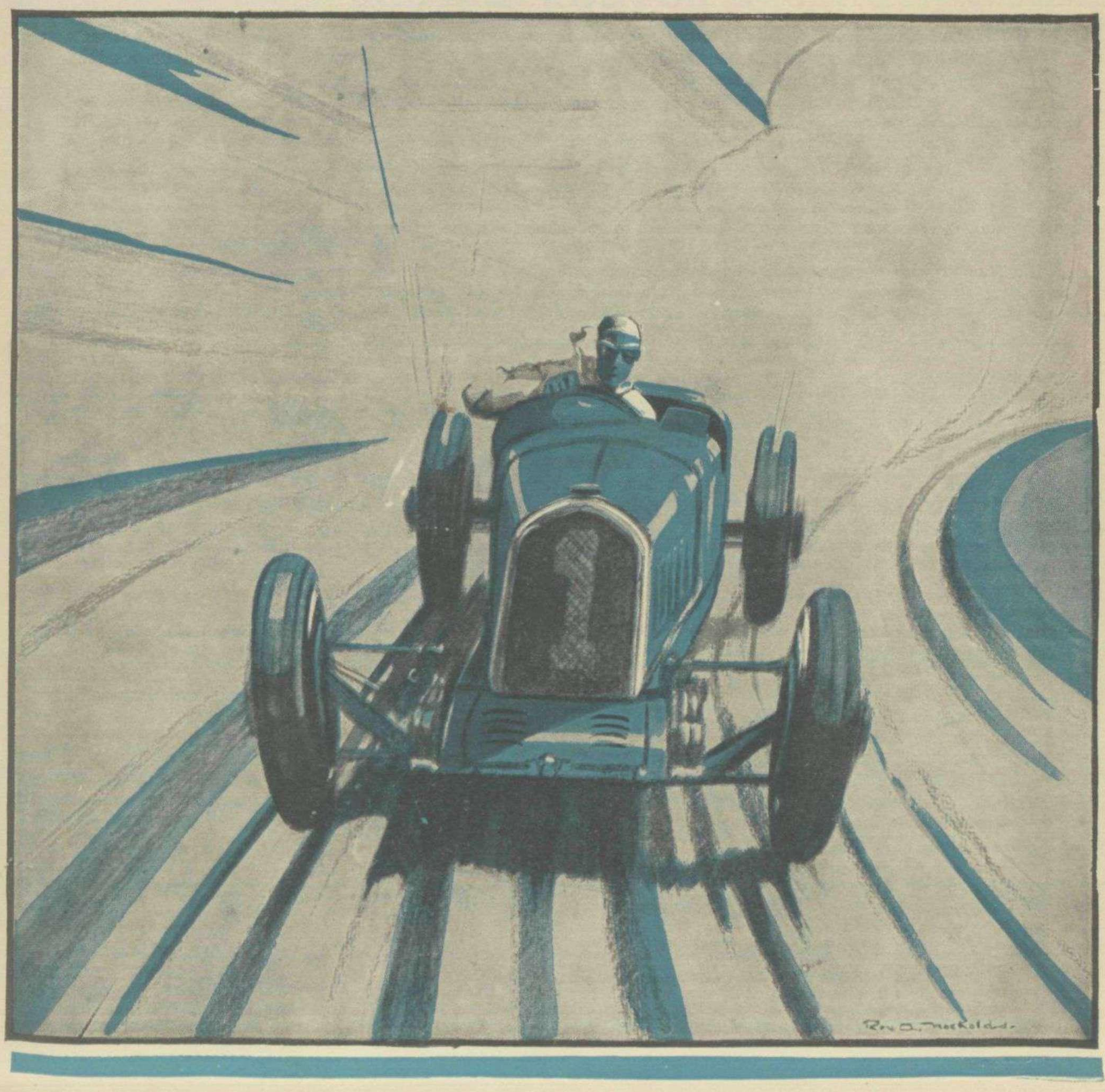
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BUYING BRITISH

WHETHER anyone in this country will feel inclined to purchase German or Italian cars after the war, assuming there is a single Axis factory left intact to manufacture such complex products, seems a debatable point. We rather doubt if these countries will walk into international affairs within three years of the armistice in as big a way as they did last time. For many, many years any motoring they do will probably be in economy vehicles. So those sportsmen who, in the past, have found their ideal in recent model Alfa-Romeo, Mercedes-Benz and Maserati cars, will take a new interest in the British high-performance market. So far as racing cars go, if E.R.A. and Alta can open up again, all immediate needs should be adequately met, and if Austin and M.G. and Riley decided to manufacture by skilled labour half-a-dozen or so racing cars apiece, based on proved designs and sold to amateurs capable of handling them effectively, some quite useful publicity might be launched in the course of turning from war-time to peace-time production facilities. In the sphere of road high-performance cars the prospect is excellent. Last month Mr. W. A. Robotham, of Rolls Royce, Ltd., told very modestly the story of the evolution of the "Corniche" Bentley. It is typical of this great firm, with a reputation of which it has every right to be jealous, that the article touched on failures as well as successes. All the more strength is lent to the sober claims for the "Corniche." Here is a car embodying the latest streamlining modes, capable of over 110 m.p.h. without sacrifice of comfort, silence, economy or passenger and luggage accommodation. The V12 Lagonda as yet has not appeared in production streamlined form, yet it exceeds 100 m.p.h. with the most commodious of unfaired closed coachwork. In Le Mans guise the engine was giving 210 b.h.p. at 6,000 r.p.m. with a compression-ratio of 8.5 to 1, and the maximum road speed of these cars was 145 m.p.h. The possibilities of post-war development are obvious. From continued advertising policy it seems that Alvis, Rover, S.S., M.G., Riley and other manufacturers of British high-performance cars are fully aware of the demand that will exist for their products when we achieve, in the words of recent Standard advertisements, "The new world." There is every reason to expect better editions of the 4.3 litre, the "Sixteen," the 3½-litre "100," the 2.6 litre and the "Big Four," that we knew before the war. When leaders of men and leaders of industry, and Naval and Army and Air Force personnel, seek relaxation in a return to those many motoring activities that Ford chooses to illustrate for us as a reminder of things worth fighting for, they will find excellent British high-performance cars awaiting them. Cars in which extreme acceleration and truly high maximum speed goes hand in hand with safe road-holding, adequate braking, comfort and complete reliability. British cars will supply all needs, reach every market. If we import at all, let it be from our friends in America, where cars are accepted as essential possessions and Indianapolis is a general holiday. Stagnation has certainly not been reached. Modern tyres were regarded as completely immune from trouble, even under exacting racing and record-breaking conditions. Yet Mr. Robotham told how the "Corniche" suffered a peculiar tyre failure, when speeds of over 100 m.p.h. were held with wheels tucked away out of the air-stream in faired wings. Doubtless Fort Dunlop will offer a solution to that difficulty soon after the war is won. We can look forward to a peace enlivened by some very excellent sports cars from a country responsible for the Spitfire, Typhoon, Vulture and Sabre. It will not be too long in coming.

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SOME NOTES ON THE 1½-LITRE ASTON MARTIN

[These notes, by a reader who is now a Wing-Commander in the R.A.F., although a departure from our more usual tuning notes, will be of interest to all present and prospective Aston-Martin owners, although the advice given is not necessarily that agreed by the makers. The writer has had ample experience of the marque, racing included, after becoming interested through perusal of a MOTOR SPORT road test twelve years ago.—Ed.]

DURING the period from 1929 to 1936, after which the o.h.c. 1½-litre Aston Martin went out of production, five models were produced, the International, Standard, Le Mans, Mark II, and Ulster. The first was of separate gearbox construction, with a worm-drive axle and torque tube, and may be readily recognised by the flat radiator and rod-operated brakes. The last three, with which this article is concerned, have a Vee radiator, engine and gearbox of unit construction, a bevel drive and open propeller-shaft, and cable-operated brakes. They may be distinguished from one another by the following points. The Le Mans (often wrongly referred to as the Mark I) model was produced in 1933 and 1934, and may be recognised by the oil filter, which has an aluminium cover, and runs the whole length of the offside of the engine. The Mark II and Ulster cars were built between the end of 1934 and 1936, and are recognisable by the Auto Klean oil filter near the front of the engine, and an additional frame cross-member, which is situated between the crankcase and clutch housing. The Mark II also has radiator shutters. The Ulster model has a higher compression ratio, a camshaft with more overlap, and, usually, a two-seater body with the spare wheel very neatly stowed horizontally in the tail. Any car bearing the engine and chassis numbers L.M. followed by a two-figure number is a car built specially for racing.

