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The Editor of "Motor Sport's" Open Letter

TO THE BRITISH MOTOR INDUSTRY

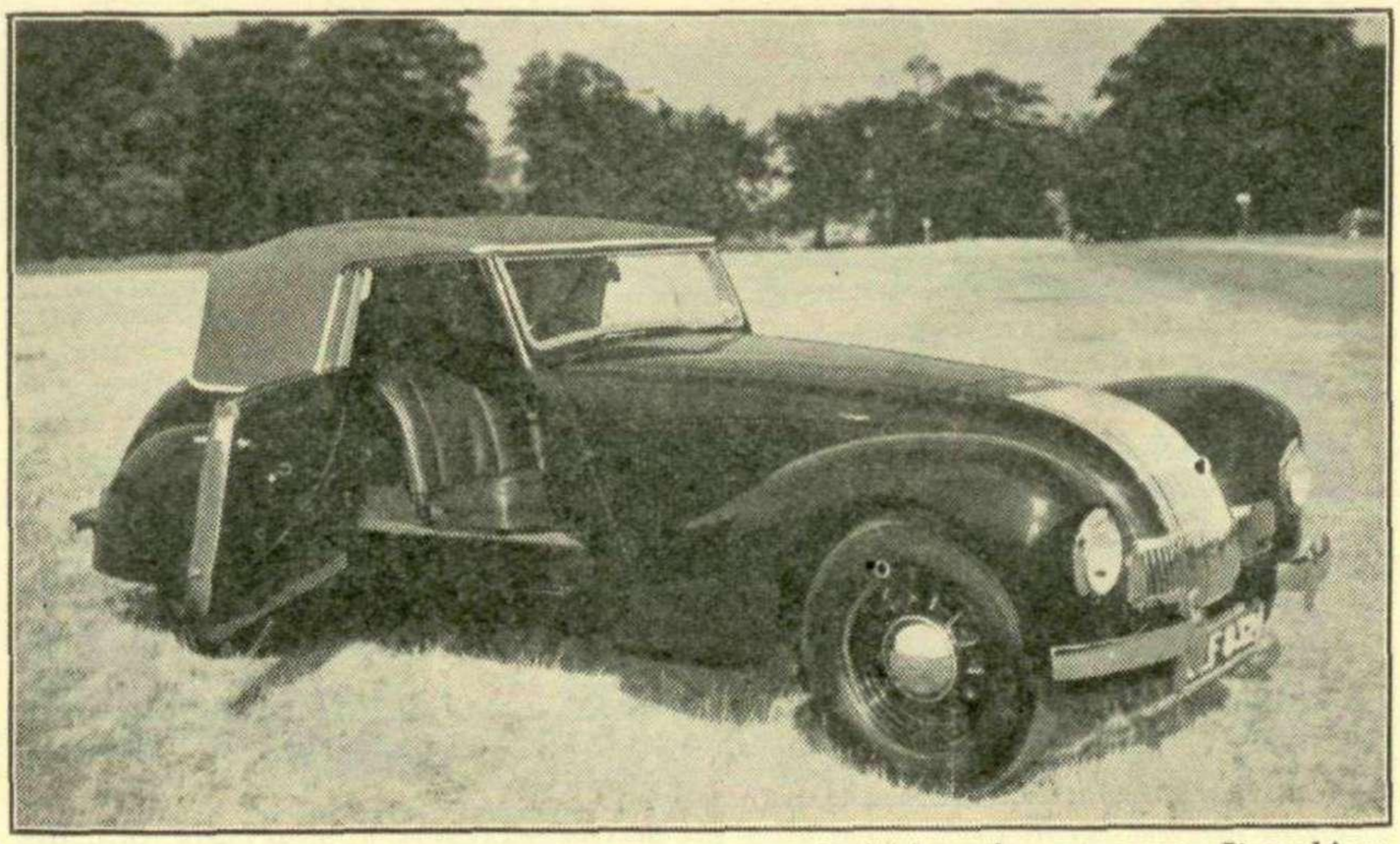
THE British Motor Industry, which made such an immense contribution to this country's war effort, is passing through a very trying period. I sometimes wonder whether we hyper-enthusiasts for motoring are sufficiently appreciative of what British manufacturers are achieving in these unhappy times. We tend to go into raptures over Alfas, Bugattis, Maseratis, Ferraris and new rear-engined Isotta-Fraschini and to pass off the cars made in our own factories as stodgy, over-burdened and cart-sprung.

The fact, easily overlooked, is that our bigger manufacturers are trying to attain an ambitious export target and to do this many of them wisely concentrate on improved versions of existing cars—cars, moreover, intended to appeal to bread-and-margarine motorists all over the world. It is not opportune for the big-output factories to waste effort on experimentation and a many-models programme. And, enthusiasts that we are, we must admit that the oft-despised family saloon *does* constitute a very valuable means of personal transport—the family's seven-league boots, as a certain talented American engineer sees it. Most of us, at some time or another, have preferred to borrow such a car for a journey, perhaps to a dance or theatre with the girl friend, and to leave our own car in its garage.

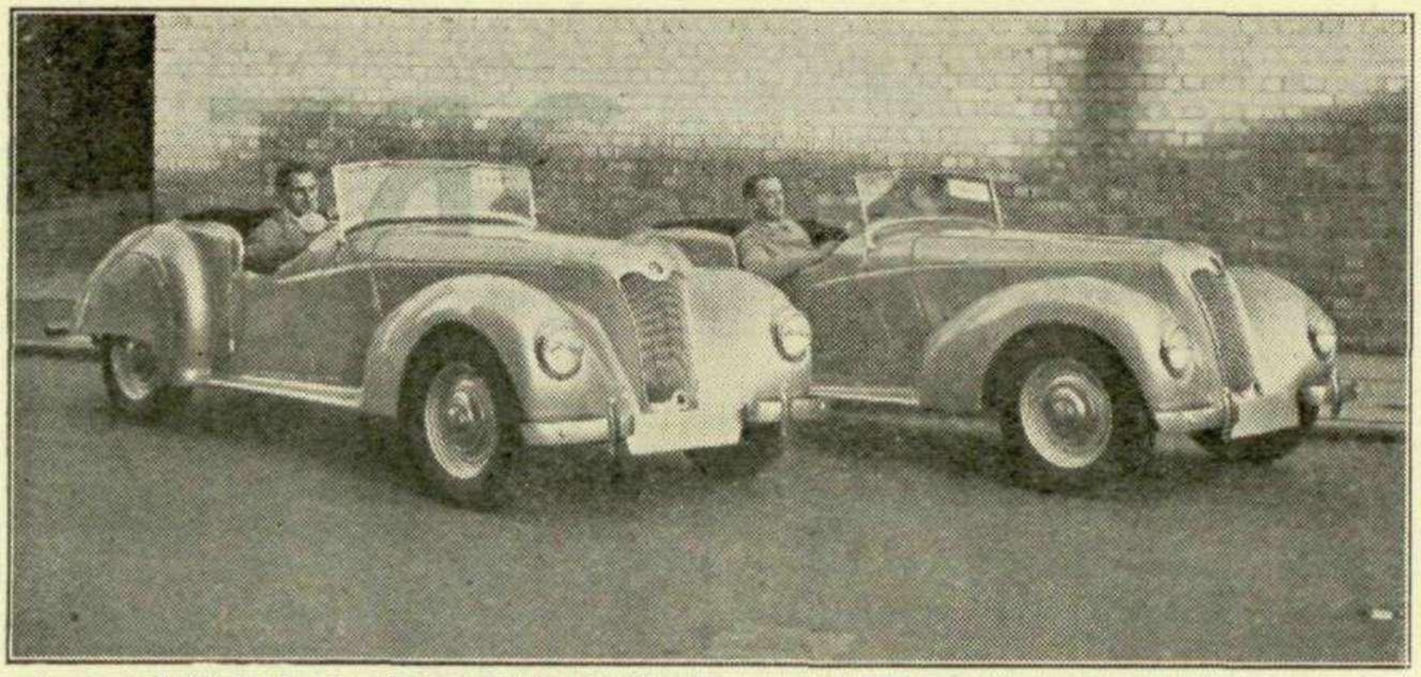
In the field of less-exciting but more-exportable cars the British Industry does remarkably well. Good, economic, dependable transport is being turned out in quantity by Austin in the City of Birmingham, Ford at Dagenham, Morris at Cowley and Hillman outside much-bombed Coventry. These are purely utility cars, yet, at a time when we are agreed that technical progress must be subservient to quantity production, Austin has contrived to bring out the entirely new o.h.v., i.f.s. A40 that has apparently taken America in its short-wheelbase stride. The aforementioned useful makes are backed up by that astonishing little long-stroke Standard Eight which cruises surprisingly fast for its size and, moreover, goes from 0–50 m.p.h. faster than many "Tens." Nor must we overlook the Singers, Wolseleys and Vauxhalls. Maurice Olley is behind Vauxhall, and anyone who has read his papers to the I.A.E. or heard him speak at the recent "Rembrandt" Brains Trust, cannot help feeling that any car with which he is associated must be entirely satisfactory. Moreover, the Vauxhall Company is not afraid to look back, as witness the help and interest they have shown in the "30/98" feature in this issue of MOTOR SPORT.

There isn't space to spare to mention all the good cars which emanate from Britain, but we have only to consider a few of them to see that, over and above sound utility transport, our designers can still offer the world initiative and technical brilliance in other spheres.

I remember, more moons ago than I care to tell, an uncle's brand-new four-cylinder Austin Twenty landaulette. It was considered a very dignified, luxurious carriage, yet it wasn't by any means the most expensive, and its owner thought nothing harsh of its uncomfortable "occasional" seats and windows that soon required little screw-clamps to stop them rattling like those of a taxi. Today, in the new A.125 and A.135, Austin offers something of the same sort of car—a modern, high-performance luxury vehicle, yet one that comes about mid-way up the price scale. Either in "Sheerline" or "Princess" form, this Austin is a splendid achievement in what may be



The coupe model Allard—one of Britain's most popular high-performance cars. It combines vivid acceleration, high speed and modern outline with the advantages of Ford's world-wide service facilities.



A sound British car that is helping the export drive—Lea-Francis. These two sports models were shipped to Chicago and New York, respectively, at the end of February.

termed the economy-luxury category. The Armstrong-Siddeley is another.

To the M.G. Car Company, Ltd. must go unstinted praise for still offering an out-and-out small sports 2-seater in the present day and age. Big sales in the States are a convincing testimony to the excellence of this TC M.G. Sydney Allard, too, sponsors a car that is invaluable as an export commodity and which will sell strongly in this country when waiting-lists and permits are abolished. For people who spend much of their business life in their motor-cars —and in spite of austerity, many still do —it is not an extravagance to crave the extra performance and effortless travel which an Allard gives. I wistfully recall a run in one of these cars, and particularly its acceleration from rest, making even a drive along London's congested Oxford Street a grand experience. Leslie Johnson, who understands these things, ordered a coupé Allard quite recently.

Donald Healey, too, is placing an up-to-the-minute really high-performance car within the reach of more enthusiasts than seems possible under prevailing conditions—really high-performance is correct, for the Healey saloon has the enviable distinction of having proved the fastest production-car on any market in the world.

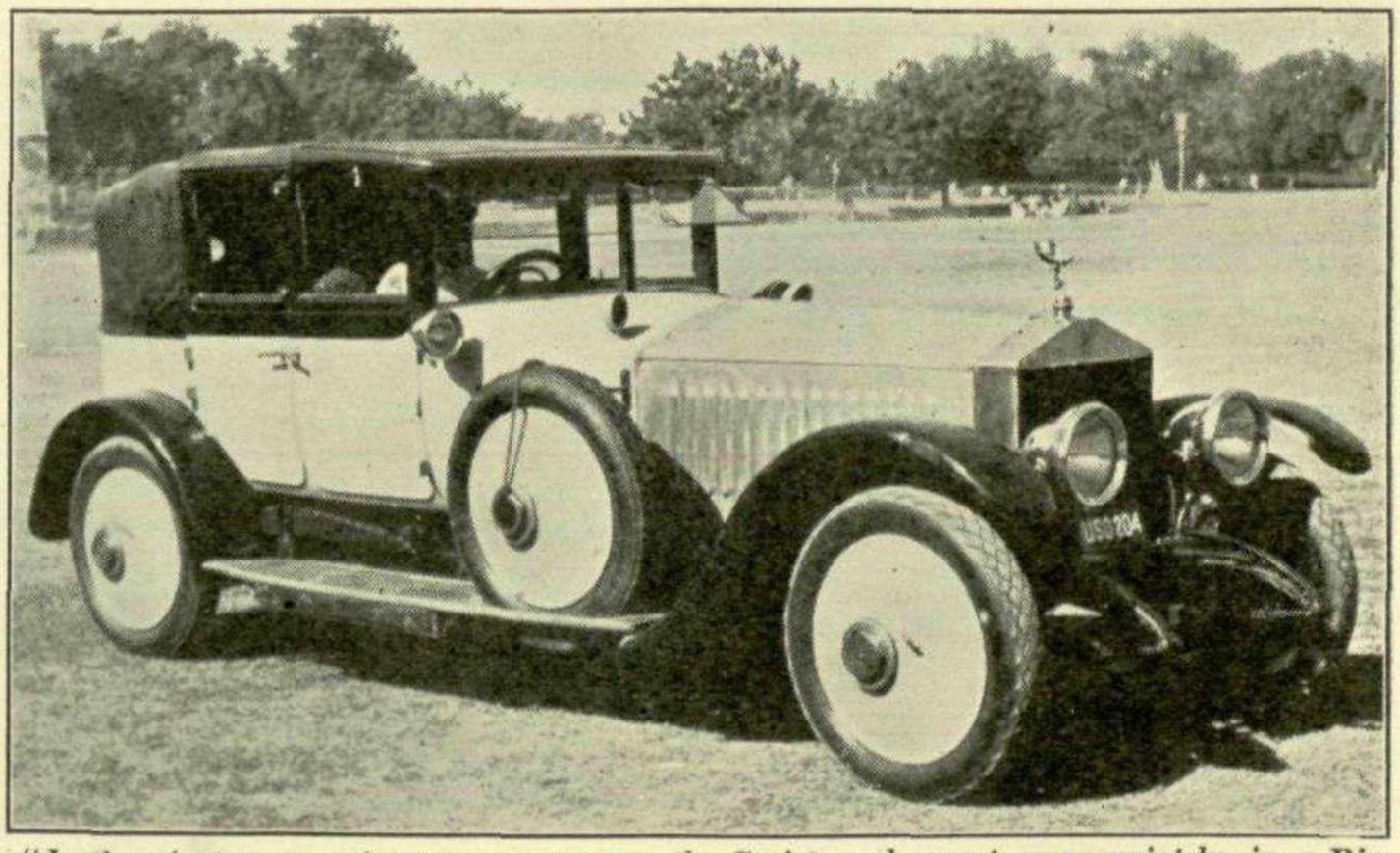
Lea-Francis offer one of those altogether excellent British cars which give performance very much above the ordinary while remaining entirely practical and hard-wearing. I have not yet had an opportunity of trying the latest sports model, but from the manner in which Bob Cowell's prototype sports Lea-Francis, with a quite standard single-carburetter engine, both motored and handled, I judge that driving the production sports car would be a most pleasant experience.

If anyone has any doubts about the ability of this country to forget "vintage" traditions, I commend him or her to beg a ride in a Jowett "Javelin." Taking over this newcomer, and motoring it from the first derestriction sign in a manner that made it necessary to remind the passenger that it was *not* a V8 and that its flat-four engine is of a mere 1,486 c.c. capacity, is one of my happiest of last year's memories. The Javelin looks rather like the American cars that have made big inroads into markets Jowett soon hopes to invade, but it is actually of cleaner outline. It handles like a good Continental, yet in its ingenious design and construction is essentially British, and it possesses performance that is remarkably refreshing from a 1½-litre 5-seater saloon. For these reasons, I say that apart from bringing the dollars home, it will be an extremely popular car here, when restrictions are lifted.

Another pleasant memory is that of a very refined "Ten"—the Lanchester—with fluid flywheel, pre-selector gearbox, good performance and a praiseworthy ability to go fast round corners on an even keel, helped by Luvax shock-absorbers that really did their job.

If anyone wants further proof that British design is not stagnating, there are the Standard "Vanguard"—I confess I have not yet tried or seen one—the Frazer-Nash, which must surely rank high on the dreamer's list of the world's better cars, the Aerodynamic H.R.G., which combines the best of the ancient and modern worlds, the two-stroke 654-c.c. Lloyd, the "1800" Triumph, the Riley, the Bristol and that technical jig-saw, successfully solved, the Invicta "Black Prince."

Britain has no rivals in the quality market. As a purely personal aside I think the "luxury" car has lost something of its old-time dignity. In the nineteen-twenties you swept up to the Society red carpet, appropriately, in a Big Six or Silver Ghost, but today's "luxury" cars hide quality beneath an exterior shape and construction similar to that of other cars; gone is the six-foot bonnet and coachbuilt carriagework. Engine exteriors, too, are not what they were. Daimler alone, as befits the manufacturer who supplies the British Royal Family, offers in the magnificent 5½-litre, straight-eight Daimler Thirty-Six a really dignified car. With the famous Daimler transmission, a cruising speed of 70 m.p.h., and splendid handling qualities, this big Daimler ranks as one of the world's great cars—of any era. The Mk. VI Bentley is encountered surprisingly frequently on our roads in spite of austerity and petrol rationing and that is because no other car can get about quite so rapidly with so little apparent effort and such a high factor of safety and durability—so that V.I.P.s, to use a useful but horrid tag, need these cars now as they needed the Mk. V and earlier 4¼ litres during the war, to save them travelling time on work of national importance. Incidentally, a car able to cruise at 50 m.p.h. is not too tedious as transport, but a cruising speed of around 60 m.p.h., with a maximum in keeping, is necessary before you can apply the term "sports car." When it comes to cruising at 70 to 80 m.p.h., with such speed attainable in third gear, and a maximum of around 100 m.p.h., you have real motoring, and a safe motoring, too, if brakes, road-holding and like qualities are of the same standard—although only fit and experienced drivers can habitually use such performance to the best advantage. It is this latter type of motoring which the Mk. VI offers, allied to Rolls-Royce silence and refinement, and nothing else in the world can equal such a combination of desirabilities. Britain certainly has nothing to fear in the millionaires' market.



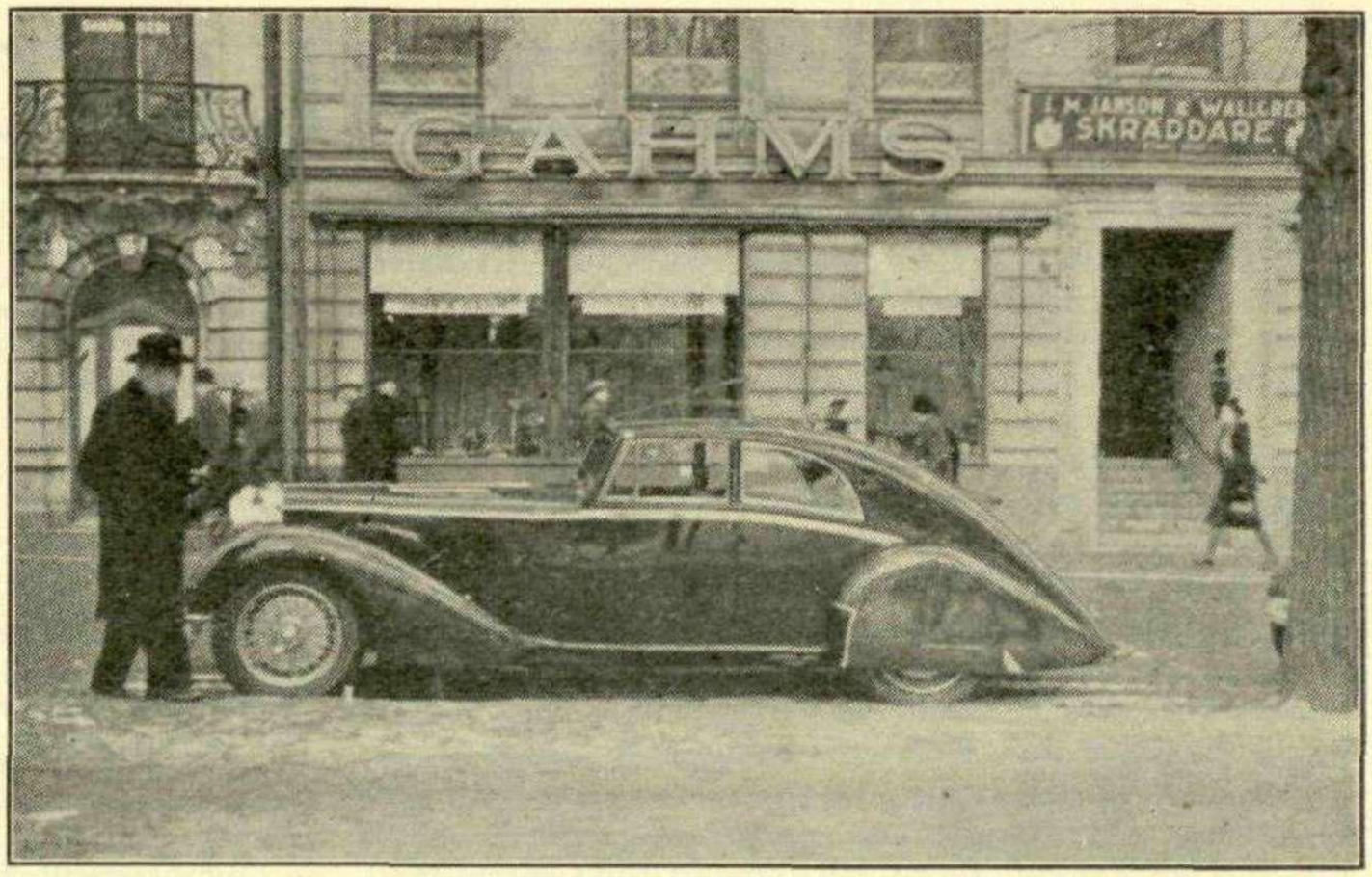
"In the nineteen-twenties you swept up to the Society red carpet, appropriately, in a Big Six or Silver Ghost . . ." The car shown is a Gill-bodied Rolls-Royce Silver Ghost cabriolet of 1923 vintage, photographed quite recently in Delhi.

If these good British cars exist in all these various categories, why is it that the enthusiast is restless for cars he cannot have, even for such as the little Dyna-Panhard or Renault Juvaquartre? Having driven B.M.W., Lancia, F.I.A.T., Citroen, D.K.W. and the like for appreciable distances, I know the answer to that one! It is a question of the superior cornering and handling qualities of Continental cars. I have always said that the main criticism I have of the Lancia "Aprilia"—an Italian touring car dating back over ten years, yet giving 75–80 m.p.h. and better than 30 m.p.g. as a 1,352-c.c. saloon—is that it handles so well that you hardly realise how rapidly you are motoring it, and any skill you possess appears to be negatived. It does rather seem that all the world's ordinary drivers, and not merely Mr. Brown of Balham, fail to appreciate good "feel" in a car—otherwise American and other cars presumably wouldn't sell so well in export markets. But the chassis qualities which are so dear to British enthusiasts and which are taken for granted by the French and Italians could be developed into a very big sales-promoting factor. Some British cars are certainly beyond reproach in this respect and some of our utility cars now handle really well. But certain of our manufacturers should accept the fact that, unlike the late Ettore Bugatti, they do not understand rigid-axle suspension, and must rid themselves of cart-springs at the earliest opportunity.

May I be permitted one more criticism? It is that British cars are still far too heavy. A recently-introduced model, with valve gear like something out of an animated sewing-machine to make its engine efficient, still has a power/weight ratio inferior to that of the similar-sized "12/50" Alvis of nearly a quarter of a century ago. Why cannot Cisitalia-like chassis and light-alloy construction become a reality in *this* country? Apart from these two grumbles I have nothing but praise for what our Industry is producing. It will be able to play a very big part in putting Britain back on the map during the next few years, particularly if the Government offers reasonable co-operation. To allocate steel only to the "Big Six" and so cause cars of the Bentley type to go out of production might well jeopardise our export drive, because it is the high-performance and high-quality Britishers that achieve prestige overseas so beneficial to the sales of our technically less brilliant bread-and-margarine types.

It behoves our manufacturers to do all they can for the British shop-window. Our national policy of self-condemnation and modesty MUST take a back seat; our cars MUST be popularised by every means at our disposal—competition successes, road-tests and advertising in those journals read by technically-proficient large-scale buyers of motor-cars. Our leading accessory makers, Lucas, Lodge, Ferodo, Dunlop and Lockheed in particular, are very willing to encourage the competition driver.

It behoves the Government to encourage an Industry which, in 1938, exported £12,922,000-worth of vehicles and employed some 415,000 workers. Such encouragement must take the form not only of allocations of materials and shipping facilities to exports, but of unrationed petrol so that the home market can be re-established and our cars enabled to provide, with the State Railways and State Airlines, efficient and pleasant transport for the peoples of these islands. W. B.



This 4.3-litre Alvis with special Bertelli saloon body, belongs to Henken Widengren, the Swedish racing driver. Wheels, brake drums, front-axle assembly and under-bonnet accessories are chromium-plated, and this is another instance of a British car well-satisfying a Continental customer.

An Ambitious Venture

K. N. Hutchison and Dennis Poore have teamed up and formed the Hutchison Poore Organisation. They intend to compete under this name in as many Continental races as possible, Hutchison using his ex-Ferrari 2.9-litre *monoposto* Alfa-Romeo and Poore his ex-Nuvolari 3.8-litre Alfa-Romeo. Hutchison will retain red as his colour, Poore will race under British green, and the organisation's symbol will be a "Winged Horse." We know that these two drivers intend to take racing extremely seriously and we feel confident that their Continental exploits will not only enhance British prestige, but will also bring useful publicity to such components and accessories as they decide to use. Hutchison's Alfa-Romeo will have Lockheed two-leading-shoe brakes, and light-alloy cylinder blocks increasing power output by some 20 per cent., while many of the car's major components, notably in the transmission, have been replaced by new parts of British make. A Type-150 Wilson gearbox has also been fitted. It is hoped that two Formula II cars can be acquired, when four vans will transport these, and the Alfas, about the country. We wish the Hutchison Poore Organisation the success that its initiative and careful planning deserve.

★ ★ ★

A CHALLENGE!

I read with interest Mr. Clutton's article on the little 1910 Bugatti, but cannot understand why he chose the 2-cyl. Renault with which to compare it. Surely the Lion Peugeot and the baby Delage were more suitable playmates, and one would as soon compare the 8.3-h.p. Renault of the 1920's with an Amilcar or Salmson as one would the earlier model with the Bugatti

In order to fan the fires of controversy, I will issue a challenge to Mr. Clutton! If he can borrow Peter Hampton's Bugatti, I will get Ken Waller to lend me his 1911 Vinot et Deguingand 12-h.p. two-seater. No doubt a suitable course could be found somewhere for this historic contest, but I would suggest that to race side by side up Prescott might be the most amusing method of settling the feud.

I am, Yours, etc.,
Wrotham, Kent. JOHN V. BOLSTER.

★ ★ ★

With apologies to "Punch."

Have you a Ford? or a supercharged Cord?
An Ulster? an Aston or Allard?
A Singer with cogs or a special with dogs?
Or just a plain town-hacking Standard?

Are you a trundler, a dicer? (or worse?).
You compete? or spectate? or mechanic?
Do you dodge all the trees looking calm and at ease,
Or rush up the course in a panic?

Can you talk about boost? been up Beggar's Roost?
Do you shout at your car? do you pet it?
Whatever your views—for real gen and news,
Take MOTOR SPORT—if you can get it!

C. P. TODEY.

RUMBLINGS

That Film Again

The German Motor-Racing Propaganda film, together with George Monkhouse's great colour-films of pre-war Mercédès-Benz and Auto-Union racing, could surely be used to very good effect as publicity for the B.R.M.? We feel, and have felt for a long time, that British motor-racing prospects would improve if a series of lectures by well-known personalities could be given to the general public in various parts of the country—like the Political Hustings now in operation by one of the great daily newspapers. Raymond Mays is doubtless very fully occupied at the present time, but we feel sure he could be persuaded to start such a motor-racing Public-Relations-Scheme, if others would back him up. We visualise something on a larger scale than Club film-shows, something, indeed, rather like the Sir Malcolm Campbell show at the Central Hall, Westminster, which A. F. Rivers Fletcher caused to happen last month—only about modern road-racing, and Britain's urgent need to participate successfully therein. We hate to mention the shadow of war, but such a shadow, real or imaginary, reminds us that a country operating a world-beating G.P. racing car would be respected alike by friend and foe—who can say but that the very efficiency of the Mercédès-Benz and Auto-Union teams in 1939 brought home forcibly to Europe, America and Russia the potency of the German menace?

The British public is *not* apathetic to motor-racing. A thousand pities, then, that it cannot be educated to appreciate that proper racing is a matter of beating foreign cars on the road-circuits of the world and not a question of freak motor-cycles scattering the cinders at Wembley.

* * *

A British Track?

It is very good news indeed that Parnell is leading a "Give Us Donington" campaign launched by "Bira," Lord Waleran, Raymond Mays, George Abecassis, Ken Hutchison, F. R. Gerard, Leslie Brooke, St. John Horsfall, B. H. Davenport, R. D. Poore and Charles Mortimer. At a recent luncheon given by Lodge Plugs, Ltd., it was decided to approach the Castle Donington Parish Council, after Mr. Bernard Hopps, Managing Director of Lodge Plugs, Ltd., had put a resolution to the meeting calling for the early release of Donington circuit. [Alas, as we close for Press we learn that, despite eloquent pleading by Mays, the Parish Council decided unanimously, on March 18th, to support proposals to make Donington a permanent vehicle depot.—ED.]

Brooklands has been written-off, even in motor-racing circles, but C. A. Lewis, Secretary of the B.M.C.R.C., hasn't given up hope. The reasons why he hasn't are contained in the following very enlightening letter we have received from him:

"Brooklands is still in large part usable, but a section has been cut out at Byfleet, buildings have been erected on the actual surface which, in general, would need repair and the removal of such objects as 'cats-eyes.' The latter would be little more than was always done annually, whilst the other renovations were envisaged as an essential cost to be borne by the Government on the cessation of hostilities, at the time of their enactment as a wartime emergency measure.

