engine lay in the fore and aft line on the off side of the car, outside the main body, with the gearbox on the inside and parallel to it, from which a shaft carried the drive to a bevel on the rear hub, all totally enclosed. The gear-lever moved in a straight line, fore and aft, and if I remember rightly the positions were back for first, neutral; second and top right forward, with a false neutral between second and top.

Starting was à la Trojan by a pull-up-and-back handle, and if the ignition was too far advanced you had to watch your head on the windscreen when she kicked—and could she kick!

Cooling was thermosyphon with a radiator in the conventional position with yards of tubing to reach the engine, and lubrication was by petroil.

All controls, apart from clutch, brake and accelerator, were on the inner cover of the engine, and she had a choke, but no speedometer.

The body was a cosy and fairly comfortable two-seater, secured to the frame by about four bolts, so for accessibility it could not be beaten. One man could easily remove it. It was fully panelled, with one door, a hood and windscreen.

Steering was I imagine rack and pinion (unless it was string on the shaft?) but was positive and very high geared, and the swing of the front wheel was such that parking at the kerb held no terrors. She could turn in her own length, but roundabouts taken too fast caused the driving wheel to lift and curb over-enthusiastic cornering.

As regards performance, I had one in 1934/5 and, timed between milestones on the Brighton Road, she was comfortably clocking 60 m.p.h. Later, to the great dismay of a Ford V8, she kicked dust in the latter's radiator at two sets of lights on the Brighton Front, and the Ford driver really tried at the second set.

Her reliability was surprising apart from the fact that I never dared go out without spare water for a sieve-like radiator, and she would always start on about the fourth pull, even on an icy morning.

Her one big snag was the fact that true neutral had to be engaged and the clutch fully home before using the starting handle. Otherwise, so I was told, all the gears shuffled down to one end of the box and only dissection would then retrieve the situation. I never tried it to see what would happen.

She was a grand little car and I only wish I still had her. I got her as a gift if I would only take her away, and found that for many years she had been doing duty as a tractor for a vast mowing machine and I had to excavate her from piles of grass.

I ran her for about 15 months and then parted with her for £1, still going strong.

I wonder if any reader can amplify the details of her design, and if any are still in existence?

I am, Yours, etc.,

Radlett. J. SANER.

[From 1921 to 1925 the Scott Sociable had a 3 by 2½ in. twin-cylinder engine rated at 7.2 h.p. Wheelbase was 5 ft. 1 in., top gear 4.5 to 1, later 4.8 to 1, and the

price fell progressively from £273 to £135. These amusing little vehicles took part in the M.C.C. trials of their time. A few, capable of being rebuilt, and an experimental engine, we believe with monobloc cylinders, were at a Bradford garage during the war and are probably still there.—ED.]

* * *

THE SINGULAR CASE OF THE "MONZA" HISPANO

Sir,

The recent correspondence in the *Times* regarding the suggested connection of Mr. Sherlock Holmes with the Borough of Paddington's part in next year's Festival of Britain prompts me to ask you to head this letter as above!

I have read Mr. Moss's letter with the greatest interest and had corresponded with him prior to its publication and have seen him since.

I am grateful for his intervention and his contribution to the question at issue and, while wishing to keep this letter as short as possible, would like to put forward the following :—

(1) Mr. Moss tells me that he has not as yet actually seen the original registration form of PP 1181, a Buckinghamshire and not a Kent registration, but that over the telephone the authorities concerned informed him that the bore (and not the stroke, which is probably a typographical error only) is shown as 105 mm.

This is indeed remarkable and I feel certain that it also is an error, of fact, as, apart from Zborowski's measurement, the thin steel screwed liners would be most unlikely to grind out to this figure.

I ought to remember myself what tax I paid on this car, but unfortunately I can no longer do so, neither have I the pass books, or my bank their ledgers, dating back so far.

(2) Mr. Moss tells me that Mr. Chevrollier told him that he overhauled, or rebuilt, this car in 1943 (and it seems to be about this time that it was fitted with Lancia front suspension) when he found in it non-Hispano pistons which he replaced by Hispano ones after having rebored the cylinders from 102 to 102.5 mm. The question of the pistons raised by Mr. Moss in his letter is actually relevant only so far as follows :—

The pistons in PP 1181 were replaced by Count Zborowski by British ones, but I did not find them unsatisfactory during my ownership other than that the oil control was not as good as it might have been.

(3) Mr. Briand tells me that it was the engine of a car with the front rebuilt with a Lancia suspension which he measured and whose stroke he found to be 140 mm. only.

He also says that he knows of a small series of chassis which were from time to time imported into this country. The dimensions of these were 102 by 140 mm. and were known to him as "Monza" cars.

Mr. Briand has been kind enough to allow me to quote him to the effect that Mons. Maignan, who was in charge of the Hispano Service Depot in Chelsea during Count Zborowski's and my ownership of this car and had been a foreman at Bois Colombes, has told him that he believed that a certain number of engines having a stroke of 150 mm. were built.

The car which Mr. Moss has bought is not now registered as PP 1181 and he is at present without a definite registration link regarding it, but he has kindly given me a photograph of the much modified car in his possession which has mudguards so generally similar to those of PP 1181 as I last saw it and as photographed in the recent articles in your columns that it leaves me in no practical doubt that the two cars are basically one and the same.

Summing up, objectively, it does indeed look, from the presence of non-Hispano pistons found by Mr. Chevrollier in an engine in which Mr. Briand had later measured a stroke of 140 mm. that this engine was the original and that the stroke was 140 mm. and not, as always believed, 150 mm.

This case contains some curious side issues which may or may not be solved some day, but in view of the foregoing I feel that I can no longer defend the 150 mm. stroke, at least as far as it concerns the car which is known as the ex-Zborowski car and which was later my property, assuming as I do that this was the car which is now in Mr. Moss' possession.

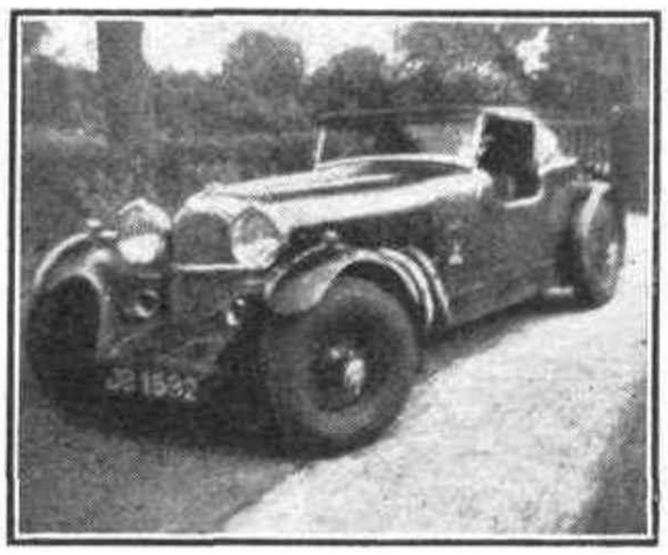
Further information may materialise one day, but in the meantime, since I raised the issue of the Monza stroke, I feel it only fair to make an *amende honorable* to Mr. Karslake without waiting longer for something which may never appear.

I am, Yours, etc.,

Leatherhead. CLIVE GALLOP.

* * *

THE SIX-CYLINDER MARENDAZ SPECIAL



Sir,

I have noticed that readers have mentioned the Marendaz-Special in answer to a recent quiz. As an owner of one of these cars I see no resemblance to cars used in the quiz.

Maybe you can use one of the enclosed snaps to remind readers what the six-cylinder Marendaz-Special looked like.

I am, Yours, etc.,

S/Sgt. C. H. ALLEN,
Glider Pilot Regt.

* * *

DESMODROMICS

Sir,

Reading "Baladeur's" fascinating article in the December issue of MOTOR SPORT regarding Desmodromic (what a word!) valve mechanism, reminded me that during the year 1912 the late Lord Austin, for whom I was then acting as draughtsman, built two engines with positive valve operation. Due to the very necessary buffer spring, it would perhaps be more correct to say *semi*-positive valve operation.

The engine functioned quite well and revved up to nearly 4,000 r.p.m., at which speed the power output was considered good for those days. However, the design was abandoned owing to frequent breakage of valve stems.

With best wishes for the continued success of your valuable journal.

I am, Yours, etc.,

J. T. CLARKE.

Birmingham.

Sir,

In connection with "Baladeur's" "Sideslip" on positively operated valves, it is interesting to recall that these were used both on Lenoir's engine of 1861 and on the earliest Benz cars, including the 1888 model now in the Science Museum. On both the Benz and Lenoir the valves were of sliding, steam-engine type. Since this arrangement is easily lubricated and made gas-tight, and achieves the advantages of the sleeve-valve with much less friction, one wonders why it was not further developed.

I am, Yours, etc.,

CECIL CLUTTON.

London, S.W.1.

[And since these correspondents have referred to further desmodromics, what about the cam-less Hotchkiss six-cylinder production model of 1921, the 750-c.c. Vagova racing car entered for the 1924 J.C.C. 200-Mile Race and the Laystall Special engine?—ED.]

* * *

AN AMERICAN OPINION OF THE XK 120 JAGUAR

Sir,

In your November issue I read with much interest your article headed "The Sports Car Races of 1950" and noted the conclusions you came to in this article. It is very surprising that the results in American sports car racing do not appear to correspond with the results in European races, and the conclusions in this country would therefore necessarily be quite different.

At the beginning of 1950, in the sports car race at Palm Beach, Leslie Johnson was fourth in an XK 120 Jaguar, being beaten by George Huntoon in a Ford-Duesenberg, Briggs Cunnungham in a Cadillac-Healey and George Rand in the Ferrari owned by Cunningham and being the car with which Chinetti won the 1949 Le Mans race, this Ferrari being a 2-litre, three-carburetter Grand Prix version.

At Santa Ana in California, Roy Richter in a J2 Allard with Ford engine beat the entire contingent of XK 120 Jaguars very readily and without any fuss or bother. At Bridgehampton, Long Island, Tommy Cole in a J2 Allard with Cadillac engine beat Sam Collier in Cunningham's above-mentioned Ferrari, George Huntoon in the above-mentioned Ford-Duesenberg, Jim Kimberly in a three-carburetter "Mille Miglia" Ferrari (similar to the one with which Ascari won at Silverstone), Larry Kulok in a "Le Mans"-type

Frazer-Nash, Harry Gray in a blown Healey "Silverstone," and a whole slew of Jaguar XK 120s coming way behind and getting nowhere fast.

At Suffolk County Airport the above-mentioned Ferrari of Briggs Cunningham was the winner over Tommy Cole in the J2 Cadillac-Allard, myself in an XK 120 Jaguar and fourth was Larry Kulok in a "Le Mans" Frazer-Nash.

By the time the Linden Airport races came round, I had purchased a Cadillac-Allard and was way out in front when certain difficulties developed, the car just having been finished a week ahead of the race, and I was forced to retire, leaving the win to Larry Kulok in the "Le Mans" Frazer-Nash, which previously in a production car race had thoroughly trounced the XK 120s which were entered and which again were getting nowhere fast.

At the International Grand Prix at Watkins Glen, New York, where there was an entry of some 110 automobiles, I won in a J2 Allard, and after the first four laps never saw my nearest competitor in the mirror—this after having started in 27th position. At this race there was the "Mille Miglia" Ferrari of Kimberley's and an Inter 166 Ferrari of Bill Spear's. There were more Jaguar XK 120s than I can mention, and on this course of about six miles I lapped all the XKs at least once.

I personally am very dubious as to whether the people in England really have any conception of the speed which can be gotten out of a slightly worked over Cadillac-Allard engine, and this opinion of mine is strengthened by the fact that I see that Sydney Allard's time in a J2 Cadillac-Allard in the recent meeting at Castle Combe was 74.1 m.p.h., whereas the Frazer-Nash of Moss averaged 74.77 m.p.h. In other words, the Frazer-Nash was faster than the Cadillac-Allard, which to me is just unbelievable, having run away from this similar Frazer-Nash at Linden Airport prior to breaking down and from the same car at Watkins Glen as though it were standing still. I am naturally fully aware of the fact that the capacity of most of these automobiles is much smaller than that of the Cadillac-engined cars and therefore their performance, considering their capacity, is remarkable. However, your article goes out with the assumption of general and not class results.

I also do not wish to take anything away from the Jaguar XK 120 which, for the money, undoubtedly is a very nice car and ideal for sports touring but which, unfortunately, has proven completely unsuitable for sports car racing in this country, being outclassed at all the races. As far as fast touring in this country is concerned, it is a very ticklish problem, speeding laws being enforced on highways in almost every state in the Union and the car therefore has little purpose in the American market, this probably being the reason that you will find Jaguar XK 120s advertised for sale every Sunday in the *New York Times* and there is now no trouble in getting immediate delivery of these automobiles.

I am, Yours, etc.,

New York City. A. E. GOLDSCHMIDT.

[At Castle Combe Allard had such a runaway win he didn't have to hurry as Moss did. We based our comments on the 1950 sports car races largely on events confined to virtually stock cars, which one would expect to be slower than cars with "worked over" outsize engines and racing-car chassis.—ED.]

* * *

ROLLS-BENTLEY COMMENT

Sir,

As the owner of a pre-war "4¼" Bentley, I should like to congratulate Raymond Mays on conveying, in just over two of the most interesting pages, more of the fascination of these lovely cars than all the road tests I have ever read put together. Although I have not yet had the opportunity of driving a Mark VI, I hope to do so in the near future, and I only hope the result will not be too devastating, as I cannot possibly afford one!

Another interesting dissertation was that of K. N. Hutchison, in your July issue, and though I lack the necessary personal experience of both the cars mentioned to argue the point, it seems remarkable, on the strength of his remarks, that a Mark VI Bentley, or, if he should consider the cost of this too high, even a pre-war "4¼" would not fill the bill, and bring him very near his ideal all-rounder. It would certainly seem to possess to a remarkable extent all the essentials laid down as requisites, and I should be most interested to know in what direction he considers it fails to meet his requirements.

I am, Yours, etc.,

R. BAILLIE.

Bedford.

* * *

Sir,

I was interested to see that Mr. Raymond Mays credits the Mark VI Bentley with a genuine 100 m.p.h. I have seen this claim for the pre- and post-war 4¼-litre more than once in print, but none of the several road-test reports in various publications which I have read showed it to give a mean maximum timed speed of much over 90 m.p.h.

I expect that Mr. Mays' paean of praise for the Mark VI is deserved, but I await with rather lively anticipation the comments of members of the B.O.C. and others.

I am, Yours, etc.,

W. STUART BEST.

Dorchester.

* * *

THE NEXT GRAND PRIX FORMULA

Sir,

There has recently been a good deal of discussion about what should succeed the present Grand Prix formula when it expires at the end of 1953, and after reading the article by your contributor "Baladeur" on desmodromic valve control, I wonder whether any competent person has considered the merits of the following relatively simple formula:

That the car's engines should be limited to a total of four cylinders.