In buying a second-hand car, a test run of at least fifteen miles should be undertaken, during which the car should be driven fairly hard. If, at the end of this, the oil-pressure has not fallen below 20 lb./sq. in., the engine is in all probability in good condition. A rough and ready estimate of the mileage of the car may be made from the wear on the gear-lever and gate, as if there is appreciable wear on the gate between the top and second speeds, and if the gear lever is worn about half through, a total mileage of about 100,000 is indicated, and, by this mileage, the driver's right heel has generally worn a hole through the floor boards!

The Le Mans and Mark II cars have a compression ratio of 7.5 to 1, and it may be wondered how they like "Pool" petrol. The answer is that a pair of Cox Atmos economisers, together with a slight increase in the use of the ignition lever, render them quite tractable, although the fuel-consumption increases to about 26 m.p.g., as opposed to 28 on Cleveland Discol, which was found by far the most suitable fuel in peace time. This increase is, at any rate in part, due to the necessity for increased use of the gears. An extension brazed on to the ignition-lever makes for comfort, avoiding the need for removing a hand from the wheel to operate the control. Retarding the ignition-timing by means of the vernier adjustment is not recommended, since it will decrease the power and increase the consumption.

As regards the performance of the car as a whole, two points stand out, namely, excellent steering and road-holding (particularly in the case of the Ulster model), and retention of tune. The maximum speed is in excess of 80 m.p.h., at which gait the speedometer of the Le Mans model is, in the writer's experience, fairly accurate, whilst that of the Mark II usually records some 88 m.p.h. Acceleration from zero to 60 m.p.h. in the short-chassis models is of the order of 21 to 23 seconds—not brilliant, but the car is sturdily and somewhat heavily built. The brakes are a rather weak point, being heavy in operation, while it is not easy to obtain a Tapley meter reading in excess of 60 per cent. A vacuum-servo motor might help in this respect, and it is the writer's intention to experiment in this direction. The hand-brake operates on all wheels and greatly assists if used in conjunction with the foot-brake. There is no compensation in the system, but once adjusted correctly—not a very long job—the brakes require no attention for a long time, other than that of greasing the cables, which should be done regularly. About once a year it is advisable to remove the brake drums and shoes and to clean and oil the shoe-fulcrums with thin oil, used very sparingly. This takes less than an hour, and is well worth doing.

Here are some jobs which have been tried and found satisfactory, nearly all of them within the scope of the average owner of the type who does his own maintenance. The first two are war-time makeshifts, intended to avoid or postpone extensive overhauls. If it is found that the oil-pressure becomes unpleasantly low when the car is driven hard, and that adjustment of the relief valve affords no improvement, the usual cause is wear in the journal and big-end bearings, and in the pressure oil-pump. It will be recalled that the lubrication is on the dry-sump principle, and both pressure and scavenge pumps are identical except that the former is 1 in. and the latter 1½ in. long. Obtain a new scavenge pump-case and new gears, and cut these down to 1¼ in. in length. The gears do not need softening, but care must be taken to ensure that both case and gears are cut absolutely square, and to make a good face-joint between the case and end cover. There should be a clearance of .001 in. between the end cover and the spur gears. The existing studs are long enough to accommodate the extra length of casing, and the scavenge pump has sufficient excess capacity to deal with the greater oil-flow. A consequence of this greater flow may be oil finding its way past the front main bearing into the dynamo, which can be overcome by drilling a $\frac{3}{16}$-in. drain-hole at the bottom of the dynamo-casing, immediately in front of its flange. It will be necessary to adjust the relief-valve after fitting the new pump, setting it to give a pressure of 30 lb./sq. in. when the engine is thoroughly warm.

If the valves are old, repeated grinding-in may have made the edge of the heads sharp, and this is liable to cause pre-ignition in the case of the exhaust valves. This sharp edge should be skimmed off, removing as little metal as possible. The valves are of Valchrome steel and should not be roughly handled, as the stems may become bent. The writer once tried K.E.965 valves on a car which was being prepared for racing, but increased pinking was noticeable, and he was subsequently told by Bertelli that, in a bench test, the standard valves ran at a temperature 75° C. below that of the K.E. ones.

The flywheel weighs 45 lb., and from 12 to 15 lb. can be removed, resulting in slightly quicker upward changes and a little better acceleration. Here again, care must be taken to ensure that the flywheel is not weakened, and that the balance is not upset. The weight must be removed from the front face, since the clutch is mounted on the rear one. However, since much dismantling is necessary before the flywheel can be removed, and since the results are not very pronounced, this job is not worth the trouble of doing unless the clutch has to be dismantled at some time, and this is unlikely unless the engine is being removed from the chassis. Power-output can be improved at the expense of economy by substituting 36 mm. carburetters for the normal 30 mm. pair (a new balance-pipe will be necessary) and using a T.T. camshaft, which has 41° of overlap as opposed to the 19° of the standard shaft, whilst the use of 9 to 1 compression-ratio pistons will improve both economy and power-output in a most marked manner, but is impracticable on Pool spirit.

Le Mans models were equipped with a fibre timing pinion, for quietness. This is liable to fail, and it is most advisable to replace it by the later steel pinion. Since the failure invariably involves bent valves, and sometimes further damage to the engine, it is wise to effect the change *before* the teeth strip. The wheel is quite easily reached if the radiator is removed, but it should be noted that the bottom of the timing-cover is flanged and that two bolts below the front of the sump screw into this flange. These bolts must be removed before the timing cover will come away.

Here are some items of general information. Champion R.1 plugs are most satisfactory for normal use. This grade is several degrees harder than the plug recommended in the Aston Martin handbook, but it is the type recommended by Messrs. Champion, and unless the car is using oil at a phenomenal rate, no oiling-up trouble will occur, and erosion of the points takes place more slowly. The plug gaps should not be allowed to exceed .015 in. or the engine will missfire when the throttle is opened; .012 in. is the best figure. This point should be watched when new plugs are fitted, as the gaps of these are very frequently much greater

SOME NOTES ON THE 1½-LITRE ASTON MARTIN—continued

than this when the plugs are sent out. The writer has seen many people who should know better attempting to adjust the gaps of this and similar types of Champion plug by bending the central electrodes. Even if the insulator does not crack at the time, there is a very serious risk of splinters chipping off after the plug is installed in the engine, and such splinters do a mighty lot of no good! If the gap is too large, the earth electrode should be tapped inwards with the aid of a fine pin-punch. The normal oil-pressure for all three models is 30 lb./sq. in., and 20 lb./sq. in. should be regarded as the minimum safe pressure at normal engine-speeds. Below 2,000 r.p.m. the pressure is sure to fall off when the car is old, and when idling the pressure may be only two or three pounds.

The bore and stroke are 69.3 by 99 mm., giving a capacity of 1,495 c.c., the exact bore being 2.728 in. and not 2.73 in. as quoted in the catalogues of some piston manufacturers. The correct valve-clearances, at running temperatures, are: inlet .006 in., exhaust .008 in., and these should be measured with the blade of the feeler between the valve and the rocker, not between the cam and the rocker. With the T.T. camshaft, an extra .003 in. on each valve is necessary. Both top dead centres are marked on the flywheel, the pointer being on the near side, and if the flywheel is ever removed, it must in consequence be replaced in the same position relative to the crankshaft. One inch of arc on the flywheel rim subtends an angle of 9.6°, and the valve timing, measured on the rim, is: standard cam-shaft, inlet opens ¾ in. before T.D.C., exhaust closes 1¼ in. after T.D.C.; T.T. camshaft, inlet opens 2 in. before T.D.C., exhaust closes 2¼ in. after T.D.C. The standard ignition timing is with the points just breaking at T.D.C. with the magneto fully retarded.

When replacing the valve rocker-plate on the head, ensure that there is a paper washer on the machined face having the front dowel. Here there is an oil-duct, in the underside of the rocker-plate, for lubricating the timing-chain, and if the washer is omitted there will be a serious lack of oil-pressure when the engine is warm. Before removing the valve-spring retaining caps, but after removing the lock-nuts, measure the length of valve-stem projecting, and when replacing the caps, screw them down the same distance. If in any doubt, tend to leave slightly less stem exposed, because the caps can easily be screwed down if necessary, but, owing to the jamming action of the springs, it is sometimes difficult to unscrew them. If the caps are screwed down either too much or too little, it will not be possible to obtain the correct valve clearance.