"The Vickers Armstrong Company stated as recently as November 13th last:—'In order to afford the facilities you desire, it would not be necessary only to restore the racing surface which has deteriorated, but it would involve very substantial work on the rebuilding of the Track, which has been destroyed by erection of buildings thereon. The expenditure, therefore, would assume enormous proportions, quite out of line with any sum likely to be found by private sources. In addition we think you will appreciate that at this juncture we could not possibly face the disorganisation of our works which would result from the removal of several substantial buildings from the track itself.' Viking aircraft made at Brooklands are flown away from the airfield with the lightest possible load to Wisley airfield, from which they can be safely operated. The risk to the surrounding towns of Byfleet and Weybridge hardly needs comment; thanks are due to the skill of the pilots who get hitherto-never-airborne Vikings out of Brooklands without mishap.

"Development work is now going ahead with other aircraft less likely to be flown safely out of so small an airfield.

"During the war, it was proved that very large aircraft could be built as main assemblies at factories and transported by road to their final erecting centre over a hundred miles away. This, too, with big wartime contracts.

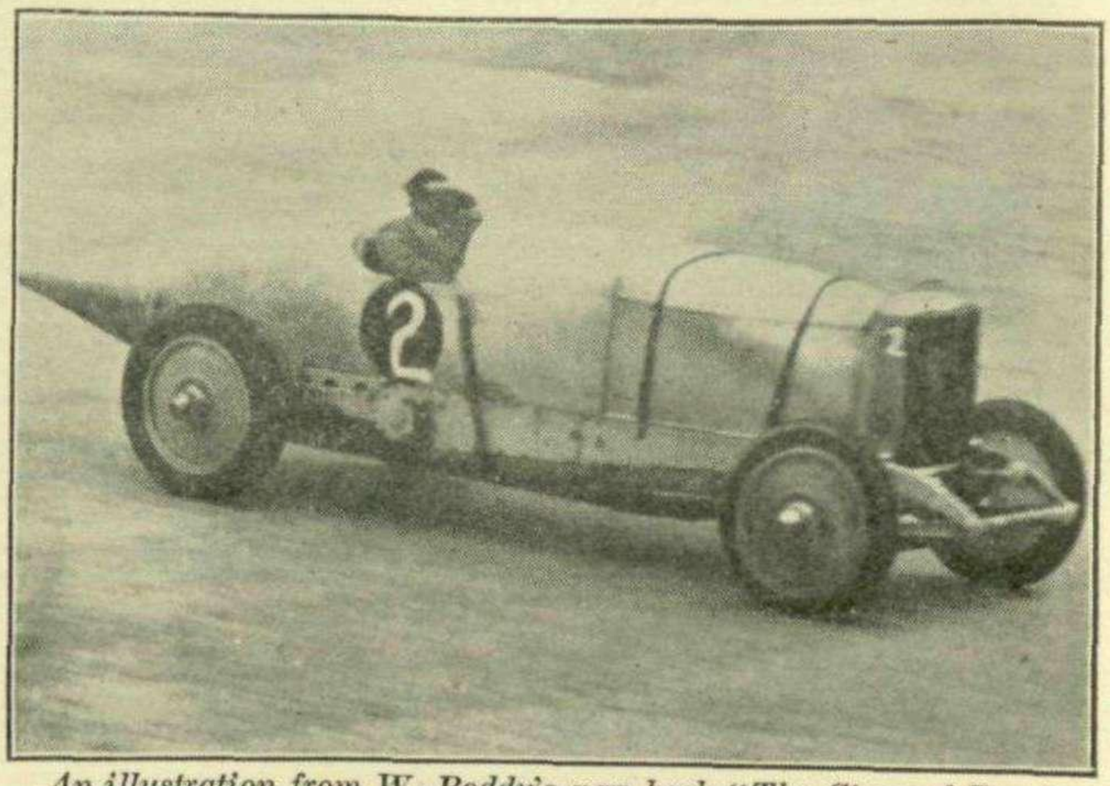
"*Cannot the same be done in the case of such closely-placed* localities as Weybridge and Wisley? If so, there should be amply-sufficient factory space at Weybridge without encroaching on the Track.

"The Government should take over Brooklands Track, restore it and thereby restore to England the opportunity properly to use an asset which, at the moment, is vilely abused. The airfield, too, could be restored to its old and appropriate duties as a flying school."

* * *

Brooklands

It can now be revealed that for the past year or more W. Boddy, Editor of MOTOR SPORT, has been working on a detailed history of racing at Brooklands Track. The story of racing at the world's first motor course is long overdue and no one is more fitted to compile such a book than Boddy, because he has made a detailed study of the subject for many years and has been generously assisted in his researches by many well-known drivers and personalities.



An illustration from W. Boddy's new book "The Story of Brooklands"—see accompanying announcement. The picture shows Parry-Thomas' 1923 Leyland Eight and is reproduced nearly twice this size in "Brooklands."

So much information has been set down that "The Story of Brooklands" will, of necessity, be published in two volumes. Even so, the first volume contains over 100,000 words and will be lavishly illustrated with full-page photographs, many of which have never previously been published.

The story opens with the building of the famous track and goes on to give a year-by-year account of the racing organised by the B.A.R.C. Much technical detail of the cars, both famous and obscure, is given, and the "atmosphere" of the Track is admirably captured in the anecdotes and episodes so graphically recalled.

Yet this is a serious history, and the records and lap-speeds quoted therein are absolutely authentic, having been compiled from the official records of the Brooklands Automobile Racing Club. The author has, in fact, been honoured by a foreword written by John Cobb, holder of the Brooklands Lap Record and Land Speed Record. This new book is uniform in page size with Boddy's "200 Mile Race." Publication date is May 10th and as paper restrictions will limit the edition, you are advised to order "Brooklands" now, either from your newsagent or direct from MOTOR SPORT. Do not forget—published May 10th, by Grenville Publishing Co., Ltd., 15/17, City Road, London, E.C.1, at 12s. 6d. per copy, or 13s. per copy post free.

* * *

J. B. M.

Ever since the James Boothby Limited advertisement in the last issue of MOTOR SPORT, we have been asked continually just what *is* the J.B.M. "Fireball" Formula racing car. Having visited James Boothby and his (literally) merry men, at his charmingly rural works near Crawley, we can give you the answer. This car will consist of an unblown 4-litre single-seater, suitable for Formula I racing. The first-off, which is now under construction, will be for Boothby's own use, but it is his firm's intention to build six further cars, which, it is hoped, will be available to the racing public at approximately £825, plus purchase tax. The engine will be a six-cylinder, side-valve, Grey "Fireball" racing marine engine. Its flywheel, located on the *front* of the crankshaft, will be machined down, and a Type 120 or 150 Wilson gearbox will be installed in the normal position. A light sheet-steel sump will be fitted and the modified Grey engine is likely to weigh 30 lb. less than a V8 Ford engine. The Grey engine, well known in American marine racing circles, has extremely good porting and a seven-bearing crankshaft, and it is hoped to obtain about 165 b.h.p. at 4,800 r.p.m., on a 10½ to 1 compression-ratio, using either three or six carburetters. A horizontal Scintilla Vertex magneto will protrude into the cockpit.

This engine will go into a very light, box-section chassis fabricated from 4 by 2 in. steel, having a wheelbase of 8 ft. 10 in., a front track of 4 ft. 8 in. and a rear track of 4 ft. 7 in. Front i.f.s. will be by vertical coil springs, suspension of the normal rear axle by transverse leaf spring and special radius arms. A Ford axle-casing will be used, in conjunction with a 3.1 to 1 straight-tooth bevel drive. The dash, seat and tail assemblies will be welded to the frame and it is probable that the seat will be offset to clear the propeller shaft. The dry weight of the car will be about 13 cwt.

Apart from discussing this exciting venture, and appreciative inspection of a s.v. Aston-Martin, Samuelson's 1914 T.T. Sunbeam and a Type 55 Bugatti in the J.B.M. tuning-shop, we were able to inspect and drive the production J.B.M. cars. The Series I have reconditioned Ford V8 components and we were able to try a customer's two-seater, which gave a speedometer-speed of well over 80 m.p.h. with entire lack of concern, and most refreshing acceleration, while riding very steadily. Personally, we would have liked more positive and higher-geared steering and a gear-lever less prone to jump out of second on the over-run. These things are being remedied in the Series II cars, which have new components throughout and the aforementioned fabricated chassis, dropped 8 in., and 55 lb. lighter, and more rigid, than the Ford frame. On these Series II J.B.M.s the seat goes 14 in. further back, a 25-gallon saddle-tank replaces the two 10-gallon tanks, one each side of the propeller-shaft of the Series I; there is Marles-Weller steering, Lockheed braking and remote control.

The "Competition" two-seater, with long tail containing spare wheel compartment and ample space for suitcases, a simple hinge-forward bonnet and central headlamp, costs £750, and a four-seater £800, plus P.T. A four-seater coupé is being produced for export. Boothby uses special exhaust manifolds on all his cars to reduce the notorious back-pressure of the V8 engine. Our visit concluded with a drive in Boothby's own J.B.M., with Scintilla Vertex magneto and other special features, and it was a truly exhilarating experience, with urge that made a certain amount of care necessary when opening up out of corners—very refreshing, these days!

* * *

An Allard in America

Owing to the extraordinary amount of interest aroused by Allard cars in the United States, R. J. Canham, Allard's General Manager, will be sailing on April 1st, taking with him a drophead coupé, for a comprehensive coast-to-coast investigation of sales possibilities.

* * *

How Times Change!

On March 20th last, members of the Junior Car Club went as an organised party to watch racing at—White City Greyhound Stadium.

* * *

Odd Spots

Congratulations to John Cobb on being awarded the Segrave Trophy for the most meritorious motoring achievement of 1947—his Land Speed Record at over 394 m.p.h.

* * *

As Abecassis' new Alta will not be ready for Jersey, he will drive a normal Type 6C Maserati in that race, probably the ex-Negro car.

* * *

Watson's ex-Cowell Alta has had its gear-lever transferred to the steering column.

* * *

The Emeryson-Special has been rebuilt with longer chassis and the unblown 4½-litre engine from the ex-Street and Duller Duesenburg.

Experiences with an M-type M.G.

A BRIEF account of experience in the running of my 1930 M-type M.G. Midget, as far as the petrol allowance has permitted, may be of interest.

The car was first registered in March, 1931, and is a genuine M-type M.G.; chassis number 2/M 2620, engine number M.G. 2399A. I am the fifth owner, and have had the car since the summer of 1945, running it at first only while on leave, then, after demobilisation, continuously, covering over 2,000 miles in the first year of ownership. When I bought the car it was in very good mechanical condition, but in need of a coat of paint to disguise the faded "Bugatti-blue" that adorned it at that time. Apart from a routine check, no work was carried out before putting the car on the road.

JV 291 handles very well, steering being accurate and rock-steady at all speeds, but needing fairly frequent adjustment and check-over. The suspension is traditionally hard at low speeds, but more comfortable higher up. On one occasion I came upon an unexpected roundabout at close on 55 m.p.h. and managed it without sliding, though, needless to say, such cornering methods are not habitual!

The driving position is excellent, both sidelamps being visible at all times. The cockpit layout is also pleasing without grouped instruments or plastic abominations, and a complete absence of "gadgets" on the steering column. The gear-lever is well placed and the "plain" box demands clean use, otherwise the cacophony emitted from it is a little startling. I have made no alterations to the original specification, and added only a fog-lamp and pass-light on the dumb-irons.

Under the bonnet, strap-secured to prevent rattles, the layout is again quite standard, and much care has been lavished on polishing the aluminium valve cover and copper feed-pipes. The only troubles have been a tendency to get through coils rather quickly, and a set of camshaft bearings ran owing to an undetected blockage in the overhead-camshaft oil feed. Petrol consumption averages 35 m.p.g. on longish, fast runs, oil 1,200 to 1,500 m.p.g., the level seldom requiring to be topped up between draining the sump at the 1,200-mile mark. Oil pressure is good, about 40 lb./sq. in. when thoroughly warmed up.

Performance is very good, although the maximum speed is nothing startling. High average cruising is perhaps the best feature. I drive regularly from Worcestershire over the Cotswolds on A 44, where sustained speed is a delight. Acceleration is good, 2-40 m.p.h. being possible on second without "over-winding."

Weather protection is nil, as being tall, I find the view hopelessly restricted, with the "lid" up, by the V-screen and low side pillars, and have therefore dispensed with the use of the hood.

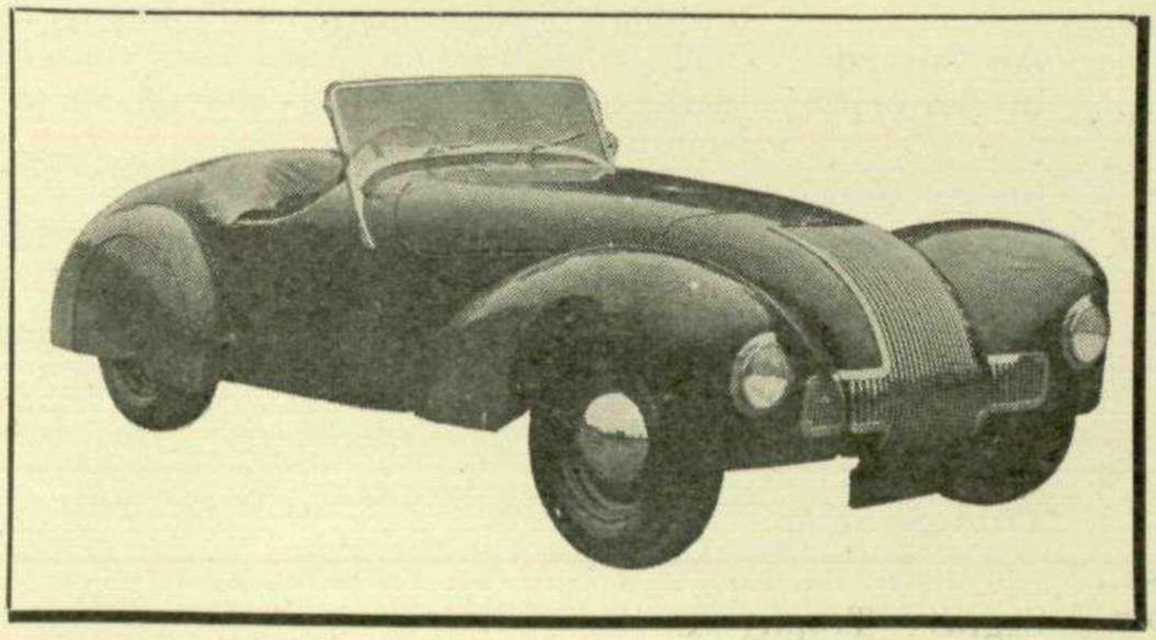
Externally the car is finished in British racing-green, with black wings and silver wheels. I have retained black for the wings as it is easier to "patch" stone chippings with black than to match the green exactly. Tyres, 400 by 19, are treated with tyre paint; the spare, carried on the boat-tail, with two coats. The general appearance and the very "healthy" exhaust provoke quite a deal of comment, particularly when getting away from traffic lights of a country town in the evening!

I have contemplated sundry alterations, but have not carried them out, rather having decided to keep the car in its original state. I have seen quite a number of modified M-types, and they have not pleased me nearly so well. Tinkering with old sports cars should not be lightly embarked upon, as the result is so often a conglomeration of unrelated shapes!

Rumour has it that this car, JV 291, has appeared at Brooklands, and I should be glad if anyone could confirm this, or give any news of the earlier days of the car.

Finally, I have enjoyed much sport in this car, which has won a very warm place in my affections for its all-round qualities. — LIEUT. A. B. DEMANS, R.N.V.S.R.

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The "30/98" Vauxhall

Continuing the much-appreciated "Motor Sport" articles on outstanding sports cars, this month we have pleasure in presenting a most painstaking study of the "30/98" Vauxhall, written for us by George Sanders. He has owned both E and OE types and covers each of these famous Vauxhall cars in some considerable detail. As one of the greatest British high-performance cars of all time, the "30/98" fully deserves the space we are devoting to it. Laurence Pomeroy, whose father was responsible for this and other classic designs, has done us the honour of prefacing Mr. Sanders' article. We also wish to thank Vauxhall Motors, Ltd., for supplying many of the illustrations here reproduced.—Ed.

Foreword . . .

The "30/98" Vauxhall is a remarkable example of a successful type which came into existence by accident and which was never planned for production. In 1913, its year of origin, Vauxhall Motors, Ltd., were building two types of four-cylinder engine and two forms of chassis. The smaller of these, the A-type, had a 3-litre 90 by 120 mm. four-cylinder side valve engine in a 9 ft. 9 in.-wheelbase chassis. This model was the founder of Vauxhall fortunes and was designed in 1908 by my father to compete in the 2,000-Mile and Scottish Reliability Trials, which it did with outstanding success.

In 1910 three specially-tuned cars were built with a V-shape radiator to compete in the Prince Henry trials in Germany, and this became the origin of the "Prince Henry" Vauxhall which, however, was not offered for public sale until the 1911 Motor Show and which went into production in 1912. The larger four-cylinder car was the D-type 4-litre, having an engine, with four-cylinders of 95 by 140 mm. and side valves, mounted in a 10 ft. 3 in.-wheelbase chassis. Additionally, there was a variant which was formed by mating the D-type engine with the A-type chassis, this being the 1913 C-type "Prince Henry." The engine of this car was, moreover, additionally modified with high-lift cams and raised compression, and developed approximately 75 b.h.p. One of these cars was used at Brooklands with a narrow single-seater body having very low frontal area. It was highly successful in handicap events, being able to lap at around 100 m.p.h. [The best lap speed appears to have been 96.52 m.p.h.—Ed.]

The works also retained a special hill-climb car, which consisted of one of the 1912 Coupe de *L'Auto* team, which was a 3-litre "Prince Henry" with a short-tailed two-seater body.

As Mr. Sanders discloses, the "30/98" was a development of the 1913 C-Type "Prince Henry" and a sister engine was mounted in the 1912 Coupe de *L'Auto* car. It is not generally known that the first appearance of the Higginson four-seater "30/98" with the handsome round-fronted radiator was on May 3rd, at the Waddington Fells Hill Climb organised by the Lancashire Car Club. This event was run under very bad weather conditions, but Higginson, nevertheless, made fastest time of the day.

Between this event and Shelsley Walsh, two cars were run at Aston Clinton, P. C. Kidner driving the four-seater and A. J. Hancock the Coupe de *L'Auto* version. The latter easily made fastest time of the day and broke the record for the hill.

The spare engine was then put into the Brooklands car, which increased the lap speed to 103.76 m.p.h.,* whilst Higginson took the four-seater to the Shelsley Walsh meeting in June. In order that he should do full justice to an entirely new type of motor car so far as he was concerned he took the precaution of entering every possible event. This gave him three runs, first in the open class, the second in a match event, in which he represented the Yorkshire club against Lancashire and the Midland Club, and a third in a class reserved for members of the Midland Automobile Club.

His success on that afternoon was followed up by other hill-climb wins by himself and also by A. J. Hancock who, for example, later in the year broke the record at Caerphilly.

About six additional cars were made for various private owners, all characterised by the 9-in. brake drums at the rear. Probably the last of the first series of E-types went to the Managing Director, P. C. Kidner, in early 1915. This was an extremely handsome car which had a distinguishing characteristic in cantilever rear springs and was later bought by T. W. Mays, father of Raymond Mays.

During the war the design of the E-type was modified to make it into a regular production model. Much larger brake drums were used on the rear wheels and a number of minor improvements were introduced, such as provision for electric lighting and starting, and a gear lever inside the body. Whereas, however, on all the other post-war cars a spiral-bevel rear axle was used, straight tooth form was retained on the E-type. It was, however, my father's intention that this car should be regarded as a stop-gap until the manufacturing programme could be rationalised around what was known as the H-type car. This was an overhead-camshaft model of advanced design, the bore and stroke being identical with the 1914 Grand Prix cars, *i.e.*, 100 by 140 mm. The camshaft was driven by eccentrics from the front of the engine and the cylinder block was deeply spigoted into the light-alloy crankcase. It was intended that this engine should be built with varying degrees of "tune" to meet the needs of the competition car and the town carriage and that it should have a rather longer wheelbase than the existing "30/98." On the test bed it gave some 100 b.h.p. at 2,500 r.p.m., but, following the departure of my father in late 1919 to take up other work in the U.S.A., the Directors decided not to go on with the H-type, but to develop the existing engine to use overhead valves operated by push rods, thus converting the E-type into the OE.

LAURENCE POMEROY, M.S.A.E.

*[Later another single-seater E-type 30/98 lapped at 108.03 m.p.h.—Ed.]

THE "30/98" VAUXHALLS, MODELS E and OE

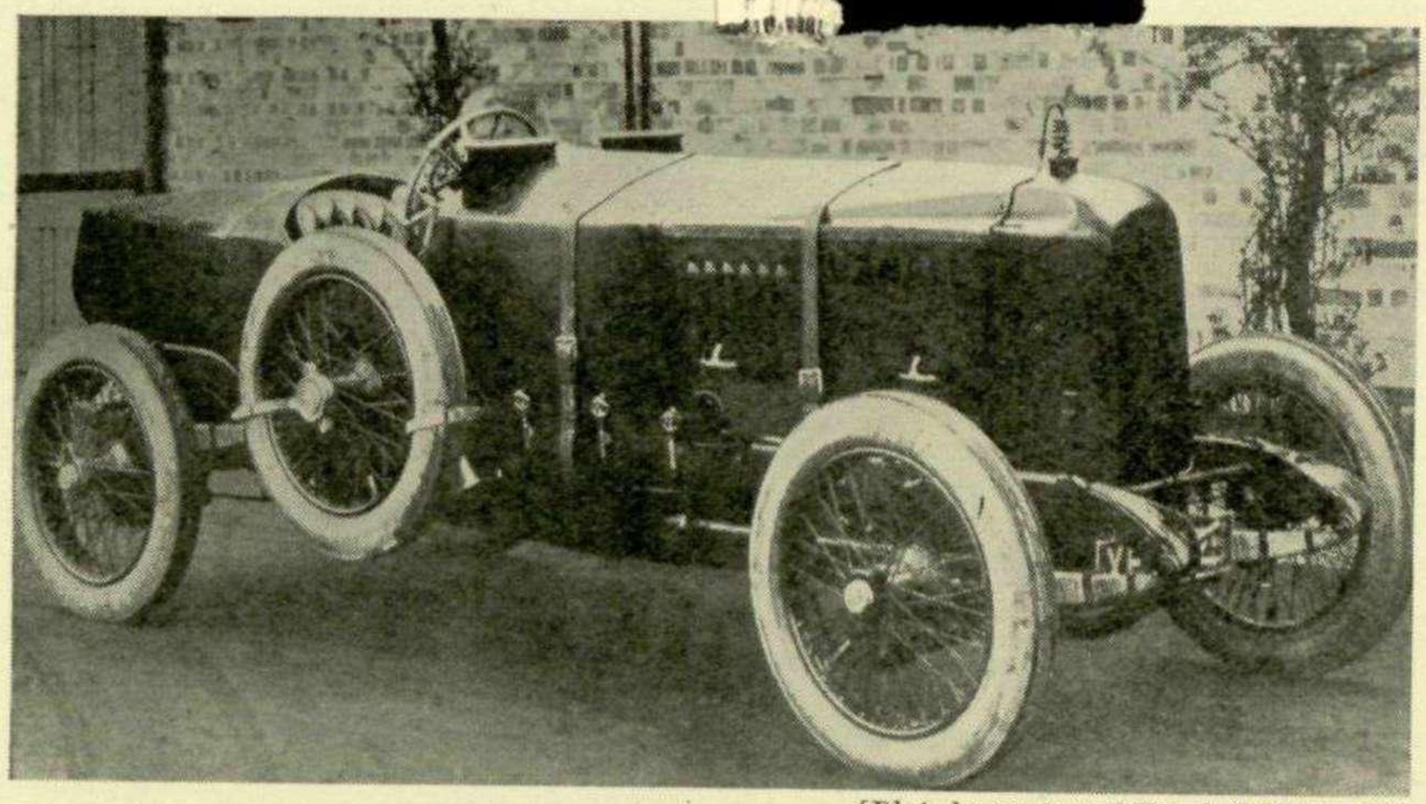
by GEORGE SANDERS

A KEEN competitor at sports events in the years prior to the first world war, was one J. Higginson, well known as the inventor of the Autovac, who had been competing with no small amount of success on an 80-h.p. La Buire. It should be remembered that at this time most competition cars were all of pretty large engine dimensions, and that the smaller engines of about 5 litres were only just becoming popular.

Higginson, however, was anxious to obtain a British sports-car that would better the performance of the La Buire, at the same time employing an engine of smaller capacity. There was no doubt that one of the course records he particularly wished to reduce was that of Shelsley Walsh, held at that time by H. C. Holder, who, driving a 58-h.p. Daimler, had climbed the hill in 62.2 sec. in 1911.

There was obviously going to be keen competition at the coming 1913 meeting, particularly from the cars entered by the Sunbeam and Talbot concerns, and against which it was highly improbable that the La Buire could compete on equal terms. Higginson therefore approached several British manufacturers with the request for a car that could gain for him the record at this hill-climb, and after various contacts managed to obtain the support of the late Laurence H. Pomeroy and the Vauxhall Motor Company.

It was during March, 1913, that Higginson contacted Pomeroy, who offered to produce the required vehicle; the only doubtful point being Vauxhall's ability to produce the car in the time at their disposal. Indeed, Higginson wanted it



[*Photo by courtesy of Vauxhall Motors, Ltd.*

Humphrey Cook's E-type " 30/98 *" in the form in which it was raced at Brooklands in* 1922.

ready for the June meeting, some thirteen weeks later.

This obviously did not give the manufacturers time to design, build and test a chassis and power unit "from scratch." Pomeroy therefore decided to build a car from various component parts available at the works, after making the necessary modifications to them.

Enlargement of the engine was put in hand, and in finished form a bore and stroke of 98 by 150 mm. was obtained, which gave a cubic capacity of 4,526 c.c. The C and E type engines were both normal side-valve four-cylinder units having two-valves-per-cylinder, a five-bearing crankshaft, and a camshaft chain-driven from the front end, with a very large clearance between the high-lift cams and tappets (in the neighbourhood of .050 in. to .060 in.). In other respects the engines differed very little from any other fixed-head, four-cylinder engine of that day.

The clutch, gearbox, transmission and rear axle were all quite orthodox, and, apart from minor modifications and slight improvements, such as various back-axle ratios introduced from time to time, remained the same for the whole period the car was in production. To complete Higginson's car, there was mounted a narrow, all-aluminium, four-seater body, *sans* doors and with light aluminium wings. The new-design flat-fronted radiator certainly gave a more imposing frontal appearance than the "V"-shaped radiator fitted to the C type "Prince Henrys," which remained in production.

Finally, came Shelsley Walsh. On his first run a time of around 70 sec. was clocked, but Higginson realised he had now obtained a motor-car fully capable of doing what he had set out to achieve. There was considerable competition that day to make fastest time. Higginson's second run was accomplished in the remarkable time of 58 sec., thus beating his old course-record, and setting up best-time-of-the-day. This achievement, however, was to be short-lived. One of the new Sunbeam racing cars, driven by Bird, managed to reduce the time to 58.4 sec., but Higginson, on his final run, and carrying three passengers, clocked 55.2 sec., thus beating his previous best time on the La Buire by no less than 13 sec. This record was to stand for 15 years before being again reduced by a sports-car, though it had actually been made against all comers, in spite of the Vauxhall being classified as a sports-car. Hancock, on the other car, had clocked 59 sec.

The older followers of Shelsley Walsh will remember the state of the road in those days, the surface being loose and dusty, and one cannot help but think that Higginson's driving, in spite of his having a powerful car, must have been in every respect up to that of the best drivers of the day.

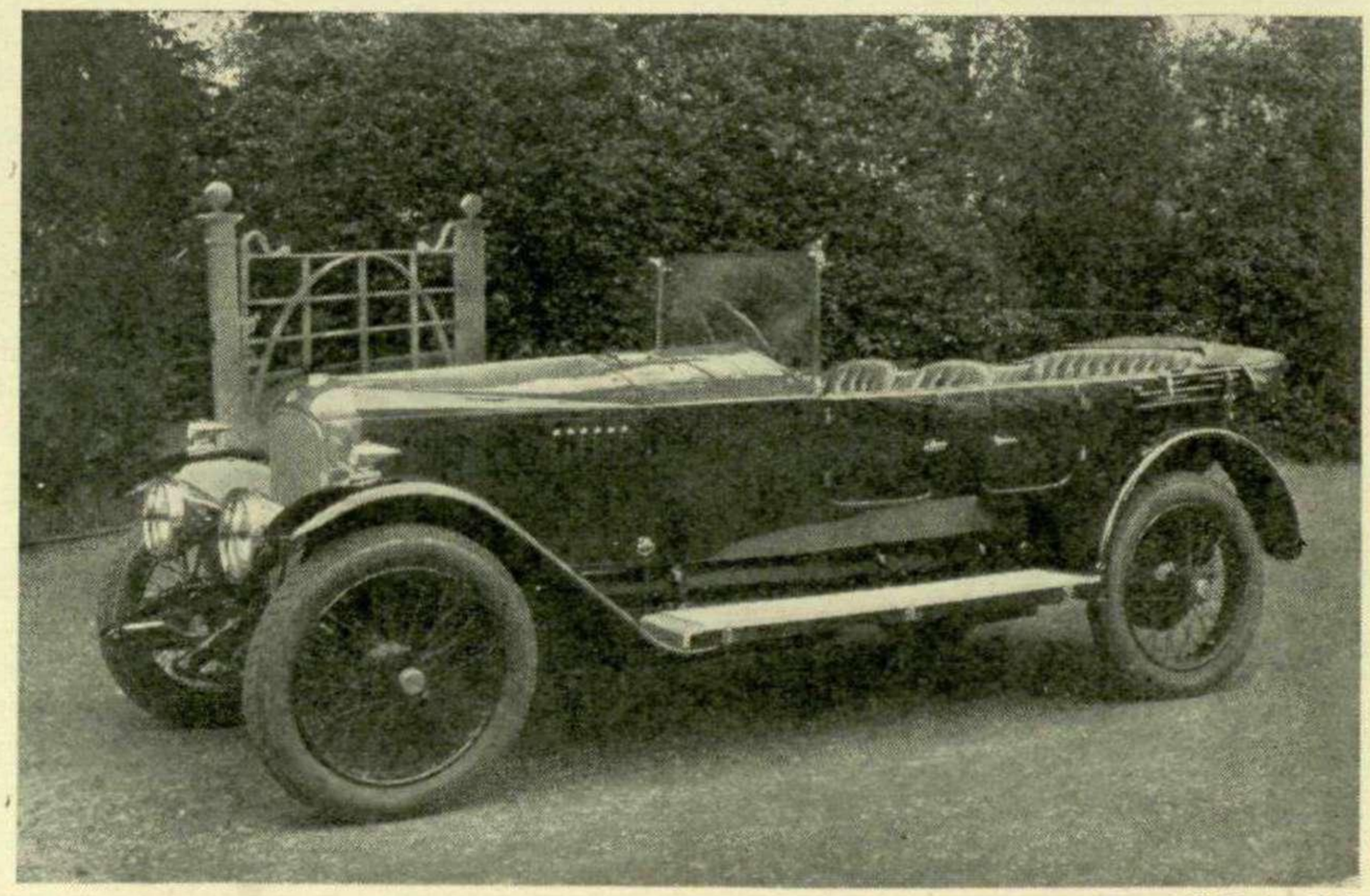
One can quite easily realise the publicity value of this performance, with the inevitable result that there was a very considerable demand put on the works for similar cars. The production methods in use at that time did not make for early deliveries, particularly as the first two cars had been so hastily constructed, and by the time the first few production models, in slightly modified form, began emerging from the works, the first World War had been declared. These modifications consisted of putting two doors in the body and providing a hood, spare wheels, and a somewhat poor electrical system. This 4-seater was named the "Velox" model.