At first sight this formula seems likely to fail for uncertainty, as the lawyers say, but a little investigation shows, I think, that this is hardly the case in practice.

Let us take as a starting point what is, I suppose, the most powerful four-cylinder racing car at present in existence, the 1,500-c.c. Maserati, with a bore and stroke of 78 by 78 mm., which develops about 300 h.p. at 7,500 r.p.m., or at a piston speed of 3,850 feet per minute. If we assume (*a*) that even a racing engine cannot stand a piston speed of more than about 4,000 feet per minute; and (*b*) that its bore cannot greatly exceed its stroke; then nothing much more can be done with the Maserati engine except to supercharge it harder. As it is even now getting a boost of 30 lb. per square inch, however, it probably has about as much already as it can conveniently put up with.

Let us assume, now, that we put the bore up to 100 mm. The stroke, in accordance with assumption (*b*) must also become approximately 100 mm., and crankshaft speed, in accordance with assumption (*b*), be reduced to about 6,000 r.p.m. We should now have a capacity of rather over 3 litres and I should think we could expect 300 h.p. with half the boost the Maserati is subject to. As a guide the eight-cylinder Mercédès-Benz of 1937, with a bore and stroke of 94 by 102 mm., and a capacity of 5,660 c.c., developed 646 h.p., with a manifold pressure of 1.86 Ata.

We could of course take the thing a stage further and postulate an engine of, say, 150 by 150 mm., with a capacity of 10½ litres. This could run at 4,000 r.p.m. without exceeding 4,000 feet per minute piston speed, but I doubt whether it could be induced to do so, or to give 300 h.p., whether supercharged or not. In the meantime its frontal area would be, to say the least of it, formidable. Even our 3-litre, with a stroke of 100 mm., would be nearly as high as the present 4½-litre, six-cylinder Talbot with a stroke of 110 mm.

I do not think therefore that the formula would produce monsters, and I do think that it would call for engines a lot less expensive to build than does a capacity limit which in practice drives designers to more and more cylinders. If, nevertheless, cylinders, and consequently their valves, got so big that the weight of the latter began to limit crankshaft speeds, we might at least get a revival of interest in desmodromic valve control.

I am, Yours, etc.,

London, W.8. KENT KARSLAKE.

* * *

SIX-CYLINDER HISTORY

Sir,

The reference by "Baladeur," in November "Sideslips," to the 1904 six-cylinder Sunbeam car reminded me that I had the doubtful privilege of being the only person to drive that car when it had the three-throw crankshaft.

The shaft was not counterbalanced, so the vibration was really fierce. However, I was instructed to take the car to the Crystal Palace show with the intention of giving trial runs.

That the car reached the show without loss of "bits and pieces" can only be recorded as a somewhat surprising fact. Trial runs being quite out of the question, the car was putaway in a stable in Upper Norwood for the duration of the show.

Whether there was a "six" on the show stand I do not now remember, but I am almost sure that the car mentioned was the only one built at that time, and quite certain that it was the only one ever to be run with the three-throw crankshaft.

Later a normal type shaft was fitted, but two other experiments in design were also failures. One was the attempt to rely on two gears only, and the other was an expanding metal clutch which was very troublesome.

Not long after that I left Wolverhampton, and can only remember one six-cylinder car being sold, although there may have been others, but, as "Baladeur" points out, the Sunbeam Company would hardly be likely in after years to enter the controversy regarding the first six-cylinder car, or to claim priority in that field of design.

I am, Yours, etc.,

Dumfries. J. REID.

* * *

LIGHT 'PLANES

Sir,

First of all I would like to say how much I appreciated your article on ultra-light aircraft in the November issue of MOTOR SPORT.

However, I think you have missed out one of the latest and finest of these aircraft. I refer to the Chilton low-winged monoplane designed and built by Messrs. Dalrymple and Ward in the period between 1937 and 1939.

The first four aircraft were powered by the Carden-Ford engine, which was yet another variation of the ubiquitous Ford Ten. In 1939 an improved version was produced using a 44-h.p. French Train 4T engine. This was to have been the standard production model, but of course the war changed all these plans. Up to a year ago there were still four or five Chiltons on the Civil Register.

Both models were single-seaters with truly beautiful lines; in many people's opinion they were the finest looking light planes ever built. The Ford Ten powered model weighed 398 lbs., had a maximum speed of 115 m.p.h., and a consumption of 60 miles per gallon; the price was £315!

The 44-h.p. type weighed 380 lbs., and had a maximum speed of 135 m.p.h., a landing speed of 35 m.p.h., and cost £375!

On a basis of performance and quality versus price, I do not think that the Chilton has ever been equalled.

I am, Yours, etc.,

Mellor. R. A. BOYD.

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During the last quarter the Scottish S.C.C. enrolled 44 new members.

* * *

The Chiltern's C.C. membership increased from 85 to 130 last year. Its 1951 fixtures include a standard-car trial, a closed trial, a touring rally, a Concours d'Elegance and a closed invitation trial. Monthly meetings, open to all, happen on the last Wednesday evening of each month at The George Hotel, Beaconsfield. Details from G. E. Gates, "Chalfonts," Longfield Drive, Amersham, Bucks.

NEW CLASS I AND J RECORDS

Between November 21st and 23rd last year Stirling Moss, Kenneth Gregory and J. Neill took a short-chassis Kieft to Montlhéry and broke six International Class J and seven International Class I records. The new figures are :—

Class I (500 c.c.) :	50 km. :	90.06	m.p.h.
	50 miles :	90.63	,,
	100 km. :	90.87	,,
	100 miles :	91.40	,,
	200 km. :	88.60	,,
	200 miles :	86.99	,,
	1 hour :	91.34	,,
Class J (350 c.c.) :	50 km. :	78.44	,,
	50 miles :	78.75	,,
	100 km. :	79.08	,,
	100 miles :	79.62	,,
	200 km. :	77.11	,,
	1 hour :	79.37	,,

The Class I records were held previously by E. Bayrol and the two-cylinder Panhard-engined D.B., which established them at Montlhéry last October. The hour record has been raised by 12.13 m.p.h. It is rumoured that D.B. may soon make a new bid. The Class J records were the property of the Vitesse-Special, the H.S. and the Voran, Gush's hour-record in the Vitesse, established in 1934 at Brooklands, being broken by 6.17 m.p.h. Kieft had intended to take further records, but the 350-c.c. car developed crankpin trouble after 200 kilometres and the 500-c.c. car a split fuel tank after 200 miles. No electrical timing was available, or the Class J f.s. 10-kilometre and 10-mile records would have been attempted, but Kieft thinks these may be allowed, as the s.s. 100-mile record was taken at a higher speed! Likewise, he should get the Class J 3-hour record, as a greater distance than the old Vitesse figure was completed before the car retired. In all, 13 records await confirmation.

The Kiefts used were normal long-wheelbase (7 ft. 6 in.) cars, one being J. Neill's own property, and were in their Brands Hatch trim except for long-range tanks and feed pumps. The 350-c.c. engine was a 1950 "double-knocker" Norton, the 500-c.c. engine a special single o.h.c. Norton. Both were prepared by Steve Lancefield and ran on methanol. A rather surprising feature of these successful record attempts was the good behaviour of the Kieft patented suspension (wish bones and rubber in torsion) and Dunlop tyres. On Montlhéry's rough bits the rear wheels suffered approximately 7 in. "bump" without anything breaking, while the Dunlops on the 350-c.c. car showed no wear whatsoever, even the original moulding seam showing at the conclusion of the run, and those on the 500-c.c. car wore down approximately 1 mm—a fine testimony to tyre and suspension.

Nineteen fifty-one is going to witness keen competition in Formula III racing and many drivers are extremely interested in the potentialities of the Kieft, which is made at Bridgend, Glam. Incidentally, the chassis takes a 1,100-c.c. engine without alteration.—W. B.

♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦

The D'Evian Ryall of the A.C. du Mont Blanc starts on the evening of July 27th and finishes by Lake Geneva on July 29th. The route embraces 27 mountain passes and includes two hill-climbs, respectively of two and five miles. The E. Anglian M.C. has full details. Bear it in mind!

Obituary

We regret to record the death, on November 26th, of Mr. C. R. Abbott, Managing Director of C. R. Abbott and Co., Ltd. Kent Karslake writes:

Because those of use who knew him well had known for some time that there was little chance of Jimmie Abbott's complete recovery, the news of his death came as no surprise—although, of course, that does little to lessen the shock of it. What did surprise one was to realise that he was within a few years of attaining the "allotted span." He remained to the last so young in spirit that those of us who really belonged to a different generation never regarded him as anything but a contemporary, even if at the back of our minds we realised that he was a Nineteenth-Century Motorist and had flown before most of us were born.

I think that "Vintage" and "Veteran" motoring gave him a new lease of life after the war. His 1904 Mercédès was restored with a care and driven with a verve which almost set a new standard in these matters, and although he was so successful with it that hardly anyone else had a look in, everyone was pleased about it. That is some indication of how we felt towards him. Only Jimmie himself remained so modest about it all that he was almost apologetic over his successes.

It was typical of him that when, at the end of 1949, he came to the conclusion that there were no new fields to conquer with the Mercédès, he decided to dispose of it and to embark on an entirely new project. The result was the really beautiful restoration of the 1914 T.T. Sunbeam. It is a consolation to think that he lived to see it completed, and to drive the car in the Vintage S.C.C.'s Parade at Silverstone last August; but it is at the wheel of the old white Mercédès that most of us will best remember him.

It is no mere obituary platitude to say that he was one of the most lovable characters among a little band of people who are not without their endearing characteristics. We shall have fun, some of us, with the old cars yet; but it will never be quite the same again without Jimmie Abbott.

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The new address of P. G. Fowler, Hon. Sec. of the Harrow C.C. and Disabled Drivers M.C., is 19, Durham Road, N. Harrow.

* * *

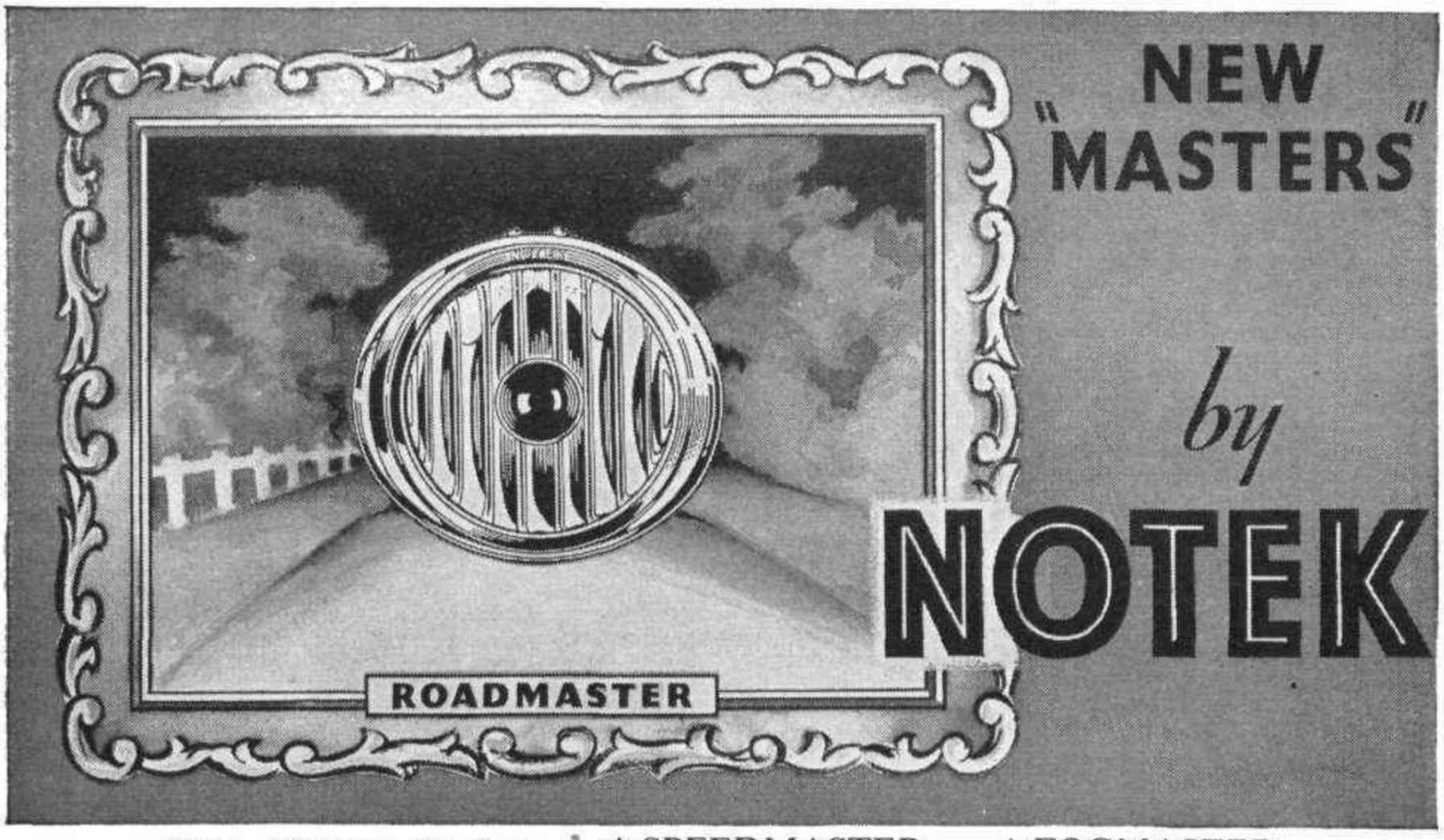
The Bugatti O.C. is prepared to hire Prescott Hill to other clubs. Details from: Major Dixon-Spain, Prescott House, Gotherington, Glos.

* * *

The article on light aeroplanes published in MOTOR SPORT last November having aroused more interest than we expected, readers may like to know that present-day inclinations in this quarter are looked after by the Ultra Light Aircraft Association, 24, St. George's Square, London, S.W.1.

* * *

Latest addition to the one-make clubs is an Allard Owners' Club, which was formed last November. The Secretary is J. H. Appleton, 24/28, Clapham High Road, London, S.W.11.



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A VISIT TO THE MORGAN FACTORY

WHEN we "went west" for the R.A.C. Championship Trial, we took the opportunity of visiting the Morgan Motor Co., Ltd., at Malvern Link.

This little factory might be said to carry on a tradition upheld on a larger scale by M.G., that of turning out mainly sports models. It lies beneath the shadow of two hills, snow-clad at the time of our visit, and its rather chapel-like brick entrance-porch is faced by trim suburban houses. This is the factory which Morgans moved into in the early 'twenties, but if you climb the steep hill facing it you come to the garage of Bowman & Acock, Ltd., Morgan agents and Worcestershire distributors. Mr. Bowman told me that this was the original Morgan factory, dating back to 1910, and that Mr. H. F. S. Morgan was born in the house next door, which this enterprising firm has recently turned into a restaurant. Mr. Bowman discovered the crib in which "H.F.S." was born, and much historical correspondence, in clearing up before the conversion.