Cylinder-head gaskets are solid copper and hardly ever need replacing, but should be annealed each time they are removed. They are available in two thicknesses, .030 in. and .055 in. When fitting the head, the nuts should be pulled down really tight, because they cannot be further tightened without removing the rocker-plate. If for any reason the cylinder-head studs are removed from the block, it is essential to ensure that the stud close to the valve-gear oil-duct is not left too long on being replaced, otherwise it will foul the rocker-plate at this point, causing a very bad oil-leak, and there is a risk of the plate being fractured when its nuts are tightened down.

Castor-oil is recommended by the makers for both gearbox and back axle, and the car runs appreciably more freely if it is used. Castor-oil is not, however, recommended for the engine. The standard axle ratio is 4.66 to 1, the lower gears being, in the case of the Le Mans: 14, 8.7, and 5.9 to 1, and in the case of the Mark II: 12.9, 8.1, and 5.9 to 1. Alternative axle ratios are 4.25 and 4.4 to 1, the latter having straight-tooth bevels.

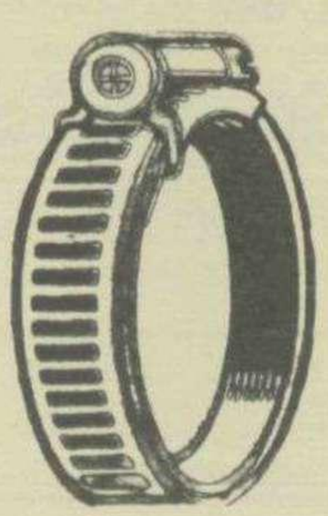
The Le Mans model had two Autopulse fuel pumps mounted close to the back axle. These pumps are extraordinarily reliable and need little attention, but if necessary they can be reached through a trap, just above them. This trap is in the floorboards, and is so well concealed that it may easily pass unnoticed.

The engine oil-tank holds 2½ gallons in the case of the Le Mans cars and 2.9 gallons on the Ulster and Mark II models. The correct oil-level is one inch below the filler-neck. It is inadvisable to circulate flushing oil through the system because a certain amount will remain in the pipe-lines, filter, etc., and it will dilute the fresh oil. The radiators of all three models hold 8½ gallons of water. These large amounts of oil and water are ideal for fast long-distance journeys, for which use the car is intended and is at its best. The

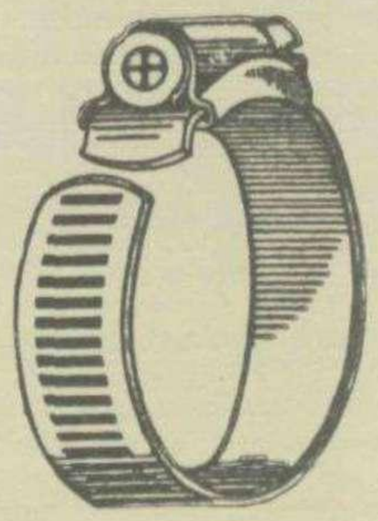
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CARS I HAVE OWNED

[A rather shorter than usual, but nevertheless interesting, contribution by the well-known driver, M. P. Terbosch.—Ed.]

MY initiation to motoring took place during the summer of 1929 when, with a cousin, I learnt to drive the family car, a "10/15" Fiat. We had some hair-raising experiences on this old car, but I remember its pulling powers and a bottom gear which seemed as if it would surmount anything. The first car I owned (and it was the forerunner of considerable experience on the make) was an Austin Seven Stadium model. I had much fun camping out one summer (with plenty of rain !) in Devon and Cornwall and having my first glimpse of some trials hills. I forget when I was first bitten by the trials fever, but with my next car, an Ulster Austin Seven (and I think one of the finest jobs turned out—I should say definitely the finest at the price), I joined the M.C.C. and competed in the "Lands End" and other trials, with satisfactory results.

The following year, 1932, with the same car, I was more ambitious and discarded the standard wings for cycle-type, tuned the engine, and ran in one or two Brooklands events—without any success, but with a great deal of enjoyment. I well remember a Brooklands meeting one lovely summer day with George Chaplin as my mechanic, followed by a hurried reassembly of the wings, lights, etc., to compete, about twelve hours later, by moonlight, in the Brighton-Beer Trial. Those were great days !

With an urge for something a little faster, a "J2" M.G. Midget was bought, because it came out with a flourish—"The Autocar" Road Test giving a maximum of 80 m.p.h.—and a very pretty body and big petrol tank, etc., combining to deceive me and others, friends of mine, who were equally distressed to find their cars would only do about 70 ! [The car tested had, we believe, a higher compression ratio than the production cars.—Ed.]

Next I turned to a Singer Nine sports four-seater, with which I obtained several P.A.s, and an introduction to the R.A.C. Rally, and to the Donington road circuit, and a great deal of fun—a very reliable car.

A Hillman "Aero-Minx" streamline saloon was run in the London-Gloucester in the winter of 1933/34 and attracted a good deal of attention in an easy climb of Nailsworth Ladder ; the workmanlike chassis and willing engine inspired the writer, who had then joined the Trade, to build a special Minx—with alloy head, Scintilla magneto, Hartford shock-absorbers, and lighter-than-standard body, resulting in—among other achievements—an average of 70.29 m.p.h. in the M.C.C. one hour High Speed Trial. I think this car obtained four premier awards.

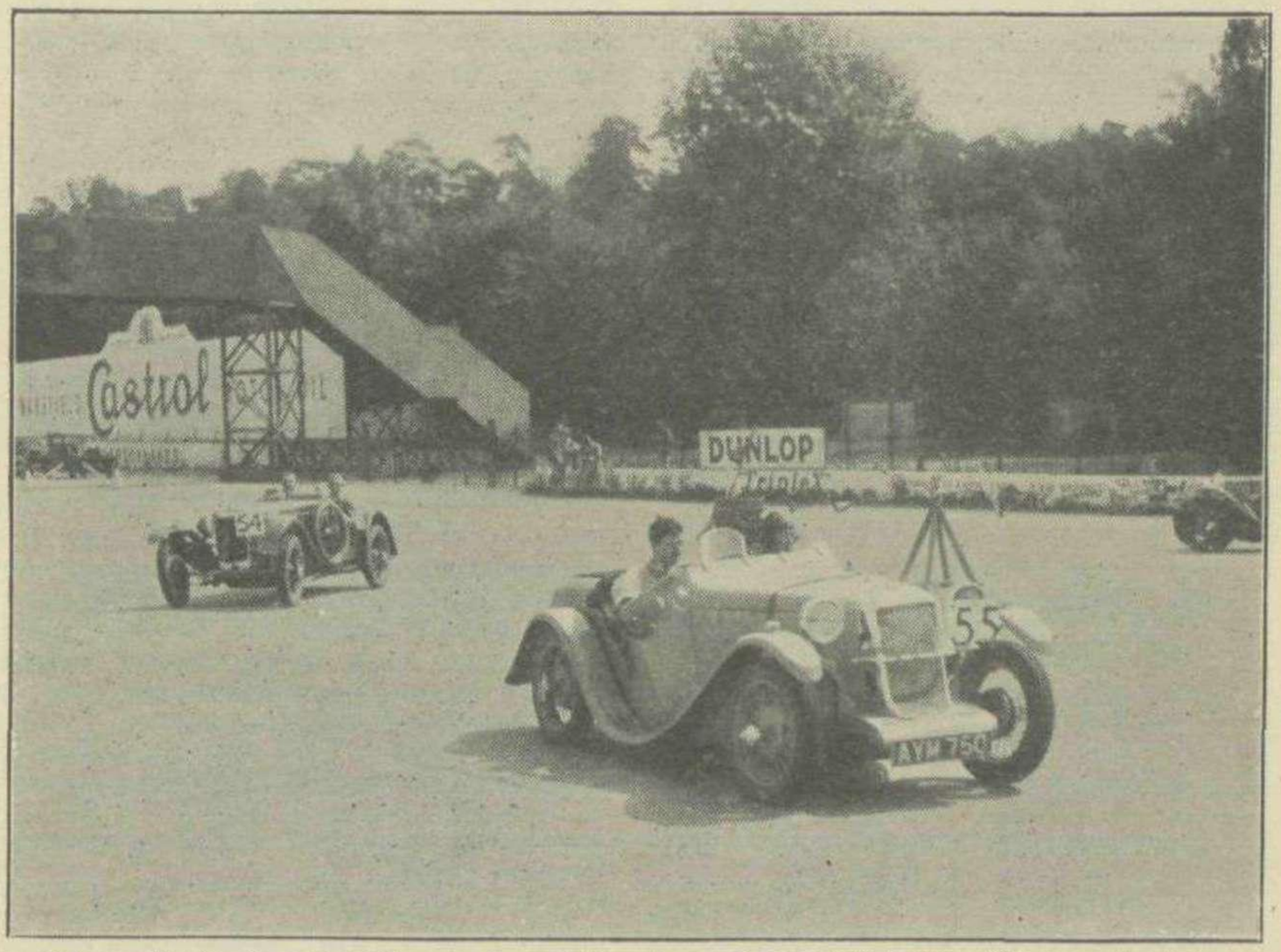
At the 1934 Show a most attractive exhibit was a Fiat Balilla "Mille Miglia" two-seater, with which Dudley Froy drove very uncomfortably round the Mountain circuit at Brooklands for 1,000 miles. I drove this particular car in the Colmore Trophy, but found that the gears and weight-distribution were not ideal for mud-slinging. In the J.C.C. Members' Rally, however, the little car was in its element in the figure-eight test—with tyres screaming and much wheel-winding ; and I was told afterwards it looked one of the best in this particular test. I had the second car to be delivered in this country, and after a hurried running-in period the Scottish Rally was entered by way of the London-Edinburgh, but the car was too new to do well, and there had not been any time for preparation. The J.C.C. High Speed Trial was another story ; the little car made light of the artificial corners and the way it handled was a very pleasant experience.