In the meanwhile Higginson had been competing in many competitions with every success, while the "works" car appeared to be retained mostly for Brooklands. These two cars collected 13 firsts and 13 seconds during this twelve-month period, the only other driver to appear with one of these cars in this country being Bertelli. Perhaps the greatest success was finishing second in the Russian G.P., at an average of 70.8 m.p.h. in May, 1914.

Coming now to the post-1918 period, in 1920 the "30/98" Vauxhall appeared at the Motor Show, still with the side-valve engine and basically very much the same as turned out in 1914. The body, however, was constructed with some consideration for the purchaser, being fitted up with what was, in those days, quite complete equipment, the price being £1,650.

In the early 1920s these cars really began making a name for themselves, competing at all kinds of speed events and rarely missing the honours. The side-valve cars collected over 60 "firsts," and well-known names connected with the driving of these cars are Humphrey Cook, M. C. Park, Major Coe, George Duller, E. Swain, Clay, Barber-Lomax, Ropner, Watson, Pearce-Jones and many others.

Some very outstanding endurance records were also made, such as the run from Durban to Pretoria, a distance of 445 miles, in 10 hr. 56 min., an average of 40.7 m.p.h., and the run from Sydney to Brisbane, 643 miles, in 18 hr. 58 min. These two runs, incidentally, were accomplished in 1922, and both beat the records



[*Photo by courtesy of Vauxhall Motors Ltd.*

A standard 4-seater side-valve E-type " 30/98 *" Vauxhall.*

as they stood at that time. Compared with present-day average speeds, these do not appear particularly quick, but one must remember that the road surfaces were, for the most part, the roughest imaginable.

So much, then, for the side-valve " 30/98," which was known as the E-type. During 1922/3 the manufacturers partly redesigned the engine, in order to provide the car with more flexibility throughout its range. Push-rod-operated overhead valves were used, and the stroke was reduced from 150 mm. to 140 mm. This engine would certainly rev. faster, the peak being about 3,500 r.p.m., as compared with the 2,800 r.p.m. maximum of of the E-type, while the b.h.p. was increased from 90 for the standard E to around 112 on the new model, which was known as the OE. The top-gear ratio was reduced from 3 to 1 to 3.3 to 1 (the first production E-types pulled 2.5 to 1), and about August, 1923, front-wheel brakes were fitted as standard equipment, having the famous kidney-box operation.

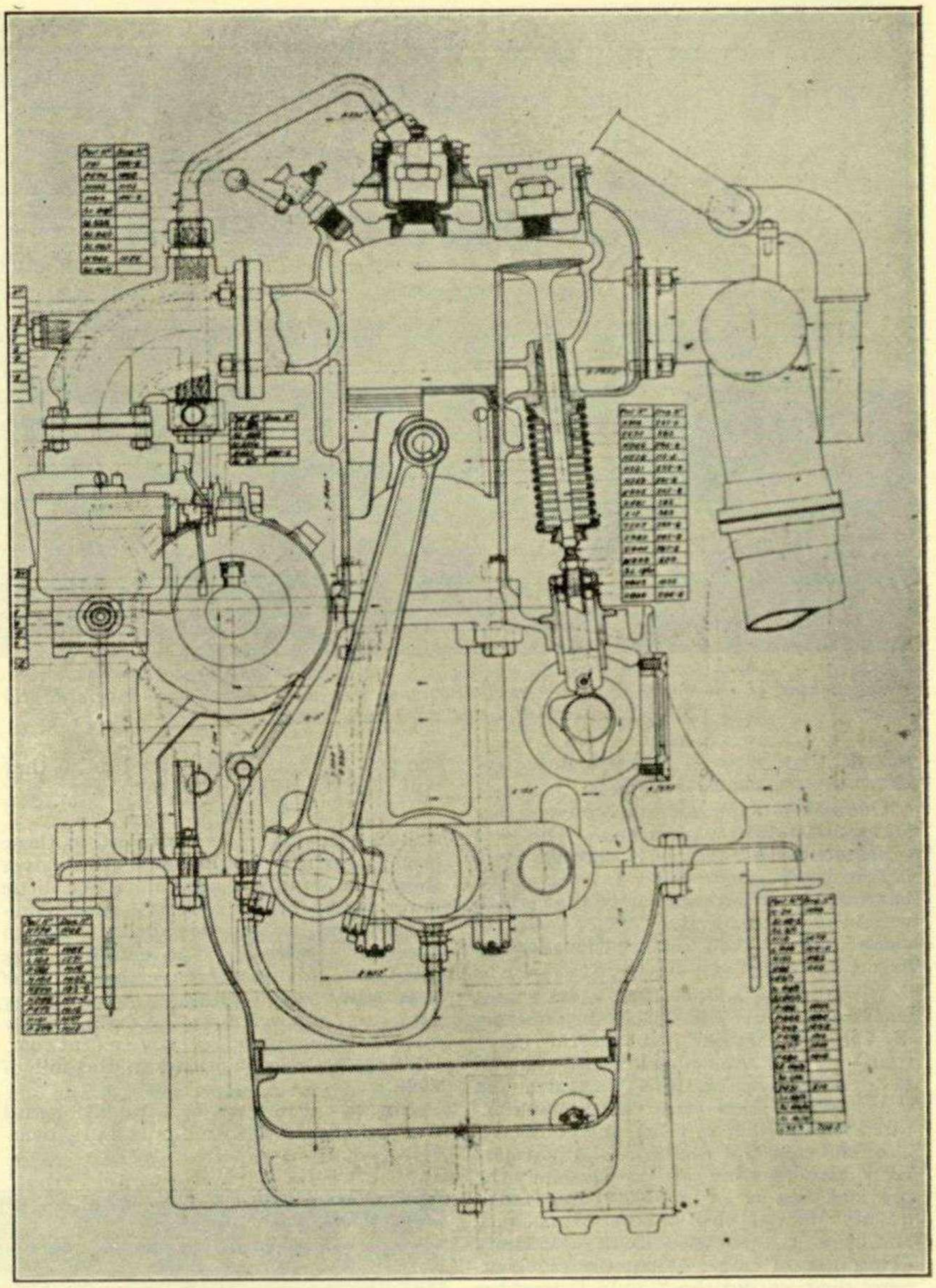
During 1923 two OE models were entered for the Georges Boillot Cup at Boulogne, to be driven by Major Coe and Sumner. The latter's car did not start and Coe was left to compete single-handed against the new " Boulogne " Hispano-Suizas, considered the fastest cars in the race and certainly the largest. By the second lap Coe was running a good third to the two Hispanos and by the fifth lap it seemed he had every opportunity of winning on formula, when, alas, he was forced to retire. The following year two more " 30/98s " were entered, but once again only one started and it again failed to complete the course.

I mention these two races particularly, as it was only on very few occasions that these cars were used for road-racing as opposed to hill-climbs, sprints and track racing. I don't know why this was so, but the OE models certainly appeared to be handicapped by teething troubles at the Boulogne races.

Although these OE cars were very much smoother running, and developed more power than the E-types, maximum speed does not appear to have been so high, as, in 1913, Hancock had lapped the Track on an E-type at 108.63 m.p.h., the following year N. F. Holder proved himself able to lap at nearly 101.5 m.p.h. on a similar car, yet now, by 1924, Major Ropner, whose " Silver Arrow " OE was the fastest " 30/98 " at Brooklands, could not better a lap speed of 103 m.p.h.

The " 30/98 " changed little during the period 1923 to 1926. In 1924 various small improvements were introduced, such as a direct-drive dynamo in place of the earlier mounting which was belt-driven from behind the clutch, the wheelbase was lengthened about 8 inches, and the ground clearance dropped from 9 to 7 inches. Wheels throughout the years had been of the beaded-edge type, carrying 820 by 120 tyres, though when officially converted to well-base, 20 in. by 5.50 in. appeared to be the tyre size considered to be most suitable for normal running.

It has been said that before the chassis was lengthened, the 1923 OE car was the world's finest skidder. I certainly do not agree, and from this point of view certainly prefer the OE to the E, unless someone had exchanged the frame of my car for a later one. The retail price had dropped in 1923 to £1,250 complete, or £950 for the chassis, at which level it remained until the car passed out of production.

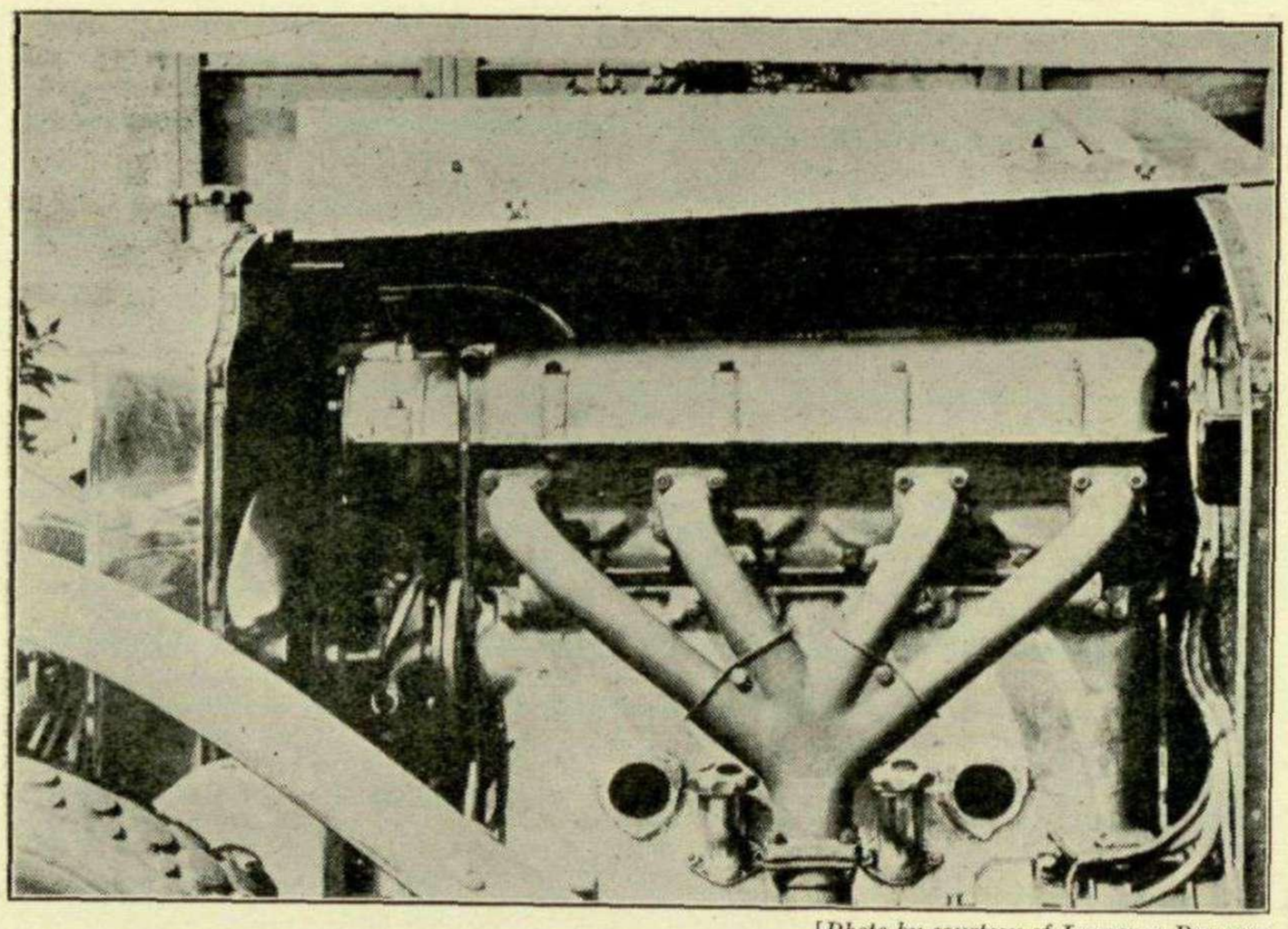


[Photo by courtesy of Laurence Pomeroy

A sectional view of the side-valve E-type Vauxhall engine.

Shelsley Walsh always saw a number of these cars in the entry list, but Higginson's time remained unbeaten. 1926 saw the car with much the same outward appearance, but the engine had been definitely improved by the inclusion of a counterbalanced crankshaft in place of the earlier " bent-wire " type, which, although it served its purpose admirably, did limit the revs. It is mainly cars so equipped that have been developed to put up the fine performances which have been seen in later years, when competition has brought them up against the " modern stuff."

A new body style was introduced, namely the " Wensum," this being a boat-backed 2/3-seater; although in my opinion the " 30/98 " looks best in her original " Velox " form. During 1927 the appearance of the four-seater was brought more in keeping with the times, mainly by redesigning the wings and making the petrol aperture on the tank sufficiently accessible so that a can of petrol could be poured in without loss. It always amazed me why Vauxhalls were so long in making this obvious latter modification. The most noteworthy alteration was the introduction of hydraulic brakes, and though many owners have said these were worse than useless, there is no doubt that, properly main-



[*Photo by courtesy of Laurence Pomeroy*

Exhaust side of the o.h.c. H-type Vauxhall engine that was intended to supersede the E-type, but which never went into production.

tained, they were a forward step over the earlier mechanical layout.

One other major modification was the fitting of a different gearbox. This was a definite advantage, as it allowed for a higher third-gear speed. I believe the box introduced was similar to that which was being used on the "25/70" sleeve-valve car. And so rationalisation began . . .

Towards the end of 1925 a statement was issued by the joint managing directors of Vauxhall Motors Ltd., to the effect that they had amalgamated with General Motors on November 16th; and, although the "30/98" cars were to be manufactured for a further 2½ years, this company, like Sunbeam and Bentley, who had also been participating in racing for the previous seven or more years, faded quietly out of this sphere of activity and began the manufacture of an entirely new range of cars. When the old company died, so did the "30/98," together with the more sedate touring vehicles, the "14/40," "23/60" and "25/70," together with any further hopes of this company ever producing a new T.T. or G.P. car.

Since then, however, there has always been a small band of drivers who have remained faithful to the "30/98," many of whom have met with considerable success in competition. To my mind the finest feat that one of these cars ever achieved, apart from Higginson's Shelsley Walsh run, was the winning of the Brooklands' Gold Star in 1932, when an OE model of 1926 vintage, driven by R. J. Munday, averaged, over the 20 odd miles, no less than 109.46 m.p.h., one lap being put in at 114.23 m.p.h.

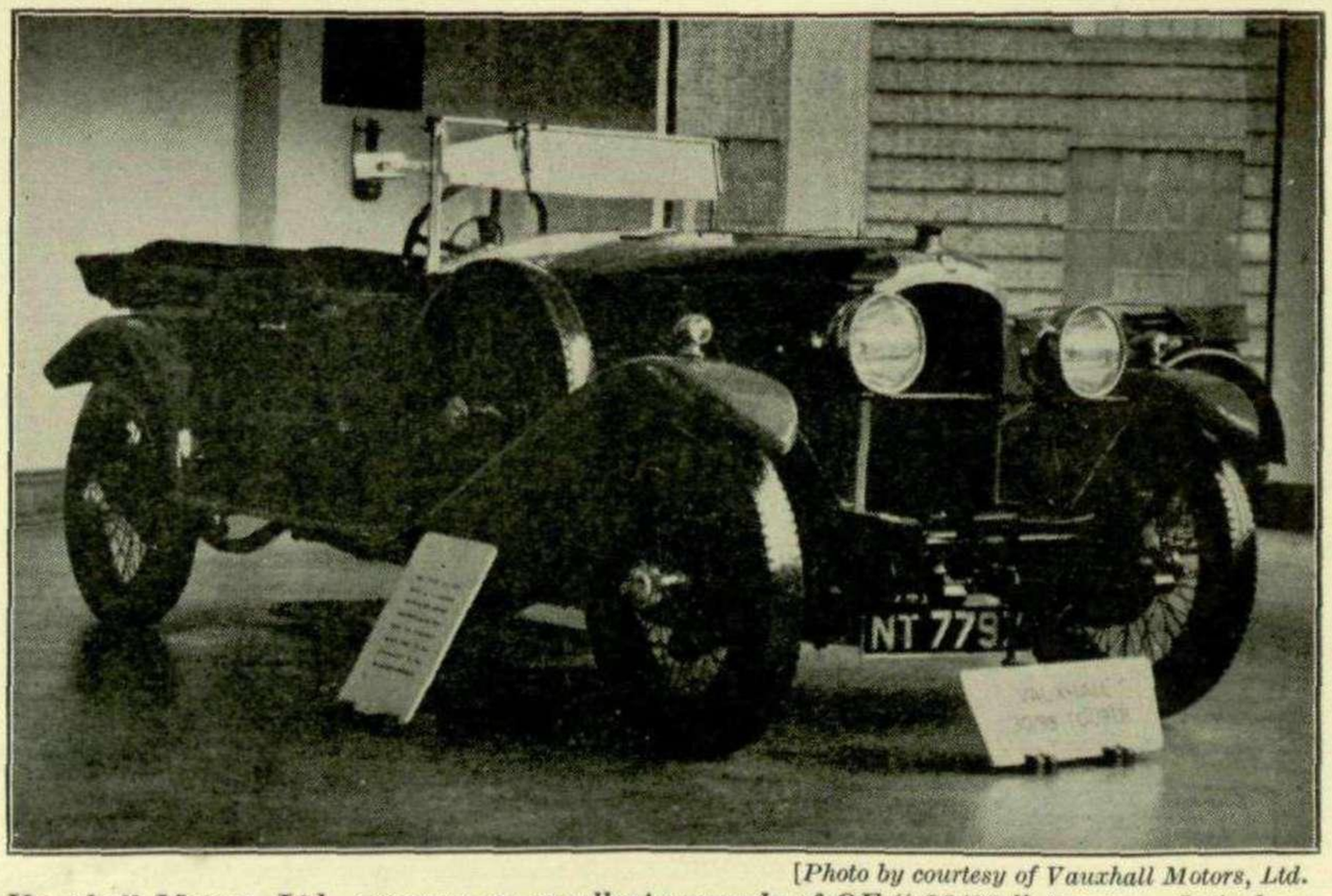
As for Shelsley Walsh, the time was eventually reduced to about 48 sec. by Jacot, and later by Windsor-Richards, both driving different cars. "30/98s" were regularly seen at all Shelsley meetings until as late as 1939, but due to the new regulations, it is doubtful if they will ever be allowed to re-appear.

* * *

I feel it would be of interest to those enthusiasts who still own or enthuse over these fine vintage cars to have a little more detail of the various main components, which together make such an excellent "recipe." The details I give are from odd notes I have made in the past when dismantling or erecting my own cars, and refer, in the main, to the OE, as the engine of my recent car, OE 64, was manufactured in the fall of 1923.

Engine.—This is a straightforward four-cylinder, push-rod-operated over-head-valve engine, with detachable head. The bore and stroke is 98 by 140 mm., which gives a capacity of 4,224 c.c. The pistons are of die-cast aluminium, so designed that heat is transmitted from the piston head by two paths. Connecting rods are of H-section, made in duralumin. Heat generated in the big-end is very rapidly conducted away, it being very difficult even under the most severe tests to melt big-end bearings. It is interesting that the Vauxhall Motor Company advise you, in the event of a big-end failing due to lack of lubrication, to fill the sump to a maximum of 2 gallons of oil (the normal level being achieved with 1¼ gallons), and the big-ends will then get the necessary lubrication by way of splash-feed.

The crankshaft, which is not counter-balanced on the earlier models, is carried in five substantial white-metal bearings. If it is hoped to put up the speed over 3,600 r.p.m., fit the counterbalanced crankshaft. These can be occasionally obtained through such well-known people as the Higher Road Garage, Urmston. The oil pump is of the valveless rocking-plunger type, driven off the rear end of the camshaft, and supplies oil under pressure to every plain bearing in the engine. This pump is most efficient; I have never heard of any trouble being experienced with it. Oil pressure should never register less than 5 lb./sq. in. at 20 m.p.h., and, although Vauxhalls originally specified Castrol "R," I have always used "XL," which fills the bill without the smell. The overhead rockers, which are of conventional design, are also lubricated by the mechanical pump, the supply of oil being controlled by a reducing valve in the rocker cover. Oil consumption on these cars should be around 2/3,000 m.p.g., even after considerable mileage has been covered. There are two oil filters in the system, one around the sump drain-plug which serves to filter the oil before the pump sucks it into the lubricating channels, and the other in the



[*Photo by courtesy of Vauxhall Motors, Ltd.*

Vauxhall Motors, Ltd., preserve an excellent example of OE "30/98" tourer. It is here seen at one of their post-war exhibitions at the factory at Luton.

form of a tray, which runs the full length of the engine, just below the lowest point of big-end throw; this tray can very easily be removed by undoing the four ¼-in. bolts located at the front end of the sump and withdrawing it by pulling on the small finger-grip provided.

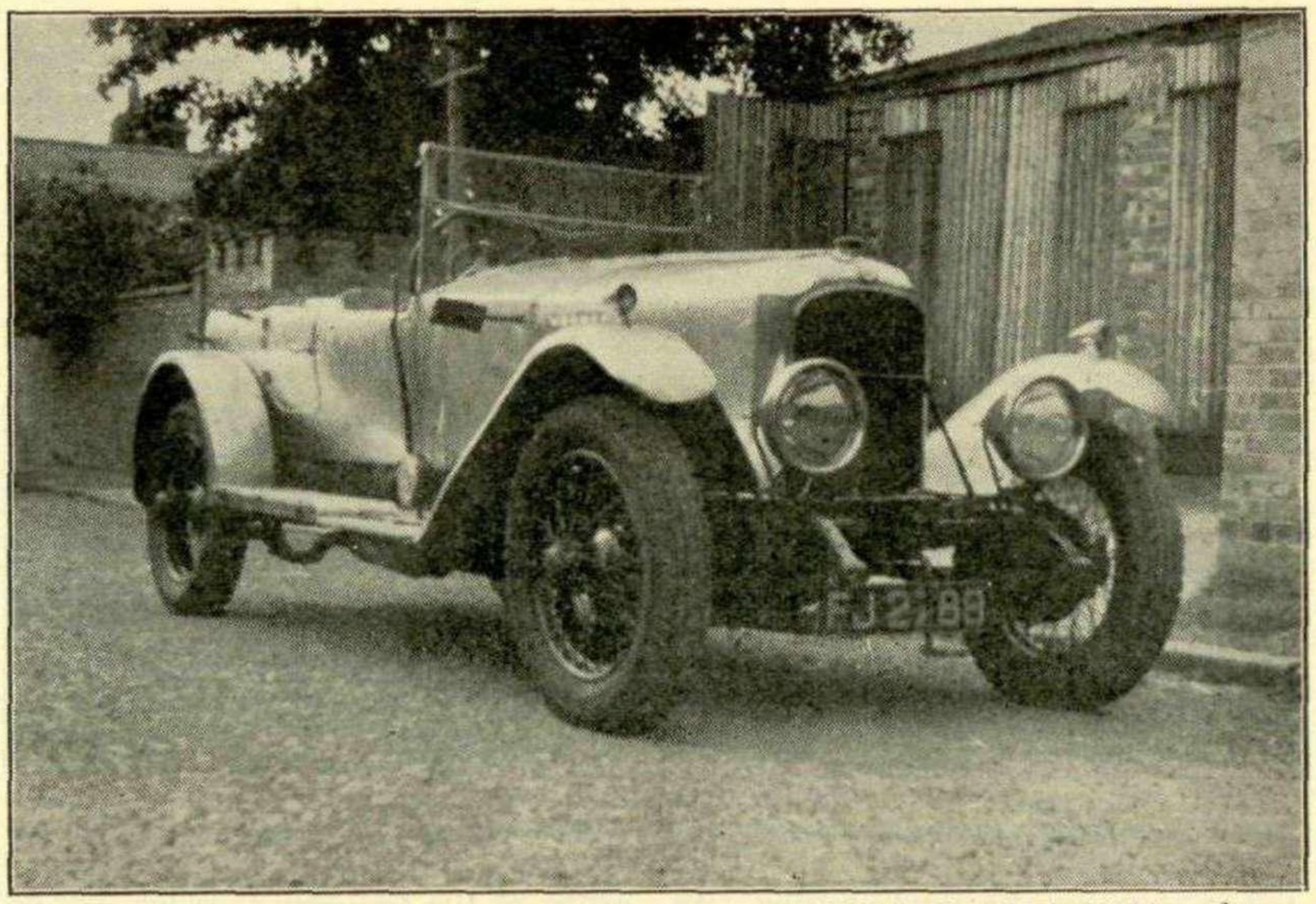
The valves are of the normal mushroom type, placed vertically in the combustion chambers. Exhaust valve seats and stems, also the sparking plugs, are entirely surrounded by water, which is circulated by a belt-driven impellor set in the front of the engine block. Double valve springs are a standard fitment, and though the valve clearance is stated on the side of all engines, I give a little more detail on this point a little farther on.

Any old sparking plugs seem to fill the requirements of this engine, although my own preference is for Champion R.3; plug-gap clearance should be from .012-in. to .015-in.

The water impellor also drives the fan and it seems that most engines have a habit of developing a lot of slack in this shaft. In my own case the whole was dismantled and a distance-piece was inserted ahead of the actual impellor, which served to set back the whole shaft and so bring the driven pulley once again in line with the driving pulley on the end of the camshaft. The whole design of this unit is definitely not of the best and occasional attention to its running is well worth while. A thermostat is also included as standard equipment, and although I removed mine as being unnecessary, I soon found that in the autumn and winter months it was most valuable. The thermostat has, therefore, been replaced, and I would strongly recommend other drivers who suffer from that wretched "spit" which periodically occurs, even when running with a hot engine, to leave theirs in.

In the winter months, I have found that blanking off a good half of the radiator maintains the required inlet-manifold temperature, without any tendency for boiling to occur. For a long while I was bothered with "spitting back" when the engine was run over 2,500 r.p.m., and, after a great deal of time had been spent on carburetter, plugs and magneto, to no avail, the trouble was immediately cured by reducing the cooling area.

The camshaft, placed low on the near side, is driven by a multiple chain from the front end of the crankshaft, which chain also drives the magneto, and is supported, like the crankshaft, in five white-metal bearings. The actual cam profile has, no doubt, a large bearing on the power output of these engines. The magneto sits in a cradle, which, together with its driving sprocket, serves as a chain tensioner. To check the tension on the chain, remove the plug at the bottom of the timing case (through this hole the chain can just be felt) and having previously eased off the bolts which hold the magneto cradle and which pass through elongated holes, pull the magneto in a clockwise direction, seen from the front. This will tighten the chain without upsetting the timing. Before commencing to do this, make quite certain that the slack in the chain is between the magneto sprocket and crankshaft, and not between the magneto and the camshaft, otherwise



The author's own OE "30/38"—a "Velox" tourer, which he bought in 1944 and very thoroughly restored after it had lain in the open for many years.

one may think all the slack has been removed, with the result that when the chain does pull into the correct driving position, the timing will be slightly affected. Don't forget to replace the plug in the bottom of the timing case, or the contents of the sump will be lost as soon as the engine has been running for a few minutes.

Petrol is fed to the engine through a Zenith visual-type filter and an Autovac. I have found this filter to be of very considerable use, as by the speed at which the bowl fills up a very good idea can be gained as to whether there are any air leaks in the vacuum circuit. If the bowl fills slowly, then either petrol is "out" in the tank, or air is being sucked into the Autovac. From the Autovac the petrol falls by gravity to a Type RA Zenith carburetter. The correct jets for normal running are 155 main and 165 compensating, with a 32 choke. (In the case of the E-type engine, these should be 165 main and 150 compensating, with a choke of the same size as for the OE carburetter.) From the carburetter the inlet manifold is water-heated to the point where it passes through the head, after which it is similarly heated by the water passages in the head itself.

The exhaust manifold is fabricated from steel tube, probably for the sake of lightness, but this component is not sufficiently robust to stand up to many year's work without breaking, and many owners have replaced it in favour of one in cast-iron.

There is no point in giving a lot of details concerning the dismantling and re-erection of one of these engines, as no special tools or knowledge are required, it being on the whole quite a straightforward engineering assembly.