Back in the small reception-hall of the present factory in Pickersley Road we came upon hand-painted boards listing Morgan competition achievements from 1912-1920, commencing with H. F. S. Morgan's historic Hour Record at Brooklands—they were very large boards. There was also a photograph of Sammy Davis, in rather baggy overalls, about to take over Mrs. Stewart's three-wheeler on the later successful record-breaking occasion at Montlhéry. Beside it was a framed certificate relating to the 1912 A.C.U. One-Day Motor-cycle Trial, on which the bold copperplate hand of officials of long ago proclaimed that H. F. S. Morgan's Morgan three-wheeler had fulfilled all requirements, had run non-stop at between 18 and 20 m.p.h. average speed, and had climbed Kirkstone and Red Bank hills at 7 m.p.h. Happy days! And so different from the commissionaire-guarded haunts of the big Midlands motor manufacturers . . .

The factory consists of a series of long, well-lit sheds, through which Morgans pass from the initial stages of manufacture to the dispatch shed. In the latter were two of the new 2-litre Vanguard-engined cars and a good number of the now-defunct 1,265-c.c. "4/4s," in two-seater and coupé form. There were also about half-a-dozen three-wheelers, in "F Super" and "Family" form, with Ford Ten engines, awaiting shipment to places like Spain and Switzerland.

We were interested to learn that the new 2-litre model has undergone a few modifications since the Show. The engine and separate gearbox are mated into a unit by the carden-shaft tunnel and this unit is now mounted at four instead of six points, two at the front of the crankcase and two at the back of the gearbox. To deaden the noise, which a separate gearbox probably emphasises, a double floor has been introduced, with sound-proofing between the panels. This new 2-litre should have a very outstanding performance, and many Vanguard engines were seen awaiting installation in this exciting new chassis, which, incidentally, is longer than the old "4/4." Some people may have been puzzled, when they examined the new Morgan at Earls Court, over the rather flimsy-looking arms running out to the i.f.s. units. These strips take no load, apart from somewhat strengthening the front-end assembly, but act as dampers which prevent the exposed coil springs interfering with the steering. Formerly secured to the chassis by sprung bolts, they are now more securely anchored on alloy blocks.

We were encouraged to discover that much hand-assembly and old-time craftsmanship is to be seen at Malvern. All the bodies are made in the factory, the wood frames being held by simple clamps while they are screwed together by hand. They are panelled in steel these days and on the 2-litre the scuttle with its tool compartment is also of steel, although wood was used on the older "4/4." Three-wheeler body frames were seen in considerable numbers, incidentally.

We were struck by the brightness of the finish on the cars awaiting shipment, and were very interested to learn that after the cars have been sprayed with synthetic cellulose they are hand finished. The coupé model has deep door-pockets and the glass side windows can be unbolted complete, if desired, so that, with the "top" lowered into its recess behind the seat, a very open two-seater is quickly acquired. The very generous leather upholstery, leather padding round the prop.-shaft tunnel, and the provision of *two* spare wheels were other points which endeared the Morgan to us. Naturally, proprietary parts play their part, as in all present-day factories—very efficient Lucas headlamps, Lucas pass-lights, Newton and Andre shock-absorbers, Hardy-Spicer prop.-shafts, Lucas ignition and electrics, Borg and Beck clutches, Dunlop wheels drilled at Malvern, Dunlop tyres, Solex carburetters, A.C. oil filters, Champion plugs, Girling brakes, Smith's jacks, Burman-Douglas steering, and so on. The 2-litre has Girling hydraulic brakes and its Moss gearbox is the same as Standard use on the Vanguard, but cleverly adapted to separate installation, a feature Morgan doggedly retains. New cars go out filled with Castrol oil. The Vanguard engine replaces the former "4/4" engine, which was first an i.o.e. Coventry-Climax, later a 40-b.h.p. Standard Ten supplied specially to Morgan's requirements with a push-rod o.h.v. head, and giving good power output low down the r.p.m. scale. These engines were bench-run before leaving Coventry and not tested subsequently.

Naturally, the predominant theme at Pickersley Road is—Morgans. A Welshman was buying spares for a 1936 V-twin three-wheeler he had recently acquired and was anxious to overhaul. The "works" truck is on a Morgan "4/4" chassis. We were met by G. H. Goodall, a legendary Morgan figure in his active competition days. The only "gate-crasher" we saw was a 3½-litre Bentley saloon with pre-war B.A.R.C. badge. We learned that one of the actual "Le Mans" "4/4s" had just been sold and a "Le Mans Replica" was being rebuilt in the works.

Altogether we came away from the little Morgan factory with a pleasant feeling that here good cars are built by craftsmen in an atmosphere far more reassuring than that which is encountered in those vast plants where mass-production predominates.—W. B.

RAILTON-MOBIL AND GARDNER-M.G. REPLICAS

In the December MOTOR SPORT, under the heading "In Miniature," we recalled the clockwork P2 Alfa-Romeo of the 'twenties and suggested that there would be a ready market today for such replicas. We have since been reminded that something of the sort is made by Minimodels in the form of clockwork models of John Cobb's Railton-Mobil land speed record car and Lt.-Col. "Goldie" Gardner's famous Gardner-M.G. record breaker. Both are of metal construction, are realistic and have rubber tyres and free-wheeling clockwork motors wound by a device which obviates an unsightly heyhole or inconvenience of losing the key—because there isn't one. The M.G. is 10 in. long and has correct louvres and markings. Gardner's signature graces the model, but could be painted out by purists. The price is 7s. 11d.

While on this subject, for those able to build from kits, and who have some credit in America, the Hudson Miniatures kits are just the thing. We have a very rakish 1909 Hupmobile roadster made from one of these kits. It is 7½ in. long and the artillery wheels, bulb horn, springs, bolster rear tank, oil tail lamps, gear and brake levers, etc., lend both realism and the correct "atmosphere" to a very attractive scale model. Other kits enable equally excellent models of pre-1914 model-T Ford two-seater, Stutz Bearcat, Mercer Raceabout and other cars to be made. Those readers interested in such replicas can obtain further details of the Railton-Mobil and M.G. on application from Minimodels, Ltd., Tennyson Road, Mill Hill, London, N.W.7, and of the Hudson kits from the Scranton Hobby Centre, Dept. 16, Scranton, Pa., U.S.A., on mentioning MOTOR SPORT.

FIAT

On the subject of FIAT, readers may have noticed that in recent issues of MOTOR SPORT this great name is rendered, unless the Editor or compositors nod, as F.I.A.T. where it refers to products made up to the end of 1905, but as FIAT for products made thereafter. For this distinction we are indebted to Laurence Pomeroy, Technical Editor of the *Motor*, who took the trouble to point out to us that in 1906 the Company was reformed with additional capital and simultaneously the legal title was changed from Fabbrica Italiana Automobilo Torino to the present Societá par Azioni FIAT.

Reports of Recent Events—*continued from page 4*

LEINSTER M.C. G.V.B. TRIAL (December 2nd)

The Leinster M.C. held its G.V.B. Cup Trial on December 2nd over an 18-mile course in the Mt. Seskin—Brittas—Glenasmole—Glencree area of the Dublin Mountains. The course contained ten observed sections and tests ranging from mud and slippery granite slabs through braking and reversing tests to a speed hill-climb on a quarter-mile loose stone track with four hairpins.

As in most Irish trials, the ordinary sports cars were able to hold their own with the specials. The winner drove a Mercury-engined special and was closely followed by a brace of TD-series M.G.s. Casualties were few, being limited to a half-shaft on a TC-M.G. and a bent chassis on a cut-down Lancia.

Results :

G.V.B. CUP.—K. P. Murray (3,917-c.c. M.M.), 127 marks; 2nd: C. Vard (1,250-c.c. M.G.), 122 marks; 3rd: D. O'Clery (1,250-c.c. M.G.), 121 marks.

FIRST-CLASS AWARDS.—A. L. Young (1,250-c.c.) M.G., 119½ marks; W. Fitzsimmons (933-c.c. Ford Special), 115½ marks; M. P. Cahill (1,287-c.c. Iona Special), 112 marks; V. R. Ross (1,250-c.c. M.G.), 107 marks.

SECOND-CLASS AWARDS.—E. Connell (1,089-c.c. Riley), 106 marks; J. S. de S. Bewley (1,172-c.c. Ford Special), 106 marks; J. Bell (1,172-c.c. Ford Special), 106 marks; J. Ohle (1,250-c.c. M.G.), 105 marks.

NORTH MIDLAND M.C. AUTUMN SPORTING TRIAL (December 10th)

Heavy rain and a blustery wind did not impair the spirits of the competitors starting at the Peacock Hotel, Owler Bar. R. W. Phillips (Fairley Special), T. C. Harrison (Harford Special) and A. M. Beardshaw (Wharton Special) were excellent in the mud-covered observed sections and their times in the tests proved they were no novices in the sport.

Phillips won the Members' Trophy by the narrow margin of one mark.

At the finish, the Devonshire Hotel, Baslow, good food, ale and a film show of trials and racing events were much enjoyed by one and all.

Results :

CLASS 1.—1st (*Members' Trophy*): R. W. Phillips (Fairley Special); 2nd: T. C. Harrison (Harford Special); 3rd: A. M. Beardshaw (Wharton Special); 4th: G. P. Mosby (Ford Special); 5th: P. J. Clay (Austin Special).

CLASS 2 STANDARD CARS.—1st (*Committee Cup*): J. Epton (Ford); 2nd: J. W. Fleetwood (Ford); 3rd: F. Greenwood (M.G.).

THE NORTON TEAM TROPHY (The "Autowreckers"): R. W. Phillips (Fairley); A. M. Beardshaw (Wharton); A. T. Aldred (Ford).

WEST HANTS & DORSET C.C. CHRISTMAS CUP TRIAL (December 10th)

Bad weather conditions made the annual Christmas Cup Trial of the W.H.D.C.C. rather more difficult than was intended. It was held on the edge of the New Forest over grass and gravel hills which become very slippery when wet . . . and that Sunday was wet.

Forty-three cars started from the St. Leonard's Hotel, near Ringwood, for the morning section. This was simply a series of map references between which a set average speed had to be maintained. One minute early or late at each point was allowed, and no fewer than thirty-nine drivers lost their clean sheets. The four who did not were: E. Crabbe (Singer), and the Jesty family, J. B. Jesty (Allard), Mrs. J. B. Jesty (Bayliss-Thomas of 1923 vintage) and H. R. Jesty in a Hillman Minx.

After lunch, competitors tackled three hills at Matchams Park, near Ringwood. Only J. J. Macklin (Allard) climbed all three, and only J. B. Jesty and G. Dear (Jaguar 100) climbed two.

The route then led through Ibsley to Furze Hill, where there were two hills, the first of which, Furze Hollow, stopped the entire entry again with the one exception of G. Dear. Drivers then went over open moorland, bleak in the December rain, to Godshill, taking in another observed hill, a downhill acceleration and brake test, and an uphill acceleration test, on the way. Macklin, J. A. Shutler (Invicta), and George Hartwell (Sunbeam-Talbot) were outstanding in the tests.

Finally, there was an easy hill just outside Godshill, before the finish at the As You Like It roadhouse at Fordingbridge. Most drivers had to attempt this last hill in the dark, which made it look much worse than it actually was.

When the results came to be worked out, it was found that over half the entry had missed out one or other of the observed sections through faulty navigation, so that they had to be listed as non-finishers. The result of this was that everyone who did officially complete the course won an award.

Results :

CHRISTMAS CUP (BEST PERFORMANCE OF THE DAY): J. B. Jesty (3,622-c.c. Allard), 30 marks lost.

CLUB CUP (BEST PERFORMANCE IN OPPOSITE CLASS): J. A. Shutler (4,463-c.c. Invicta), 48 marks lost.

FIRST-CLASS AWARDS: L. J. O. Bartlett (3,622-c.c. Ford), 48 marks lost; W. A. Walters (1,496-c.c. Frazer-Nash-B.M.W.), 58 marks lost; Mrs. J. B. Jesty (1,496-c.c. Bayliss-Thomas), 70 marks lost; A. H. Saunders (1,087-c.c. Riley), 62 marks lost; P. A. Collingwood (3,622-c.c. E.R.G.), 70 marks lost; H. R. Jesty (1,265-c.c. Hillman), 60 marks lost; R. M. Lee (1,185-c.c. Sunbeam-Talbot), 54 marks lost; S. Curry (2,199-c.c. Austin), 64 marks lost.

SECOND-CLASS AWARDS: B. S. Poole (1,760-c.c. Belsize), 78 marks lost; G. Cooper (918-c.c. Morris), 72 marks lost; R. D. Corbett (1,203-c.c. Vauxhall), 86 marks lost; H. Smart (1,971-c.c. Bristol), 92 marks lost; P. Moore (3,622-c.c. Allard), 90 marks lost; G. Verner (Humber), 74 marks lost; F. H. Bullock (1,767-c.c. Lea-Francis), 96 marks lost.

BUGATTI OWNERS CLUB WELSH RALLY (December 8th - 9th)

In this event the organisers attempted to eliminate the most undesirable feature of most long-distance rallies, which is the interminable stretches of good clear main roads which have to be covered at some painfully low speed because of the set maximum average. There was a night section starting from three points, in Virginia Water, Stratford-on-Avon and Chippenham. These routes converged at the first control near Oxford, giving approximately the same mileage, and passed through Cirencester, Stroud, Gloucester, Ross-on-Wye, Hereford, Hay, Brecon, Lampeter, Aberayron on the coast, and Aberystwyth. The 70 competitors were started at one minute intervals, irrespective of their starting point, and all given the same latest time of arrival at Aberystwyth. The entry had been arranged in order of estimated performance, the slowest starting first, so that the possession of a faster car conferred no advantage. There was no other time control during the night, but there were four checks to visit, at each of which the location of the next one was given. These controls were situated in remote farmhouses, and one on the beach itself, so that time was easily lost by navigational errors. This could be made up by fast motoring, but in practice it was found that only seven competitors got to Aberystwyth on time. This was in part due to fog and ice in England, although everybody who was late admitted to having lost themselves at least once.

After a very good breakfast at the Bellvue Royal Hotel competitors were sent off to Prescott by a route over the mountains, but not including the rougher passes such as Bwlch-y-Groes. Along this route there were four undisclosed controls, situated round blind corners, and every competitor set his own average speed for the whole of the route by the time he arrived at the first check. To prevent too slow speeds being chosen, there was an overall time limit on handicap as in the night section. Thus each navigator had to work out the average speed as represented by the overall limit, and select a working average something above this to allow a margin against a double loss of marks at the finish, and to take refreshments at the controls for which time was allowed not affecting the running averages.