With the co-operation of the Fiat Company, who showed us always the greatest kindness, two other private owners and I entered for the L.C.C. Relay Race at Brooklands and after a great drive our team finished fifth. My car did the fastest lap, at 83.5 m.p.h., which I think was a very creditable speed, especially as nearly all the laps were near this figure. The following winter was spent in getting more speed from the engine, which, on looking back, I think was a mistake. A Zoller compressor was fitted and much experimental work done, including raising the compression ratio. When the plugs were all firing together, which was not often because of the high boost and oiling-up prevalences, the car went very well and the best performance was first place in the 1,500 c.c. Super-Sports class at Lewes. The acceleration was somewhere in the order of 0-50 m.p.h. in eight seconds. Donington was the scene of some exciting lappery, but the handicap was too unfavourable.

I fell now—February, 1938—for a Type 230 Mercedes Benz cabriolet, which I am still running at the present time, having done over 28,000 miles. Of the Mercedes as a general purpose car I cannot speak too highly. It will glide along in town silently and comfortably, and on the open road you can put it into corners quite fast with confidence. It has a very well-made drop-head and I have done long distances on the Continent without feeling any strain, due to the excellence of the independent springing and silent engine. I regret it is not a sports car, but one has to make concessions to our climate and the other sex. On one occasion a second visit was paid to the Nurburg Ring to see the late Dick Seaman win the Grand Prix ; a very fine show indeed, which the writer considers himself very privileged to have seen.

The need for a handy little runabout as well has been filled by a 500 c.c. Fiat, which, considering its size, is a pleasure to drive ; and, because it could be bought cheaply, by an A.C. two-seater coupe which was in use last year for a few months—its hard springing reminding the writer of sports cars handled in the past, and making an interesting comparison between the relative merits of independent springing and "Hartford shock-absorber" type springing, on which note I am concluding this article.

For trials work and other competitions I should say hard springing is ideal, but for general purposes give me independent springing, which seems to combine town-carriage comfort with fast cornering and smooth riding over rough roads. Of the several types of independent springing which I have tried, the Type 230 Mercedes seems the best, and in addition to the B.M.W. and Fiat 500 mentioned above, I have handled Lancia "Aprilia," Citroen, and Renault Eight, with independent springing.



The author's special Hillman Aero-Minx in a J.C.C. High Speed Trial—the type of event we want to see liberally revived after the war

Club News

WE HEAR . . .

G. L. Benbrough brought his 1903 6-h.p. single-cylinder Speedwell dogcart from Reading to the "Ely" Hotel, on the Hartford Bridge Flats, on a recent Sunday, with his wife and son as passengers. This car bears plaques of numerous rallies and its service in the last war, and it is now in regular business use, with a comparatively modern Claudel Hobson carburetter and modern Ford coil. We noticed a de Dion plug still in use, and the specification includes transmission-brake and quite modern expanding rear-brakes. The fuel-consumption is 40 m.p.g. and 35 m.p.h. is obtainable in conditions of perfect calm. Benbrough owns seven veterans, including a Bollee he has had since he was eighteen, and they recently collected £5 for a local hospital. Another veteran, in the form of a Singer 12-h.p. four-cylinder station-wagonette with Scottish registration, has come to light in a country garage. It has T-head, separate cylinders, dual ignition, tubular front axle and is complete with one unused India tyre—otherwise the wooden wheels are bare. Crozier's beautiful, ex-Craig 1½-litre Bugatti, a straight-eight twin-cam job, has unfortunately become a victim of enemy air-raids. Another veteran which the war has pushed off the road is a six-cylinder 32-h.p. 1912 Wolseley, used until recently as a garage service-car and now at a Colnbrook breaker's—still with its headlamp-mask in position. There is a 1½-litre Anzani-A.C. drop-head black-and-white coupe in a Lynmouth garage, minus one connecting-rod. I. Metcalfe, of High Speed Motors, now has the single-seater with Buick engine built for Greenford and sprints by Arthur Baron. The little Andre V6 was in regular use until recently by a mechanic at the same firm, but has been sold. Bainbridge, of Speed Services, is going back to the Navy, and is expecting to close his garage—he used to run Salmson and "30/98" Vauxhall cars and has three old Bentleys at Blackwater.

The British Salmson Six which Walter Norton used to drive has been seen in action in Yorkshire, and a streamlined Aston-Martin is running about in Oxford. A model T Ford chassis, less tyres, can be seen at Slough, bearing a notice: "For Sale—10s."—a really early Adams was sold from the same address for 30s. There is a Gwynne Eight chassis doing farm-work in the north. Interesting cars seen about in the southern counties include blown 1,750 c.c. Alfa-Romeo "Zagato" 2-seater; Type 55 Bugatti; a Deutsches Erzeugnis "Eifel" Ford saloon with left-hand drive, 130 k.p.h. speedometer, fabric top and concealed petrol-filler; Type 57 Bugatti saloon in London; a really fine Talbot "105" with cowled radiator; another "105" Talbot manned by the Navy; a Marendaz-Special six-cylinder 4-seater; a 6½-litre Bentley and trailer-pump on A.F.S. duties; a "12/50" Alvis 2-seater; a really beautiful, back-braked Twenty Rolls-Royce saloon in war-paint; an M.G. Six sports four-seater, possibly a "Tiger"; a black 1,500 c.c. blown Alfa-Romeo 2-seater; and the usual vintage sports cars. Lepworth travels on a solo big-twin Vincent-H.R.D. which has done 110 m.p.h. and 105 m.p.h. with pillion passenger—some wives are brave! At the outbreak of war 500 1-litre "Ardea" Lancias were due to be shipped to this country, but the permit was issued 24 hours too late. Mr. Newman, of Lancias, does the daily journey from his home to Wembley in his Lancia "Aprilia." Doctor Roth is using a rather rare version of Opel saloon, and an Adler saloon has been seen in use. Gordon Woods makes beautiful model cars, including a camshaft-racing Austin Seven, "Zagato" Alfa-Romeo, 4½ sports blower-Bentley and a K3 M.G. Magnette. Nigel Mann's K3 M.G. Magnette, which he drove in high speed trials, regrettably had to be left behind in France at the outbreak of war. Motor-cyclists have something on car-owners these days—we recently met three riders, of an o.h.c. "International" Norton, a parallel push-rod o.h.v. Norton and a diverging push-rod o.h.v. spring-heel Norton, respectively, who had done a day's ride of 363 miles and were not home then! The second machine had a rev.-counter reading to 7,000 r.p.m. and a 120 m.p.h. speedometer and all had Brooklands silencers. We have heard that Hall's 12-hour record Jowett engine eventually went into a four-wheel-brake Salmson chassis.