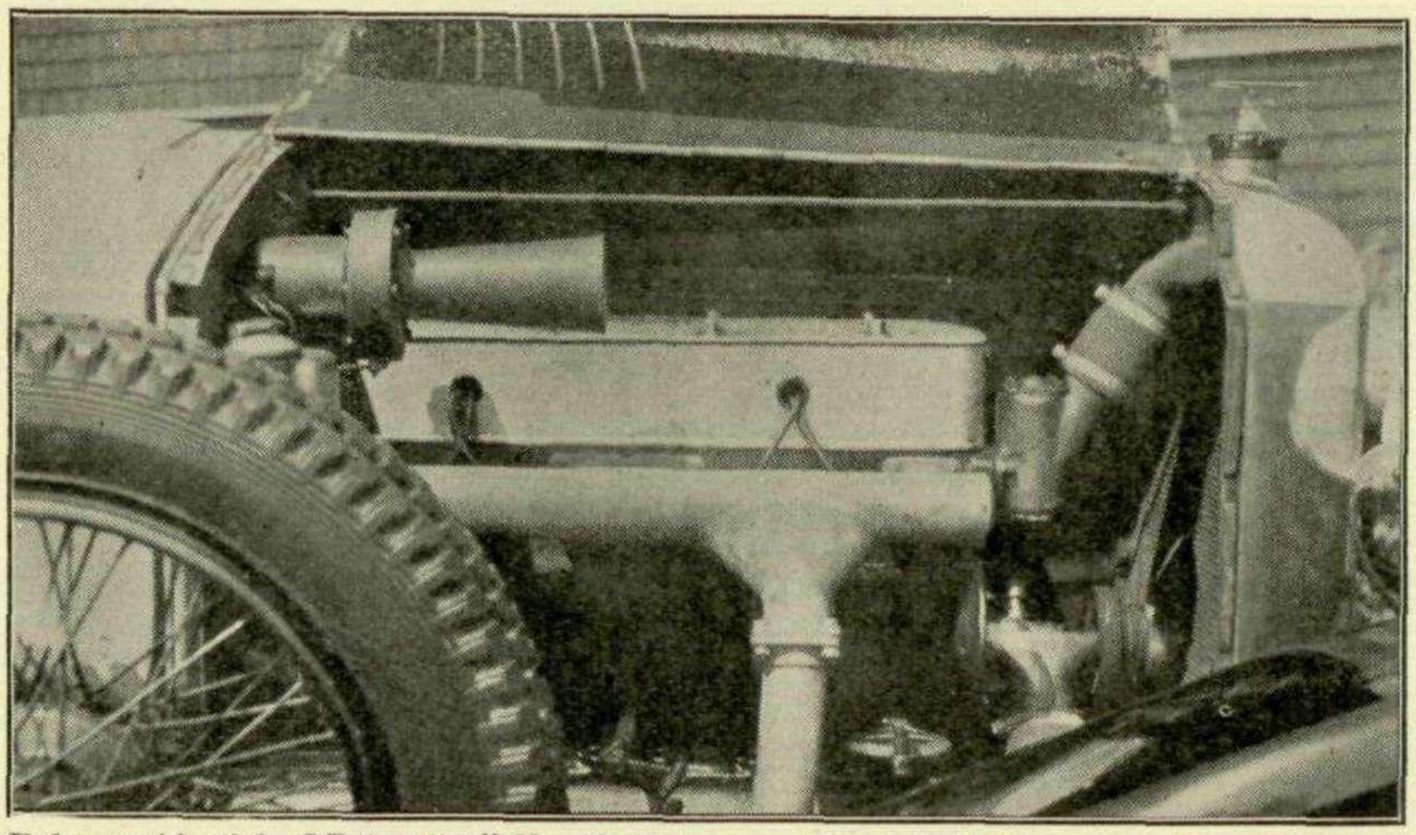
Details of the valve and magneto timing may, however, be helpful. First, remember that the firing order is 1, 2, 4, 3, which is rather unorthodox, although there are a few other manufacturers whose cars fire in the same order.

Valve timing is as follows:—

Inlet opens:	1¼ in. b.t.d.c. or 9.5°.
Inlet closes:	10$\frac{19}{32}$ in. a.b.d.c. or 81°.
Exhaust opens:	7⅞ in. b.b.d.c. or 60.2°.
Exhaust closes:	2 in. a.t.d.c. or 15°.

Where inch dimensions are given above, these are measured on the periphery of the flywheel either before or after the indented line denoting t.d.c. or b.d.c. Take care that the line referred to is actually at t.d.c., as there is always the possibility that the flywheel has been turned round for the benefit of the starter ring. It is advisable, in any case, to check the actual position from the crown of the piston, which can just be reached through the plug aperture. The gear-wheel on the front end of the camshaft, to which reference was made earlier, is of vernier design, and by removing the two bolts which clamp the actual wheel to the shaft, any desired relationship can be obtained between the crankshaft and camshaft. Before valve timing can be undertaken, it is necessary to remove the radiator and timing chain cover. The radiator can be freed by undoing the two ⅝-in. nuts just underneath, and located within the front channel cross-member of the chassis. From here on I have always found that the easiest manner by which to proceed is to draw out a timing diagram, glue this on to a piece of plywood and, having bored-out the centre to the same diameter as the front of the crankshaft, push it over the starting-handle dog, making sure it is a tight fit, at the same time setting it in the relative position to tie up with top dead-centre. If this diagram is about 8 in. across, a very accurate valve timing can be obtained, with patience. Time spent here is well worth while; these engines are very sensitive to timing.

If it is found that on the recommended tappet clearance only certain of the valves will give the correct opening or closing, then adjust the tappets until each gives the same result. Take a note of these



Exhaust side of the OE " 30/98 " Vauxhall engine. Note the oil filler, low-set fan and water impeller, the thermostat and the plug leads led through the valve cover.

tappet clearances for future setting. As an example, in my own engine the makers gave a clearance of .025 in. for all valves, but probably due to wear, the clearances have now become .024, .021, .025, .027, .024, .025, .024 and .025 in.

The standard magneto is a Watford F.4, and magneto timing is quite simple; with the magneto set at fully advanced, the points should just be breaking when the crankshaft, that is the flywheel periphery, is 4 in. before top dead-centre. This can be increased up to as much as 6 in., but is not advised, as starting will be difficult and accompanied by a violent kick-back, even when fully retarded. Even when the engine has been started, unless very hot, on the slightest attempt to accelerate she will spit back through the carburetter, which frequently sets things alight. I think excess advance on many of these engines is the cause of the numerous fires one hears about, so if anyone is troubled by these occurrences, just measure the distance on the flywheel in the manner mentioned. Contact-breaker points should have a clearance of about 0.4 mm.

The manufacturers state in their handbook that on standard timing, which I have given, the ignition hand-lever should be set, for starting, about half-way up the rack, and when running at normal speeds, this should be further advanced to about two-thirds up the rack.

If the engine is in reasonably good condition, starting should be easy, either on the handle or by the electric starter. In this respect a Ki-gass primer is definitely an advantage. Once the pump itself is primed two or three pumps should be ample, and with the hand-throttle lever set two or three notches up the rack, if there is no slack in the linkage and assuming that, when fully home the engine will just tick over, she should start, if not first pull, most definitely at the second. (Four or five notches on the rack gives about 200/250 r.p.m.) This procedure applies just the same in summer as in winter and there is no choke fitted.

The above generally covers the specification of the OE engine, which can be summed up as follows:—

Number of cylinders...	Four.
Bore	98 mm. (3 $\frac{5}{16}$ in. or 3.9375 in.).
Stroke...	140 mm. (5 $\frac{9}{32}$ in. or 5.59375 in.).
Maximum b.h.p. ...	112.
Maximum r.p.m. ...	3,400.
Compression ratio ...	5.2 to 1.
Area of piston ...	12.177 sq. in.
Total swept volume ...	272 cu. in.
Torque at 3,400 r.p.m.	175 lb. ft.
B.M.E.P.	95.8 lb./sq. in.
Max. piston speed ...	3,170 ft./min. at 3,400 r.p.m.
R.A.C. rating ...	23.8 h.p.

On the question of brake-horse-power, I have in my possession three graphs from the makers; one covers OE 19 and is dated 5/2/23; the second is apparently that of the engine fitted to Major Coe's car and is dated 30/4/24; and the third is of " Super E," No. E.1078, bore and stroke 98 by 140 mm., fitted with an S.U. carburetter Type C.2. This last-named engine is also referred to as an OE type. Quite what the engine was, or what modifications had been undertaken, is not stated, but the b.h.p. and torque figures are interesting. The comparative readings are as follows:—

R.P.M.	*B.H.P. (OE 19)*	*B.H.P. (Major Coe)*	*B.H.P. (E.1078)*	*Torque (E.1078)*
600 ...	17 ...	17 ...	20 ...	176 lb. ft.
1,000 ...	37 ...	34 ...	38 ...	187.5 ,,
1,500 ...	62 ...	54 ...	60 ...	202 ,,
2,000 ...	86 ...	74 ...	82 ...	216.5 ,, (max. 219)
2,500 ...	104 ...	94 ...	101 ...	214 ,,
3,000 ...	103 (peak 2,700)	105 ...	113 ...	199.5 ,,
3,500 ...	— ...	112 ...	122 ...	184.5 ,,
4,000 ...	— ...	114 (peak 3,650)	130 ...	170 ,,

All three graphs apparently refer to OE engines, though the figures given under the heading OE 19 appear more consistent to the output of an E-type slightly " hotted up." The figures in the second column are comparable to a standard OE in good condition, and those in the third column to a " hotted-up " OE. On the other hand, it might be that the first OE engines gave a very different set of results from those made later, when power was sacrificed lower down in order to obtain more urge higher up.

Clutch.—The clutch, which is bolted direct to the flywheel in the customary manner, is of the Hele-Shaw multiple-disc type, and should be lubricated by fine flake graphite only. Liquid graphite should never be used, unless one is prepared to dismantle the clutch after a thousand miles or so.

Generally speaking little trouble is experienced from this unit, which is most efficient considering its overall size and the torque it is called upon to transmit. There are, however, occasions when, after a long run, or after a lot of violent gear changes, when the whole assembly has become quite hot, it is found impossible to disengage the clutch. Sometimes it can be freed by allowing the assembly to cool down or by exerting extreme pressure on the pedal, but as the trouble is likely to occur again, and it can be very disconcerting in traffic, it is far better to take the " bull by the horns " and strip it.

Before the clutch can be removed it is necessary to unbolt the gearbox, and, having removed the trunnions from the rear of the propeller-shaft, pull back the gearbox a few inches to allow the clutch room to come away, together with its subsidiary mechanism. There are, of course, other parts to be disconnected, such as the clutch and brake pedals, but no comments are necessary on these. Be careful when lifting away the clutch-operating cross-shaft, which carries the toggle arms, as there are two small spring-loaded carbon brushes which serve to combat any rattle or vibration which might occur between these toggles and the clutch-race withdrawal housing and are more than likely to fall out. Having disconnected the Hardy-Spicer flexible coupling (not, I believe, fitted to the E-type, which has a metal coupling) and removed the bolts holding the clutch to the flywheel, the whole should come away. If difficulty is experienced, a few clouts with a raw-hide hammer should serve to ease the small ball-bearing which locates the centre spline of the clutch in the flywheel.

Dismantling of the clutch should be done as follows. Stand the unit vertically, the top being the face which mates up to the flywheel, and undo the five or six small screws visible on the surface. Before actually removing these, rig up some sort of a lever capable of holding down the plate, which the screws serve to retain when fully driven home. The set-screws can then be removed safely without the plates becoming airborne. Gradually release the leverage until the spring has lost its tension and lift out all the plates, taking care that they are laid out in the sequence that they occupied prior to dismantling; the centre spline can then be lifted out. Thoroughly

clean everything and examine the centre spline for grooves along the spline. As the majority of these cars have, today, covered large mileages it will be a fortunate owner who finds no grooves on these splines. This fault permits the plates to become lodged in set positions, whereas they should, of course, slide freely over this shaft when the pedal is depressed. There are two ways of overcoming this trouble ; either file away the ridges until a smooth surface is again available, or get the shaft built up to its original dimensions. The latter course is definitely the better, because the former allows play between the plates and the shaft ; however, in my own case, filing only was done, and no further trouble was experienced afterwards.

Having attended to this part, turn your attention to the plates. These are of copper and steel, there being, I think, thirteen of one and fourteen of the other. Test each plate for flatness on a measuring table and, if warped, treat with a soft hammer until perfect flatness is obtained ; also remove all burrs, which will be found particularly on the copper plates. Examine the splines within the housing ; these do not usually suffer very badly but if they are notched, treat them the same way as mentioned above.

Re-assembly is quite straightforward, being merely a case of dropping all the plates back in, compressing against the one spring situated at the rear of the clutch housing, and tightening down the small set screws. When assembled, fill with approximately half a pint of flake graphite through one or more of the plugs in the outer housing. I might mention that there is no necessity to undo the large $\frac{7}{8}$-in. nut which appears to be the key to dismantling this unit. This serves only to hold the main spline to the driving shaft which protrudes through the rear of the housing. If the clutch is cared-for as described above, no sweeter clutch could be desired, even though it may be a little on the heavy side compared with modern standards. But for smooth get-away and easy gear-changing it is second to none. Normal maintenance is practically nil. Introduce about $\frac{1}{4}$-oz. of graphite from time to time, keep the thrust race well lubricated, and keep all the withdrawal mechanism well oiled.

Gearbox.—It is not necessary to say much in respect of this unit, as the general principle is as with all other pre-synchromesh boxes. Troubles are practically unknown, although it must be admitted that these cars are heavy on the bearings. The only trouble I have experienced, and I mention it in case others suffer from the same annoying habit, was a periodic difficulty of not being able to select a particular gear, or when in gear, being unable to get either into neutral or any other gear.

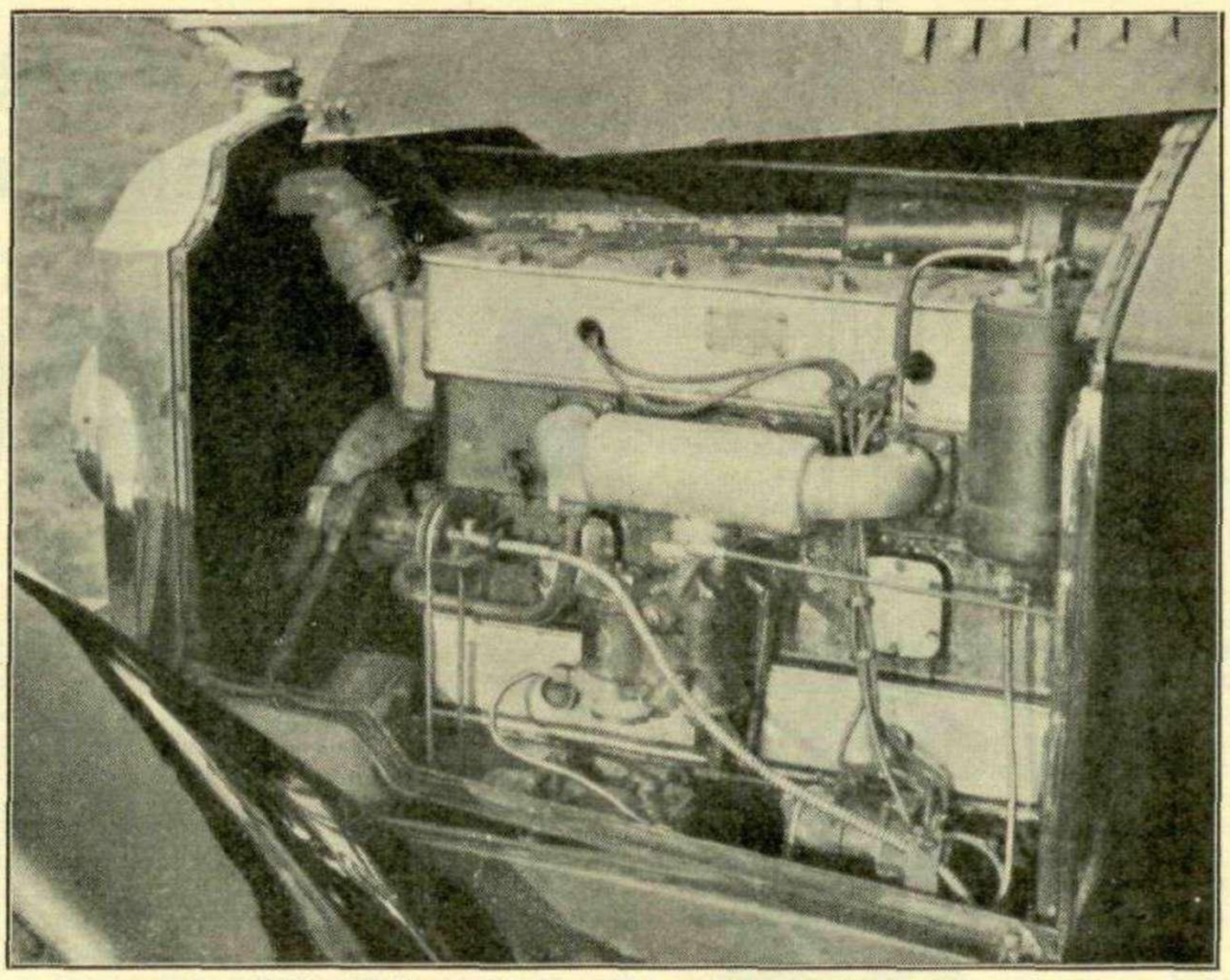
I only remembered to look at the most obvious place, which is, of course, the selector arm, after much examination. This arm is clamped to the end of a shaft the other end of which carries the gear-lever, and is self-locking when a particular gear is selected, through the selectors which are housed in a small box of their own on the off side of the gearbox. The bolt which locks the selector to the gear-shift cross-shaft had worked loose (there is no locking device) and allowed it to move a little way to one side. Obviously misalignment occurred, and the selectors could not be moved. What was so misleading was that, every-so-often, this selector must have vibrated back into its correct position, when no further trouble would be experienced for a considerable while.

The gearbox, which like the engine is mounted on the sub-frame, should be carefully shimmed up into position of alignment with the latter. This can be done by attaching a small pointer to the front flange, which for the purpose of this test would be disconnected from the flexible joint. Turn this in relation to the flywheel until the two are concentric.

To allow for the flex in the main chassis and the rigid mounting of the gearbox in the sub-frame, a ball joint is provided on the extreme end of the gear-shift cross-shaft ; keep this well lubricated. It will make for easy gear-changing on rough roads. Also, keep the cross-shaft itself well lubricated, which can be done by feeding oil through the two small holes provided for the purpose in the steel tube surrounding the actual shaft.

The gearbox should be drained at intervals of 5,000 miles, and refilled with Wakefield Castrol gear oil to within 6 in. of the lid seating. Gear-changing is easy, and comparatively light, except on winter mornings when the oil is particularly thick. Changes up and down can be effected without the use of the clutch, but in order to achieve this quietly a certain amount of brute force has to be employed. When changing gear in the more normal manner and using the very efficient clutch stop, the lining of which should be kept fairly well oiled, little pause is necessary in moving from one gear to another. The standard ratios provided are not the best for those who like high speeds on the indirects, perhaps because the car was essentially designed as a top-gear performer. With a 3.3 to 1 rear axle the ratios of the OE are :—Top : 3.3 to 1 ; 3rd : 5.1 to 1 ; 2nd : 7.8 to 1, and bottom : 12.2 to 1. Assuming the maximum engine-speed to be 3,400 r.p.m. and the car to be fitted with 20 in. by 5.50 in. tyres, allowing for various losses, speeds of 88 m.p.h. on top, 60 m.p.h. on third, 38 on second, and about 20 m.p.h. on bottom should be possible. There are available today, I believe, redesigned sets of gears which allow higher speeds on the indirects, although this is naturally quite likely to affect the acceleration a little. To my mind the best modification is to fit a side-valve rear axle, which is fitted with a 3.0 to 1 crown wheel and pinion.

Transmission.—The drive from the gearbox to the rear axle is transmitted by an open propeller-shaft with universal joints at either end. Immediately behind the gearbox is the transmission brake drum. The centre of the drum makes up part of the universal joint, which is of the metallic type, and through which two hardened and ground pins locate alternately in the propeller-shaft and housing. This form of universal joint, though quite common on cars built during the twenties, has now been generally discarded in favour of the more popular flexible joint, as made by Hardy-Spicer, added to which, with the latter type of joint, lubrication is unnecessary. Generally speaking, little wear occurs with the forward end, and it is only necessary to dismantle this when one has cause to remove the propeller shaft in its entirety. To do this, remove the rubber boot, which serves to retain lubricant, and undo the serrated collar which is then exposed, and which sur-



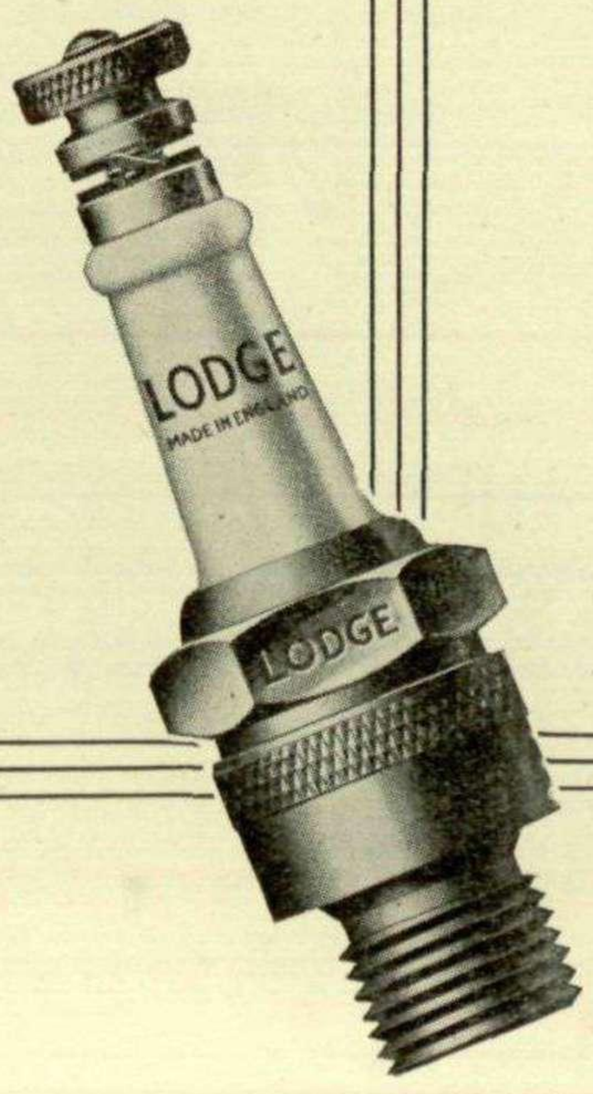
Carburetter side of the OE "30/98" Vauxhall engine, showing location of dynamo and magneto, belt-drive to fan, rev-counter drive, water-jacketted inlet manifold, tappet covers and inspection plates and autovac.

rounds the propeller-shaft and screws into the outer casing of the universal joint. On the earlier cars the speedometer-belt pulley is an integral part of this assembly, but as these pulleys, which are made of cast-iron, break for no apparent reason at the flange, I scrapped mine and took my speedometer drive from a split pulley fitted round the actual prop.-shaft, at the same time fitting a spring belt in place of the earlier flat rubber or leather drive. With this small alteration no further trouble was experienced through the belt coming off and becoming entangled in the works. It is important to keep this belt taut and the two pulleys absolutely in line.

The rear end of the propeller-shaft carries a transverse pin, on which are located two bronze trunnions; these trunnions slide in two slots of a machined housing which forms part of the pinion assembly, the trunnions being kept into position by a cover which slides over the whole, and is secured by four small bolts. When driving these cars at low speeds in the higher gears, roughness or jerking in the transmission is frequently experienced, and this can usually be traced to the trunnions having become worn on their driving faces. If they have not previously been turned round, this action will quite frequently cure the trouble, but more often than not this expedient has already been tried, in which case there is only one thing to do—scrap them and have new ones made. The head of these trunnions is of spherical design and this surface also suffers wear, but this can, up to a point, be rectified by placing shims underneath the blocks. The life of these trunnions is not long, and they will well repay very regular lubrication and replacement. To my own mind one of the best improvements which can be made on these cars is the scrapping complete of the standard prop.-shaft, replacing it by a modern-type Hardy-Spicer.

Rear axle.—The rear axle is made up of two steel castings bolted together round the periphery to form the pinion and differential housing, and into which are led two steel tubes, these tubes leading through to the hubs. There is no doubt that this form of construction makes for extreme strength with the minimum of weight. On the E-type cars the casing was also supported by a tie-bar underneath but this seems to have been discarded on the OE models. Keep this tie-bar well adjusted; there is provision at the ends. Unless for any reason it is necessary to remove the crown wheel and pinion, which are of the spiral-bevel type, there is no necessity to open up the two halves of this housing. There is, however, a frequent necessity to remove the hub assemblies, as wear often takes place at these extremities. Perhaps the following few notes on dismantling these ends will be helpful to those who are not familiar with the layout. First, remove the hub-cap, split-pin and nut, and withdraw the brake drum and hub in one piece. There is a steel bush dowelled into the front of the hub, the inside of which is splined and slides over the splines on the extremity of the half-shaft. Should the female splines for any reason become damaged or worn it is only necessary to replace this bush, and not the whole hub. Having exposed the shoes, remove the thrust race which is also visible, the shoes, oil retainer and backplate. The difficulty usually comes in removing the spring pad, which should be a floating fit on the axle tube, but which is more often than not seized solid.

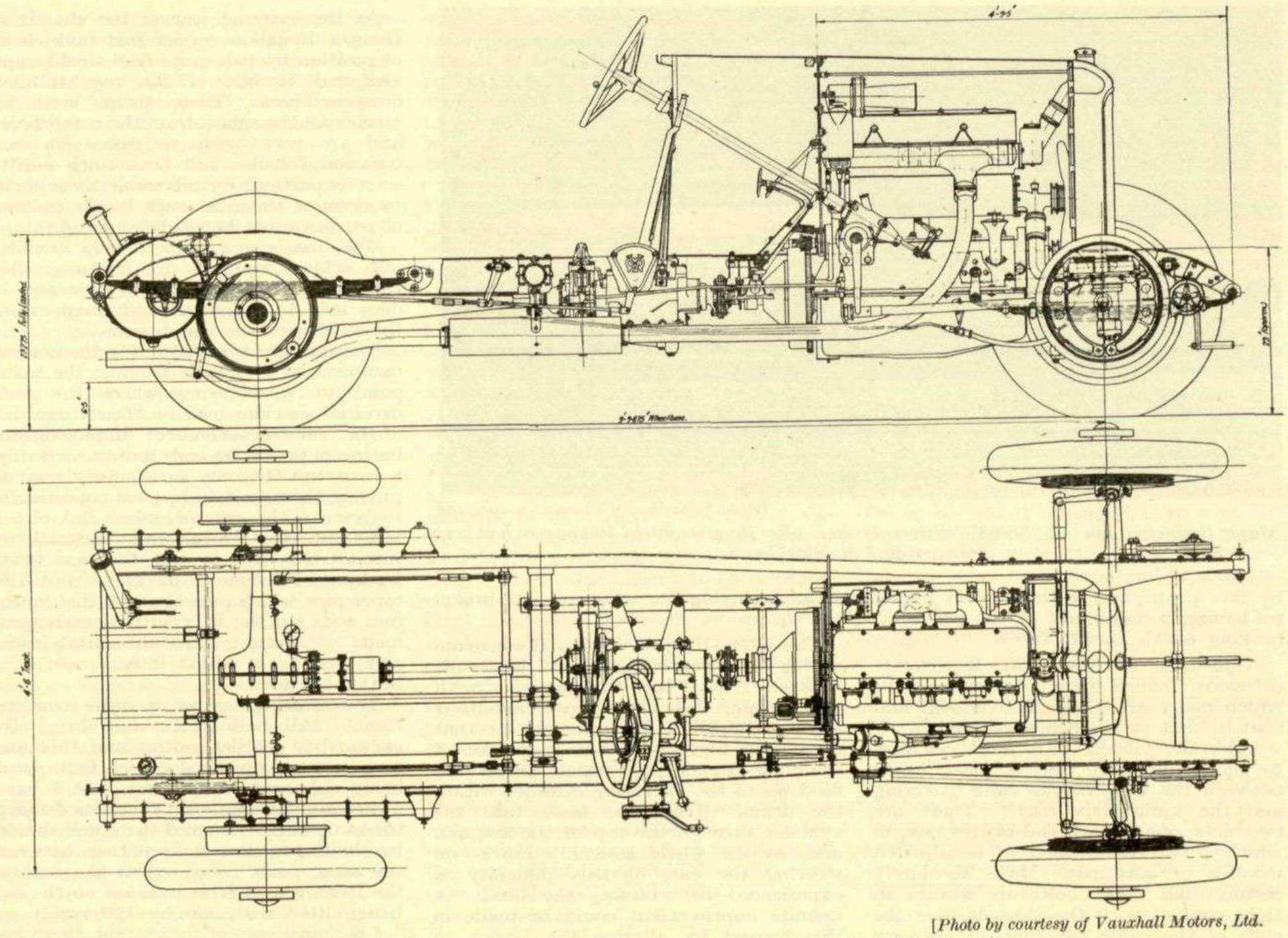
This spring block is an aluminium casting, into which is pressed a bronze bush, this bush being located by the dowel pin which is the extension of the spring clamping bolt. The easiest way of removing this casting is to slacken-off the retaining ring (which can be found behind the spring pad and which serves to adjust this pad) against the thrust bearing already referred to, knocking it up the tube four or five inches and then heating the whole with a blow-lamp, until it can be forced free. Having removed the block, the bush, if not too badly worn, should be scraped, and the axle tube cleaned down until the two once again mate properly. In view of the general design of the transmission of these cars, it is most important that a smooth and easy movement is achieved, so that the axle is allowed to move when riding rough roads or when accelerating violently. When re-assembling make sure the bush is fitted the right way up, that is, so that the dowel pin can locate in the hole made for it, and which will ensure the bush moving on the axle tube and not in the aluminium housing. One other point; the small oil-retainer pressing, which



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[*Photo by courtesy of Vauxhall Motors, Ltd.*

Plan and side elevations of the standard OE "30/98" Vauxhall chassis.