The whole of these manoeuvres were worked into a story in which it was supposed that each competitor was a doctor hurrying to save a patient lost in the mountains, and to pick up a special vaccine landed from a submarine on the way, at the instigation of the fabulous Dr. Foster. Messages from the latter, directing the carrier of the life-saving vaccine were in fact the directions issued at the day controls. The missing patient was finally run to earth in a village near Hereford, and the vital injection given.

At Prescott, reached in the darkness of Saturday evening, each competitor was desired to negotiate the hill from Pardon Hairpin to the end of the esses, in reverse, and apart from one or two unfortunates whose cars grounded while turning at at Pardon, this last straw was received with tolerably good humour. One enthusiast, long after crossing "Line B," motored through the Allard gap on the semi-circle, and balanced his Rover on the edge.

The final six were extremely closely-placed and the reaction of all competitors to the event seemed to be very favourable.

Results :

1st:	E. J. G. Madgewick (Austin Ten)	5	marks lost
2nd:	E. O. Hanlon (M.G. "TD") ...	6	" "
3rd:	A. Gascoine (Austin A40) ...	7	" "
4th:	T. G. Wood (Bentley 4¼-litre) ...	8	" "
5th:	R. P. N. Stark (Vauxhall Velox)	9	" "
6th:	W. A. L. Cook (Bentley 4¼ litre) =	Best B.O.C.	

A Tale of Two Trials

—continued from page 28

flywheel, stopped untidily across the line and wasn't too neat when reversing, and Faulkner's Mercury touched a pylon.

Proceeding to the group of four hills near Prestbury, it was evident that we were to see long delays. An R.A.C. official rushed hither and thither with good effect in a Land Rover, and young Farmer Draper and his B.S.A. motorcycle proved able to ascend every acclivity there was, but the trials cars all jibbed at that short steepness called Noverton I—all save L. J. Oliver, whose Oliver-Ford made a fine climb—and most of them couldn't get either to the start of the longer Noverton II or to any of the other hills !—again, all except Oliver, who got a long way up, and Wharton, who climbed clean with no bouncing-aid from his navigator.

Over at Draper's Two, a sort of Redroads which cars had to tackle from a standing start just before a severe hump, this hump defeated most of them and those who cleared it came to rest on a gulley a little higher up. Wharton was magnificent, getting into section 4, Phillips' Fairley got into section 3, and Tracey's blown Dellow was even better. In spite of the snowy scene—it was one of great beauty—many little engines were boiling merrily, Burgess being quite obscured by steam and having clutch slip into the bargain. Alf Frost's A.F.S. wouldn't look at it, neither would Waldron's Dellow or Wilson's Austin Special, but Pentony, hero of the Lockhart-Bossingham, got his Cyclops, the Vauxhall engine of which has needed no attention of any sort in a year of this kind of thing, as high as anyone. Rumfitt's white Allard, one of the declining "heavy brigade," wouldn't leave the line, but Waring's blown Dellow proved helpful by wearing down the hump by wheelspin. Begley's Ward Special was boiling seriously, likewise Winder's Ford-Austin and the Price, and then Imhof, watched by his enthusiastic wife Nina, "did a Wharton" in a grand assault on this nasty pimple. Best's "never-say-die" M.G. achieved section 3. The Draper B.S.A. motorcycle was, of course, complete master of the situation !

We now moved on to John's Delight, a rather similar, straight-up hill but beneath trees. The skilful got as far as section 3, Wharton up into "4," the others to section 2, and all slid backwards, wheels locked, in hair-raising fashion to the bottom. Even the Bold, whose engine had "lost a pot" on the first hill, boiled here. Onslow-Bartlett called for helpers to hold down the front of his tail-heavy Bartlett as he came to rest ! The o.h.v. J.A.P. still started on the button but the carburetters—there is one to each cylinder—were twisting round on their mounting stubs.

The cars now wound along the field road, at a time when the trial should have been finishing and with four more hills and another timed test to tackle. But the situation was retrieved—marks had been noted down, the competitors had got clear of Lower Hill Farm, where at one time they seemed likely to stay, and the trial would clearly come to a stiff but successful conclusion.

At the last hill, Middle Jinny, lent by Cheltenham Corporation, the last competitors climbed this long, leaf-mould lane with a steep bit at the top, in the dusk. Many clean climbs were recorded, mostly by those who built up sufficient speed to get over the final obstacle, Wharton actually changing-up. Only Crossby's neat Vauxhall Special failed low down, but there were many who were unlucky at the top, including the Wilson, the RAD-Ford, Goodalt's Ford, Smith's Bartlett, Enderby's Ford, Hopkinson's Ford/Austin, and others.

So the mud-stained cars wended their way back into the town and the welcome hospitality of the Cheltenham M.C., whose members had marshalled the hills. This R.A.C. event is a classic of the utmost importance but it is only fair to emphasise that it isn't a championship in the sense that the Hill-Climb Championship is, no previous events being taken into account. Wharton, however, also won in 1949, which is fair enough ! The results were announced that night, as follows :—

FIXTURES FOR JANUARY

C. = *Closed Event.*
C.I. = *Closed Invitation Event.*
R. = *Restricted Event.*
N. = *National Event.*
I. = *International Event.*

7th.—Vintage S.C.C. C.I. Rally, Measham.
Wirrall 100 C. Trial, N. Wales.
12th.—Ulster A.C. C. Trial, Northern Ireland.
Scottish S.C.C. C. Rally, Glasgow.
Sheffield & Hallamshire M.C. Dinner/Dance.
13th.—Bristol M.C. & L.C.C. C. Trial.
13th/24th.—BRUSSELS MOTOR SHOW.
14th.—M.G. C.C. Midland Centre C. Trial.
Leicester C.C. C. Trial.
N. Midland M.C. C. Trial, Derbyshire.
21st.—N. Ireland M.C. C.I. Trial, Londonderry.
Blackpool & Fylde M.C. C. Trial, Wales.
23rd/31st.—INTERNATIONAL MONTE CARLO RALLY.
27th.—Manchester U.M.C. C. Rally.
27th/28th.—Leeds U.U. M.C. C.I. Night Trial, W. Riding.
28th.—North Devon M.C. C.I. Trial, Devon.
M.G. C.C. S.E. Centre C.I. Trial, Chilterns.

Results:

CHAMPIONSHIP TROPHY (BEST PERFORMANCE): K. Wharton (1,200-c.c. Wharton-Austin).
SPECIAL AWARDS (SECOND AND THIRD BEST PERFORMANCES): A. G. Imhof (1,172-c.c. s/c. Imhof Special), R. W. Phillips (1,486-c.c. Fairley).
SOUVENIR AWARDS (NEXT SEVEN IN ORDER OF MERIT): T. C. Harrison (1,172-c.c. Harford), L. J. Oliver (1,172-c.c. Oliver), G. Pentony (1,450-c.c. Cyclops), J. D. Sleeman (1,172-c.c. s/c. Sleeman Sports), D. F. H. Cotton (1,172-c.c. Cotton Special), K. C. W. Rawlings (2,088-c.c. Vanguard), J. Clegg (1,172-c.c. s/c. Clegg).
SPECIAL AREA AWARDS: *North:* Wharton. *South:* Imhof. *Scotland:* J. E. Wilson (1,200-c.c. Austin). *Ireland:* W. T. Todd (4,086-c.c. Humber).

CLASSIFIED—*continued from page 52*

WANTED—*continued*

M.G. "PA," "PB," or Morris Eight tourer required. Reply 54, Langham Road, Teddington, Middlesex. Tel.: Kingston 9148. [2854

CHEAP OLD CAR, dead or alive. What have you ? Riley, Alvis, etc. Anything considered. Must be towable if non-runner. Cash settlement. Box No. 741, MOTOR SPORT, 15, City Road, E.C.1. [2875

8th SERIES LAMBDA. Can anyone help save my fine specimen from the breakers ? Cylinder block is corroded at base of liners. Has anyone spare block in sound condition or salvage suggestion ? D. F. Saunders, 66, Grove Avenue, Muswell Hill, N.10. [2860

B.M.W. 328 INSTRUCTION BOOK. German text satisfactory. Would buy or borrow. Please make an offer. Ewing, 19, Barclay Street, Poughkeepsie, New York, U.S.A. [2819

VINTAGE ROLLS wanted or Mercédès, Type S or SSK at reasonable price. Box No. 703, MOTOR SPORT, 15, City Road, E.C.1. [1680

BENTLEY WANTED. Red Label. Good mechanical condition essential. Box No. 705, MOTOR SPORT, 15, City Road, E.C.1. [1683

LAGONDA 2-LITRE drophead coupé. Must be in good order throughout. Box No. 706, MOTOR SPORT, 15, City Road, E.C.1. [1684

FOUR-SEATER OPEN TOURER or sports body, Lagonda, Leaf, or similar, to fit Alvis "12/50." Full details to Foulger, 8, Grove Road, Uppermill, near Oldham, Lancs. [2757

DROPHEAD open saloon 4-seater still required under 12 h.p. Good condition under £200. M. W. Chetwood, 44, Crowborough Road, Southend. [2762

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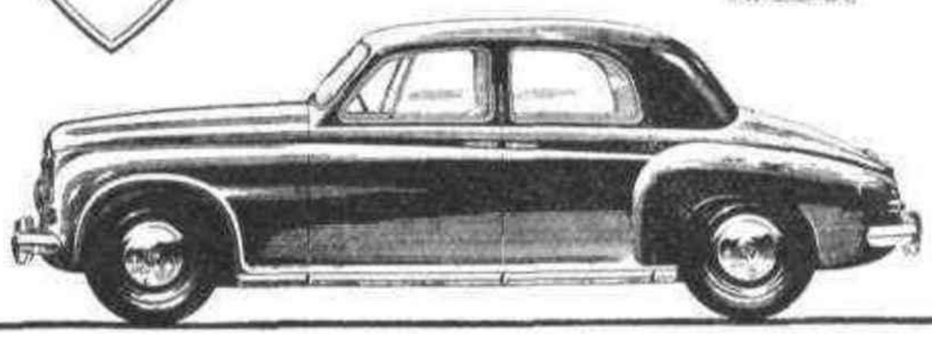
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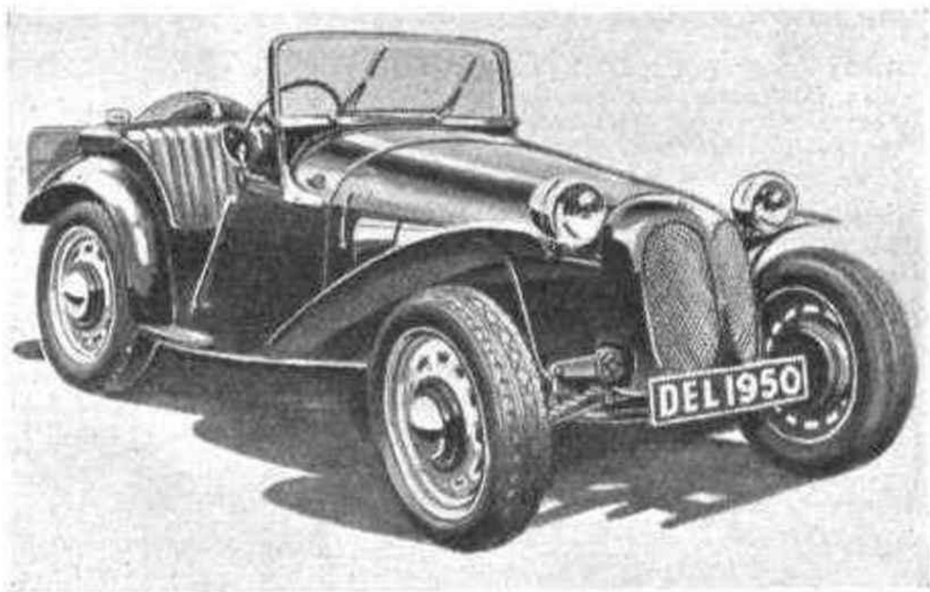