An old Clyno, an A.J.S. saloon and a Swift "Cadet" saloon have been noticed in Hampshire recently, where, at a country garage, stand a rather-the-worse-for-wear "10/23" Talbot tourer and a lowered Vernon-Derby chassis. Walsham, who used to run a "2.3" Bugatti and later a Railton, is now an able-bodied seaman, aboard a 40-ft. motor-launch, and looking very fit. A reader reports seeing two Mark V Bentley saloons within 100 yards of each other in Millbank—the experimental cars are doing yeoman war-service. Capt. Woolfe Barnato is using one. The R.A.F. have in service an early Twenty Rolls-Royce and an aircraft firm a Lanchester as a tender. The Multi-Union is safely stored for the duration, but Chris Staniland, still flying for Faireys, looks forward to racing it again "in about a year's time." There is a "12/50" 1926 Alvis 2-seater in generally good order, looking for a kind home. It has a 1933-type Hardy-Spicer propeller-shaft, does 50 in third, 27-30 m.p.g. and 2,000 m.p.g. of oil and can be had for around £20. We also know of a "12/40" Lea-Francis 2-seater at £25. Latest recruit to the ranks of two-wheeler manipulators is Joe Lowrey, with a 600 c.c. "Square Four" chain-driven o.h.c. model Ariel. The 1926 996 c.c. o.h.v. McEvoy-Anzani solo which we tested in 1926 or 7 is still in use, and was written-up in "Motor Cycling" last month. Davidge-Pitts is using a Riley saloon as a war-time mount. J. F. MacLagen, "Morenish," Sledgate Lane, Wickersley, Rotherham, asks for the history of a "Brooklands" Riley Nine with four Amal carburetters, which suggests a racing past. The registration number is WK7162, engine number 5214, chassis number 60/40, date 1929. There is an Aston-Martin for sale at a dealers near one of the roundabouts on Hendon Way. R. G. V. Venables reports having great fun handling a 28-h.p. Studebaker at high velocities over rough fields for the purpose of picking up hay in a scoop attached to the front of the car. As the hay collects, visibility becomes nil, while the fuel-consumption is 7 m.p.g. and water-consumption 2 gallons per mile. At the other end of the scale, Venables's "Arrow" Austin Seven, with new body following an argument with a lorry, does over 40 m.p.g., driving hard. An old Eric Campbell small car was recently broken-up in Wales. There now seems little doubt that the racing M.G. with fabric tail, about which a reader enquired at Chessington, was the Hartwell Magnette and a very potent job. E. R. Hall drove it at Shelsley, when it had the twin carburetters on the blower, which accounts for the big dumb-iron cowling. It was last seen, since the war started, in a warehouse at a London docks; it seems probable it had been sold to someone in Holland and never got across. Harry Rose has acquired a 1930 8 ft. 6 in. wheelbase 4½-litre 4 seater Bentley with brand-new body. Does anyone know of a type R.61 B.M.W.? An army officer driving one of the small Standard Ten-engined Railton coupes was encountered recently.

CAN YOU ASSIST?

We have received two appeals of sufficiently deserving nature to merit individual inclusion. An anti-aircraft battery, describing itself as "very statie," is desirous of purchasing an interesting car that it could rebuild and run on rare days of leave. Estler, once of Squires, is amongst the enthusiasts in question, and they would like to get the Miss Paget Mercedes-Benz, a G.P. Sunbeam or something similar. Letters will be forwarded, and the car could be collected from almost anywhere. Then S. Haywood Statham, whose Austin-Salmson-Beardmore "Special," on which seven years spare-time work had been spent, has been destroyed by an H.E. bomb, would particularly like to acquire another sprint single-seater "on which the donkey-work has been carried out." His address is: "Greylands," Queen's Road, Mumbles, Swansea.

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THE 2,000-MILE INTERNATIONAL TOURING CAR TRIAL OF 1908

Cecil Clutton writes comprehensively of an important event

RELIABILITY trials have altered so much in the last few years that it is not without interest to look back and see what a serious trial was like over 30 years ago. A good example to review is the famous R.A.C. 2,000-mile trial of 1908, which also incorporated the Scottish A.C. six-day trial. Very complete information about the event is available in the official R.A.C. report, which runs to 109 pages, including the regulations, specifications of the cars entered, particulars of their performance, and contour sections of the more important hills.

There had, of course, been reliability trials from the beginning of time, including the no less famous R.A.C. 1,000 mile trial of 1901, but it was not until about 1908 that the motor-car had become an entirely reliable means of transport, and it was necessary to exercise ingenuity to search out its weaknesses. Thus, despite the length of the trial and the inclusion of several famous hills, the organisers felt it necessary to finish up with a 200-mile race at Brooklands. In passing, one cannot help feeling that if some modern trials had finished up at the track there would have been fewer freak "trials specials" seen in our midst.

Slime-storming had not yet been invented (narrow section tyres put it out of the question, and anyway, the trial was run during June) and the principal hills were: Cairnwell, Fintry Hill, Cairn O'Mount, Trinafour, Rest and Be Thankful, Dunmail Raise Pass, Kirkstone Pass, Shap, Alston, Harley Hill and Broadway Hill; and the steepest gradient encountered was 1 in 5.4.

The regulations divided the entry into eleven classes, by R.A.C. rating, and the body regulations made certain that, to outward appearance at least, the cars should be normal touring vehicles of the period. All except the two smallest classes were to be four-seaters, and to carry four passengers, including an official observer, who was to be provided with a "comfortable seat"; but at Brooklands, all except the observer were to be dropped, and ballast substituted for them.

It was also provided that the axle ratio should not be changed during the trial, and that the cars should be effectively silenced. All parts (except batteries and tyres) replaced during the trial were to be carried on the competing cars, and "travelling workshops" were forbidden.

Minimum weights were laid down for each class, and one or two taken at random show how commendably light were the cars of the period. Thus, the 9.4-h.p. class had to weigh not less than 12½ cwt.; the 13-h.p., 14½ cwt.; the 16-h.p., 16 cwt.; the 20-h.p., 20 cwt.; the 46.4-h.p., 30 cwt., and the 60-h.p., 35 cwt.

The system of marking is highly ingenious, though it could only have worked satisfactorily with a small entry (there were but 46 starters) since it is all done on a time basis.

Minimum and maximum times were laid down for the different sections of the trial, and any competitor arriving outside those times was penalised by one mark per minute. There were also timed hill-climbs, and a similar penalty was allotted for each minute by which any competitor was slower than the fastest car in his class.

Three minutes were allowed for starting first thing in the morning, and one minute for each subsequent start. The operations which might be included in "starting" are laid down, doubtless with a view to preventing this period being used for making other adjustments. Self-starters are mentioned, though it is not clear if any were, in fact, carried. In view of its universality at that time, it is peculiar that priming was not allowed. Any car taking more than the permitted time to start was docked one mark per minute.

Petrol used was charged at the rate of one mark per gallon, thus bringing petrol-consumption into the time-formula in a most ingenious manner. Lubricational operations also lost one mark per minute. If one or more passengers was dropped on a hill it counted ten marks per passenger (apart, of course, from the inevitable additional loss of time waiting for them to catch up) but a car which received actual assistance on an observed section was disqualified from the whole trial.

Each day's run had to be completed by 5 p.m., the trial being spread over 13 days with a maximum day's mileage of 172¼ miles.

On arrival at Brooklands for the 200-mile race (the 200 miles were additional to the 2,000 of the trial) each car was handicapped one minute per mark lost during the road section, and the first past the post was the winner of his class.

There are other minor regulations about marking, but those given are the important ones.

It would really be difficult to devise a fairer or more comprehensive test of a genuine touring car, and although it should not inconvenience any modern car it might, nevertheless, be pleased with itself if it completed, without loss of marks for anything except petrol-consumption.

The section devoted to the specifications of the competing cars contains much of interest, but a few quotations from it must suffice for this *resume* of the event.

It is surprising that a considerable proportion of the cars had forced feed lubrication at this early date, though splash, drip, gravity and air-pressure are all represented. Dual ignition, by accumulator and coil, and high-tension magneto, was by far the most popular system of sparking.

The smallest car running was a 6.2-h.p. de Dion and the largest, a 59.5-h.p. Ariel.