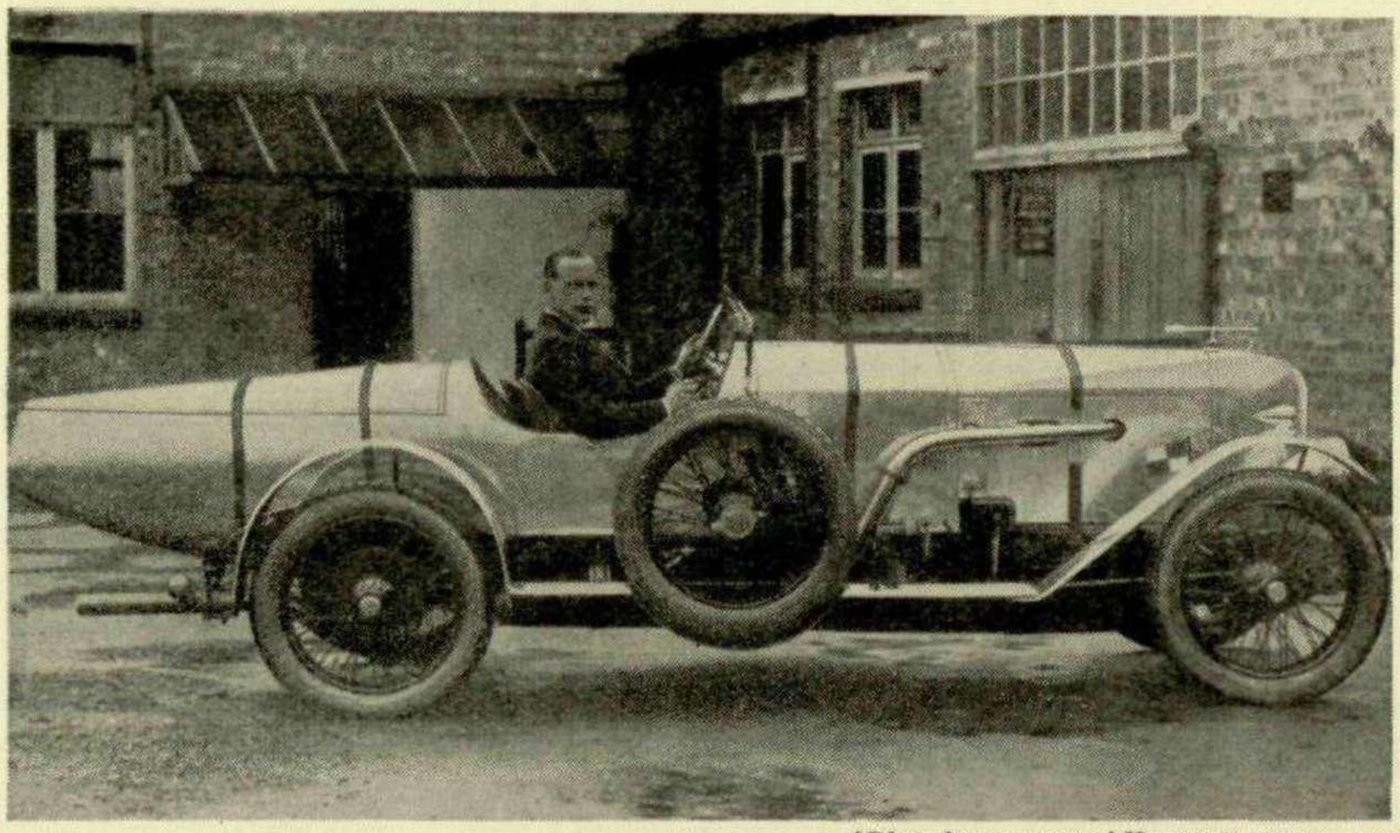
screws to the back-plate, has a hole drilled on one side. This hole must be at the bottom, to allow any surplus oil from an over-filled rear axle to escape. Re-assembly of the remainder is orthodox, finally tightening up the retaining ring until the spring pad is just free.

The rear axle should be filled with Wakefield Castrol gear oil, until the level comes up to the filler-cap orifice. There is no drain plug in these axles and to remove old oil it is necessary to unscrew the filler-aperture from the actual casing. Even this procedure will not entirely empty the axle.

Brakes.—Undoubtedly one of the worst features of these cars are their brakes, and there is no doubt that it is this which has prevented the "30/98" from becoming as popular as others in the same class.

The E-type and the first 30 OE-type cars were fitted with two-wheel brakes only and a transmission brake, the hand-brake working the rear wheels and the foot-brake on the transmission. The dimensions of the transmission drum made it impossible to dissipate heat generated when the foot-brake was applied hard at even moderate speed, and lining wear was excessive. One car I owned had actually been fitted with $\frac{3}{8}$-in. copper linings; I do not know if this was common practice but to me it seemed most dangerous, due to the violence of the grab.

About August, 1922, Vauxhalls, who were then building the OE, apparently decided it would be a very good thing for their cars to be shown at that year's Motor Show equipped with four-wheel brakes. The time at their disposal was not very long and no doubt this contributed to the poorness of the brakes which appeared. Obviously something had to be devised which called for no great chassis modification. The outcome was compensating mechanism rigged up externally and enclosed within a kidney-shaped box ahead of the radiator. Apart from this, and the design of the actual brakes themselves, nothing else was done, except to hook the whole up to the pedal, which then applied both front wheel and transmission brakes, the hand-brake still operating on the rear wheels. This certainly provided a four-wheel-braked vehicle, but it is a great pity that in the next four and a half years no improvements were made, with the exception of increasing the drum diameters, which was done in 1927. To all intents and purposes this system, on the face of it, should work reasonably well if the hand-brake is used at the same time, but it just doesn't. To my mind the root of the trouble appears to be that the rear wheel and transmission brakes are cam-operated, whereas the front brakes are operated by a vertically-rising wedge, pulled upwards by cables operating through the kidney-box. From details that I have had worked out the linkage required to operate the two separate brake systems to advantage from the pedal would have to be very much larger than it is reasonable to fit within the limit of space available and so, without making any alterations to design, the easiest way to overcome the brake problem is to entirely disconnect the front-wheel mechanism from the transmission brake. In my own case I scrapped the transmission brake in its entirety, it is unsatisfactory anyway, and tied up the foot brake to the front wheels only, leaving the rear wheels to be operated by the hand-brake. With the brakes in good condition, no further troubles were experienced and quite an efficient stop could be made by using the foot-brake, followed by an application of the hand-brake. By an efficient stop, I mean that it was quite possible to stop from 30 m.p.h. on a dry road in about 43 feet, without experiencing any tendency to pull or skid. Many owners have attempted to hook up all four wheels to the foot-brake, and connect the hand-brake to the transmission. I have already pointed out that I believe this to be unsatisfactory without major modifications, but it is always interesting to hear from anyone who has achieved a good four-wheel-brake system



[*Photo by courtesy of Vauxhall Motors, Ltd.*

Major Ropner in his OE "30/98" "Silver Arrow," after the guaranteed 100 m.p.h. had been demonstrated at Brooklands

by this means, and in this respect I refer to having a minimum of 60 per cent. braking on the front wheels.

Adjustment of these brakes is perfectly orthodox, though there is one small point which many are likely to overlook, and that is, that on the cable-operated front-wheel-brake models it is most essential to make quite sure that no slack exists between the ends of the cable covering and the kidney-box itself. There are two slots, one at each end of this box, in which sit two bolts, which can be adjusted inwards or outwards. Make absolutely certain that these bolts are always in tight contact with the shrouds over the ends of the cable covering. It is very surprising indeed to try the brakes on one of these cars before and after the slack has been removed; a very great improvement can be obtained without interference with the normal thumb-screw adjustments behind the drum. The kidney-box itself encloses a compensating mechanism and should permit the two front brakes to equalise themselves when pressure is applied to the pedal. The manufacturers give the following notes on brakes and brake adjustments :—

(1) Always use the hand-brake for normal stopping. Keep the foot-brake for emergency use only.
(2) When adjusting hand-brake, wheels should just be turning by hand when the hand-lever is pulled on four or five notches.
(3) When adjusting the front brakes (foot), jack up one wheel at a time, bringing the shoe as near to the drum as possible without fouling. A compensating mechanism will never give equal braking.
(4) To adjust cables, slacken nuts on front cross-member and tap brackets holding cable ends along the cross-member.
(5) The normal amount of play in the pedal action is about $\frac{1}{2}$-in. at the extreme top of the pedal, when the brakes are in the full-off position.

All drums are of steel, with cast-iron liners rivetted in, their effective diameter being 12 in., and the total brake-lining area, excluding the transmission brake, 160 sq. in.

The later OE cars, that is those made during 1928, were equipped with hydraulic brakes. I have had no experience with this design, but from those layouts I have examined it does seem to me that one of the biggest troubles is the use of the rigid copper pipe which carries the fluid up to the operating cylinder within the drum. This pipe leads into the cylinder through the top of the king-pin and, as the whole assembly moves on steering the car, obvious difficulty is experienced in retaining the fluid. A definite improvement could be made in this respect by altering the layout to carry Bunday tubing, as used on the Lockheed system. The hydraulic brake air-pressure system should be maintained at 10 lb./sq. in.

On the other hand, it seems that the older design of cable-operated brakes could quite easily be converted to hydraulic operation by fitting two small transverse cylinders vertically over the king-pins; these would serve to lift the wedges very much more satisfactorily than the cable mechanism. No difficulty would be experienced in installing the remainder of the hydraulics.

Chassis.—The chassis is of perfectly straightforward design. Along roughly half of it is a sub-frame carrying engine and gearbox. The rear end of this sub-frame is slung from a tubular cross-member which also acts as the bearing to which the torque stay is clamped. This cross-member is subjected to considerable strain and frequent attention should be paid to the rivets by which it is held to the frame side-members, and also to the bolts which support the sub-frame. It is advisable to replace all these bolts and rivets with modern high-tensile bolts on an elderly car. Keep the torque-shaft bearing well lubricated and eliminate any side-play. Immediately behind this member is the cross-shaft operating the rear brakes. On the outside of the frame will be found two grease nipples and regular attention to these will go a long way towards easy and smooth brake operation.

At the extreme rear of the chassis is slung a 12-gallon copper fuel tank, held in position by two quite frail steel straps anchored to one of the rear tubular cross-members. These straps seem to receive all the splash from the rear wheels and are very liable to rust. On one occasion I had a full tank come adrift, so it is particularly advisable these days to examine them, as even twelve gallons of petrol cannot be easily replaced!

The chassis as a whole is very flexible, but seldom appears to fracture; the front end is possibly too flexible and it does help to insert an additional cross-tube between the dumb-irons.

The springs are supported in the normal manner and give little trouble, the main point of wear being where the rear inverted shackles bear on the extremities of the rear cross-member. Replacing the bushes in the spring ends is not necessarily a cure and the only satisfactory way of putting these parts into good condition is to remove the cross-member and either build up the worn-away material or regrind the ends to suit the new brass bushes. To remove it, knock out the taper pins which pass through the dumb-iron ends (on the E-type these ends were made of bronze), heat the dumb-irons, and then I am afraid it is a case of a heavy hammer.

The steering layout is quite conventional. All ball joints were originally enclosed in leather gaiters and this was no doubt responsible for such little wear being apparent on the cars that I have owned and dismantled. There is a decided toe-in on these cars and the track should be about $\frac{3}{8}$-in. less in front than between the same point measured at the rear of the front wheels (this is based on the car being fitted with 820 by 120 tyres).

Like most cars of this period, there are a great many grease-points on the chassis and it is most essential to locate all these and keep them thoroughly and regularly supplied; the handling characteristics can be completely changed through lack of attention in this direction.

The electrical system is of C.A.V. manufacture throughout, being of the double-pole type. The headlamps, though of fair proportions, can hardly be considered satisfactory for the speed of the car, and replacement by a more modern type is desirable. The dynamo on the earlier cars is of considerable size, having ample output for the demands likely to be made upon it, and is belt-driven from behind the clutch. During 1924 this component was replaced by a smaller unit situated between the magneto drive and magneto; a more accessible installation.

The E-type carried the accumulator on the near-side running board but towards the end of 1923 it was slung under the rear floor. I cannot say I quite agreed with this modification, as it meant doing away with the two foot wells, and there never was very much room for one's feet when occupying the rear seats.

One other change was made when the OE replaced the E-type, and this was the fitting of the starter button on the dash-board. Previously the switch was placed on the floor, just ahead of the driver's seat, and this meant that to start the car one had to almost stand up, not very easy when the hood was erected. Apart from these few changes in design, I

believe the electrical system to have been unaltered during the years the car was in production. A copy of the wiring circuit can, I believe, still be obtained from the makers of the equipment, should anyone feel that it would be advantageous to have it for reference purposes.

The dashboard carries oil-pressure gauge, speedometer, clock, ammeter, voltmeter and the customary switches. On those cars fitted with pressure feed there is also an air-gauge and hand-pressure pump, and there is an additional air-pressure gauge on those OE models fitted with hydraulic brakes. If desired, a rev.-counter can quite easily be fitted in place of the clock. Perhaps one of the easiest ways in which to rig up a drive is to mount a split pulley round the magneto coupling and from here take a small belt-drive to a second pulley on the end of the actual rev.-counter drive, and anchored just ahead of the magneto.

The body, wings, bulkhead, dashboard, etc., are all made from aluminium, which contributes a great deal to the light weight of the car. Though the front seats are "just right" for long-distance driving, and a feel of absolute control over the car is immediately noticeable to the driver, the back seats are extremely bad, both from a point of view of comfort and safety. There is practically nowhere to put one's feet, unless it is straight out ahead. What an improvement could have been made by lengthening the scuttle six or eight inches, setting the two front seats back and shortening the rear compartment! This, together with a little redesigning of the rear floor, would have made the body as comfortable inside as it looks good from outside. Still, these points are minor when it is remembered the car was built for speed, and not necessarily as a means of conveyance to social functions.

* * *

I will conclude with a few notes on my own experiences of the two "30/98s" which I have been fortunate to own.

I had always had an interest in these cars and naturally had a hankering to possess one, but my age and impecunious position had been such that it was not until 1933 or 1934 that I first became an owner. Purchased from Dixon's of Redditch, the car was an E-type "Velox" four-seater, in comparatively good condition. The whole car was in virgin aluminium, and all instruments and equipment "worked," and no modifications whatsoever had been made. There were no front-wheel brakes, and both the rear shoes and those on the transmission brake had been shod with copper linings. (Was this customary in those days, or was it an idea of a particular individual in desperation?) Unfortunately I have not got the engine number of this car, but remember the registration number to be DH 2681, it having been first registered in 1921.

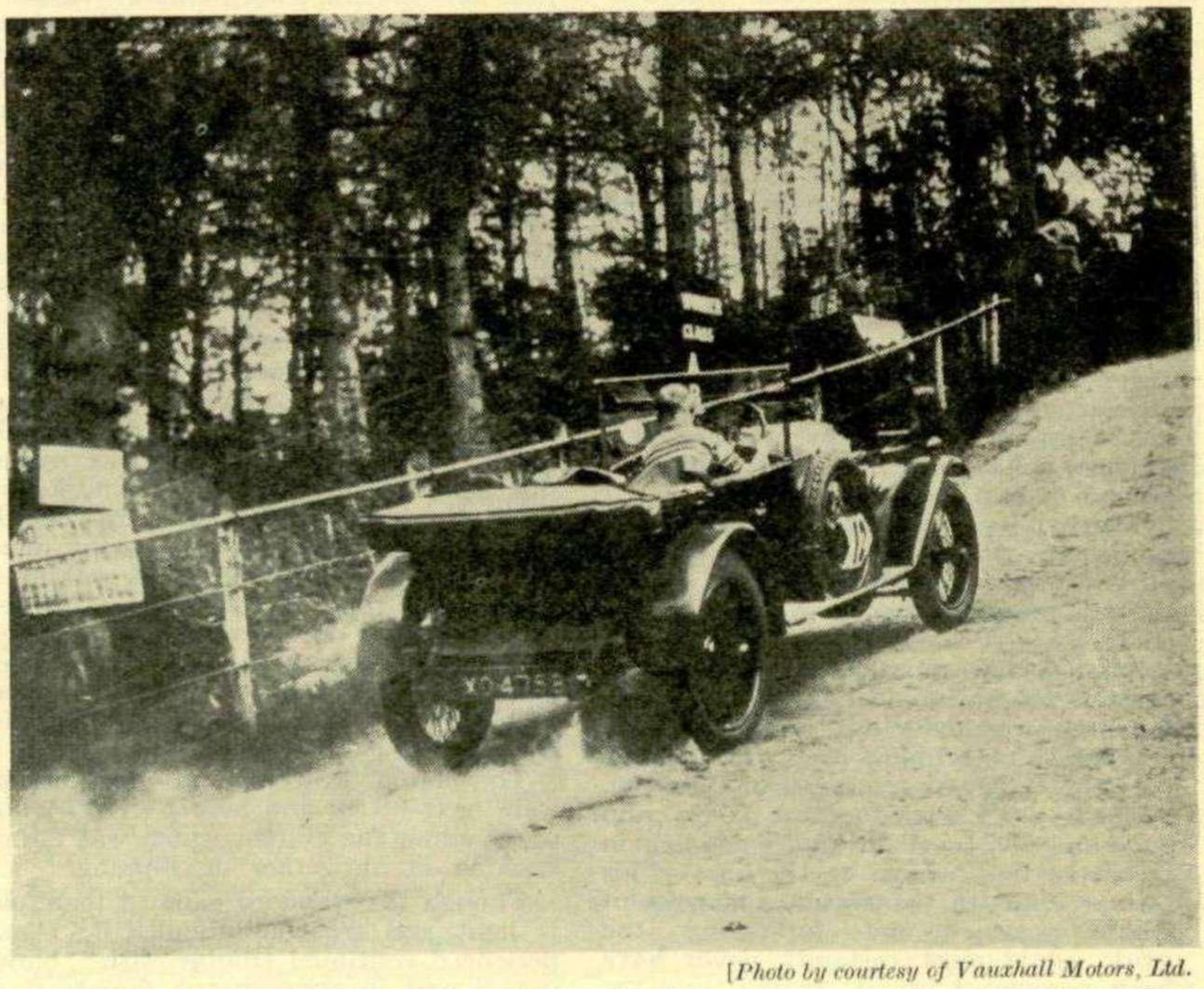
The performance of this car after those of which I had had previous experience was terrific. I well remember the demonstration run that was given me by a person whose job seemed to depend on whether he sold the car. After I had had an opportunity of becoming used to her, the maximum speed proved to be considerably under 80 m.p.h., but up to about 65 m.p.h. the car was definitely very quick, after which acceleration seemed to fall off rather badly, and if one really pushed the engine a good rattle set in, which I think was probably due to valve bounce. In this form, DH 2681 was once or twice entered for Shelsley Walsh, but never bettered 63 sec.

The E-type car is lighter than the later OE, and there is considerably more twist in the chassis, it being of much less robust construction; the springs were narrower and the engine weighed less. Hydraulic shock-absorbers were fitted as standard, these having been made by Deridon. They were not very successful or else they were worn out, and were accordingly replaced by double Hartfords. Steering and road-holding were excellent on dry days, just the reverse on wet. On long runs petrol consumption worked out at around 20-22 m.p.g. When I took possession of this car the fuel was fed to the carburetter through the medium of twin Autopulses (no, I was wrong in saying the car was entirely standard, but this was the only modification). These, due mainly to their condition, did not prove too suitable, as starvation invariably occurred when driving hard on the intermediate gears. Consideration was given to fitting either some new electric pumps or an Autovac, but finally it was decided to re-connect the old air-pressure system, as originally used, and this, although a little inconvenient when starting up on a near-empty tank, proved itself extremely reliable and highly efficient, a pressure of 1½-2 lb./sq. in. being maintained quite comfortably from the mechanical air-pump, which is driven off the rear end of the camshaft by the same cam that drives the oil-pump.

My car was driven hard for about 10,000 miles, when its earlier mileage began to tell. On one occasion, when it was necessary to make a quick stop, which called for violent application of the transmission brake, the torque-stay broke at its neck and allowed the axle to swing heavily within the spring pads, which resulted in considerable damage to the rear end of the propeller-shaft. On the OE models this stay was made to a different section and is undoubtedly more robust; I have also noticed that on quite a number of these cars a small steel plate is fitted underneath the forward bearing of the torque-stay, which serves to prevent this component from dropping in the event of a breakage such as I have just mentioned.

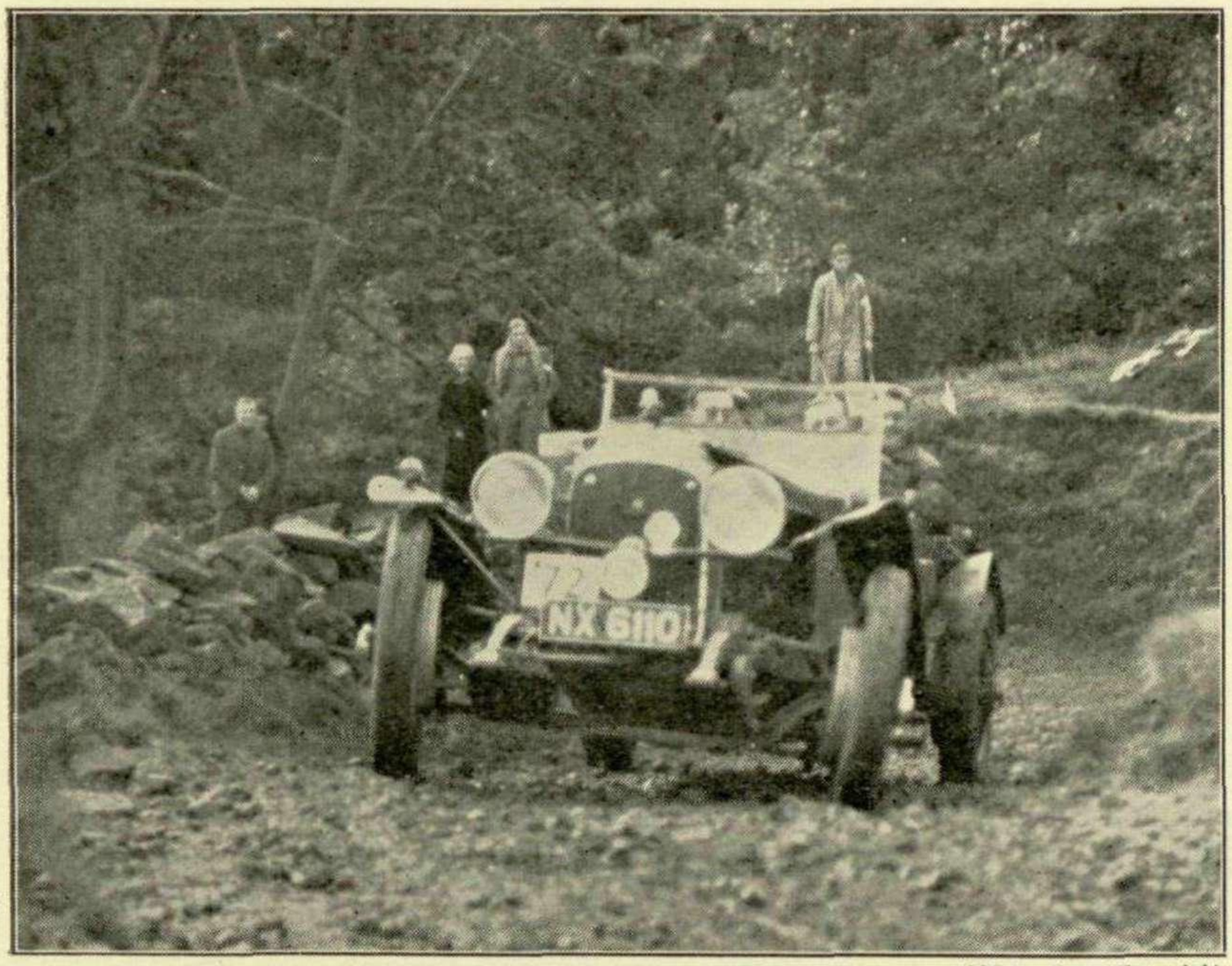
The only other mechanical breakage that was experienced on the road was when I endeavoured to change into third gear at a speed above that at which the car was capable of travelling in that gear. On inspection it appeared that whip in the crankshaft had caused two main-bearing bolts to break, at the same time bending a connecting-rod and breaking a piston.

In view of this failure it was decided to completely strip the engine and replace all bearings, which work was duly carried out, and although I had intended to have the block rebored at the same time, this proved to be unnecessary, very little wear being evident. One new piston, to replace the broken one, and new rings on the others, brought this part of the "works" back into an efficient condition. Before the block was replaced the brass sealing washer was removed from the top of the crankcase, with the idea of slightly increasing the compression-ratio.



[*Photo by courtesy of Vauxhall Motors, Ltd.*

T. G. Hunt in a Vauxhall "30/98" taking the bend in a team event for sports and standard touring cars at the Midland Automobile Club's Amateur Open Hill-Climb at Shelsley Walsh, 1926.



[*Motor Sport Copyright*

Alan May's well-known O.E. " 30/98 " *competing in a pre-war M.C.C. Lands End Trial. It has been more than a match for the moderns in speed events of recent years and is largely standard, save for a downdraught carburetter and Hispano-Suiza front axle.*

Practically all valve guides were found to be broken where they passed through the ports, and the valves were definitely " sloppy " in the guides. New valves and guides were therefore fitted, together with a new set of valve springs. I think on the E-type attention to the condition of these springs is important, as most I have driven seem to be suffering from valve bounce.

The flywheel had some 45 lb. removed though from later experience, by way of difficulty in starting, I do not think the slight gain in acceleration is worth the roughness and I would not recommend this procedure unless the engine has a counterbalanced crankshaft.

It was most unfortunate that I never had the opportunity of trying the car out, as, on her first run, due no doubt to too little attention being paid to the condition of the brakes, she became involved in a serious collision whilst travelling at around 50 m.p.h., which was also shared by two other cars, a lamp post and a suburban villa. To all intents and purposes the Vauxhall was written off and the remnants dumped in a Birmingham garage.

After a few months, I decided that perhaps the car could be rebuilt, and so a search was made for another frame. One was eventually discovered, which bore the registration number of BN 5600. I should here refer to Paul Jacot, who gave me such excellent advice and help in reconstructing my car on the lines of his own well-known two-seater, and without whose patience and forbearing the work would most certainly never have been completed.

The new frame was completely stripped, cleaned and all rivets carefully inspected. It was then sprayed black, the inside of the channels being painted in aluminium. New springs were obtained, these being set down to lie flat under load, and bound tightly with cord. The wheels were rebuilt to carry 19-in. by 5.50-in. well-base tyres, which lowered the chassis quite a lot. My old rear axle was partially overhauled and cleaned, and a braked front axle was fitted (although the brakes were not Vauxhall), together with a new cross-shaft, the rear brakes being rod, the front cable-operated. They were interconnected to be operated by the foot brake, the hand-lever being concerned solely with the transmission drum. All copper linings were removed and replaced by the more normal type of asbestos lining.

The engine, having been only slightly damaged, was fortunately ready without any further alterations, as she had literally done no mileage since overhaul. Actually one slight change was made, this being the fitting of a downdraught Amal in place of the standard Zenith carburetter, which was quite easily done by reversing the inlet pipe and making a slight alteration to the hot-spot water pipe, though I do not think performance showed any improvement for this change, added to which I was continually troubled with excess petrol in the inlet manifold when starting up from cold.

The clutch, gearbox and transmission were next fitted, and here I erred by not overhauling the clutch, which was either sticking in altogether or slipping.

Though the standard exhaust manifold is light and reasonably efficient, I experienced continual trouble with " blow-outs," and in consequence discarded it in favour of a set of outside pipes. Another radiator was obtained and fitted with a quick-action filler cap ; a hole was at the time put through the honeycomb by Serck, to allow the starting handle to pass through, instead of below, the radiator, as I intended to mount the radiator between the dumb-irons and so achieve a lower bonnet line. In order to keep weight to the absolute minimum, which had been one of my aims all along, it was decided to skimp the bodywork as much as was reasonably possible, without making the car unfit for normal road use. A one-piece bonnet and scuttle-top only was made up, and kept in position by straps, the scuttle frame being made up from light-section angle-iron. A new aluminium dashboard was made, which also served to stiffen the scuttle frame by the manner in which it was fixed. The instruments included a fuel-pressure gauge, oil-pressure gauge, water thermometer, rev.-counter and speedometer. The only electrical equipment was two sidelamps and a tail lamp, which were connected direct to an accumulator and just about served to get the car home at the end of an evening.

The steering was overhauled and the column dropped about 5 in.; this can quite easily be done by revolving the circular steering box in its chassis bracket and reclamping into position. After a considerable amount of trouble, an Ashby spring steering wheel was substituted, though I think these cars definitely handle better with the standard rigid wheel. The hand-throttle lever was discarded and a new magneto control lever, of sufficient length that it could be operated without moving the hands from the rim of the wheel, introduced. The original floorboards were replaced by a new set of less weight, and two small wicker seats from a 1914-18 Vickers' bomber screwed direct to the floor. The tail comprised a suitably-shaped framework of similar material to that used for the scuttle, covered with plywood, and finally with Rexine. Two small aero-screens were attached, and the whole painted black and silver. The car, when fitted with small segment flat wings, certainly looked " right." In this form, unladen, it weighed slightly under 20 cwt., and, theoretically, should, with 90 odd b.h.p., have been able to travel. Maximum speed proved to be just under 80 m.p.h., but acceleration had improved, and was now excellent, 10-30 m.p.h. occupying $3\frac{1}{2}$ seconds. Road-holding was also better, but the car tended to suffer from front-wheel slides when cornering rapidly on dry roads. This was eventually cured by doubling up on the front shock-absorbers by adding a pair of Houdaille dampers. No further trouble was experienced in this direction. The steering castor was also improved by the addition of $\frac{1}{4}$-in. wedges under the front springs.