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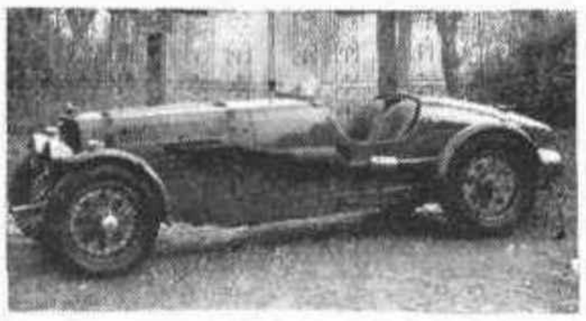
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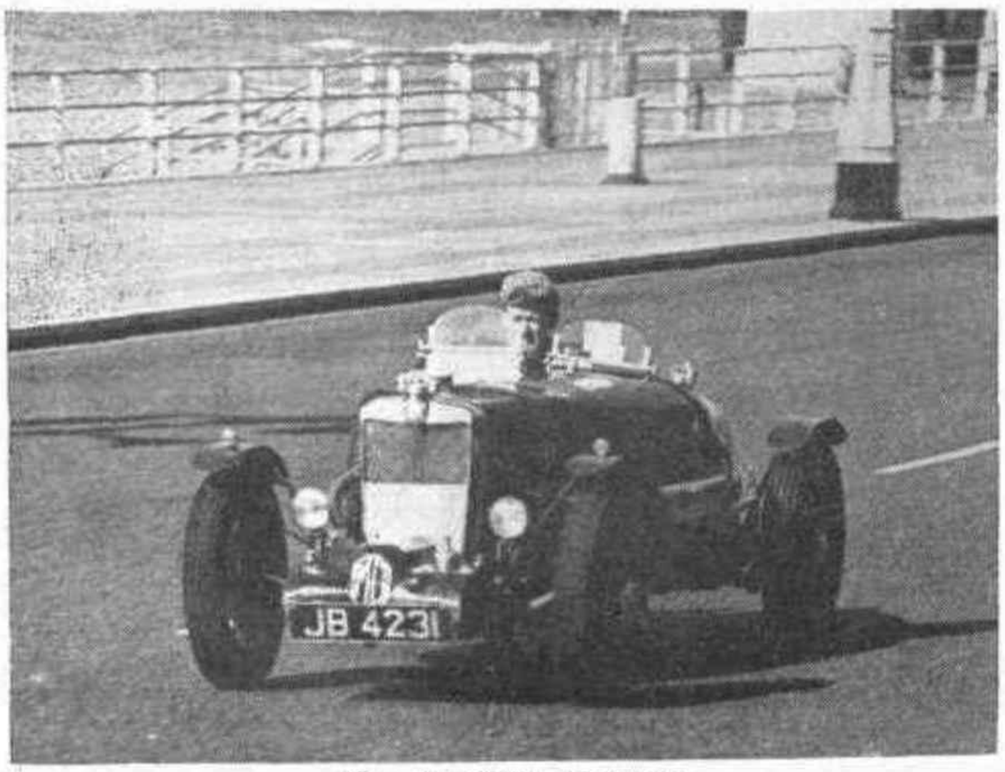
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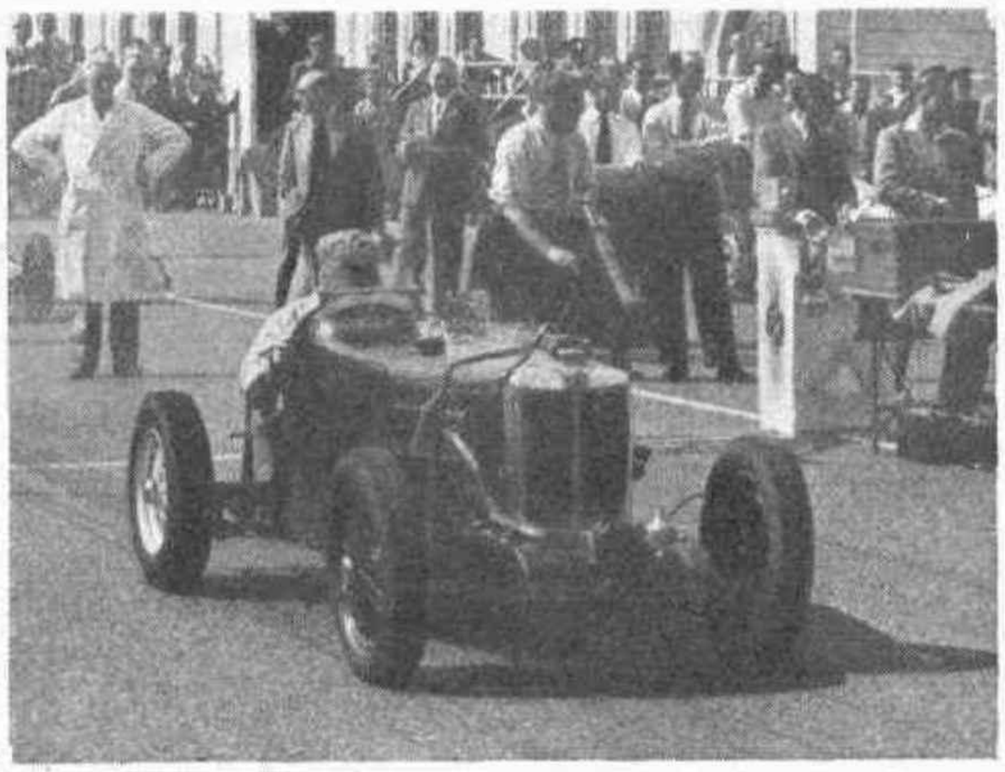
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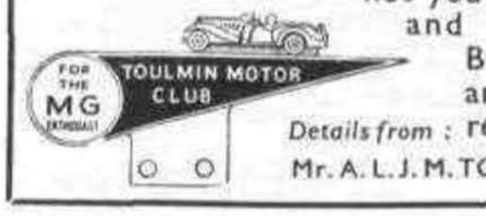
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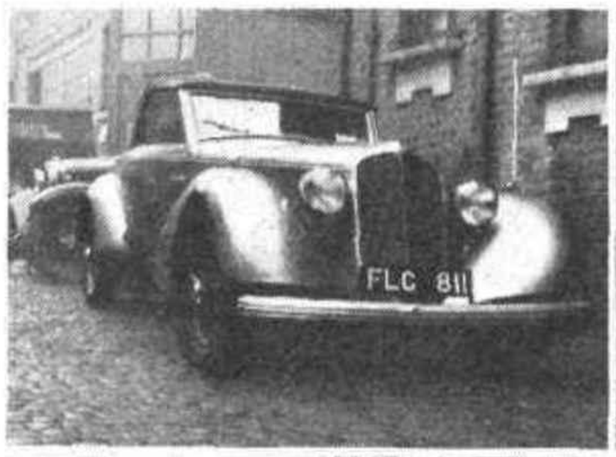
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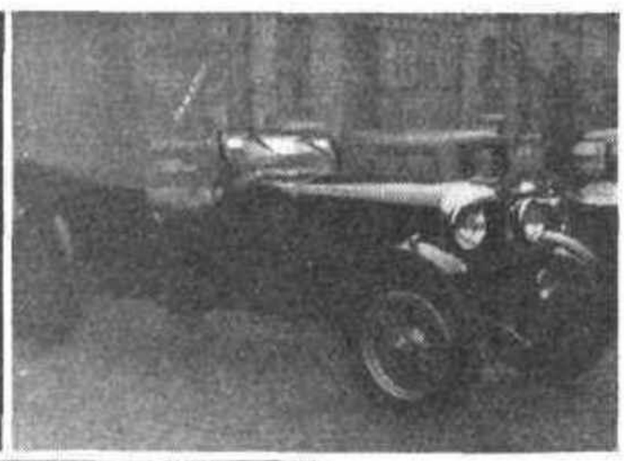
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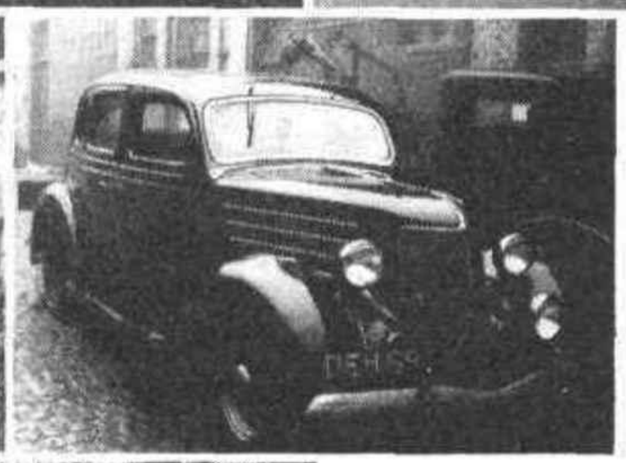
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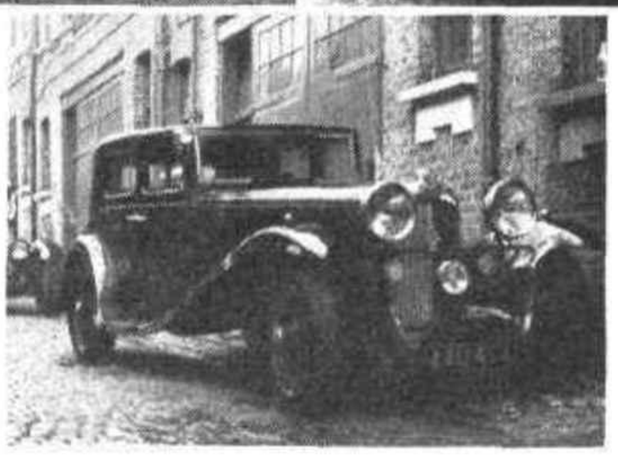












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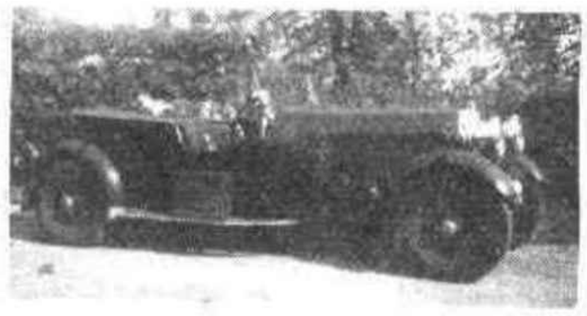
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1928 FIAT 8-h.p. COUPE. Excellent running order. Fast and economical. Nearest £75. T. Ford, Crown Wheel and pinion. Numerous Morris 11.9-h.p. spares. Peter Macey, Warmlake, Sutton Valence, Kent. [2864

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FINE CLOSE COUPLED 4-SEATER "SPEED SIX" BENTLEY. New wings, professionally coach painted black. All chrome as new. Excellent interior in red, carpets, etc., full weather equipment as new. Shortened chassis 1929, but engine, gearbox, etc., all late 1930. Four tyres as new, two good spares. Maintained by an enthusiast. Excellent mechanically. Marechal lamps, two sports, one swivel signpost lamp. Twin C.A.V. wipers, well laid-out dash. £695, or nearest offer. Apply: 14b, London Road, Alderley Edge, Cheshire. Tel.: Alderley Edge 2177. [2869

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ATALANTA 2-litre. Cotal gears, independent four-wheel suspension, 2-seater sports, British racing green 10,000 miles since complete rebuild. £475. Miles, Stanton House, St. Mark's Hill, Surbiton. Tel.: Elmbridge 1341. [2878

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1938 2½-LITRE JAGUAR 100 2-seater. Total mileage 40,000. Very fine condition. No reasonable offer refused. McGlashan, 52, Fortrose Street, Glasgow, W.1. [2882

FOR SALE—*continued*

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SPRITE-KESTREL 1½-LITRE RILEY 1937. New bearings, etc., September, 1950. 55,000 miles approximately. Good reliable motor. Seen London weekdays, Sussex/Hants/Surrey weekends, elsewhere by arrangement. £525. Humber Super Snipe saloon, ex-W.D., £10 tax. Good condition, body rough. Ideal towing trailers, caravans, etc. Seen Cut-Mill Garage, Portsmouth Main Road, Bosham, Sussex (between Chichester and Emsworth). £175. Owner getting new car. Unique 20 ft. by 6 ft. beam centre-board sailing boat, designed and built by Uffa Fox. Unsinkable, self-draining. Very fast canoe type for four/five persons. Lying Burnes Yard, Bosham, as above. £500. Owner wishes to race Swordfish dinghy. John K. Maw, Aldersgate House, New Barnet, Herts. Tel.: Barnet 5555 Monday–Friday 9 a.m.–5 p.m. [2888

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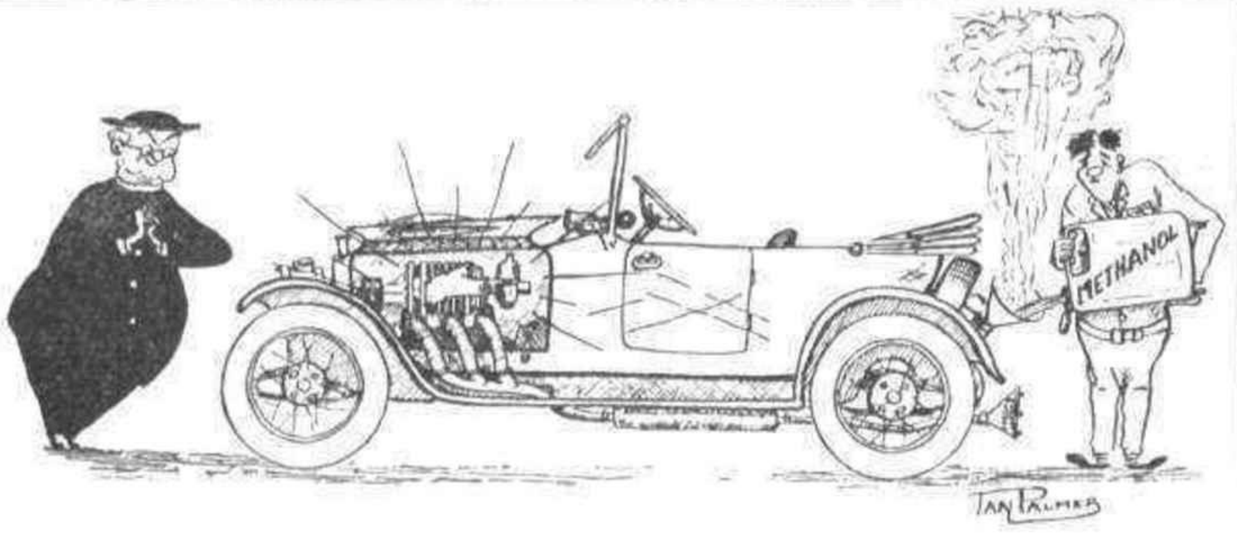
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8L V12 PACKARD ENGINE unit complete with dual carburetters, dual coils, starter, dynamo, manifolds, aluminium heads. Suitable supercharging and 400 b.h.p. at 3,500. Would make record-breaking special. Will fit most 4½-litre chassis. Still fitted and can be tested in car. Would part-exchange car with cash adjustment. Seen Oxted, Surrey. Box No. 749, MOTOR SPORT, 15, City Road, E.C.1. [2897

1927 H.E. SIX 2-litre sports tourer. Good condition throughout. Exchange sports saloon, or sell. £130. 37, Anne Street, Higher Broughton, Salford, 8. [2898

RILEY NINE saloon, 1929. Sound mechanically, fabric body, exceptional, £67 10s. Austin Seven saloon, 1929 (later engine), good all round, £47 10s. Instruction books : Talbot, Jowett, Standard, Armstrong, etc. 60, High Street, Ponders End. Tel. : Howard 2320. [2899

ALVIS TWELVE f.w.d. 2-seater, 8 ft. 6 in. wheelbase, originally blown but now with single Solex, engine completely overhauled, bored and shaft ground, transmission and chassis very good, body rebuilt with new framing and aluminium panels, rear tank, cycle wings, new hood and tonneau cover, three new tyres, good battery, 11-in. lamps (re-silvered reflectors), complete range of instruments ; a very sound specimen, £185. Bentley 6½-litre (not Speed Six), very ordinary-looking saloon body, four-door, six-light, but in extremely good condition ; chassis really first-class throughout ; good tyres, good battery, excellently equipped, does 75-80 m.p.h. and 14-15 m.p.g. on single Smith carburetter ; an outstanding bargain at £140 (the rebuilt and re-chromed radiator alone is worth £50). Lancia Dilambda 32-h.p., 1930-1, very comfortable and good looking Mulliner four-light fabric saloon body in extremely good condition, with beautiful hide upholstery ; very good chassis indeed, all minor defects such as worn distributor and split exhaust pipes rectified ; new tyres and batteries ; sixth fastest time in class of 27 at V.S.C.C. Bisley Rally, £170. Invicta 4½-litre saloon, 1931 ; in running order, fairly good mechanically but very rough body, nevertheless repairable, £80. Singer 1923 15-h.p., six-cylinder all-weather tourer with wind-up windows, mechanically sound, good tyres, body structurally sound and good leather, £32 10s. to clear. Trojan, 1926, with 1928 engine, 4-seater tourer ; good hood and new side-screens, good battery, solid tyres and spare set of well-base wheels, two hubs ; last taxed 1935, two owners and 25,000 miles since new ; very sound throughout, £50 to clear. 1939 Renault Eight saloon, one owner and 53,000 miles ; original paint, good interior, recent reconditioned engine, new tyres ; a very nice little car at £270. Spares : a quantity of miscellaneous Invicta 4½-litre spares, including a block, a shaft, front axle, magnetos, etc., also a complete French Talbot 21-h.p. chassis and 1929 Vauxhall "20/60" chassis, less rear axle ; Pair Bentley headlamps, £6 10s. ; 10-in. Marechals, chromed, £11. Numerous B.E. tyres ; set of six as new 19-in. Rolls-Royce wheels for Ghost or Phantom ; various acetylene and electric vintage lamps, etc. C. J. Bendall, 25, Orchard Road, Stevenage, Herts. Tel. : Stevenage 566 (day), Hitchin 1108 (evening). [2900