The de Dion had one cylinder measuring 100 by 120; 750 by 85 tyres and gear ratios of 5.7, 9.3 and 20 to 1 (a "trials" bottom with a vengeance). It sold for £241.

The Vauxhall, which was to perform with such distinction, had four cylinders of 91 by 120.6, dual ignition, 8 ft. 10 in. wheelbase, forced lubrication, metal clutch, detachable wheels (these were almost universal), 870 by 100 tyres, ratios of 13.3, 7.7, 5.05 and 3.3 to one and a selling-price of £460. These ratios are interesting, since, apart from a rather higher bottom, the 30/98 carried almost identical ratios to the day of its death, 20 years later, and suffered acutely for it. They are, indeed, admirably suited for a reliability trial, but much too widely spaced for ordinary touring use.

The 20-h.p. Talbot's engine was a trifle smaller—90 by 117, and it had the quite nicely-spaced ratios of 3.4, 4.7, 7.3 and 12.8 in conjunction with 815 by 105 tyres. It also had forced lubrication and dual ignition, and sold for £495.

A car which performed with some distinction in this class, and was runner-up to the Vauxhall, was a de Luca-Daimler, which was apparently of Italian origin, although entered by the English Daimler Company. This car had the very high top gear, for its size, of 2.6 to 1, which may have been done with a view to the Brooklands event, though, in point of fact, it was not so fast as the Vauxhall.

Panhards entered two cars, one with chain and one with live-axle transmission, and although the marque was by then losing its premier position, its specification may be noted with interest. The engine measured 91 by 130, and H.T. magneto was the sole means of ignition. Drip-feed is a sign of obsolescence. The detachable wheels were of wood. The ratios comprise a very close third, and wider lower ratios, which is a very good compromise for touring purposes, the figures being 4, 5, 9 and 14 to 1, and the selling-price was as much as £642.

In the larger classes interest naturally centres upon the important English entries of Daimler and Rolls Royce. Daimlers entered two cars of 38.1-h.p., selling at £775. The engines had four cylinders, 124 by 130, dual ignition, gravity oil-feed and leather clutch. The detachable wire wheels carried 880 by 120 tyres, and the wheelbase was 9 ft. 7 in. The gear ratios were 2.2, 2.7, 4.1 and 8.5 to 1 with direct drive on third.

Rolls Royce entered two cars, of 48.6 h.p., and they were the only six-cylinder machines in the competition. The cylinder dimensions are given in inches, as is the annoying habit of Rolls Royce to this day—namely, 4½ in. by 4¾ in. (about 112 by 118) and they had dual ignition and forced feed lubrication. One of the cars had 895 by 135 wheels—a very wide section for the time—but the other had 895 by 105. The wheels were wire detachables. The wheelbase was 11 ft. 2 in. and the ratios the apparently ill-assorted ones of 2.7, 4.2, 5.9 and 8.5 to 1, giving three close lower ratios, and an immense gap between third and top; an arrangement which was later abandoned by Rolls, but has found favour to this day with several continental brands; notably Delahaye. The Rolls sold for £1,184.

The big Ariel, 59.6 h.p., 155 by 150 (giving 11¼-litres) had dual ignition, forced feed lubrication, 880 by 120 tyres, ratios of 1.8, 2.25, 3.1, and 5.8 to 1 (a nice selection) and sold for the moderate figure of £750.

Next in the programme comes the analysis of performance, which is also of

THE 2,000-MILE INTERNATIONAL TOURING CAR TRIAL OF 1908—continued

engrossing interest, and no less detailed than the specifications. Again, however, a few excerpts must suffice.

In general, one is struck with the fact that, although the better cars in 1908 were very reliable, the less good ones were still astonishingly bad. As is to be expected, tyres gave a good deal of trouble, and some 44 seem to have been changed during the course of the trial, exclusive of a compulsory change before the Brooklands race. One is also reminded that the sparking plug was still a very frail fitment by the fact that some three dozen were changed during the trial. Quite a number of cars, however, never changed one at all, so it may be that some less knowledgeable drivers regarded them as the root of all evil, and automatically changed them whatever the real trouble—a thing not unknown in present-day racing circles.

The small de Dion had very little trouble beyond tyres, but it had difficulty in competing with its time-schedules.

One Rolls Royce had to stop and adjust its carburetter, which took one minute; lubricator union tightened, 7 minutes; withdrawn on the sixth day with a seized piston. The other had to adjust its carburetter on two occasions, fill its radiator, and adjust its coil and tappets on different occasions.

One of the Daimlers ran well, except that it had to fill its radiator no less than eighteen times, and many other competitors had this trouble in lesser degree. The other Daimler withdrew at Brooklands with a broken ball-race.

In fact, most of the involuntary stops were short and of a fairly trivial nature, but of the Belsize we read the laconic entry, "withdrawn fourth day. Water in cylinders," and the Benz, "withdrawn eleventh day. Broken crankshaft."

Some of the entries read quaintly, such as the Star, which "stopped engine when clutching, 2 minutes," and the Lorraine Dietrich, which "stopped engine going round corner."

But to show what dreadful things *could* still happen to motor-cars in 1908, here is the full tale of woe of the 15.4-h.p. Straker-Squire. On the first day all went well, but, taking the successive days by number:—

2. Near front wheel came off, 10 min.
3. Cutting away dust cover, 20 min.
4. Flooded carburetter, 8 min. Filling radiator on road, 3 min. Engine stopped, 1 min.
5. Filling radiator on rank, 1 min.
6. Tyres, 4 min. Filling radiator on rank, 1 min. Clutch trouble, 1 min.
7. Fitting new detachable wheel, 8 min. Various stoppages on hills, 27 min. 3 passengers dropped, 30 min. Penalty for over maximum time, 11 min. Filling radiator on rank, 1 min.
8. Carburetter choked, 19 min. Bevel pinion stripped, 244 min. Engine stopped when changing speed, 1 min.
9. Broken front springs, 210 min. Adjusting clutch, 35 min.
10. Changing wire wheels, 5 min. Adjusting carburetter float, 3 min. Tightening fan belt, 1 min.
11. Pumping up tyre, 2 min. Filling radiator on rank, 1 min. Broken differential cage, removing broken part, 47 min.
12. Changing detachable wheel, 5 min. Filling radiator on rank, 1 min.
13. Filling radiator on rank, 1 min. Engine stopped, 1 min. Differential trouble, 142 min.

It also used a lot of petrol for its size—98 gallons, equivalent to 20 m.p.g.—and lost nearly 37 minutes behind the fastest car on timed bits, and altogether, it had mislaid 1,008 minutes 53.2 seconds when it reached Brooklands.

This may not speak very highly of the 1908 Straker-Squire, but it certainly speaks volumes for its crew that they nevertheless presented the car in running order at Brooklands at the end of the road section.

The Vauxhall sheet makes a staggering comparison: "No time occupied under headings Lubrication, Tyres, Other stops, Other penalties." It also only lost 1 minute 22.4 seconds in all on timed hills and used 76 gallons of petrol, equivalent to exactly 26 m.p.g., which is a very fine performance for a 3-litre motor-car under competition conditions. Even the little de Dion only did 28½ m.p.g. One of the Daimlers did 22½ m.p.g., which was good for its size, and the other, and the one Rolls to complete the course did 20, which is an amazing figure for a 40-h.p. car.

The 11¼-litre, 59.6-h.p. Ariel, the biggest competitor, showed 12½ m.p.g., which is, again, a very creditable figure, but the most extravagant competitor was the 52½-h.p. Lorraine-Dietrich, which only did 10 m.p.g.

Reverting to the Vauxhall, this performance is really phenomenal, especially recollecting that it was a brand-new design, hardly tested at all; it made instant success for its manufacturers, and the late Mr. L. H. Pomeroy, its then youthful designer. The only other car to complete the course without mechanical trouble was one of the Beeston Humbers, but it had two tyre-stops, and sundry halts for lubrication. This put it at the top of Class F until the race, when the Talbot got in front of it, by averaging 51.8 m.p.h. as against 48.1 of the Humber.

The total losses of the Vauxhall were only 77 minutes 22.4 seconds, and the next best performance, regardless of class, was a Rolls Royce which lost 115 minutes 6 seconds. Other good records were the Beeston Humber, 131 minutes 9.6 seconds; Daimler, 139 minutes 35.8 seconds.