In this condition the car was twice entered for Shelsley Walsh, and once for Wetherby, but on both the former occasions, in spite of quite good practice runs, it failed to keep running on four cylinders during the actual event. At Wetherby, however, she ran well, and clocked a satisfactory time, beating all other " 30/98s," with the exception of Jacot's, as well as a number of the more potent sports-cars. In 1936, due to matrimony, I sorrowfully parted with her to a friend, who, in due course, had a

very excellent two-seater body specially constructed for the chassis. Before disposing of her, I removed a number of the more special components, including the downdraught carburetter and front-wheel brake layout and axle. I managed to keep track of this car until the middle of 1945, when I heard from her latest owner, to whom I hope I was able to give a little information concerning her past. Strange to say, only a few months ago, I met, quite by accident, her first owner, who was delighted to hear that the car had given such satisfaction and pleasure over 25 years.

For a few years I lost the pleasure of handling a "30/98," but during the war I began looking for a genuine vintage vehicle. Naturally my thoughts turned to, amongst others, the "30/98," and although it would be practically impossible to find one that was not, by this date, very well worn, my past experiences, and the pleasure I had derived from these cars, eventually got the better of me.

Having decided to own another "30/98," the next thing was to find one that had not at some time or another been involved in at least one collision. Eventually I resorted to the advertisement columns, and through this source had one offered to me at a reasonable figure, by an enthusiast near Bristol. I duly inspected the car, an all-aluminium "Velox" four-seater, registration number FJ 2789, engine OE 64, chassis OE 63, which was really to my mind in appalling condition due to sheer neglect, having obviously been standing in the open for a long while. During the passing of the years the hood had rotted away, followed by the side-curtains, and finally the upholstery and the floor. The body and wings had not corroded although they had grown barnacles, the axles and all exterior paintwork had turned green of their own accord, and bonnet hinges, front floor-board release catches and front seat runners had well and truly rusted solid. Strange to say the engine was quite free, and after a rough inspection of such parts as the clutch for freedom, the propeller-shaft for play, state of the rear splines, etc., it seemed that mechanically the chassis was good, and would be worth rejuvenating. Examining the contents of the railway van in which my purchase came home, I began to doubt my sanity in having bought such a wreck. In the full daylight it now looked worse than ever, and to crown everything it had been bumped in transit, with the result that, apart from both front wings being pushed in, the starting handle, always very prominent on these cars, had been almost bent double. Fortunately, it had not gone back on to the front end of the crankshaft. Advantage was taken of the railway weighbridge; the car turned the scales at 24¾ cwt.

I was not disposed to completely strip the car and then commence re-building, a method which would undoubtedly have been the most satisfactory, but was forced by circumstances to start at the front and work backwards.

Overhauling the car occupied two years of spare time; at the time there seemed little chance of petrol being available for years! The engine was not disturbed, apart from overhauling the water pump and replacing the bearings in the magneto drive, which were found to have completely collapsed. Everything else was stripped and new parts fitted where necessary. The bodywork presented the biggest problem, but even this was put in reasonable order, by removing all the leather work and replacing by canvas. It was a great shame this had to be done, but the original leather had pulled away from its frame due to long exposure to the rain. In due course the car was on the road again, looking, at least externally, as she must have done when her first owner took delivery. It is hard to imagine a more desirable car of the old-school for fast, and with care, safe motoring; but it is not a motor-car for the very young or the aged. The steering can be dead accurate, and the car be placed just where one wishes. Road-holding, to my mind, is excellent even on wet roads; averages of over 50 m.p.h. can be maintained with absolute safety on Class B roads. Speeds of around 80 m.p.h. can be held for mile after mile on the better roads, and on such runs as Preston to Carlisle the "30/98" really comes into its own.

Apart from occasional obstinacy in starting, no trouble was ever experienced except on one occasion when the clutch gave way to its habit of sticking in. Petrol consumption was around 14 m.p.g. in towns, and 21 m.p.g. on runs. During the autumn of 1946 I did enter her for the Speed Trials at Cofton Hackett, where she clocked the fair time of 36.2 sec. compared with 35.6 and 36.8 sec. of the two 4½-litre Invictas entered. For various personal reasons OE 64 was sold in December, 1946, though it is my hope to obtain another specimen in the not too distant future. No truer slogan was ever given to a product by its manufacturers, than that by Vauxhall Motors when referring to the "30/98"—"*A sporting car which has never known a superior.*"

[Other articles in this series include the following: 12/50 and 12/60 Alvis, Jan., 1940; Lancia "Lambda," June, 1942; M.G. Midget, July, 1942; G.N., November, 1942; s.v. Aston-Martin, May, 1943; 2-litre Lagonda, Feb., 1944; Bertelli Aston-Martin, Jan., 1935; Austin Seven "Nippy," April, 1935; "14/40" Delage, Oct., 1935; H.E., Dec., 1935; 3-litre Bentley, Feb., 1947; F.W.D. Alvis, May, 1947; Twin-Cam Aston-Martin, June, 1947; Amilcar, July, 1947; Ballot, Dec., 1947; 4½-litre Bentley, Feb., 1947. For details of issues still available and prices, see p. 123.]

★ BOOK REVIEWS

"BRITISH SPORTS CARS," Second Edition *by Gregor Grant* (*Foulis*, 8*s.* 6*d.*).

The author of this book has lost a golden opportunity. In the second edition he could have eradicated the many serious errors which marred the first impression of "British Sports Cars," especially as, in his foreword to this new edition he writes: "I am grateful to the Editor of MOTOR SPORT for allowing his journal to be occupied to the extent of two whole pages devoted to a most searching criticism of a highly constructive nature." It is true that no fewer than *thirty-seven* of the mistakes which were pointed out in MOTOR SPORT's review of the first edition have now been corrected, almost word for word as we suggested. Alas, many confusions remain, and fresh errors have crept in.

The author gets badly muddled about the "Ulster" Austin Seven and the differences between the production and the T.T. versions. He states that Austin Seven won the 200-mile Race, when victories in the 750-*c.c. class* of that race are intended. Lycett's famous 8-litre Bentley is now made to appear to have been one of the 4-litre cars, whereas it merely had a 4-litre chassis frame. Other drivers, besides Cocker, raced Crouch cars at Brooklands and the front suspension was full-elliptic, not cantilever as quoted. The Simmins-Talbot engine measured 57 by 95 mm., *not* 57 by 57.5 mm., and the Beardmore was a 2-litre, *not* a 1,192-c.c. car. The engine eventually used in the F.M., after the Jameson 2-stroke project had fallen through and before Peter Clark had put in a V8 Ford, was a beautifully-finished, blown 2-litre Lagonda, *not* a push-rod 3-litre Lagonda, as Grant states in a footnote. A "Silver Ghost" Rolls-Royce did 101.816 m.p.h. over one mile at Brooklands in 1911, *not* 103 m.p.h. Bolster's 4-engined "Mary" no longer exists, as two of its engines are in the present "Mary," nor does John "sit almost on the ground, elbows raised to avoid a maze of engines and chains." The underpart of his seat has some 5½ in. clearance and there is only *one* final-drive chain. The L.M.B. Epoch was a fairly-normal blown Ford Ten open 4-seater, *not* a special trials car with a tubular "back-bone" chassis. We have no more space in which to correct further errors, which is a pity, because this might have led to a third, more accurate edition. It is needed, because frequent and serious errors in a work of reference are indeed unfortunate.

★ ★ ★

THE "MOTOR SPORT" BROOKLANDS FUND

This Fund, inaugurated to commemorate Brooklands Track, which so ably served the British Industry and motoring sportsmen of this country for forty years, is growing quite significant. Next month we hope to publish the full list of donors to date. Meanwhile, here is the position up to the middle of March. If you enjoyed yourself at Brooklands in the past, please send your donation to this Fund, which will eventually be used to commemorate the old Track in a manner beneficial to the sport as it exists today:—

	£	s.	d.
Brought forward	44	17	0
Laurence Hunt, of Orpington		10	0
John D. Crevatt, of Colnbrook		10	0
Raymond D. Wickham (late B.M.C.R.C.), of Brenchley....	2	2	0
	£47	19	0

A South African Speed Hill-Climb

THE second Leeuwkop Hill-Climb, held by the Sports Car Club of South Africa—about 10 miles from Johannesburg—on February 21st, is dubbed the Shelsley Walsh of South Africa, and was an interesting event, even if a little different from Shelsley itself.

The climb, approximately 900-1,000 yds. in length, consisted of a gradual bend to the right just after the start followed by a short stretch with a sweeping curve to the left then an acute right angle bend, another to the left and a third to the right leading into the finishing straight and the finishing line. The track is just a dirt road concreted at the starting grid and at the first two right angle bends which are also slightly banked. The programme consisted of three events. One for cars up to 1½-litres, one for cars over 1½-litres, and the third for midget dirt-track cars. There was to have been an event for dirt track motor-bikes, but due to an argument about licences they could not appear. An event for stock cars was also abandoned. The Perry-Emery 747 Austin Special, driven by R. G. Hauptfleisch, opened the proceedings with a climb of 59.9 sec. Each car was allowed two runs per driver, and at its second attempt managed 61.8 sec.; driven by Emery it returned 69.8 sec.

The next car driven by R. W. Lee was a Talbot Special. This vehicle has the straight-eight, all roller-bearing Talbot engine out of the car once raced with great success at the Earl Howe circuit by "Mario." The rear end of the power unit was damaged, so it was cut in half making it a four-cylinder 750-c.c. supercharged job (retaining original blower and carburetter) which revs at plus 7,500. Earlier in the year it ran in the Fairfield Handicap at Durban, but suffered from carburetter trouble. This problem was still audibly present and it took 82.5 and 84.0 sec. for its two ascents.

These were followed by a F.I.A.T. "Topolino" with D.K.W. engine (72.0 and 71.7) and a couple of TC M.G.s. The best M.G. time was made by Latham at 55.9 sec.—sufficient to win the class. The 1,100-c.c. Amilcar-Austin Special, built by Hugh Lister and driven by Bill Ritchie, managed 58.6 sec. and 57.6 sec. This car consists of a "Grand Sport" Amilcar s.v. engine in a modified Austin Seven chassis. Its unladen weight is about 700 lb. and it develops 47 b.h.p. at 3,800 r.p.m.

The 500-c.c. Cavanagh Special ran, but had a lot of trouble (it is the first "500" to be built in South Africa, I believe). Its owner, builder, entrant and driver has put a Sunbeam "90" motor-cycle engine in a F.I.A.T. 500 chassis with i.f.s. Interesting features are the engine placed behind the driver (the only one of this type at the meeting) and its very narrow track rear axle. Unfortunately, no times were recorded for this interesting vehicle. In this instance and also in the case of a few others, I believe the electrical timing apparatus was at fault. A pity as it would have afforded a comparison with larger cars, particularly in view of the interest this class has aroused in England. Though perhaps because of its stubbornness it is just as well its times went unrecorded!

The other interesting motor in this class was a Riley Special, driven by C. N. Rex, an immigrant from England, this being his first appearance in competition motoring in South Africa. This car has just been completed and is a Riley chassis "altered to E.R.A. specifications" (quotation from programme) fitted with a 1,086-c.c. four-cylinder o.h.v. Riley engine. Perhaps all the bugs have not been eliminated yet, as it took 58.8 and 59.7 sec. In event 2, Dr. Charles Theron (pronounced Tay-ron) had a standard blown 2.3 Alfa-Romeo. In two polished ascents of 50.6 and 50.0 sec. he won not only his class, but recorded f.t.d. for standing start machines. The old 4-litre Sunbeam, driven by O. R. Truby, provided an anti-climax, and took 74.4 and 72.9 sec. for his two climbs.

We were next treated to three 4½-litre Bentleys of the Old Brigade, one supercharged. This latter, driven by Jack Patterson of Pretoria, is an "ex Brooklands model" (quote programme again). He took 57.8 and 58.3 sec. This car, and that of J. G. Watson, ran in full road trim, whilst that of Mike Morelli was stripped. Morelli's machine has its 4½-litre engine installed in a shortened chassis belonging to a 3-litre. Watson returned 57.1 and 57.6 sec. and Morelli 52.0 and 51.9 sec. A beautifully prepared 2½-litre Jaguar 100, driven by G. A. V. Lawrence, was the only car using twin rear wheels. This car was raced pre-war by Fred Allen and has an aluminium body. Running stripped his twin rear wheels must have helped to combat wheelspin on a loose surface and indeed his times of 51.3 and 51.0 sec. were good enough to give him 2nd f.t.d. from a standing start. And who would argue with 2.3 blown Alfa?

A stripped Railton Sports—painted bright red in contrast to the grey of the Jaguar and black of the Alfa and Maserati—managed 56.7 and 56.2 sec. This was followed by a 4½-litre Lagonda saloon in standard road trim, which took, surprisingly, only 59.0 and 57.2 sec. Then a 3.6 Ford V8 Special, driven by A. F. R. Griffiths—54.5 and 53.5 sec.

Finally, the titbit of the day as far as the cars were concerned, the 2.7 s/c Maserati, driven by I. J. Fraser-Jones. It is a 1936 ex-Campari works team car, and was brought to the Union by "Mario" who raced it in the East London G.P., after which it was converted for road use. Its present owner has replaced the supercharger and reconverted it for racing. Disappointingly it could only manage 52.1 and 52.5 sec. The third event consisted entirely of American midget dirt track cars. They all had 2.2-litre o.h.v. clutchless Chev-Miller engines, and whereas the previous drivers appeared safe and smooth in their actions, these midgets were just the reverse. In fact their pilots had to wrestle with the tiller all the way up and rarely were their front wheels pointing in the direction of motion! Their times were the best of the day, all eight cars returning under 50 sec. with the exception of one ascent. Though it must be borne in mind that having no clutch they have the advantage of a flying start. Etberg provided the only accident of the afternoon when he ran out of road at the first right angled bend. The car was undamaged, though Etberg cut his neck on the wire fence. Otherwise he seemed all right, though I daresay a little shaken. In this class Murray Pohl was the fastest at 43.6 sec., closely followed by K. R. Robinson with 43.9 and Hilton Gray at 44.4 sec. "Sparky" Davidson came next with 44.7 sec.—he recently won the Transvaal championship for midgets.

The final entertainment—as indeed it was—provided us with a veteran challenge match between a 1906 Flanders and a 1913 Metz. The third competitor in this event was a man—in full cowboy rig—on a horse. The Flanders won in 103.6 sec, overtaking the Metz on the last bend. The horseman, let it be stated, was only a few yards behind the cars at the finish!

It is interesting to note that, as at the first climb last year, a midget had again returned f.t.d. (out and out fastest for standing and flying starts). This meeting's f.t.d. was also 1 sec. faster than at the last, when Hilton Gray returned 44.6 sec. in his midget, just beating the ex-Howe 3.3 Bugatti owned by Pierre Kelfkens. The Bug holds the standing start record for the hill at 44 sec. (made in practice), but at this meeting it was unable to compete, as Kelfkens had broken the crankshaft at a hill climb in Cape Town.—J. R. L.

Results

UP TO 1½-LITRE: 1, Latham, 1,250 u/s M.G., 55.9 sec.; 2, M. A. G. Morelli, 1,250 u/s M.G., 56.7 sec.; 3, W. J. C. Ritchie, 1,094 u/s Amilcar-Austin Special, 57.6 sec.

OVER 1½-LITRE: 1, D. C. Theron, 2.3 s/c Alfa-Romeo, 50.0 sec. (f.t.d.); 2, G. A. V. Lawrence, 2½ u/s Jaguar 100, 51.0 sec.; 3, M. A. G. Morelli, 4½ u/s Bentley, 51.9 sec.

MIDGET CLASS (FLYING-START): 1, M. Pohl, 2.2 Chev Miller, 43.6 sec.; 2, K. R. Robinson, 2.2 Chev Miller, 43.9 sec.; 3, H. Gray, 2.2 Chev Miller, 44.4 sec.

[*See picture on page* 120.

JOHN COBB

We are glad to observe that in the recent Government publication "Something Done," John Cobb's Land Speed Record gets a full page to itself—which is only what Cobb deserves. We note with pleasure the non-austerity style of this publication, the size of which is most refreshing in this age of paper rationing, and merely wish to correct Lionel Birch on one point—Cobb beat his previous record by 25.35 m.p.h., not by "a further twenty-five miles."

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Although deliveries will not begin until 1949 advance reports of the Gordano car have aroused so much interest that we have decided to issue this preliminary brochure and abridged specification to meet the demands of enthusiasts all over the world. FREE ON REQUEST.

GORDANO MOTOR COMPANY LIMITED

ALMA VALE ROAD - CLIFTON - BRISTOL

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Reports of Recent Events

N.Z.S.C.C. PLIMMERTON HILL-CLIMB

On January 31st the N.Z.S.C.C. held a hill-climb on a new half-mile course at Plimmerton, near Wellington. The surface was loose gravel and rather bumpy, while three right-hand and three left-hand corners plus a rather twisty 300-yard "straight" necessitated due concentration by drivers and provided very adequate spectator interest.

The weather was atrocious, with the result that clay worked up through the gravel surface with disastrous results to tyre adhesion, but the remarkably high standard of driving provided no untoward incidents.

The event was notable for a terrific battle between H. Hollis (TA M.G. Midget) and G. Easterbrook Smith (12/50 Alvis), who finally tied for f.t.d.

H. M. Allmand set the ball rolling with a neat climb in his remarkably well preserved M-type M.G. in 69.2 sec., followed by King ("Le Mans" Singer) in 72 sec. Next came Hollis with his fast T-type M.G., who made no mistakes in a climb occupying 56.4 sec., while Easterbrook Smith with the Alvis replied with 56.6 sec. Freeman's Triumph "Dolomite" took 63.2 sec. and W. Easterbrook Smith manhandled his long-wheelbase Sunbeam 16 to the summit in 62.8 sec. Cresswell followed to put himself at the top of the 3-litre class with a climb in 60.8 sec. in *his* Sunbeam 16.

Next came R. Clapperton with his much-modified, outside-piped model-A Ford, clever handling of a difficult car returning a time of 58.8 sec. Bill Cope found the rear end of his Ford V8 inclined to wander and needed 62 sec.

The second round saw Allmand reduce his time to 68 sec. and King to 71.2 sec. Hollis came to the line next and nervous spectators climbed higher up the banks, but a flawless climb brought his time down to 55.6 sec. Easterbrook Smith followed with the Alvis, easily the noisiest car competing. In spite of a bad overslide on one of the lower bends, 5,000 r.p.m. up the "straight," and steady cornering through the final bends, resulted in 55.2 sec. Vintage characters smiled freely and Hollis and Easterbrook Smith could be seen head to head making guarded inquiries as to how hard the other was trying!

Freeman reduced his time substantially to 60.6 sec., handling a difficult car well, and W. Easterbrook Smith reduced his time to 61.6 sec., which was equalled by Cresswell. Clapperton, with 59.4 sec. was a shade slower, but Cope improved to 61.4 sec.

With f.t.d. in the balance the final runs started in an atmosphere of real excitement. Allmand made his usual steady climb in 69 sec., but King was much slower, with 74.2 sec. Hollis, really trying, overdid things slightly and hit the bank, but continued unruffled to reduce his time again, to 54.8 sec.

Receiving this news at the start, Easterbrook Smith assumed a suitably grim expression and departed at speed, kept the slides in check through the first corners, eased the throttle a couple of times on the straight out of respect for a 23-year-old crankshaft, swept through the final bends, and registered the same time as Hollis.

Freeman followed, to record his personal best-time of 60.4 sec., W. Easterbrook Smith, faster than anyone round the difficult left-hand corner at the end of the straight, took 62.6 sec., and Cresswell, with remarkable consistency, occupied 61.2 sec.

Clapperton brought the model-A Ford to the top again in 59.8 sec., the action of his transversely-suspended front axle being remarkable, and Cope, with three spare wheels over his rear axle to hold the Ford's tail down, and far less fireworks in his driving, reduced his time to 58 sec.

AWARDS

FASTEST TIME OF DAY TROPHY: H. Hollis (M.G.), G. Easterbrook Smith (Alvis).
CONSISTENCY TROPHY: A. Cresswell (Sunbeam).
HANDICAP TROPHY: W. J. Cope (Ford).

ROSARIO G.P.

Wimille has started the 1948 season well. In a 1,220-c.c. Simca he won the 80-mile Rosario G.P. at 56.69 m.p.h. from Landi's 3-litre Alfa-Romeo and Villoresi's Maserati. Fangio's Simca made fastest lap, at 58.06 m.p.h., but blew-up after having at one time led Wimille. Farina, now in a 1½-litre Maserati, retired with brake trouble and Galvez broke his 3.8-litre Alfa's back axle. Varzi, who had forsaken his V12 Alfa-Romeo for a 3.8-litre, broke the prop.-shaft a few yards from the start.

BUENOS AIRES—SECOND ROUND

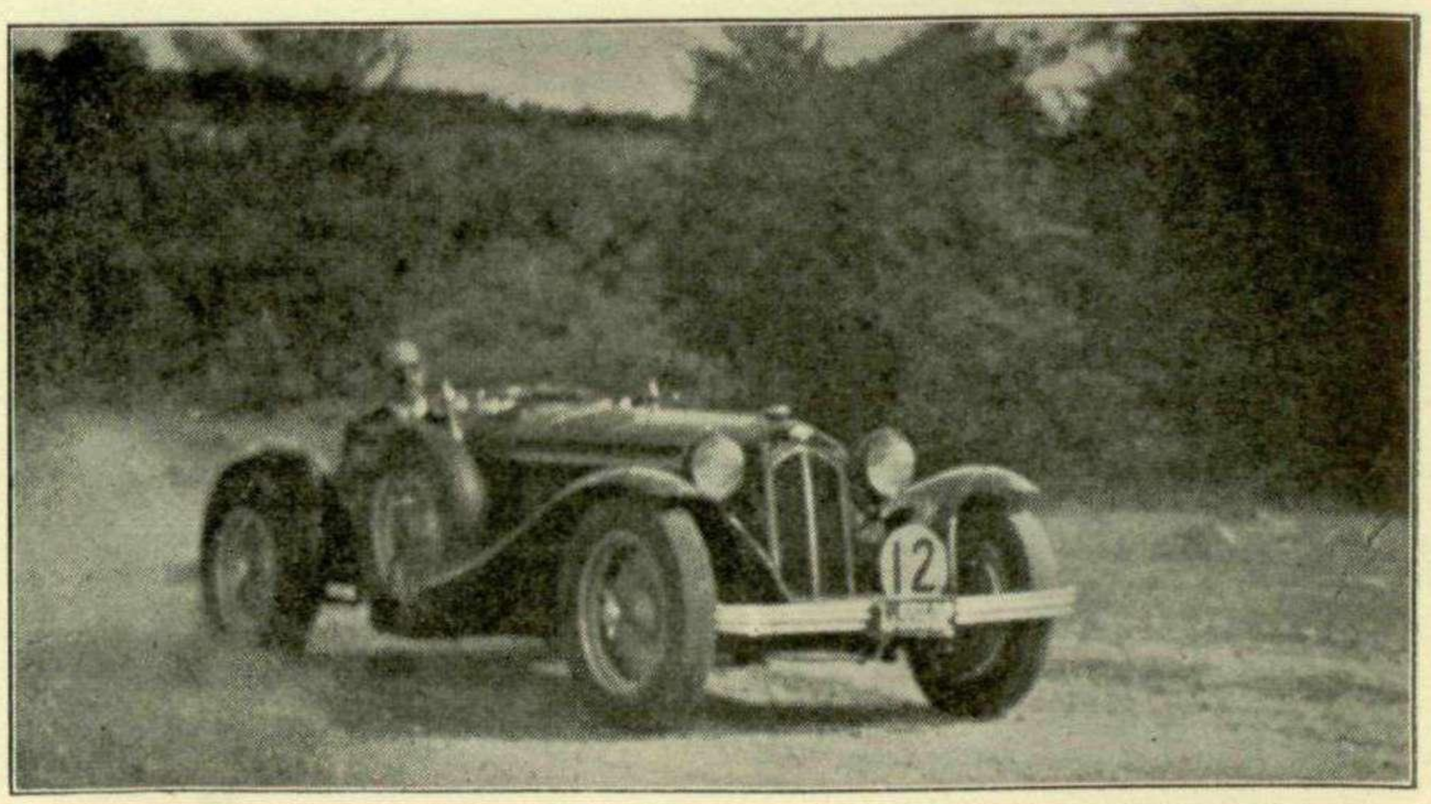
On February 25th the second Buenos Aires race, over 150 miles of a 3-mile circuit, was held. At first a ding-dong battle took place between Galvez (3.8 Alfa-Romeo), Varzi (4.6 V12 Alfa-Romeo) and Luigi Villoresi's 16-valve Maserati. After Galvez had had a prolonged refuelling stop and Varzi had suffered misfiring and then retirement, Villoresi won at 67.07 m.p.h., 39.3 sec. ahead of Galvez. Raph's Maserati was 3rd, 2 laps behind, followed in by Pessatti (3.8 Alfa-Romeo) and Firpo, Campos and Rosa (Maseratis). Farina's 3-litre Maserati retired with a split fuel tank.

DURBAN'S FAIRFIELD HANDICAP

B. W. Beall won this event from scratch in his 1½-litre E.R.A. at an average of 67 m.p.h., clocking 1 h. 39 m. 50 sec. D. Cockerell's Austin Seven was second, E. R. Hall's 4¼-litre third, the remaining places being occupied by a 1¾-litre Alfa-Romeo, an M.G. midget and a Plymouth with V8 Ford engine. The interesting thing from our point of view is the appearance and excellent performance of E. R. Hall's Bentley, which was the 1936 T.T. car, and which lapped at about 72 m.p.h., compared with the E.R.A.'s fastest lap of the 3¼-mile course, incidentally in the rain, of 73 m.p.h.

FUTURE FIXTURE—PRESCOTT OPEN HILL-CLIMB

The first of this year's Bugatti O.C. Prescott Open Hill-Climbs is scheduled for May 9th, commencing at 2 p.m. Arrangements are very much as in previous years, with eleven classes, entry fees ranging from £3 to £5 according to class and the prizes consisting of cash awards and cups. £50 is offered for f.t.d. Entries close on April 21st and if "basic" petrol rations have not been restored by then, cars will have to be run on methanol. Full details from the B.O.C., Little Chantry, Winchcombe, Gloucester.



D. C. Theron ("2.3" s/c Alfa-Romeo) making f.t.d. at the South African Leeuwkop Speed Hill-Climb—see page 118.

Club News

WE HEAR

Barry Eaglesfield has disposed of the ex-Birkett Type 40 Bugatti and acquired a Type 37, which he has fitted with a Morris Minor tank, S.U. pump, 5.50 in. by 18 in. rear tyres and a folding seat in a new tail, the original 30-gallon tank and tail having been disposed of to Major Cree for a "special" he is building. Major Cree runs a 2-litre Lagonda. Eaglesfield has a Type 40 instruction book which he will lend to any person who deposits £5 with him. R. Redvers Lewis has a 1932 2-litre Crossley drop-head coupé which has been laid-up since 1938. Apart from the several Lanchester 21s reported last month, another is reported as in use by a Margate Hire Service. D. C. Pitt has fitted four special Amal carburetters to his ex-Lester PB M.G. Midget, also Q-type valve gear, h.c. pistons, etc., while reducing weight by about 28 lb., a lot of it unsprung weight. He is running a Fiat "500" as transport. Another M.G. enthusiast is G. E. Lant, who has installed a 1936 N-type M.G. Magnette engine in a 1933 Wolseley Hornet Special chassis. He argues that not everyone can run a vintage sports car. His Wolseley was a 21st birthday present, bought for £20 and, finding out its shortcomings during the war, Lant decided to try to eradicate them. He chose the Magnette engine as a replacement for the original as offering an opposed-port head, better valve timing and $\frac{5}{16}$-in. b.e. bolts. To improve stability and control a new front and rear cross-member were added, together with double Hartford shock-absorbers, stronger rear springs, new shackle pins and steering joints and a Series E Morris Eight drop arm. Radius rods will eventually be fitted to the front axle. This type of rebuild is extremely sensible and worth while and Lant will be glad to assist anyone anxious to undertake a similar rebuild.