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RED LABEL BENTLEY. Registered 1933, 9 ft. 9½ in. chassis, 3.53 B.A., "A" box, crank reground, new bearings, valves, guides, springs, rings, pot joint, rewired, four new 21 by 5.25 tyres, two spare wheels, open V.D.P. body. Requires attention, nero screens, no hood. Domestic difficulties require sale. £195. Hughes, 41, Sidney Road, Rugby. [2903

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£39 VINTAGE (1928) AUSTIN "12/4" tourer. New hood, good runner, appearance good. Barnes, 36a, Leigham Avenue, Streatham. [2906

6½-LITRE BENTLEY 2/3-seater, 1930, "Ducks Back" sports. Twin S.U.s. Perfect condition throughout. Original instruction manual. New hood, tonneau and sides. Shaw, Manor House, Manor Road, Oldham. [2907

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"12/50" ALVIS, 1927 "TG" 2-seater, with small open box body. Sound mechanical condition, well shod. £100 or near offer. Lawrenson Bros., Billingshurst, Sussex. Tel. : Billingshurst 88. [2909

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D.I.S. DELAGE. Sleeved block, Martlets, reconditioned cam followers, new bearings throughout ; brakes relined, drums skimmed and lined. Four-seater close-coupled coupé body, very fast motor. For sale due to one of my children being blind through head operation and require more suitable car. The Old Granary, Great Eversden, Cambs. [2915

1930 DELAGE D8 fixed-head coupé. Finished racing red and polychromatic grey, hide trimmings. Excellent condition throughout. £275. Mack, 87a, Chesil Street, Winchester. Tel. : Winchester 2707. [2917

MASERATI, 2,600-c.c. supercharged, ex-Whitney Straight. Held Shelsley record and Brooklands Mountain Championship. Quantity of spares, including twin hill-climb wheels. Has been in storage since 1938, only used at Brighton last year. £800 or near offer. Can be seen in London. Tel. : Uxbridge 2564 or write Bradley, Flat 3, 2, The Broadway, Oxford Road, Denham, Bucks. [2919

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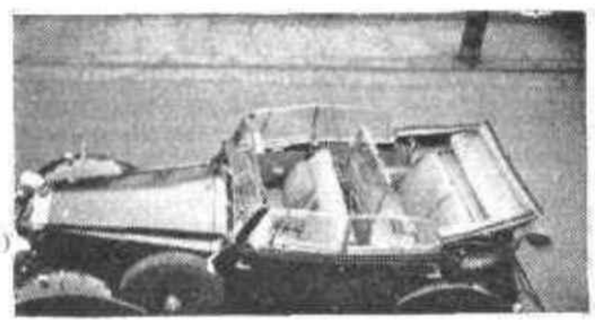
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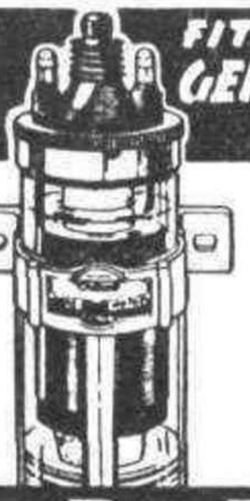
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ALVIS SPARES, " 12/50," " 16.9 " and " 19.8," also f.w.d. Crested Eagle radiator, £7 10s.. Engine complete, running, £30. Speed Twenty engine complete, running, £35. F.W.D. radiator, sound, £3. " 12/50 " radiator, sound, £3 10s. Starter motor, £3 10s. " 16.9 " valves, guides, springs, gaskets in stock. Crested Eagle springs and gaskets. Tyres, unused retreads, 4.50 by 19, £3 ; 4.50 by 17, £2 17s. 6d. ; 6.00 by 19, £5 5s. ; 6.00 by 20, £5 7s. 6d. ; 6.25 by 18, £4 5s. Wheels, 18, 19, 20, 21 in., 42 and 52 hub sizes ; 52 hub caps, 7s. 6d. each, plated 8s. 6d. extra. Four-cylinder B.T.H. vertical magnetos, £3 10 each, used. Cranks, rods, blocks and heads for pre '35 Alvis. Rebuilt " 16.9 " tourer, Silver Eagle ; £10 tax ; full weather equipment, £180 or near offers. Complete " 12/40 " Leaf chassis with body ; all stripped prior to rebuild, some work carried out, owner lacks time, £60 the lot. Riley Nine twin manifolds, 35s. each ; magneto, £2 10s. ; " 12/6 " crank, £2 10s. ; radiator, £3 ; rods, 10s. each ; rockers and box, £1 ; timing cases, £1 ; cylinder head, repairable, £1 ; brake drums and shoes, 10s. ; axle case and torque tube, 30s. Carriage extra except tyres. Bagshaw, The Green, Bath Street, Belgrave, Leicester. [2918

JOWETT, 1929, 7-H.P., 2-seater with dickey. Good tyres, hood and body. Engine requires attention. Numerous spares. Taxed year end. Offers. Tel. : Valentine 9023, after 6 p.m. [2249

FREDDIE DIXON 1,100-c.c. racing " Brooklands " Riley. Racing $1\frac{10}{18}$-in. diameter journal counterbalanced crankshaft and polished connecting-rods, 17 to 1 high-compression Benzole pistons, extended-period high-lift racing camshafts, alternative two or four S.U. carburetter manifold assemblies, latter fitted with racing Barrell throttles. Crankshaft and rods reground and metalled and balanced by Laystalls, new cylinder liners, genuine racing clutch centre plate and racing flywheel assembly, 16-in. diameter racing brake drums, modified five-stud hubs to knock-offs and complete set of alternate size road wheels. The complete chassis and engine is stripped and can be inspected prior to being rebuilt by an experienced Brooklands racing mechanic for serious 1,100-c.c. racing in the coming season, or all road equipment. It is available as an exceptional 1,100-c.c. sports car with a maximum of over 100 m.p.h. Price depends entirely on what form the car finally takes. Communications to : Box No. 708, MOTOR SPORT, 15, City Road, E.C.1. [2806

DELAGE D.8 Super Sports eight-cylinder, 4-litre. Special Lancefield drophead body. One owner. Total mileage under 8,000. Body and chassis in original beautiful condition. 18 m.p.g. Registered on £10 tax. Cash offers, or exchange. Box No. 709, MOTOR SPORT, 15, City Road, E.C.1. [2807

ALVIS SILVER EAGLE " 16.95." December, 1930. Black fabric saloon, red wire wheels, leather, seven tyres, four nearly new. New radiator, clutch relined, towbar. It's sound, solid and built to last. £110. 268, Abbey Road, Barrow-in-Furness. Tel. : Barrow-in-Furness 1859. [2808

DELLOW, late 1948 ex-Eric Penn car unblown. Twin S.U. carburetters, S.U. pump. Total weight, 10 cwt. Metallic blue, twin Michelin spares. Faultless condition throughout. New all-weather equipment including side-screens. Fantastic acceleration, 40 m.p.g. £325, offers. Partridge, 206, Penns Lane, Sutton Coldfield, Birmingham. Tel. : Erdington 5534. [2809

O.H.C. MORRIS MINOR. Recent rebuild, including new tyres, battery, 2-seater body, transmission overhauled, etc. £75. 64, Grange Road, Sutton, Surrey. Tel. : Vigilant 3403. [2817

TALBOT 95, 1935. Darracq body, accelerating clutch, host extras, lovely job. Taxed, insured. £155. Woodfield, 23, Murtwell Drive, Chigwell, Essex. Tel. : Buckhurst Hill 5957. [2821

SPEED 20 ALVIS, sale or exchange, 1935 Vanden Plas saloon. Car resprayed, crankshaft reground September, excellent tyres. Sell £300, no lower offers, take smaller saloon, Alvis, Leaf, similar quality car, age no objection if sound. Wilson, Hill Place, Maidstone. Tel. : Maidstone 2868. [2822

B-TYPE E.R.A. 1,500-c.c. supercharged single-seater racing car. New engine, 120-mm. supercharger, gearbox overhauled by makers, 4.5 to 1 ZF-type rear axle, chassis and axles thoroughly reconditioned. New Girling S.A. Car ready for next season's Formula I racing. Ex-Seaman and Cotton. £1,100 or near offer. Apply T. C. Harrison, Ltd., 53-61, London Road, Sheffield. [2823

QUANTITY OF SPARES for disposal. Rudge wheels, 16 to 21 in. Bugatti radiator, large, £5. Old Alfa 1,750 radiator, £2 10s. Steering, £4. Single-cam head and block. Talbot radiators, £3. Axleshafts, differentials. Rover Speed 14-h.p. spares. Ford 10-h.p. reconditioned with starter, £50, etc. G. Jones, 47, Edmonstown, Tonypandy. [2824

M.G. MAGNA, 12-h.p. six-cylinder. Bored +.020 in. complete with dynamo, starter, manifold, clutch, without carburetters. £10. J. N. Staight, Bank Farm, Dumbleton, near Evesham, Worcs. [2828

ALLARD or Ford V8 body or any part thereof wanted urgently. Can anyone please help. 64, Grange Road, Sutton, Surrey. Tel. : Vigilant 3403. [2818

AUSTIN, 1934 16-h.p. saloon. Excellent condition, original black cellulose. £98. Tel. : Gipsy Hill 2513. [2830

LANCIA ARTENA 17 h.p. four-cylinder. Fitted well-built English shooting brake body. Scintilla Vertex. Oil consumption negligible. Five excellent tyres. Capacious, reliable, interesting. £395. Box No. 733, MOTOR SPORT, 15, City Road, E.C.1. [2831

CORD. Nicely preserved 1936 convertible 4/5-seater. New tyres, battery, black mohair hood and tonneau. Everything, including radio, works. Handbook and data sheets available. Photos available. £499. I. McLardy, Glasgow Road, East Kilbride, Lanarks. [2832

CAR CABLE, rubber insulated, spiral metal braided, ideal for vintage rewiring. 50 yards 15s., c.w.o. S.A.E. sample. Bacon (Electrical), Par, Cornwall. [2833

M.G. 1936 " PB " 2-seater. Resprayed, new hood, lamps, etc., re-chromed, new side-screens. Best offer over £250. Box No. 752, MOTOR SPORT, 15, City Road, E.C.1. [2834

MERCEDES, 1½-litre " Targa Florio " four-cylinder, two camshaft, supercharged. Full electrical and road equipment, 2-seater body. Large quantity of spares for early side-valve Aston-Martin cars. Blagdon Engineering Co., Blagdon, Seaton Burn, Northumberland. [2836

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BENTLEY 6½ ENGINE BX 2412. Complete except clutch shaft, disc and starter. Starter ring worn but repairable. Replaced by diesel. £25 or offer from enthusiast. Rogers, 71, London Road, Kilmarnock. [2841

DELAGE D.M.S. Engine, gearbox, front axle, steering, wheels, etc., for sale. Can be sold separately. Gahagan and Hall, Wonersh, Surrey. Tel. : Bramley 2021. [2842

FOR SALE, LOW PRICES : Set four 1¼-in. S.U. carburetters ; Bugatti spares, including G.P. gearbox, Hartford conversion front shock-absorbers, straight-through exhausts, clutch, tank, front axle (bent), etc. ; T59 pistons ; T57 front seats, thermostatic radiator shutters ; T44 half-shafts ; T35A rods, brakes, etc. ; " Brescia " crown wheel and pinion ; pair 6-in. rev.-counters, speedometer, set Hartfords. A. C. Whincop, Old Orchard, Charlwood, Surrey. [2844

SLAB TANK, suit Bentley, etc., 15-gallon, £5. Bentley 3-litre engine parts, also hub extractor, 45s. Wanted, 19-in. tyres. Box No. 735, MOTOR SPORT, 15, City Road, E.C.1. [2848

RILEY NINE, 1934 Kestrel, but with single S.U. Price £200. Completely overhauled, two spare wheels, crown wheel and pinion, bills shown for large expenditure last three years. Car seen Kendal or reasonable radius by arrangement. Hitchen, Castle Road, Kendal. Tel. : Kendal 164 (business), 914 (evenings). [2845

VINTAGE BIANCHI, 1930 10.4 h.p. o.h.v. 4-seater sports, British racing green. New : valves, starter, tonneau cover, battery. Beautiful car with appearance that does not date. Reason for sale and test for genuine enquirers. About £80 ? After 6 p.m. Warne, 33, Ambleside, Streatham, S.W.16. Tel. : Streatham 5785. [2847

½-IN. WOLF HEAVY DUTY ELECTRIC DRILL, 6-in. rubber disc and polishing mop ; 3-in. heavy duty lathe (not s/e), both as new and hardly used. £20 or sold separately. A. C. Wright, 25, Oakengrange Drive, Southend, Essex. [2849

1935 SINGER " LE MANS " 1½-litre, six-cylinder. Three S.U. carburetters, slab tank, good tyres and two spares. Body and paintwork good. £230. W. Lindley, R.A. Mess, Connaught Barracks, Dover, Kent. Tel. : Dover 914. [2850

£450. ALLARD, 1947 (November), with special 2/3-seater drophead truck body. Easily convertible. One owner. H. Linney, The Old Cottage, Farnsfield, Notts. [2852

FRAZER-NASH, 1931/2, 3/4-seater. Four-speed, new tyres, battery, hood, tonneau cover. Good throughout. £225, no offers. Box No. 736, MOTOR SPORT, 15, City Road, E.C.1. [2853

DELAGE, 1924 D.I. If any of the kind enquirers after this car, advertised at £30 in the November issue, are still interested, it is now available again, previous purchaser having defaulted in payment. Beavis, Brewhouse Hill, Wheathampstead. Tel. : Wheathampstead 2175. [2856

JOWETT TOURER, 7-h.p., 1927. Genuine vintage car. Good hood, side-screens, and tyres. 45 m.p.g. £35. Bingham, 54, Brewery Road, Horsell, Surrey. Tel. : Woking 1254. [2857