Of the 46 starters only 10 were withdrawn or disqualified on the road section, leaving 36 to compete at Brooklands; but here the organisers found themselves a good deal embarrassed, because some cars (notably the Straker-Squire) had amassed such a formidable handicap that they would have had to reserve the track for two days before they could have started. Cars which were obviously out of the running in this way were therefore sent out to complete three laps at high speed, just to show they were capable of running.

Of the rest, there was not much competition in the smallest and largest classes, but the de Dion did 80 miles at the respectable speed of 27.6 m.p.h. The Vauxhall completed its 200 miles at 46.1 m.p.h. (its maximum was about 58 m.p.h.) the only faster car in the class being the Talbot, which averaged 53.4.

In the 25-32-h.p. class the Adler pulled up from third to first place by averaging 62.7 m.p.h., and was thus the only car to complete the 200 miles at more than 60 m.p.h.

Rolls Royce averaged 53.4 m.p.h., and the big Ariel only 50.7.

The biggest entries were in Classes E, F and G, ranging from 16 to 32-h.p., and outside these classes it cannot be said that the honour and glory of victory was very substantial.

However, to complete this retrospect of an historic event, here are the final results:—

	Class.	*Winner.*	*Won by:*
A.	Up to 6.4 h.p.	de Dion 6.2 h.p.	Walk-over
B.	6.4–9.4 h.p.	Adler, 8.9 h.p.	Walk-over
C.	9.4-13 h.p.	Cadillac, 10 h.p.	1 min. 14⅘ sec.
D.	13-16 h.p.	Singer, 15.8 h.p.	More than 6 hours.
E.	16-20.8 h.p.	Vauxhall, 20.5 h.p.	56 min. 41⅗ sec.
F.	20.8-25.6 h.p.	Talbot, 25.5 h.p.	3 min. 24⅕ sec.
G.	25.6-32.4 h.p.	Adler, 30 h.p.	30 min. 19 sec.
H.	32.4-40 h.p.	Armstrong-Whitworth, 40 h.p.	145 miles
J.	40-46.4 h.p.	Ariel, 45.86 h.p.	Walk-over.
K.	46.4-52.8 h.p.	Rolls Royce, 48.6 h.p.	44 miles
L	52.8-60 h.p.	Ariel, 59.5 h.p.	Walk-over.

CLUB NEWS—continued from page 420

J.C.C.

The Junior Car Club has issued another *Gazette* and recently held another informal council meeting, attended by the Duke of Richmond and Gordon, Major Bale, Capt. Frazer-Nash, E. C. Gordon England, Norman Freeman, Lionel Martin, H. R. Godfrey, Charles Follett, G. Roberts, A. T. Logette, "Bunny" Dyer, Secretary Morgan, etc.

RED ROADS HILL-CLIMB

Fastest time of the day at the recent Red Roads hill-climb was made by a solo Vincent H.R.D. "big-twin." Unfortunately a B.M.W. ran into the crowd and five persons were hurt—but a friend who was present says it was the crowd's own fault. Incidentally, is Red Roads getting flattened-out or is it merely the urge of modern mounts that gives the impression?

BARRY

E. C. Baragwanath, of B.M.C.R.C. memory, held a rally for B.M.C.R.C. members all of his own accord on August 17th, the meeting-place being Marble Arch. "Barry" was ever a sportsman and one of the few really famous men approachable by raw amateurs. We like this wartime gesture of enthusiasm on his part. Remember his Brough-Superior?

MERCEDES-BENZ versus AUTO-UNION

Some of the Greatest Racing Ever, as a Prelude to War

Continued from the January issue. The 1937 *Season*

RUMOURS of 1937 Grand Prix season commenced almost as soon as the last big race of 1936 had been run. It was said that Fagioli was leaving Mercedes-Benz and Varzi quitting Auto-Union, and that Brivio and Trossi would fill the gaps. Mercedes held early trials at Monza of the new V12 car and Dick Seaman and Kautz had their now well-remembered trials in the German cars. Seaman had sold his victorious 1½-litre Delage in preparation for joining the German team, but Kautz, after making best time, with Seaman, in the initial test, in 10m. 52s., crashed during the second trials, where Stuck came to grief in September 1936. Seaman seemed at the top of his always polished form. By February, 1937, were announced the Mercedes team as Caracciola, Lang, Seaman, with Zehender as first reserve and Baumer, Brendel and Hartmann as *cadets*. Brauchitsch was said to be haggling over terms. Auto-Union were putting up Rosemeyer, Von Delius and Hasse, and trying hard to persuade Stuck not to become an independent. Mercedes were depending on the new V12 engine, already proved in record work, in a hush-hush new chassis said to obviate the road-clinging bothers of 1936. Kautz later took a place in the team. Auto-Union were expected to race cars unaltered in general design. Greater harmony was a feature of the new Mercedes team and the Monza tests went well.

A most astounding event preceded the opening of the Berlin Show, when 4½ miles of the main streets were closed and lined with thousands of storm-troopers that Mercedes-Benz and Auto-Union racing-cars could drive from the Wilhelmplatz to the show building! In his opening speech Hitler made much of the industry's second four-year plan, of the *Volkswagen*, of the *autobahnen*—where are they now? The record-breaking Mercedes-Benz, a G.P. Auto-Union and Henne's B.M.W. motor-cycle were exhibited. As the beginning of yet another season approached, rumours crystallised. The respective teams turned out to be: Caracciola, Lang, Seaman and Brauchitsch, for Mercedes, with Baumer, Brendel, Hartmann, Kautz and Zehender reserves, and Rosemeyer, Stuck, Fagioli, and Delius for Auto-Union, Hasse as reserve. Fagioli in an A.U.! Mercedes now had coil front suspension and torsion bars at the rear of a new, oval-tube frame, and 6-litre V12 motors, while Auto-Union had soared to 6½ litres, still V16, with four speeds in place of five and simply huge rear tyres. At further trials at Monza Seaman inverted a Mercedes.

Rumour and inactivity ceased with the Rond G.P. on January 16th, when Delius gained an Auto-Union victory in 2h. 31m. 14s., averaging 80.37 m.p.h. for the 212 miles. Rosemeyer was second, ahead of Howe's E.R.A. Then came the great Tripoli G.P., and Lang effectively turned the tables by winning for Mercedes, at 134.42 m.p.h., ahead of Rosemeyer and Delius. His race-time was 2h. 27m. 57.6s. The first big race on German soil was the Avusrennen, watched under a blazing sun by 380,000 German motor-sports fans. The Alfa-Romeos did not run, but Mercedes put in three fully-faired cars and two normal G.P. jobs, while Auto-Union replied with two ultra-streamlined cars and two G.P. *bolides*. The Mercedes *Stromlinienwagen* had enclosed front and rear wheels, with side panels removed to assist tyre-cooling and open cockpits, and Rosemeyer's Auto-Union had totally-enclosed cockpit and wheels. Six cars started in the first heat, the leading four to run in the final. Lapping at about 148 m.p.h., Delius led from Seaman, until Rosemeyer went ahead on lap 2. Caracciola picked up places gradually, to lead from lap 5. Rosemeyer repassed, but led by a bare length, and Caracciola overtook him passing the stands. The Auto-Union driver made a great bid on the last lap, clocking 171.6 m.p.h., but the Mercedes won by ⅗s. at 155.5 m.p.h., Delius third and Seaman fourth, all home within 6s. of the winner! At first Fagioli led the second heat, at about 157 m.p.h., but Brauchitsch went ahead at 160 m.p.h., and then Lang lapped at 167 m.p.h. to take first place. However, a tyre went back on him at the south turn, and here Fagioli, when in second position behind Lang, retired with serious trouble. Brauchitsch went on to win at 160.3 m.p.h. from Hasse and Lang, the latter unable to make up for his stop, although lapping at 169 m.p.h. Hartmann's Maserati was fourth. Fagioli's retirement was first blamed on the tyres, but when the maker's representative protested, a jammed gear-lever was given as the true cause! Tyre temperatures were tested and much leaping up and down followed the discovery that those on the faired-in wheels ran cooler than those exposed, yet had worn to a greater extent. A broken oil-pipe was replaced on Rosemeyer's Auto-Union and the final began. Caracciola led the opening lap, Rosemeyer on his tail, until low oil-pressure brought the Auto-Union in for a brief check-over. The Mercedes averaged 165 m.p.h. for the three initial laps and with the Auto-Union's stop Lang and Seaman were second and third. Brauchitsch was out with clutch trouble. However, Caracciola now retired on account of oil entering the clutch and setting up slip, while Seaman lost 40s. having two tyres changed—excellent pit work. Lang ran on, however, and again the covers on the enclosed car stood up to the immense speed. The Mercedes won at 162.61 m.p.h. in 35m. 32.9s., 2s. ahead of Delius's "open" Auto-Union, which was 36s. in front of Hasse's normal Auto-Union. Rosemeyer was fourth and Seaman fifth. Mercedes were atoning!