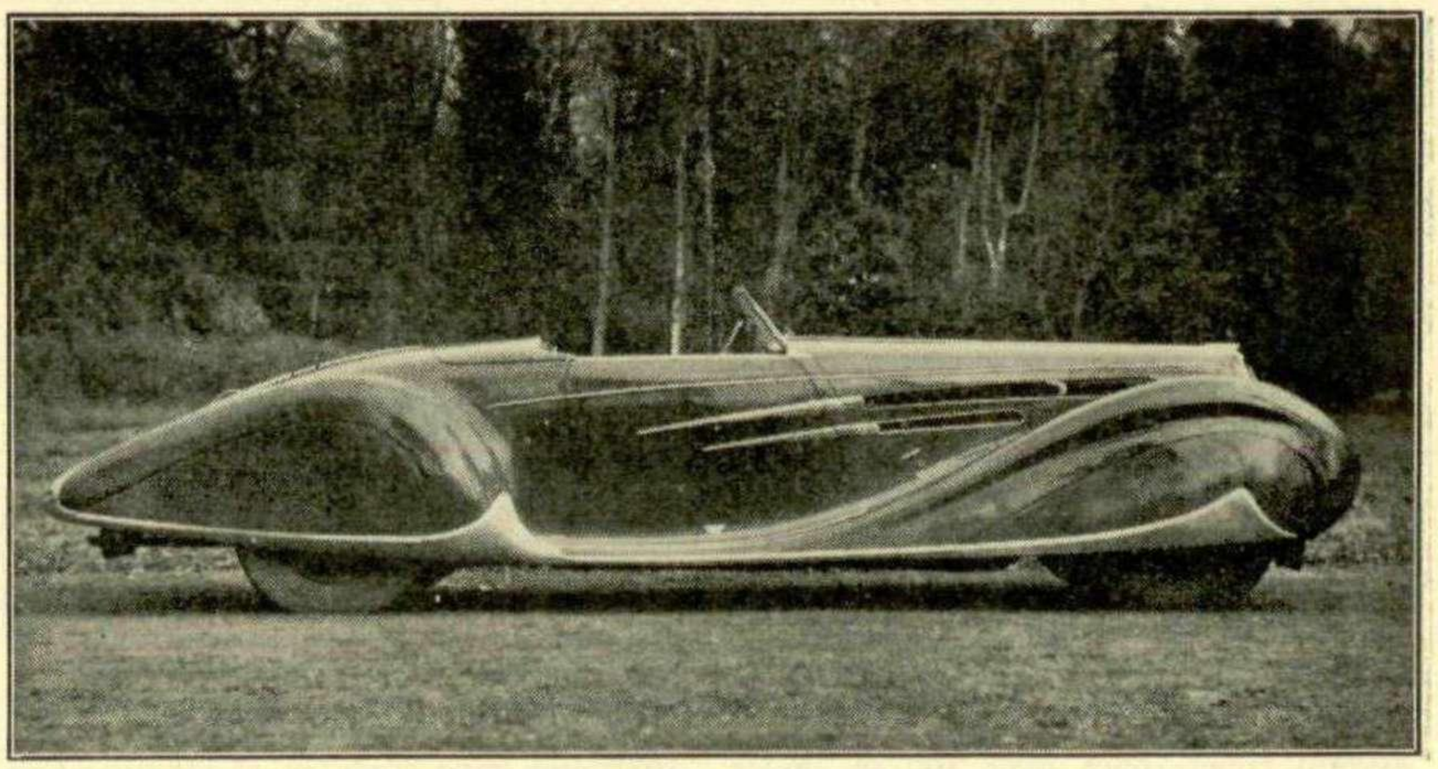
Earl Howe and Sir Miles Thomas are Vice-Presidents of the Oxford University M.D.C. The article on Peter Hampton's 1910 Type 13 Bugatti in the February MOTOR SPORT aroused much interest. The little car was originally used by Ettore with a 4-seater closed body (!), but Col. Dawson fitted the present 2-seater body when he acquired the car. It saw war service at the Front during 1914–18, yet Col. Dawson "never had to renew a brass in the engine." Good Edwardian stuff, it seems. Lt. Bellingham, R.N., is carefully rebuilding a 1911–12 ex-Scott-Moncrieff Ninety Mercédès. Jarvis is running a very fine Marshall-blown "Ulster" Austin Seven and hopes that there will soon be some reason for the Cambridge Engineering Co. to assemble his single-seater Austin Seven for further "dicing." Bowles also has his well-known "Ulster" Austin, now fitted with the rather special ex-Fish "works" engine out of a car that used to run at Southport, ready for any Prescotts that happen. A well-known manufacturer who made very high-performance sports cars before the war wishes to contact someone interested in investing money in the business and resuming production. Major Silva is rebuilding a 1931 "International" Aston-Martin and Chris Tooley has been devoting this petrol-less period to overhauling his Riley-G.N. sprint car. The last run in his brother's Meadows-engined Singer-Brescia Wilson-gearbox "Special," to lay it up, resulted in an average of 52 m.p.h. and no trouble of any sort. Allan Raunsley has joined a friend in restoring an Austin believed to be about 1912 vintage, but he would like confirmation of this; the aged number plate appears to read NA 8002. A mysterious car with "Brooklands" Riley Nine engine and gearbox, what is thought to be a Bugatti chassis and rear axle, a prop. shaft that is probably M.G., $\frac{1}{4}$-elliptic rear springs and a galvanised-iron body, has been saved from a barn by John Savage and Francis Gabb. The car seems to have been registered as a Victor Gillow Special about 1940 and engine and chassis Nos. are B3 and E3. The new owners are anxious to discover whether that exciting driver Victor Gillow really did have anything to do with this car or if it has a competition history. Film producers are getting quite particular about the cars they use, for Dick Nash was recently asked for a car for this purpose, but it had to be a Rolls-Royce, either a tourer or coupé, and of about 1920 vintage. A 1923 550-c.c. Bradbury motor-cycle was advertised for £16 recently in a non-motoring paper—the name, alas, spelt as "Bradberry."

Julian Fall has acquired a well-preserved example of 1922 "8/18" Talbot-Darracq 2-seater. It is very encouraging to find that British toy makers have pulled their fingers out and are flat-out for the export market. The International Model Aircraft Co., Ltd., apart from making those fascinating "Frog" metal flying model aircraft, delivered in a box that contains an ingenious winder, have recently introduced excellent rubber-driven, plastic replicas of the modern $1\frac{1}{2}$-litre Riley and Ford V8 saloon cars. We believe these replicas cost 3s. each and they will be avidly sought by those who are not too grown-up to collect motor-car miniatures. A Club has recently been formed on an island in the Persian Gulf, with a heterogeneous collection of cars ranging from 3-litre Bentley to 1948 Ford, Studebaker and Nash. Petrol is in unlimited supply at 4d. a gallon! Basil Tye has acquired the ex-Williams racing $1\frac{1}{2}$-litre Alta which appeared at the last Shelsley Walsh meeting with new bodywork, and Cowell, recently joined by John "Alvis" Cooper, has been motoring in a Lago Talbot. A Wilton of the early nineteen-twenties is rotting in a S. London garden. A. J. Taylor has acquired a "Grand Sport" Amilcar and seeks a set of pistons for it.

★

LEICESTERSHIRE C.C.

This Club has a strong social programme to tide it over the present era and six of the members' wives have formed a Ladies' Social Committee to assist in this direction. A regular newsletter is issued and readers of MOTOR SPORT are extended a hearty welcome to attend the Club's functions, by the Hon. Sec., H. H. Mayes, "Willoughby," 75, Leicester Road, Narborough ('Phone: Narborough 3343). There is a motoring talk at the Victory Hotel on April 6th.



Rare Types: No. 1—The V12 Delahaye, now in Conan-Doyle's stable. Its specification is similar to that of the V12 Monoplace *racing car, and we believe this to be the only sports version in this country.*

BERKHAMSTED M.C. & L.C.C.

This old-established Club, which used to run the Dancer's End speed hill-climbs, etc., is extending its social activities to tide it over "the drought." A Film Show will be held at the "Mason's Arms," Maddox Street, London, at 7.30 p.m., on April 7th. Members of the Harrow C.C., N.L.E.C.C., Chiltern C.C. and Herts County C.C. are invited.

★

B.D.C.

The Bentley Drivers' Club "Review," which appears quarterly, is in every way a fitting publication for the commemorating of one of the greatest of the British vintage cars. That for March contained some fine illustrations, useful technical "gen," a long list of new members (membership now numbers 679), more of Dr. Benjafield's delightful reminiscences, American news, reports of the Club's events, of which it still holds a great many, W. A. Taylor's impressions of a Brooklands outer-circuit race in Barnato's 3-litre Bentley, Overseas News, and an article by W. Boddy on Bentleys at Brooklands. This journal alone makes the 30s. subscription worth while. Future fixtures include a Steering Wheel party, a Northern meeting, a possible expedition to the J.C.C. Jersey race and the A.G.M. on May 8th.

★

V.S.C.C.

The Vintage S.C.C., the membership of which approaches the four-figure mark, gave a very fine film show by George Monkhouse and talk by Laurence Pomeroy, in London, at the end of February. The German motor-racing propaganda film was shown—it should be shown in every British cinema, followed by a silver collection for the B.R.M. And we suggest that, if Raymond Mays is ever troubled by a queue of ex-tank drivers, Spitfire pilots and the like seeking a "wheel" in the B.R.M. team, he shows them this film, especially the part showing Hasse's Auto-Union emerging *backwards* from the tunnel at Monaco, preceded and accompanied by fearful tyre-scream and still going very fast. That, and the shot of the crowd at Nurburg leaving the fence in a wild frenzy of arms, legs and human shrieks when Nuvolari's Alfa-Romeo shed a rear wheel at speed, together with some of the bunched starts, should thin the ranks of the applicants quite a bit. Leaving this magnificent film show, so vastly improved by George Monkhouse's witty and accurate commentary, we wondered why anyone troubles to show other motor-racing films.

★

NORTH-WEST LONDON M.C.

The Annual General Meeting will be held at St. Stephen's Tavern, Westminster (adjacent to Westminster Station) at 7 p.m. on Tuesday, April 6th.

★

N.L.E.C.C.

The North London E.C.C. invited all other clubs and enthusiasts to a lantern lecture and film show at Central Hall, Westminster, on March 4th. This was very well attended and Sir Malcolm Campbell, introduced by A. F. Rivers Fletcher, who organised the show, spoke for some 2½ hours, without notes, on his adventures in connection with breaking the land and water speed records, dating back to 1924 with the 350-h.p. V12 Sunbeam at Fanoe. His land speed record endeavours were continued with "Bluebird," built in 1926-27 and the front axle of which was retained for all subsequent versions of the car, up to the Rolls-Royce-engined car of 1935, with which Sir Malcolm did 301.13 m.p.h. Mrs. K. Petre thanked the lecturer for a very entertaining evening, and Leo Villa, Campbell's engineer, "who came to him as a boy and now has a grown-up son," was introduced to the audience.

★

G.N. REUNION

The luncheon for G.N. owners went off very well indeed. H. R. Godfrey had many amusing reminiscences to put over, remarking, for example, that the old G.N. works were at the top of a hill, which made it so easy to dispatch customers and so difficult for them to return! He was ably backed-up by A. G. Frazer-Nash, and other speakers were Douglas Clease, A. C. Armstrong, John Bolster, Basil Davenport, E. J. Anderson, Clive Gallop and Mrs. Ivy Collins (formerly Miss Ivy Cummings).

★

QUIZ

The first correct solution to the MOTOR SPORT March Quiz picture came from H. L. Biggs, of Enfield. He described the car as the Straight-Eight O.M., driven by Henken Widengren and R. F. ("Dick") Oats and remarked that he has worked on this interesting car. Actually, our photograph showed it in the 1933 500-Mile Race, in which it was driven by G. M. Crowther and Vernon Balls. It was a blown 1½-litre straight-eight. Other correct solutions came from H. J. Gahagan, of East Leake; T. Brettell, P. L. K. Bird, of London, W.1; and R. G. Bell, of Southampton.

Incorrect solutions covered such cars as the 4-litre V12 Sunbeams, the Napier-Railton, the Multi-Union, an Eyston Riley, 2-litre O.M. and 2-litre Mercédès.

LETTERS from READERS

TRIBUTE TO A BRITISH CAR

Sir,

My copy of November MOTOR SPORT reached me via Australia in New Zealand a week or so ago.

I was interested in your impressions of 1½-litre Riley as I arranged to have one at Melbourne on arrival and have since driven it about 7,400 miles. It has 6-in. tyres, the smaller not being available. Distance record is very close to accurate but I think speed is optimistic, but it runs showing 70 easily. I have often had it above and up to 80, but have not tried for max.

Almost always we are two up and full of luggage.

I agree with most of your remarks. I do not find the horn too strong—I would prefer two-tone, one being stronger.

I do not think the steering heavy and do not find any pull to one side, but on a bad road some reaction comes back.

Some of the main roads especially in Australia are straight, towns are few so that I have done 50 miles in an hour several times, once over 100 in under 2 hours, but oil pressure keeps up well and the rad. thermometer sticks at 70°. There are quite substantial mountains to cross, especially in New Zealand, and generally very twisty and narrow, so that gears are used, but I don't think water has reached 80° even on a hot day.

I can't understand your m.p.g. of 18–19, as in Australia I averaged approx. 30 and in New Zealand with more climbing 28 to 29. I do some coasting. Petrol is no better than at home.

I am very pleased with the car, which attracts a lot of interest.

I am, Yours, etc.,

A. A. POLLARD.

On Tasman Sea.

P.S.—In the matter of speed I consider my wife's dislike of going very quickly so max. is kept down.

* * *

Sir,

I was interested to see in the December issue that Lt. McKay has definitely established his 2-litre Lagonda to be the one that ran at Le Mans in 1929. There must, however, be some mistake as I have had the Le Mans car since 1938 and have evidence of identification from Lagonda Motors (letter, August, 1938), from Mrs. Field-Richards (letter 25/11/40), who bought the car from R. R. Jackson, and from a photograph of the car at Le Mans sent to me by Mr. Culling, who was with Lagondas at the time and acted as racing mechanic.

For Lt. McKay's information, three similar cars (not exact replicas) were prepared and raced by a syndicate consisting of C. J. Randell, W. E. Edmondson, George Roberts and others; the team was managed by A. W. Fox. The registration numbers of these cars were, I believe, PK 9201, PK 9202, and PK 9203. Mine is PK 9204. As a matter of interest I have a photograph of PK 9202 in racing trim.

If anyone has any original performance "gen" on any of these cars I should be most grateful if he would get in touch with me, as very little seems to be known of these racing models, *i.e.*, the four 1929 cars and the three of 1928 that competed at Le Mans in such difficult circumstances. There was also W. M. Couper's car that seemed to appear in everything from the "Land's End" to Outer Circuit Brooklands races for very many years!

I am, Yours, etc.,

Holt, Norfolk. D. R. HAGEN.

BACK NUMBERS

THE first issue of MOTOR SPORT, or "The Brooklands Gazette" as it then was, was published in July, 1924. Those fortunate readers who have a complete set of volumes from that year up to the present time possess an excellent cross-section of sporting motoring and an account of the high performance car in all its forms, extending over more than twenty-three years. It is inevitable that many issues of MOTOR SPORT have gone out-of-print. However, we are still able to supply certain issues and, for the guidance of those readers who wish to procure back numbers we give herewith a summary of the leading articles in copies taken at random down the years. This will give our newer readers some idea of the kind of matter contained in back numbers of MOTOR SPORT. A list of those issues which are out-of-print is appended, together with a scale of charges applicable to the issues we can still supply. For those who wish to have a selection of back numbers, without reference to any particular articles or period, we can supply twelve miscellaneous copies for 15/-, post free. The charge does not apply to twelve specific issues, to which the charges listed below apply. Postal Orders or Cheques to cover issues and postage must in every case be sent with the order.

Space precludes detailing the dates under which series-articles (such as "Great Racing Marques," "Motoring Sportsmen" "Veteran Types," race reports, tuning articles or road-tests) appear, but on receipt of a stamped postcard we shall be pleased to state whether a back number containing a particular reference can be supplied, and at what cost. Meanwhile, here is a cross-section of the more interesting material taken at random from pre-war issues in our stock of back numbers :—

Sept., 1925

"30/98" Vauxhall test.
Motoring Sportsmen—E. C. Gordon England
Test of a Ner-a-Car.
200-mile Motorcycle Races.
Olympia Show.
Brooklands Pictures.
Problems of Efficient Carburation.

July, 1926

The A.C.U.-T.T.
350-c.c. o.h.c. Chater-Lea test.
Motoring Sportsmen—Mons. Senechal.
Le Mans.
200-mile Sidecar Races.
Amateur Cyclecar.

Sept., 1927

Great Racing Marques—Peugeot.
"Puma" Speed-boat Test.
Motorboat Races.
172-c.c. Francis-Barnet Road Test.
"Super-Sports" Excelsior Coupe Test.
Race Reports.

July, 1928

Le Mans Report.
The 1928 T.T.s (Motorcycle).
A 100-m.p.h. Model-T Ford.
Road-tests of "Type 44" Bugatti and 172-c.c. Coventry-Eagle.

Dec., 1929

Articles by Malcolm Campbell, T. G. John, F. T. Bersey and Hon. Mrs. V. Bruce.
Olympia.
1929 Season Reviewed.
Road Tests—H.E. Six, s.c. Triumph Seven, and 4½-litre Invicta.
Tuning for Speed.
1930 Motorcycles.
Air and Water Features.

April, 1930

London-Scotland in a Delage.
Great Racing Marques—Itala.
C.U.A.C. Speed Trials.
How Steel is Tested.
The Silver Bullet.
Air and Water Features—the Comper "Swift."

Feb., 1931

Campbell's "Bluebird."
Test of Boyd-Carpenter Wolseley-Hornet.
The Sparking Plug.
Veteran Types—a 1912 de Dion.
Workshop Hints.
The Caunter Aero-engine.

Dec., 1932

Inter-'Varsity Trial and Veterans Run.
Motor-racing in Films.
Veteran Types—A 1913 "Ninety" Mercedes.
1932 in Retrospect.
Motoring Sportsmen—G. E. T. Eyston.
Tatra and Type 43 Bugatti Tests.
Sideslips.
Rolls-Royce Aero-engine.

April, 1933

Brooklands Opening Meeting.
Men Behind the Scenes—N. W. H. Freeman.
Swedish Winter G.P.
R.A.C. Rally Report.
"20/70" Fiat and 25-h.p. Rolls-Royce Tests.
Special Rolls-Royce Features.

March, 1934

Road-test of Blown 1¾-litre Alfa-Romeo.
1934 Racing Cars—The M.G. Magnette K3.
Description and Test of P-type M.G.
Reports of Monte Carlo Rally, J.R.D.C. Speed Trial, J.C.C. Rally, etc.
Test of Humber "Snipe" Sports Saloon.

Feb., 1935

Veteran Types—A 1908 G.P. Itala.
Road Test of "Speed Twenty" Alvis and M.G. N-Magnette.
Detailed description of 1935 "Bluebird."
Full Reports of Monte Carlo Rally and London-Exeter Trial.

May, 1936

B.A.R.C. Easter Meeting.
Southport Races.
The Empire Trophy Race and Prince Rainer Cup.
Mille Miglia and Land's End Trial Report.
Road Test of 4¼-litre Lagonda 4-seater.
Early I.O.M. Races.

June, 1937

Sunshine at Shelsley Walsh.
The Avusrennen.
"Bira" wins the I.O.M. Race.
Detailed Tests of Meadows H.R.G. and Triumph "Dolomite."
Description of Conan-Doyle 2-litre V12 Delage.
Race Reports.

Jan., 1938

The A.C. and British Salmson Factories.
Kimber Trophy Trial.
1937 Records.
Veteran Types—A 90-h.p. Fiat.
Looking Back on the Continental Season.
The Matter of Minor Controls.
Trial Reports.

July, 1939

Les 24 Heures du Mans.
"Bira" Wins the Nuffield Trophy.
A Supercharged Rolls-Royce.
Road-test of 3½-litre Hotchkiss.
Gardner's Records and Shelsley Walsh.
Indianapolis and Bol d'Or Reports.

Early application is advisable, as stocks of the majority of issues are now almost exhausted.

The following issues are out-of-print.—*1924* : All. *1925* : Jan., Feb., March, April, July, August, Oct. *1926* : Feb., March, April, Aug., Sept., Oct., Dec. *1927* : Feb., April, June, Aug. *1928* : Dec. *1929* : Jan.-Nov. inclusive. *1930* : March, May-Oct. inclusive. *1931* : Jan., March-July inclusive, Sept. *1932* : Jan.-March inclusive, May, July-Oct. inclusive. *1933* : May-Aug. inclusive. *1934* : Jan., May, June. *1935* : Jan., March, May, June, Aug., Sept., Oct., Dec. *1936* : Jan., Feb., April, Aug. *1937* : nil. *1938* : April, May, June, July, Sept., Dec. *1939* : Jan., Feb., March, Sept. *1940* : Aug., Sept. *1941* : April, Sept. *1942* : nil. *1943* : Jan., Nov., Dec. *1944* : Jan , July, Dec. *1945* : March, April, Nov., Dec. *1946* : Feb., April, Dec. *1947* : Jan., May, June, July, Aug., Sept., Nov., Dec. *1948* : Jan., Feb., March.

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MORE LETTERS from READERS

Sir,

Mr. J. G. Fairman raises a most interesting point relating to B.R.M. drivers. B.R.M. must be successful to gain the international prestige so necessary for this country, and of course *should* be handled by British drivers. Unfortunately, there is not a single driver in this country who has ever driven a modern G.P. road-racing machine at more than 150 m.p.h Our more successful drivers proceed in the orthodox British style, a style which can be likened to a foot-forward speedway rider who sticks rigidly to the white line; but I feel that they lack just that something displayed by the Continentals when they are at the wheel of a softly-sprung modern car, so different from the usual British hard suspension. According to Mr. Berthon the B.R.M. should do 195 m.p.h. "plus," and unless prospective drivers are trained on the continent by a first-class foreign driver a few people are going to be more than disappointed.

The great difference in handling old and new types of sports cars at comparatively slow speeds is very noticeable to anyone used to an Aston-Martin, on suddenly being asked to drive a Healey, to quote two typical opposite examples. When it comes to driving at over three miles a minute on a road circuit it will be a matter of "leg trailing," to return to a speedway analogy.

A large number of fighter 'planes were cracked-up by pilot trainees during the early part of the war; one must remember that the number of B.R.M.s available will be somewhat fewer!

I am, Yours, etc.,

London, W.17. "DOPE FIEND."

* * *

Sir,

I want to register a mild protest that the H.E. in the last Vintage gallery is not the "14/40" dual ignition model, but the ordinary 2-litre.

I enclose a photograph of my own H.E. "14/40" (taken a good many years ago). You will see the different bodywork (tail that opened with dickey, full wing valances, opening windscreen, etc.). The 4-wheel brakes I had fitted. This car had the twin coil ignition with two plugs per cylinder. It had no self-starter, but started easily on the handle, unless the coils got damp (which they not infrequently did, in which case it was a case calling for a hot oven!). It had a very nice device that I have often wished I had on other cars, when touring strange lands, namely, neat Yale locks which were fitted to the bonnet, and also to the scuttle which hinged like the bonnet—in here was a very good tool shelf. I wish that I could remember more details of the car; it was the first real car that I owned—with rev.-counter and all! It would travel along at 70, if given enough space. It was a remarkably well-built car, if a bit heavy. In my energetic youth I once drove from here (Sussex) to Perthshire in one day (over 500 miles). Quite hard work with that old steering, it was not quite like the B.M.W.! The only break I had with it was a rather expensive disaster when the worm-drive axle ran low in oil, coming down from Scotland, and chewed up.

I often used to go over to the works at Reading and found all the people there very nice. I remember there was always a very exciting racing H.E. there, all polished aluminium and scarlet, in the current sporting fashion!

I am, Yours, etc.,

Pulborough, Sussex. BETTY HAIG.

WANTED—*continued*

ENTHUSIAST wants complete or incomplete car for his own use; must be cheap, preferably Lancia "Lambda" but interested in having details of other make of any horse-power. Write BM/WLTB, London, W.C.1.

M.G. Midget wanted, either in running order, crashed or damaged. Condition immaterial. Price, etc., to Box No. 429, MOTOR SPORT, 15, City Road, E.C.1.

WANTED.—Sports car, Lagonda, Alvis, Sunbeam, etc. Age, condition, immaterial. About £130. 492, Coventry Road, Small Heath, Birmingham.

H.R.G. required, in good condition, 1,100 or 1,500 c.c., pre-war model preferably. State price wanted and full particulars. Box No. 430, MOTOR SPORT, 15, City Road, E.C.1.

30/- PER copy offered for MOTOR SPORT, May, June, 1929 (Vol. V, Nos. 2 and 3). 34 spares for sale from Vols. I, II, III and IV. H. Batten, 9, Beachfield Avenue, Newquay, Cornwall.

VINTAGE car wanted, up to 1½ litres. Regret £50 all I can offer, so condition expected to be in keeping with price. A "runner" preferred. Can anyone oblige a genuine enthusiast with shallow pocket? Dunning, 92, Blackhouse Road, Fartown, Huddersfield.

URGENT.—Ford 8/10 complete. G.B. Austin, Alta, C/R. G.B., downdraught, four-branch exhaust, starter motor, C.W.P. Condition, price. Cole, 144, East Reach, Taunton, Somerset.

WANTED.—Riley Nine dynamo. Cronin, "Parkwood," Church Lane, Bygrave, Baldock, Herts.

WANTED—*continued*

FOUR 1 11/16-in. "Ulster" Austin connecting-rods. Will exchange set of 1⅛-in. works connecting-rods. Biggs, 9, Firtree Walk, Enfield, Middlesex. Tel.: Enf. 2493.

WANTED.—Lagonda, Aston-Martin, Alvis, Frazer-Nash, appearance immaterial but engine working. 130, High Street, Braintree.

M.G. 1935 "PA" instruction manual wanted, any condition, or any literature relative to the above. Wilson, 109, Delves Green Road, Walsall, Staffs.

WANTED.—One set of "P"-type wings for M.G. J. Allen, 18, Warminster Road, Westbury, Wilts.

WANTED urgently.—"M"-type instruction book, also anything "M"-type, rebuilding. Advertiser, 85, Old Hale Way, Hitchin, Herts.

I URGENTLY require a Type 37, a "Brescia," or a Type 40 Bugatti. £200 is the limiting figure, so I expect to have to do some reconditioning. But providing the car is mechanically complete, I would request any persons having one of the above-mentioned types for disposal, to contact me. A southern offer would be more acceptable. Box No. 439, MOTOR SPORT, 15, City Road, E.C.1.

ANY back axle, reasonably light, with ratio about 3.5 : 1, would consider Jaguar. Marsh, Pine Cottage, Batheaston, Bath.

WANTED.—Instruction book for 1933-4 Talbot "65." M. R. G. Pelling, 91, Goldstone Crescent, Hove, 4, Sussex.

WANTED.—Complete 3-litre Bentley engine, flywheel and clutch. Will accept dismantled. Must be sound mechanically. McNabb, 65, Linden Avenue, Wembley, Middlesex.

LEA-FRANCIS "Hyper" roller crank and crankcase, pair of rear hubs and caps, 3.75 or 3.91 to 1 crown and pinion; also modern gearbox for adaptation. D. Shepherd, 25, Sandfield Road, Oxford.

WANTED.—Downdraught carb., 32 mm., 2⅛-in. flange centres. Seymour, 5, South Drive, Harrogate.

SPORTS car urgently required. Condition immaterial provided price is under £200. Full details please. Box No. 440, MOTOR SPORT, 15, City Road, E.C.1.

SPORTS car suitable for trials as well as normal use required. Must be under £155. Box No. 441, MOTOR SPORT, 15, City Road, E.C.1.

HIGH-PERFORMANCE sports car, 2 or 4-seater. Age, condition and make unimportant. Limit £350. W. Storr, 63, Gravelly Hill North, Birmingham, 23.

WANTED.—17-in. spring spoke, 1-in. bore, steering wheel, key and clamp bolt fitting. Open body "TC" M.G., Riley "Imp," Talbot. Simpson, Kildwick Hall, Crosshills, near Keighley, Yorks.

WANTED.—Front axle beam and rear shockers for Frazer-Nash, 1931, urgently. R. C. Lissaine, "Spring Tynings," Compton Martin, near Bristol.

WANTED.—"Ulster" Austin axles, springs and engine parts. Pettet, 428, High Road, Leyton, E.10.

TWO-SEATER open sports car wanted urgently, in reasonable condition mechanically and bodywork. Not more than £550. Box No. 442, MOTOR SPORT, 15, City Road, E.C.1.

WANTED urgently, "M"-type M.G. engine and any "M" spares. Also 2-seater sports body for same. Bryant, 95, Bushey Grove Road, Bushey, Herts.

RACING M.G., "J3," "J4" or "Q" preferred. Anything similar considered. Mallinson, Salisbury Road, Totton, Hants. Tel.: Totton 3123.

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

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FOR SALE—*continued*

3½-LITRE Bentley sports saloon by Hooper. In grey and blue. £153 spent on chassis in 1947. Price £1,750. Box No. 419, MOTOR SPORT, 15, City Road, E.C.1.

LANCIA 1935 " Astura " 28.8-h.p., long-chassis touring saloon, with large luggage boot. Total mileage 30,000 odd ; stored during war years ; a fast, completely safe and refined motor-car. Price £800. Letter to 191, London Road, Kingston-on-Thames.

EXCHANGE.—1936 14-h.p. Vauxhall saloon. 5,000 miles since rebore, crankshaft reground, new mains and big-ends, king-pins and bushes, radiator hose, battery, and rewired where necessary. Spoon-fed throughout its life and in better condition than most 1940 cars, offered with cash adjustment either way for really good sports or D/H coupé, up to 2-litres, Bugatti, Alfa, Lagonda, Aston-Martin preferred, but other makes considered. Exchange photos and data. A. R. Eastwood, 71, Euston Road, Morecambe, Lancs. 'Phone : 1908.

AUSTIN SEVEN chassis with front axle, rear springs and shock-absorbers. New king-pins fitted. Engine complete, starter, dynamo, distributor, etc., minus carb. Strip wings and stays. Seat and back-rest. £35 or nearest. S.A.E. to Box No. 418, MOTOR SPORT, 15, City Road, E.C.1.

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FOR SALE—*continued*

TYRES for sale.—Beaded edge : 310 by 100, 28 by 3½, 880 by 120, 26 by 2½, 25 by 3, 27 by 2.75, 18 by 3.85, 21 by 2.75. Str.-sided : 32 by 4, 25 by 2.75. Well-base : two only, 4.50 by 17. All new. Write to Phoenix Green Garage, Hartley Wintney, Hants.

FORD Ten silver-top cylinder head, £5. 31, The Spinney, Winchmore Hill, N.21.

"M"-TYPE Midget. Attractive open 2-seater, light blue, beetle-back, spare slab tank available. Seen Tattenham Corner. Offers to Box No. 420, MOTOR SPORT, 15, City Road, E.C.1.

NEW Dunlop tyre, 5.25 by 16, £6 ; Bosch sports coil, 6-v., 30s. ; M.G. sports chrome luggage grid (light, smart), £6. 6, Twitten Orchard, Nut-bourne Common, Pulborough, Sussex.

GENUINE opportunity, annual tax £10. Super-charged 36/220 Mercedes-Benz 2/4-seater sports, left-hand steering, excellent condition and honest reason for disposal ; ideal for enthusiast " V.C.C.-minded." Genuine offers invited. Telephone : Amersham 714.

FRAZER-NASH B.M.W., 1937, Type 319, 3 car-buretters, cabriolet with new hood. Exceptional mechanical condition. New gearbox, good tyres. Best offer over £500. Box No. 421, MOTOR SPORT, 15, City Road, E.C.1.

GRAHAM centrifugal supercharger, Stromberg carburetter, some attention needed, £7 10s. Wanted : Citroen Fifteen power unit. Tooley, St. Olaves, Queens Road, Colchester, Essex.

ASTON-MARTIN 1933 " Le Mans " 2-seater ; cylinder block faulty. Will sell with engine dismantled or purchase used block, if in first-class order. Offers to Frank Hopper Ltd., 202/222, Bothwell Street, Glasgow. Tel. : Central 0535.