J. H. BARTLETT LTD. OFFERS. New type 55 B.M.W. pistons and FIAT 500 pistons, new. M.G. P-type head, £30. M.G. radiator, £10. M.G. gearbox, P-type, £35. M.G., M-type gearbox, £25. M.G. twin wheels and axle shafts, £25. Alvis Speed 25 back axle, £35. Alvis Speed 25 brakes and drums. Aston-Martin cylinder head, twin S.U. carburetters, dynamo starter, water pump. S.U. carburetters (M.G. P-type), M.G. connecting rods and clutch, B.M.W. 326 gearbox, £35. Lagonda 2-litre engine parts, axle shafts and hubs, grease guns, 10s. each. All Lagonda Rapier spares. Healey 2½-litre engine and gearbox, back axle, complete brake drums. Some front suspension parts. Also rear suspension. P100 spot light, £3. Also other spot lights, 25s. Oil coil, 12s. 6d. S.U. petrol pumps, £2 each. We are interested buyers of all sports and Continental cars. Also crashed sports cars. 27a, Pembridge Villas, W.11. Tel. : Bayswater 0523. [2859

ALVIS SPEED TWENTY foursome drophead coupé by Vanden Plas, March, 1935. Excellent chassis. Alvis metallic grey. Telecontrols, P.100s. Laid up during war. Price £375. Seen by appointment. Ewen, Link Hotel, Gordon Avenue, Stanmore. [2921

RILEY NINE SPECIAL. High-compression Marflet pistons, twin S.U.s, external exhaust, i.f.s., light aluminium body. Trials or fast road car. £285. Newnam, Park View Road, Wollescote, Stourbridge. [2922

INVICTA, 1935 100-m.p.h. 3-litre open 5-seater. Completely rebuilt 1946. New hood, tonneau, engine, chassis, body, tyres all excellent. £295. Ryland, Allerford, Minehead. Tel. : Porlock 100. [2923

1950 VINCENT BLACK LIGHTNING engine unit, complete to the latest modifications. Two front heads, 32-mm. carburetters, etc., run approximately 300 miles only in motor-cycle and guaranteed in perfect condition throughout. £300. 2, Sunderland Road, Forest Hill, S.E.23. [2925

HUMBER TOURER, 1931 23.8 h.p. Hood, body-work good. Perfect running condition. Taxed, insured. Offers to Haworth, 91, Abbs Cross Lane, Hornchurch, Essex. [2814

RILEY KESTREL, 9 h.p., twin carburetters, Scintilla, new battery. Very clean, with almost complete spare engine. 245 or near. Alvis Silver Eagle, single or triple carburetters. Rebored and shaft ground recently, new batteries, excellent chassis, nearest £150. Alvis front and rear axles complete, nearly new crown-wheel and pinion, 20-in. wheels, believed early Silver Eagle. T. C. Ivens, North Owersby, Lincoln. Tel. : Owersby Moor 202. [2812

LAGONDA " 16/80 " Van den Plas 2/4-seater. Carefully maintained. Excellent condition. Tel. : Wimbledon 0423. [2813

B.M.W. TYPE 321, 1939 model, £10 tax. Drophead 4-seater, four-light, left-hand drive. New hood, tyres, battery, etc. Chassis just completely overhauled. Whole car in first-class condition, both bodily and mechanically. Noakes, 30, Trevor Place, London, S.W.7. Tel. : Kensington 1317. [2815

1951 650-C.C. THUNDERBIRD. Delivered December 16th. Unused, owner taking delivery new car. £220. 170, Green Lane, Morden, Surrey. [2926

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BENTLEY (1928) 4½-LITRE 2/4-seater with 40-gallon slab tank mounted with twin spares. Chassis No. KM 3079. D-type box. Fold-flat and twin aero screens. Mechanically superlative having undergone a complete rebuild in 1948 and having been stored untaxed for the majority of the time since. At present being recellulosed black in our shops, all plating being re-chromed by "Muppivans." When completed trimming will be renewed in red leather and a red silk-mohair hood and tonneau will set off a very pretty and extremely potent 4½. The tyres and battery are new, as is the wiring and Carl-Zeiss lamps. Similar and inferior 4½s are advertised regularly by private owners in the £550/700 price range. **Guaranteed for three months against any mechanical defect whatsoever.**

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LAGONDA RAPIDE (1935) 29.13-h.p. In absolutely original mint condition having completed only a reputed 20,000 miles in the hands of two meticulous owners. Fitted with the famous LG 45 engine, the performance ranges from 7 m.p.h. to close on 100 m.p.h. in an effortless top gear. Telecontrols are fitted as standard and the tyres are believed to be original. The weather equipment is original and absolutely as new, and it is practically impossible to fault this car in any respect. Taxed year. **Guaranteed for three months against any mechanical defect whatsoever.**

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LAGONDA RAPIDE (1935). Similar to above, having completed a rather greater mileage, but nevertheless being in remarkably good condition, the engine being in every way comparable, as is the weather equipment and all else. **Guaranteed for three months against any mechanical defect whatsoever.**

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ASTON-MARTIN "INTERNATIONAL" (1930) 4-seater short-chassis tourer. This Aston has been completely reconditioned in our workshops and recellulosed, fitted with all new tyres. All road springs have been re-cambered and the whole job is in excellent condition throughout. **Guaranteed for three months against any mechanical defect whatsoever.**

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ASTON-MARTIN "INTERNATIONAL" (1932) in extremely good all-round condition—but details too late for press. **Guaranteed for three months against any mechanical defect whatsoever.**

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1948 ROLLS-ROYCE 21.7-h.p. Replica, completely rebuilt car with convertible coachwork (either razor-edged saloon or drophead). This is one of the prettiest cars existent today and bills for £1,385 can be produced for coachwork and modifications alone. This Rolls is fitted with 1948 radiator, thermostatic shutters, 6.00 by 18 tyres, etc. Space precludes further details, but photographs will be appearing in next month's issue. **Guaranteed for three months against any mechanical defect whatsoever.**

BAMFORD & MARTIN ASTON (1924) s.v. 2/4-seater, chassis No. 1933, reg. No. PW 55. One of the most amazing vintage sports specimens both in condition and performance that has ever come into our hands. Fitted with 14-in. brake drums on all four 4.75 by 18 knock-on wheels, cycle-type wings, gaitered springs and "Le Mans" tank. Racing-type "about face" box, large rev. and speedo-counters, reconditioned starter and dynamo, V-type screen, new hood and tonneau, new upholstery and a good set of tyres. The engine is commensurate with the rest of the vehicle, the performance being really astounding, and the oil consumption negligible. A perfectly genuine 72 m.p.h. was obtained on test this week.
Regardless of its age, this very fine vintage specimen will be **guaranteed for three months against any mechanical defect whatsoever.**

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Readers are requested to bear in mind that I am always interested to hear of Alfas, Hispanos, Mercs., Isotta, Bentley and Rolls, etc., for sale or part exchange, always providing they are in reasonable condition, and will gladly give any assistance, within my limitations, to owners disposing of sports cars, or advice as to repairs and technical data, etc. ANY VEHICLE ADVERTISED BY ME IS FULLY OPEN TO ANY TRIAL AND EXAMINATION, AND PROSPECTIVE BUYERS ARE ASSURED THAT EVERY POSSIBLE FACILITY WILL BE PLACED AT THEIR DISPOSAL TO EFFECT THEIR COMPLETE SATISFACTION.

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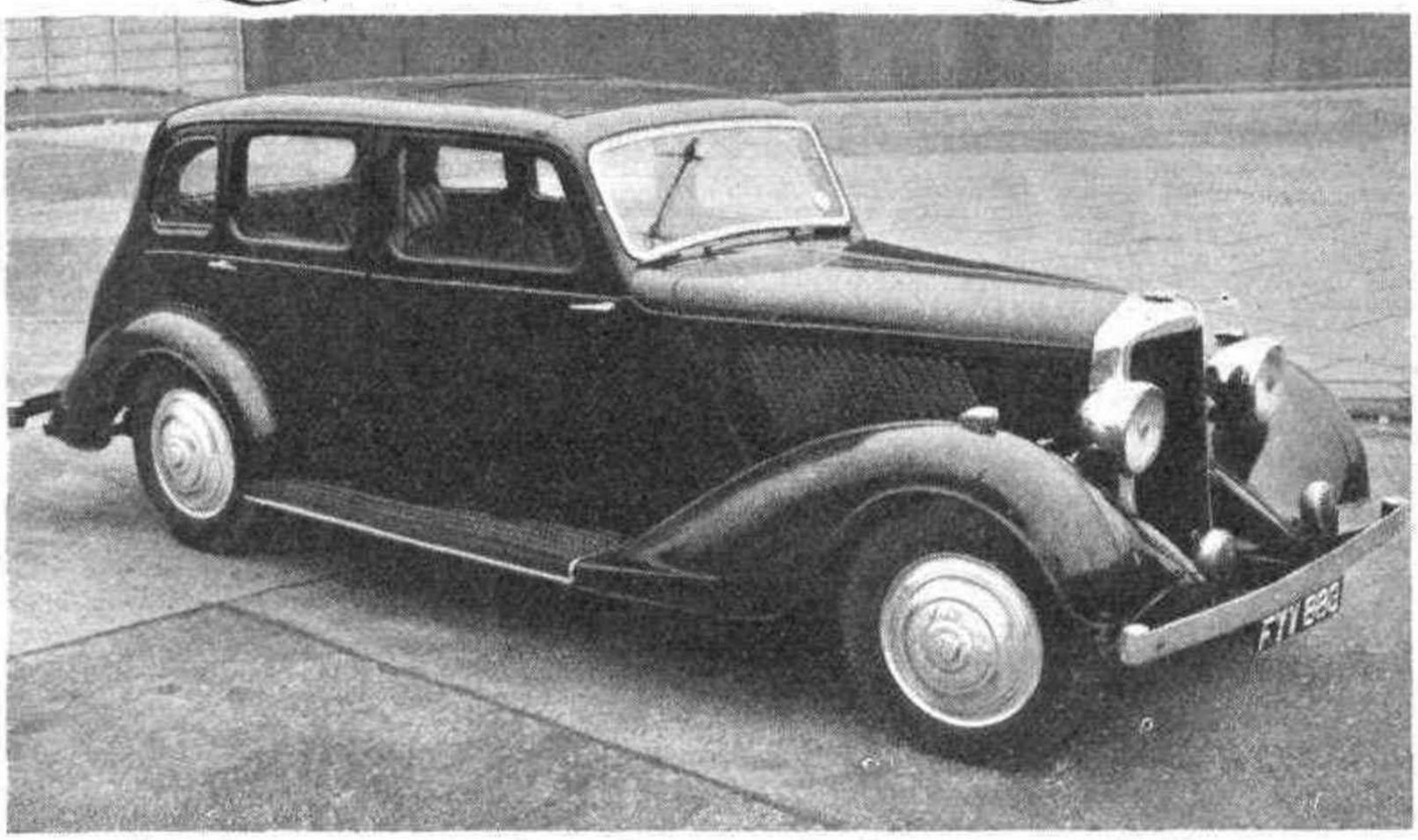
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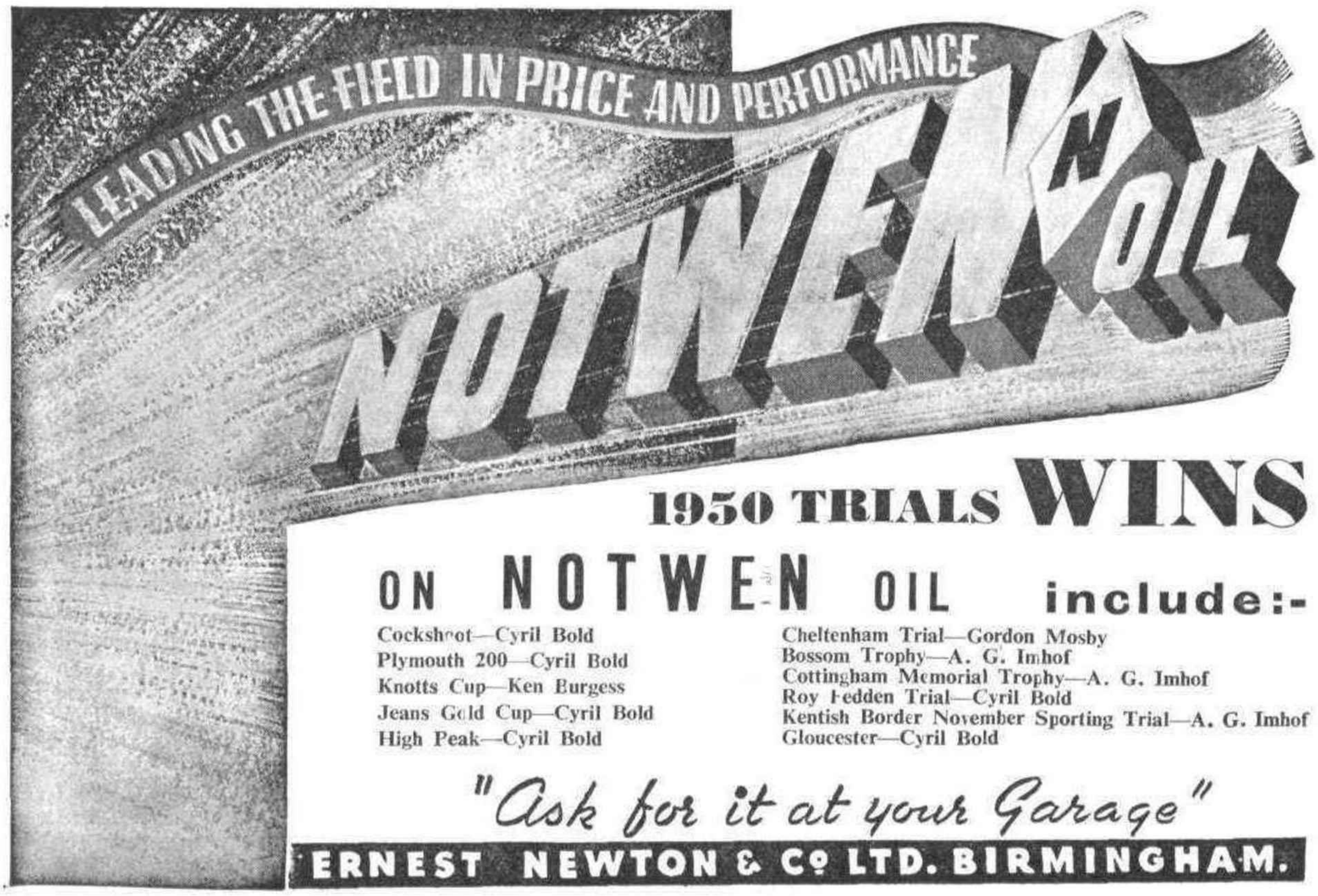
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FOR SALE—*continued*

ALVIS, 1931 Silver Eagle saloon, 20 h.p. Good tyres, trafficators, new battery recently, rear luggage boot. Very good body, leather interior. Mechanically first-class. Taxed. Any trial run. £85. Apply after January 6th, evenings after 7 p.m. or Sunday mornings. H. J. Stone, 8, Boston Road, Boundary Road, Walthamstow, E.17. [2927