AMERICAN AUTOMOBILE. Send s.a.e. for list of subscription rates of American motoring and other magazines available now. Francis Feck, Rydal, Westdown Road, Seaford, Sussex.

RATHER a good motor-car.—1938 Citroen Twelve de luxe, front-drive saloon, resprayed maroon, red upholstery, overhauled. £450. Box No. 422, MOTOR SPORT, 15, City Road, E.C.1.

FOR sale.—1930 Special Series 1098-c.c. Riley ; C.R. 7¼ : 1, mag. ign., 41 b.h.p. at 4,500. Com-pletely reconditioned. £50 or offer. Box No. 423, MOTOR SPORT, 15, City Road, E.C.1.

1930 RILEY Nine engine and gearbox complete except for starter ; also a number of miscellaneous Riley Nine parts. Michelli, 18, Elm Avenue, Oxhey, Herts.

AUSTIN Seven magneto ignition engine, complete with 3-speed ball-change gearbox and all ancillaries, less dynamo, £12. Biggs, 9, Fir Tree Walk, Enfield, Middlesex. Tel. : Enf. 2493.

1936 SINGER " Le Mans " 9-h.p. Excellent condition, new tyres, battery, etc. Any trial. Price £350. 46, Woodside, Wimbledon. 'Phone : Wimbledon 5703.

ASTON-MARTIN twin o.h.c. engine, 8-valve type by Benson. This extremely rare and efficient engine of 1,496-c.c. capacity has been rebored, fitted with Martlet pistons, K.E. 965 valves, new guides, crank reground, and bearings remetalled and line-bored. Complete with starter, dynamo and four Amal carbs. (latter not fitted). Engine has been run on test bench only since rebuild. Offers over £60 invited. Also available : Zoller blower, Type 4, good order and reliable, was used on above engine, £20 ; Morris Ten gearbox, 1939, excellent condition, £10 ; Ford V8 4-speed truck gearbox, new condition. £12. Andrews, 656, Forest Road, London, E.17, 'Phone : Lar. 4311.

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MERCEDES, Bugatti, Alta and E.R.A. scale models. Approx. 1/36th in scale. Well made, with rubber tyres. Super detailed and painted in racing colours, 45s. each, including postage. Wanted, water pump and radiator for 1924 "14/40" Sunbeam. Keogh, St. Briarels' Lodge, St. Briarels, Glos.

1938 LANCIA "Aprilia" drophead 4-seater, leather. Engine and all suspension reconditioned at works 10,000 miles ago. New Hardy-Spicer joints fitted. Immaculate throughout. £645. Beardall Motors Ltd., 499/503, Woodborough Road, Mapperley, Nottingham.

ALVIS "12/50." Perfect mechanical condition, extensive overhaul just completed. Body poor. Superb performance. Owner must sell. What offers? Box No. 424, MOTOR SPORT, 15, City Road, E.C.1.

ALL-OVER tonneau cover, centre zip, "TA" M.G.; heavy material, excellent condition, £3. Two 5.50 by 15 covers, one new, one slightly used, one tube, £9. Tungar charger, 6/12 v., 5 amps, 240-250 volts, used once, £6. 8a, Harpsfield Broadway, Hatfield, Herts.

1939 SERIES VI drophead coupé B.S.A. "Scout." Resprayed grey; five new tyres, two good spares; new battery; in first-class condition; taxed and insured. £460 or nearest. Owner has new car. Hiccombe House, Brompton Regis, Dulverton, Somerset.

B.T.H. VERTICAL magneto, 4-cyl., anti-clock, £8; petrol pump, 12-volt, new, £3; Wolseley "Hornet" sports special, 1933, 12 h.p., Jensen body, twin S.U.s, 4-speed box, 5 nearly new tyres. £145. Scott, 31, Bulwer Road, Leytonstone, E.11.

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FOR SALE—*continued*

1936 "N" Magnette 4-seater; new hood, good tyres; excellent condition. £295; exchange quality motor-cycle. 47a, Station Road, Harrow.

FOR sale.—3-litre Bentley "Speed Weymann," 1927 ("Red Label" short chassis with saloon body, C-type gearbox). Only completed 6,000 miles since bored and sleeved to original size. Required, two new high-capacity batteries, two sets of wheels, 21 in. and 20 in. Bodywork and leather upholstery in excellent condition. Would consider smaller car, preferably vintage in part exchange. Offers please. Seen Midhurst. Box No. 425, MOTOR SPORT, 15, City Road, E.C.1.

WOLSELEY Fourteen 4-seater tourer. June, 1937. Ex. cond., all screens and spotlights, etc., £275. Citroen super modern Twelve de luxe saloon, 1935, good mechanically, respray, fair, £185. Diff. unit, complete with crown and pinion for 1½-litre 1934/5 Singer sports, £10. Oliver, 229, Stanstead Road, Forest Hill, S.E.23. 'Phone: For. 5592.

£525 OR exchange.—1,100-c.c., 3-bearing, Riley-engined sports special. Absolutely new in every respect and ready for racing. Exceptionally high performance. Any trial. 6, Beaumont Avenue, St. Albans, Herts. St. Albans 5356.

"ULSTER" Austin but fitted with "Nippy" lower end. Condition quite reasonable and well repay to rebuild. £70. Higher Road Garage Ltd., Urmston, Manchester.

1932 "12/60" Alvis tourer, stark special body, requires crankshaft regrind, otherwise reasonable mechanical condition. Offers. Box No. 426, MOTOR SPORT, 15, City Road, E.C.1.

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M.G. J2 open sports 2-seater. In good condition. **£160.**

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B.M.W. 1,479-c.c., "326"-type engine, 1942 series, unused, complete. Starter, dynamo, carburetter, air-cleaner, etc., also fitted Bosch (Scintilla type) Vertex magneto, super engine, practically ready for fitting. £75, carriage extra. 81, Castle Lane, Olton, Birmingham, 27.

BENTLEY B.E. wheels, with tyres and tubes, set of four, £6. Brand new 820 by 135 (rubber), £5. M.G. 19-in. wheel, £4. Racing tube, 450 by 19, 15s. "J2" cycle-type wings, £1 for 2. 8/43 M.G. crown-wheel and pinion, £5. Diff., £1. Spring steering-wheel, M.G. keyway type, 10s. Lucas 6-volt sports coil, £2. 550 by 18 unused retread, £3. Two new 500 by 16 Firestone, with tubes, £8. Major Money, R.E. Mess, Aldershot, Hants.

"T.B." CHASSIS, £14. "J2," £6. Pre-selector gearbox, £18. "M" chassis, wheels, axles, body, steering-column, tank and prop.-shaft, £25. 27, Finley Road, Gloucester.

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1938, 3½-litre Jaguar 100. A very fine specimen, exceptionally fast.

1939 Fiat 500s. Two cars, as new, low mileage.

Railton Special Foursome Drophead. Believed to be the fastest and only one of its kind in the country.

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H.P. TERMS EXCHANGES

FOR SALE—*continued*

VINTAGE Vauxhall.—2-3-litre, open 4-seater, 1924, aluminium head, pistons, etc. Duralumin con.-rods, balanced crankshaft, original valves and pistons; new high-capacity batteries. Leather upholstery good. Space wanted. Reasonable offer quick sale. "Stonesteps," Long Crendon, near Thame, Oxon.

RILEY "12.4," 1934, pre-selector, knock-on wheels, Girling brakes, body completely burnt out; suit enthusiast for rebuilding; nearest £100. Castleman, 53, Brighton Road, Surbiton. Elmbridge 5638.

"J.2" MIDGET, 1933. Completely rebuilt, mechanically as new, new hood, side-screens and battery. Aero screen, special instrument panel with oil and water thermometers, rev.-counter; excellent tyres. Performance well above average. £225 or nearest. 6, Walton Croft, Cavendish Avenue, Harrow, Middlesex.

M.G. "18-80," Mark II sports tourer, over-hauled, brakes relined, recellulosed, new hood, full weather equipment; very low mileage car and well shod, in excellent condition. £200. Gordon Maclean, Kingston Bagpuize, Abingdon, Berks. Longworth 85.

VETERAN car, 1904, single-cylinder Rover; very little used, in almost original condition; full equipment, four new tyres; in perfect running order. £100. Gordon Maclean, Kingston Bagpuize, Abingdon, Berks. Longworth 85.

F.W.D. ALVIS, reasonable condition; Lancia "Lambda" tourer, good condition. £285 the two, would consider offers for either. Can be seen at The Green Garage, Boughton, near Maidstone, Kent. Loose 83570.

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FOR SALE—*continued*

MOTOR SPORT: 49 copies between 1939 and 1946, 30s. Beaumont, 21, Hamilton Road, St. Albans, Herts.

1938 H.R.G., Meadows engine; resprayed, gun-metal. £200 overhaul, new tyres, new hood, tonneau cover. £695. Wadsworth, Moseley House, Rosehill Road, Burnley, Lancs.

MERC. "38/250" supercharger, Rootes type, in good condition, £15. Wanted.—Super sports chassis, complete with body, suitable for installing straight-eight engine; any condition, crashed or blown-up car considered. Lee, 8, Arkley Close, Brough, East Yorks.

1½-LITRE Invicta, complete engine, less pump, distributor and carb., spare engine, most main components, gearbox less top, radiator, all good condition; set of new rings and gaskets; £32 10s. or offers for parts. Rover sports front axle, 52 hubs, Lockheed brakes, £5; front axle, 42 hubs, Lockheed brakes, £4 10s. Lucas 4-cyl. mags., G, J, 4-4, as new, £3 10s. each. D. Bagshaw, 55, Edward Avenue, Braunstone, Leicester.

1926 16-H.P. Daimler spares. Front and rear wings, paint dull but unmarked, £8. Radiator, undamaged, £3. Complete engine, clutch, all auxiliaries, needs some attention, £9. Exhaust system, 30s. McNab, 65, Linden Avenue, Wembley.

SWIFT 9-h.p. 1930 2-seater. Very low mileage, recently overhauled, new mohair hood and sidescreens fitted. Varnished wooden carrying space fitted in place of dickey, with tail board. Well shod and very reliable little runabout. £150. Gordon Maclean, Kingston Bagpuize, Abingdon, Berks. Longworth 85.

DISPOSAL.—Complete set of valve seating and insert cutters, 80 cutters, 90-45-30-20-70 degrees, from 21-mm. to 74-mm. diameter, and dummy valve stems, hand-operated, and jigs, £40 or best offer. 12 assorted reamers from 12 mm. to 32 mm. and 1 doz. assorted metric taps, some L.H. threads (unused), £10. Or would exchange for dirt track M/C spares. J. D. Madden, Clay Lane Farm, Broadfields Avenue, Edgware. Tel.: Edg. 3059, 9 a.m.-6 p.m.

FOR SALE—*continued*

1939 M.G. 1½-litre sports tourer. Good hood, sidescreens, all-over tonneau, tyres and engine. Black, silver wheels, red upholstery, black carpets. Jackalls and telecontrols. £550. Also "KD" M.G. Magnet, rebored, linered, reground crank., remetalled big-ends and mains, special head, manual gearbox. Special body. Good tyres. Tojeiro, Carlotta, Letchworth, Herts.

WE have a few brand new, unused, Ford V8 Mercury engines, complete with new starters, distributors, generators, plugs, leads, water pumps, petrol pumps, carburetters, and oil fillers. An unrepeatable offer. £175 each. W. J. Reynolds (Motors) Ltd., Main Ford and Fordson Distributors, Ford House, New Road, Dagenham; Rainham 770.

M.G. "TA" (1937). Immaculate condition throughout. New hood and battery. Tyres good. Colour black. Stored war years, recorded mileage 30,000, believed genuine; used as spare car. Delivery of new car reason for sale. Offers to Dr. Musson, The Poplars, Irthlingborough, Northants.

R. W. PHILLIPS offers Austin Seven spares. Engines, gearboxes, axles, frames, everything electrical, tyres, wheels. 500s and Specials built to order. Enthusiastic attention. Fairley, John Street, Sheffield.

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FOR SALE—*continued*

M.G. INSTRUCTION books for J2, P, PB, T, KN "Magnette," L "Magna," 1½-litre and 2-litre, 12s. 6d. each. Riley Nine ditto at 12s. 6d. 6 and 12-volt Bosch trumpet-type horns at 25s. each. A.I.D. spray gun, No. 2, new, £5 10s. 6-in. Black & Decker grinder, £11. G. Goodley, 320, London Road, Oxford.

1935 M.G. "Magnette"—N type, equipped with centric blower, radio. Engine completely reconditioned. £400 or near offer. Please reply to A. Uydens, The Cordons, Chalfont St. Peter, Bucks.

AUSTIN Seven crankcase, crankshaft, 4 con.-rods, camshaft, new rear main bearings, £18. Wanted: Austin Seven dynamo with drive (old type), gear-lever and plate, ball type. Blackburn, 55, Holly Lane, Erdington, Birmingham, 24.

RILEY "12/4," complete chassis (less engine unit), £70. Riley Nine 4-seater body, complete as new, £40. Riley Twelve "Falcon" saloon body complete, £35. Riley pistons, king-pins, crown-wheels, and most Riley spares. Bryden, 101, Wellington Road, Leeds. Tel.: 38625.

£70—Sound 1933 4-speed "Minor." Fitted temporary body and weather-protection. Drive away, Hampshire or Surrey. Box No. 431, MOTOR SPORT, 15, City Road, E.C.1.

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FOR SALE—*continued*

1905 ARGYLL car, 16-20 h.p., T-head engine, 4-seater tourer, complete accessories, new tyres. Offers, Kentish, "Lane End," Headley, Bordon, Hants.

MEADOWS type 4ED 1½-litre engine, with clutch, gearbox, etc.; many new spares. Price about £160 the lot. Full particulars from Perkins, Lodge, Bilton Place, Rugby. Phone 3664.

H.R.G. 1½-LITRE open 2-seater, new Dec., 1946, 4,000 miles only, condition as new, road use only. Seen North Hampshire BM/EAWM, London, W.C.1.

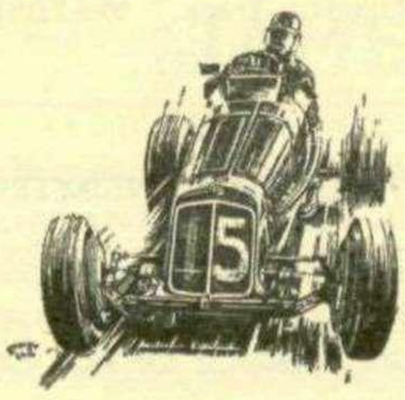
1931 RILEY Nine chassis, engine and all items for building body. Best offer. 332, Park Avenue, Bushey, Herts.

BUGATTI Type 51 spares. Rear axle complete, rear hubs to take wire wheels, twin rear wheels, front axle, complete set of gears, prop.-shaft, rear springs, and shock-absorbers, front hubs, oil and fuel tanks, brake shoes, chassis frame, etc. *Also* Austin sports spares for "Nippy," "Ulster," etc. Several super sports body shells, tanks and Brooklands exhaust systems for M.G., etc. Sunbeam 4-litre, 12-cyl. supercharged racing car, "The Tiger," at present stripped preparatory to rebuild after overhaul. All parts now as new. For sale in present form or assembled. The Monaco Motor & Engineering Co., Ltd., High Street, Watford.

£48—CLYNO 1926 "12/28" open 4-seater; lighting and starting, good battery, F.W.B. excellent order. Bodywork good, hood bad; ready for immediate use. Deliver up to 60 miles. Barnes, 36a, Leigham Avenue, Streatham.

17TH-CENTURY grandfather clock, engraved brass face, oak case; perfect timekeeper. Exchange vintage car, sell £25. Barnes, 36a, Leigham Avenue, Streatham.

URGENT.—Mercedes-Benz, Type S.S. "38/250," supercharged, 2-seater sports, 1930; low mileage, 6 wheels well shod, mechanically perfect, terrific performance. Owner going abroad, highest offer secures. Photos available. Box No. 432, MOTOR SPORT, 15, City Road, E.C.1.



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FOR SALE—*continued*

ENTHUSIAST'S motoring collection and library for sale. Owner going abroad, list available. Flying jacket, R.A.F. officer's, fur-lined throughout, perfect ; M.G. chrome radiator stoneguard ; " Monza " radiator cap ; 3-in. Tapley meter. Offers. Box No. 433, MOTOR SPORT, 15, City Road, E.C.1.

1928 LAGONDA 2-litre block, rebored, and pistons, plus .040 in., also rods, gudgeons, crankshaft and other engine parts. Wilson, 56, Blundell Drive, Birkdale, Southport.

SUNBEAM 1922 French Grand Prix car. This car is a sister car to the one I advertised last month, but is much modified, including modern sprint body, cowled radiator, well-base wheels, 16-in. rear, modified oiling and brakes. The car was modified and raced prior to the war by Jock Leith. Spare set of dope pistons. £225. S.A.E. please. D. A. Armstrong, Chalet Cottage, Farnham Royal, Bucks.

ZOLLER blower, No. 8, by Jameson, new condition, £35. S.A.E. please. D. A. Armstrong, Chalet Cottage, Farnham Royal, Bucks.

V. W. DERRINGTON LTD., for all sports special equipment. Chromium-plated tubular luggage grids from £6. Brooklands aero-screens, with universale fittings, 48s. each. Bonora quick-acting filler cap, 4-in., chrome, 70s. Chrome door grills at 10s. 6d. " Deep-note " exhaust systems from £3. Bucket seats, untrimmed, 32s. 6d. Ribbed cycle wings, 6 in., 15s.; 8 in., 18s. 6d. Sheet aluminium, 6 ft. by 3 ft. by 22 g., 25s.; 18 g., 40s. Duralumin, 22 g., 21s.; 18 g., 30s. Largest stockist Fiat 500 and 1,100 spares. 159, London Road, Kingston, 5621/2.

£115 OR offers.—1931 Morgan J.A.P. 1,100-c.c., two-speed. Very good condition. Lowfield, Birch Drive, Bramhall Moor Lane, Hazel Grove, Stockport.

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LAGONDA 2-litre Pk. 9201, engine OH 1597, chassis 9411. This was one of a team of three cars raced in the major events of 1929, including the Le Mans 24 Hours, when it was driven by the Hon. Brian Lewis and the late Rose Ritchards. Engine overhauled last month ; new set of tyres. Reluctantly forced to part owing to future movements. " J " M.G., very good condition, hood fair, new zip tonneau cover, aero-screens and tyres, £215. Also spares for Alvis " 12/50 " : chassis frame, engine, front and back axle. Lt. Mackay, H.M.S. Howe, Portland, Dorset.

SUNBEAM 16-h.p., 1932 ; new rings, crankshaft reground, Lockheed brakes, aluminium coachbuilt 2-seater, disappearing hood. £300. Caldwell, Windrush, Copthorne, Sussex.

CENTRIC supercharger No. 126, large S.U. carb., ribbed induction manifold, blow-off valve, jockey wheel, separate oil tank, and all fittings for P-type M.G., £40. K. Elvidge, 79, Wincheap Street, Canterbury, Kent.

T-TYPE M.G. body, rear wings, side-screens, seats, dash (no instruments), windscreen. What offers ? K. Elvidge, 79, Wincheap Street, Canterbury, Kent.

4½-LITRE Bentley, 1930, open 2/4-seater in excellent condition. Photographs and particulars to genuine enquiries. £495. Box No. 434, MOTOR SPORT, 15, City Road, E.C.1.

1939 TYPE 321 B.M.W. saloon in excellent condition throughout. Good tyres. Domestic reasons for selling. Apply Appleton & Arundale Ltd., Automobile Distributors, Scarborough. 'Phone 533.

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SPARES for 1932 Riley Nine " Monaco " : Set of 4 doors, radiator, steering wheel, N/S front wing, pair rears, sunshine roof folding mechanism, tie-bar for lamps, pair large wing lamps. 1933 spares : pair camshafts, bushes, timing case, timing wheels, inlet, exhaust, manifold, Zenith carb., rods, pistons, etc. Wanted : Remote control suitable 1932 gearbox (similar " Gamecock "). 1931 timing case, flywheel. The Cottage, Alexandra Road, Addlestone, Weybridge, Surrey.

OPPORTUNITY for enthusiast of limited means.—Delage " Diss," fitted rather rough boat-deck, 4-seater sports body, less seats ; requires general check over, £45. Bland, 27, Southfield Road, S.W.18. Putney 1612.

VARIOUS engine spares for coil-ignition Austin Seven prior to 1932. 1934 Austin Seven : dynamo and starter, £3 each. 1934 Riley Nine torque tube and drive shaft, £3. Dewandre, brake, Servo, ex-20-h.p. Daimler, £5 10s. " 30 " Ford V8 single carb., manifold with carburetter, £1 10s. Bland, 27, Southfield Road, S.W.18. Putney 1612

FOR sale.—G.N. engine, requires mag. and carb., £5. Wanted, D.M.S. Delage front axle ; also " 10/40 " racing J.A.P. or similar. Axel-Berg, Little Morton, Brockenhurst.

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1935 " MAGNETTE " N-type 4-seater ; excellent sports car, tyres perfect, tonneau cover and weather equipment. Seen Yorkshire. Offers around £325. Box No. 435, MOTOR SPORT, 15, City Road, E.C.1.

OPPORTUNITY.—Gift for someone. A.C. 1925 6-cyl., 16-h.p. o/h camshaft 2-seater ; 5 new tyres ; taxed six years only. This is a fast vintage car ; has just had over £200 spent on it ; is mechanically as new. Chromium lamps, rad., fine engine and steering, modern carb., rear stoppers only. Body sound but paint very dull, no rust, needs a new hood. Owner about to have body renovated, but has now decided upon emigration. Work by well-known engineers. Bills shown ; no mileage since overhaul. Seen London. Trial. £150. Box No. 436, MOTOR SPORT, 15, City Road, E.C.1.

CONTENTS of garage and workshop for disposal, opportunity for enthusiasts. 1½-litre Invicta chassis, rebuilt as new. Quantity of spares, including S.S. Jaguar, axles, etc., headlamps and electrical equipment. Offers wanted. Box No. 437, MOTOR SPORT, 15, City Road, E.C.1.

ENTHUSIAST must reluctantly sell Delage " Diss " complete chassis. Engine ready for assembly with rebored block, new pistons, etc. The basis of a first-class motor. Nearest offer to £45 accepted. Box No. 438, MOTOR SPORT, 15, City Road, E.C.1.

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AMERICAN magazines to suit all tastes posted direct from the U.S.A. Send stamp for list of 500 and full particulars. J. Johnston, 65, Curling Vale, Guildford, Surrey.

1933 "HORNET" 12-h.p. Swallow 4-seater, new tyres, wheels, screen; daily use. Exchange saloon (Alvis, etc.); sell £135. Write 26, Lissenden Mansions, Highgate, N.W.5.

1934 AUSTIN "Nippy" sports 2-seater, 2,800 miles only, laid up 6 years, one owner previously; 2,000 miles done since complete engine overhaul; tyres in excellent condition, battery almost new. £165. D. Wells, Kingwood Common, Henley-on-Thames.

1930 RILEY Nine engine, mag. and carb., £10; two Hillman Minx wire wheels, 3-stud fixing, £1 each.; Humber Twelve steering wheel, £1; two S.U. carburetters, 25-mm. choke, suitable Austin Seven or similar, £3 the pair; one Zenith, Type 26 ZH, one Solex, type 26 MH, carb., 10s. each; Talbot 14-h.p. carden shaft, 7-centre ball-race and splined coupling sleeve, £2. "Special enthusiasts"—£20 the lot!!—G.N. spares, all in good condition, comprising: Steering box and wheel; complete bevel box and shaft, pinion/crown-wheel, sprockets and dogs, end bearings, and housings, bell-crank levers and clutch assembly; rear axle, complete with hubs, drums, sprockets, radius rods, etc.; rear springs, brackets and cross-member, front springs, Hartford shock-absorbers; special wide-track front axle, spring brackets, stub axles, Salmson-type hubs; two Salmson wire wheels, B.E. tyres, 2 tyres, 26 by 3 (700 by 80); two G.N. wire wheels, B.E. tyres and tubes (710 by 90). Goddard, 13, Vicarage Road, Teddington. After 7 p.m.

FIAT 509 A. (8-h.p.) 4-seater tourer, 1927 model, in running order, £45. "Brescia" Bugatti engine, £25. Modern 35-mm. Solex up-draught carburetter (suit "Brescia"), £5. Zenith up-draught, triple diffuser carburetter, £1 10s. V. Knight, "The Orchard," Ruislip Road, West End, Greenford, Middlesex.

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FOR sale, 3-litre Bentley Mulliner saloon, recent major overhaul, very good mechanically, body rough; £200 or offers. Also 1924 A.B.C. motor-cycle, fine condition, many spares, £30. M. Brierley, Berkeley Road, Tunbridge Wells. Tel.: 942.

FOR sale, Sunbeam 3-litre tourer, immaculate condition. £200 just spent on engine, including special Martlet pistons, etc. This must be the finest 3-litre in the country. Upholstery and paintwork are unmarked and the performance is considerably better than standard; also many spares. Bentley 3-litre drophead coupé, very fine old car, needs some attention; bargain. Anzani Frazer-Nash, 2-seater, extensive work just completed; fast and economical car, ideal for enthusiast. Water transfer castings for "30/98." The Downton Engineering Works Ltd., Downton, Salisbury. 'Phone: Downton 51.

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(*continued on page* 124)

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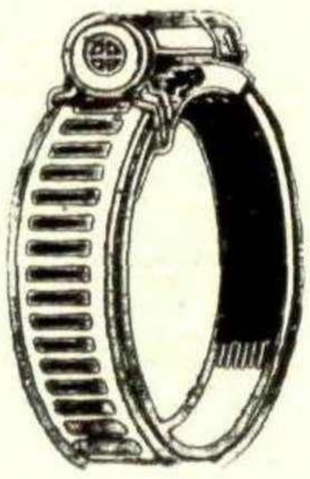
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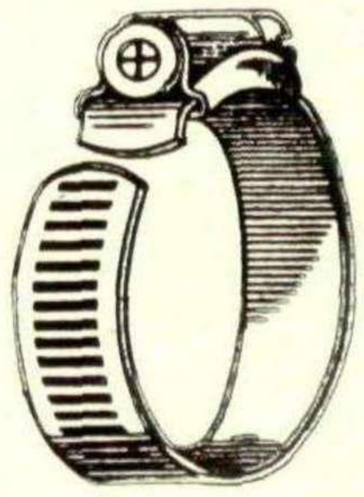
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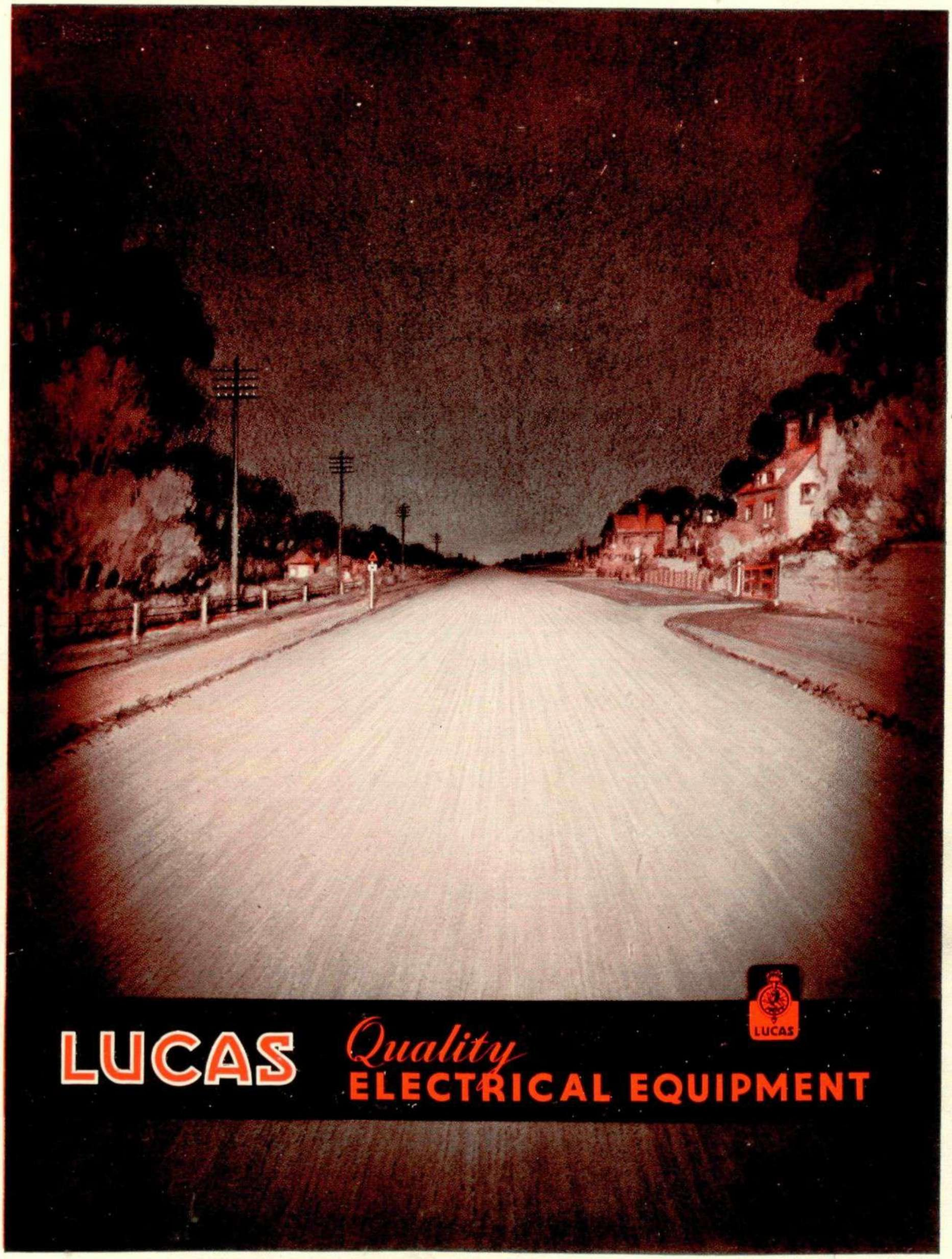
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