DELAGE, 1931 D8 saloon by Chapron. Good order throughout. What offers over £100. Box No. 753, MOTOR SPORT, 15, City Road, E.C.1. [2928

"BUILD AN ARC WELDER" (A.C. mains). Simple plans and easy to follow instructions, 5s. 6d. Discon, Peterborough Road, Farat, Peterborough. [2528

S.S. 2½-LITRE 4-seater tourer. Rebored, crankshaft reground, bearings remetalled, new valves and springs, new thermostat, reconditioned cylinder head, reconditioned water pump and radiator, clutch relined and new carbon, gearbox overhauled, including new selector and lay-shaft and ball races, worn gears replaced, new silencer, new king pins and track-rod ends, front brakes relined, new twin Zenith carburetters and electric petrol pump, dynamo, starter and distributor reconditioned, rewired, new Dagenite battery, thermometer, petrol gauge and tank unit, cut-out and junction boxes, side and tail lamps, excellent tyres, five new Dunlop tubes. Rechromed and resprayed black. This car is good for many trouble-free miles. Price £495. Box No. 754, MOTOR SPORT, 15, City Road, E.C.1. [2929

OF INTEREST TO MOTOR ENGINEERING FIRMS. Complete drawings together with first two sets of gears for conversion of ordinary Ford Ten gearbox to close-ratio four-speed. Due to heavy commitments it may be a considerable time before we could organise the manufacture and distribution of this conversion box, and we are therefore inviting offers from firms interested in taking over the project. The gears will not be sold separately at this stage and only firms interested in manufacturing this box should apply. Pat Whittet and Co., Ltd., Whinlands Works, Macdonald Road, Lightwater, Surrey. Tel.: Bagshot 3338. [2930

WANTED

LANCIA LAMBDA or Augusta, also any spares. Or Alfa-Romeo, any model, unsupercharged. Searle, 90, Brighton Road, Banstead, Surrey. Tel.: Burgh Heath 1520. [2761

WANTED—*continued*

WANTED URGENTLY. Back axle for 1925 Vauxhall "14/40." Also wanted, but less urgently, front axle with brakes. E. Butcher, 5, The Glade, Welwyn Garden City. [2770

M.G. Midget "TC" model preferred, good condition. Lowest cash price to F. Bloomfield, Debenham, Suffolk. [2772

SPORTSMAN, emigrating to New Zealand, wishes to take 4-seater sports car. Up to 1½-litres, price to £200 or will exchange 1935 "10.8" Triumph Gloria sports saloon. Full details to 17, Aragon Drive, Barkingside, Essex. [2775

ASTON-MARTIN or Alvis 1½-litre saloon. Lagonda 2-litre Speed Model. Up to £250 for good specimen. Full particulars 88, Southbourne Grove, Southend-on-Sea, Essex. [2786

SPEED TWENTY ALVIS open 4-seater. Must be in reasonable mechanical condition. Will view and pay cash up to £250. Box No. 700, MOTOR SPORT, 15, City Road, E.C.1. [2783

FIVE WHEELS, 19-in. Rudge-Whitworth knock-off for 5.50 tyres for Lagonda. Munton, Larchwood Farm, Seal Chart, Sevenoaks, Kent. [2796

GARAGE PREMISES required Chelsea, Knightsbridge, or Kensington area, to hold eight to twelve cars. Exemplary references. Would take lease or purchase freehold. Existing business not required. Box No. 702, MOTOR SPORT, 15, City Road, E.C.1. [2801

ALVIS "12/50," 2 or 4-seater, or saloon might suit if exceptional. Must be in good condition and reasonable price. Box No. 710, MOTOR SPORT, 15, City Road, E.C.1. [2810

ENTHUSIAST requires Lagonda Rapier or similar. Reasonable condition and price cash. Jubilee House, New Road, Rubery, near Birmingham. [2820

ALLARD or Ford V8 body or any part thereof wanted urgently. Can anyone please help. 64, Grange Road, Sutton, Surrey. Tel.: Vigilant 3403. [2818

COMPLETE CHASSIS and suspension for Lloyd 350. Any reasonable condition. Or complete car, alive or slightly dead. Would consider exchange 350-c.c. Norton for real go-er. Please, it must be cheap. Box No. 731, MOTOR SPORT, 15, City Road, E.C.1. [2825

ALFA, Type RH, 2,995 c.c., 1927 Handbook Manual. Also two tyres, 5.25/5.50 by 20. Buckman, New Wood, Rabley Heath, Welwyn, Herts. [2826

1932 RILEY NINE DYNAMO AND TIMING WHEEL. Exchange plus cash if desired. Box No. 732, MOTOR SPORT, 15, City Road, E.C.1. [2827

WANTED—*continued*

WANTED TO PURCHASE. Austin Seven 2-seater sports, preferably Austin Nippy, with reasonable engine, body condition immaterial if price is low. 257a, Croydon Road, Beckenham, Kent. Tel.: Beckenham 1000. [2829

PAIR FRONT BUCKET SEATS for narrow vintage V.D.P. "30/98" Vauxhall tourer. Ex-Bentley or similar, preferably red or maroon leather. Box No. 737, MOTOR SPORT, 15, City Road, E.C.1. [2835

PRIVATE BUYER extends welcome to well-kept Riley Nine. Fullest details appreciated. Smith, "Lytham," Libanos Road, Ebbw Vale, Mon. [2837

"MOTOR SPORT" January and February, 1950. Please state price required. Box No. 734, MOTOR SPORT, 15, City Road, E.C.1. [2839

WANTED, TO BORROW, buy or hire handbook for 10-h.p. 1935 Lagonda Rapier. Cochrane, 4, Lascelles Lane, Northallerton, Yorks. [2840

SUNBEAM DAWN CRANKSHAFT, or complete engine unit required if reasonable. Power Unit Engineering, Ltd., Burmantofts Works, Torre Road, Leeds, 9. [2843

WANTED FOR RILEY NINE, instruction manual, preferably 1930–35. Offers please. Capt. Grant, 4 Training Regiment, Catterick Camp, Yorks. [2851

HEALEY. Saloon or coupé. Will purchase outrigth or offer 1940 Wolseley Ten in part exchange. Oldfield, College Mead, Yarnton, Oxford. [2855

ENGINE, GEARBOX, FINAL DRIVE D.K.W. Preferably de-luxe. Condition immaterial. Cheap. Box No. 738, MOTOR SPORT, 15, City Road, E.C.1. [2863

ROLLS-ROYCE 20-h.p., or "20/25" drophead coupé. Full details, and photograph if available; 1929 or later. Box No. 739, MOTOR SPORT, 15, City Road, E.C.1. [2866

FIAT 509A, 1926. C.W.P. or diff. assembly complete. Consider axle if cheap. Anderson, 95, Geoffrey Road, Shirley, Warwickshire. [2867

AUSTIN SEVEN. Age immaterial so long as a runner and in good condition. Youth wants to start motoring. Wentworth, 6, Thorncliffe Road, Southall. [2870

19 in. KNOCK-ON WHEELS 42 V centres, wheel nut 8 threads/inch, fold-flat windscreen, two bucket seats, fly-off hand break. Dettmer, 783, Chester Road, Erdington, Birmingham. [2873

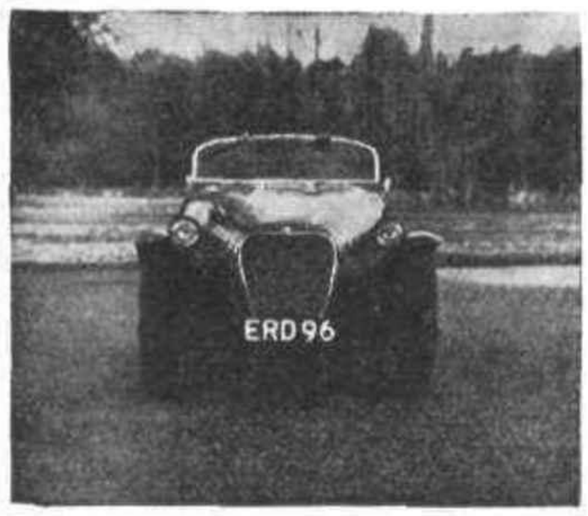
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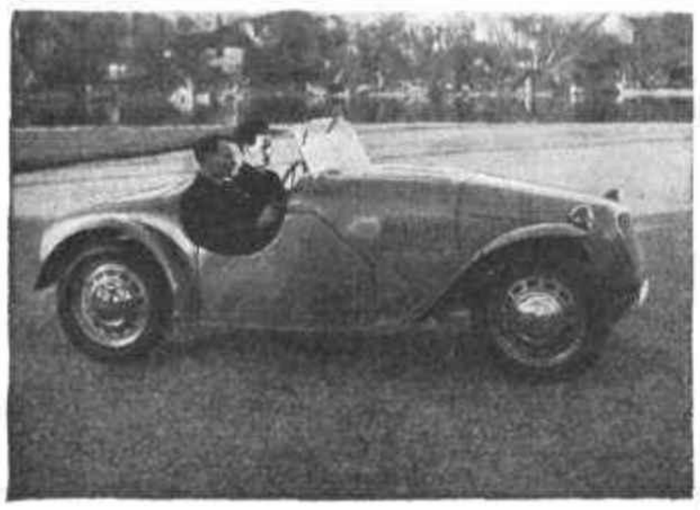
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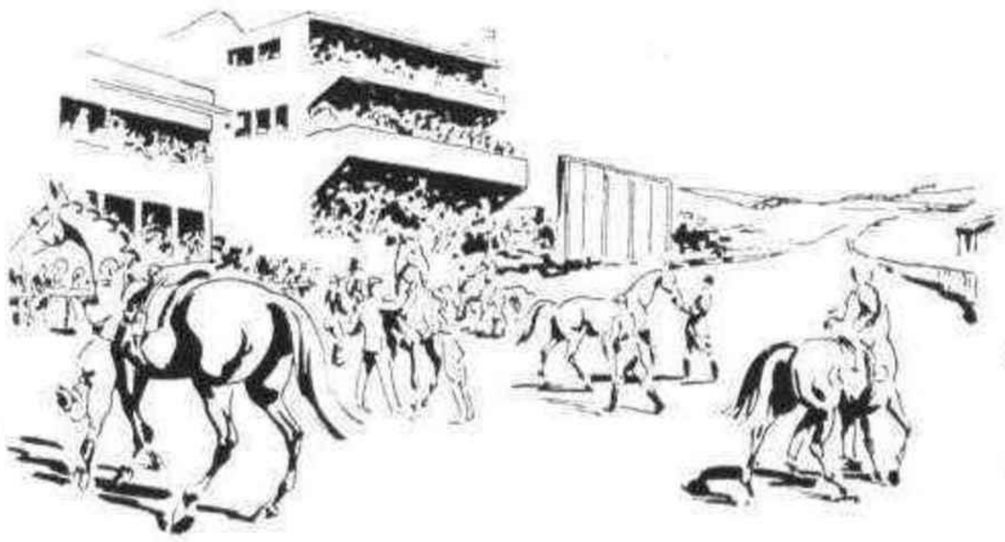


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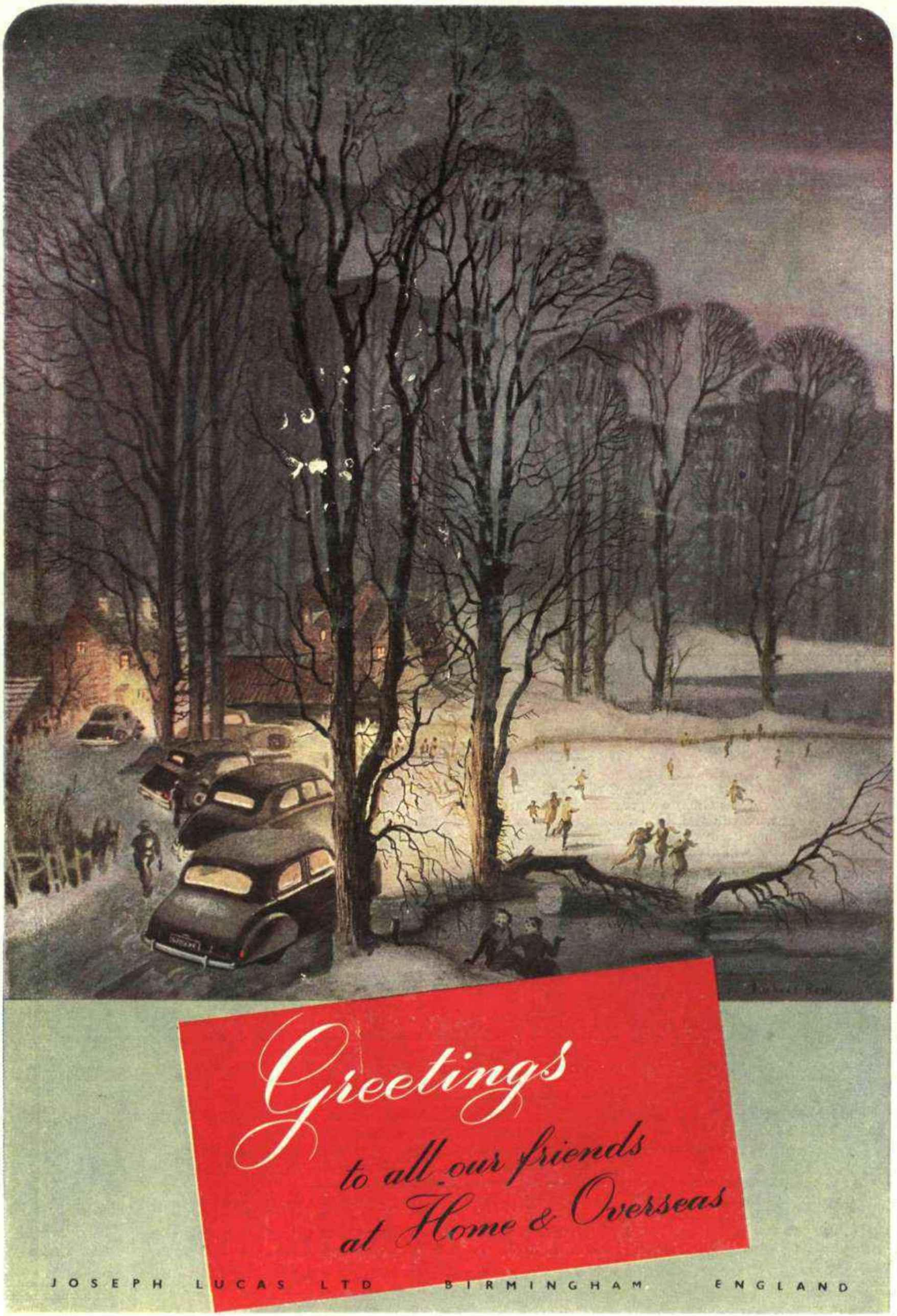
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