Rosemeyer then took out a special, fully-enclosed Auto-Union on the Frankfurt–Darmstadt–Heidelberg road and established some of the most astonishing records of all time, taking, in all, eight records, including the Class B f.s. mile at 242.5 m.p.h. and kilo at 243.5 m.p.h.

Came the Eifelrennen, at the Nurburg Ring. Adenau was stormed by some 300,000 enthusiastic racegoers, and accommodation at the Eifelerhof, at the Krone, indeed everywhere in the village, was soon completely booked and tens of thousands spent the night in the open round the Ring. Auto-Union did not feel very gay, for Stuck was in South America, Fagioli sick, while Delius had crashed in practice and suffered slight injuries. Muller was driving his first race, so the eyes of every A.U. fan were on Rosemeyer, who had set up the fastest practice lap in 9m. 57s., equal to 85.4 m.p.h. Rosemeyer got a tiny lead from Caracciola at the start, but the Mercedes led after the first lap by a bare second. However, Rosemeyer got past on the second lap, whereupon "Caratsch" very soon reversed things again!

Seaman had meanwhile retired on lap 2 with ignition trouble, and Kautz was badly troubled by considerable oil-leaks. Rosemeyer did his third lap in 9m. 59s. and slipped past Caracciola, who had eased up somewhat, and Brauchitsch was a good third. As the pits expected, Caracciola's tyres came in bits after 60 miles, as did Brauchitsch's, the changes occupying 38s. and 36s. respectively. Rosemeyer had his wheels changed on the next lap, but had been able to motor in rapidly, as the covers were intact. He was stationary for a mere 30s. and continued with a 45s. lead. Rosemeyer drove on to his greatest victory, speeding up slightly at the end to gain a 50s. advantage over the Mercedes-Benz. He had taken 1h. 42m. 11.2s. and averaged 82.95 m.p.h. Caracciola was in 50.6s. later and Brauchitsch was 55s. after him. Hasse just got fourth place, jerking his car off the jack as a tyre-change was hastily deferred, the rear wheels all but lighting up as the Auto-Union got away, actually to catch Nuvolari's Alfa-Romeo, which caused all the fun, on the run back past the pits, "Nuvers" waving Hasse on. The Alfa came in ahead of Lang and Muller, while Ruesch's Alfa beat Kautz. Rosemeyer's best lap was at 85.13 m.p.h.

The next move in the Auto-Union–Mercedes-Benz struggle was the capture by Rosemeyer, on the Frankfurt–Heidelberg *autobahn* of eight new Class B records, including the flying mile and kilometre records, at speeds of 243.6 and 243.5 m.p.h. respectively, an achievement that will live down the years, for the car, which was enclosed, had a capacity of only 6 litres. Reverting to mere racing, Rosemeyer set seal to his fame by going over to America and winning the 300-mile Pan-American Cup contest at the Roosevelt Speedway at 82.5 m.p.h., in 3h. 38m., from Seaman's Mercedes-Benz and Rex Mays's Alfa-Romeo. Yet another Auto-Union victory resulted at the Belgian G.P. at Spa, where Hasse won in 3h. 1m. 22s., at 104.43 m.p.h., from Stuck, third place going to Lang's Mercedes. Incidentally, before either of these two events, Auto-Union had sent Hasse to uphold prestige at Milan, but he was soundly beaten over the short, twisty

MERCEDES-BENZ versus AUTO-UNION—continued

circuit by the Alfa-Romeos of Nuvolari, Farina, and Ruesch—a decided reply to those persons who were of the opinion that a German car had only to start to inevitably win its race. Nuvolari averaged 64 m.p.h.

So to Nurburg, for the German G.P. Mercedes seemed to be making a decided attempt to break their rival's run of success, with better road-holding and a supercharger system in which the blower was placed between the carburetter and engine for the first time in the marque's history. But in practice it was Rosemeyer who set the fastest lap, at the record speed of almost 87 m.p.h. Lang led lap one from Rosemeyer and Caracciola, but in lap two Rosemeyer went ahead, lapping at 85.6 m.p.h. Then, on the fourth lap, with Lang close behind it, the Auto-Union threw a rear tyre-tread and, at the pits, 2m. 26s. was lost because the wheel-hub had stuck! Next, Stuck went out with blower trouble. Caracciola now led from Brauchitsch, Lang third, and, when Muller crashed into the stone bridge at Breidscheid, wrecking his car, Seaman became fourth. Mercedes got through their pit-stops really well, "Caratsch" leaving in 39s., Brauchitsch in 31s., while Kautz lost 46s., Hasse's Auto-Union 41s. Sensation followed, for Seaman hit Delius's Auto-Union after the latter had swung sideways in negotiating the humped Dottinger Hohe bridge. Both cars left the road, and while Seaman suffered from a broken arm and badly cut face, poor Delius was fatally injured. Due to replenishments, Lang led for a time, with Nuvolari second, but on lap nine Caracciola went out ahead, and a lap later Lang made his first tyre-change—after 140 miles! He left in 30s., and Nuvolari had all wheels replaced in 60s. Rosemeyer moved up, but soon lost another tyre, the change occupying 34s. Caracciola made his second stop after 180 miles, and Brauchitsch came in next round, for a mere 31s.! That included refuelling. Rosemeyer had four wheels changed in 52s., but the unfortunate Lang had to crawl in with a cover in shreds, so that a plug-change was also necessary and over 180s. were lost. Caracciola had yet a third stop for tyres before the end, which took only 23s., applauded by Huhnlein himself. So Mercedes went on to win a most arduous race, Caracciola crossing the line after 3h. 46m. 0.1s., at 82.7 m.p.h. Brauchitsch was 46s. behind and Rosemeyer third, Nuvolari fourth, Hasse fifth, Kautz sixth and Lang seventh—the first Mercedes victory for six years in this race.

The scene moves to Monaco, where Mercedes - Benz entered Brauchitsch, Caracciola, Kautz and Zehender, while Auto-Union replied with Rosemeyer, Hasse, and Stuck. Seaman was still in Ardenau Hospital. In practice Brauchitsch did a staggering lap in 1m. 50s. and then Caracciola achieved 1m. 47.06s. (66.168 m.p.h.). When the flag fell Caracciola led away, followed by Brauchitsch and Rosemeyer. Hasse crashed and suffered slight injury in the first lap. Then, after only nine laps, Rosemeyer retired with seized steering-gear. Stuck needed brake adjustments after 20 laps—it was not an Auto-Union day. Brauchitsch, working really hard, clocked a lap in 1m. 49 1/16s., but Caracciola replied with 1m. 48s. for the sinuous round-the-town course, and at 30 laps led by 10.4s. He made his routine pit-stop just before half-distance, so that Brauchitsch then led by almost 2 mins. Auto-Union lost a minute putting Rosemeyer into Stuck's car. "Caratsch" lost 2m. 15s. on his pit-stop, as a plug had to be changed, whereas Brauchitsch, when he stopped, was stationary for only 1m. 30s. "Caratsch" was now doing all he knew, lapping in 1m. 47.9s., then in the record time of 1m. 46.2s., or at 66¾ m.p.h. On his 80th lap he again took the lead, by a mere ⅘ of a second. Two laps later he again called at the pits, and Manfred von Brauchitsch won by 1m. 24.3s., at 63.27 m.p.h., taking 3h. 7m. 23.9s. Caracciola was second, in 3h. 8m. 48.2s., and Kautz third, two laps behind, while Rosemeyer was fourth and Zehender, on his first race for Mercedes, sixth.

The Acerbo Cup race in Italy followed, which Rosemeyer won for Auto-Union, covering the 412 kilos in 2h. 55m. 39s., an average of 88.12 m.p.h. Brauchitsch was second and Muller's Auto-Union third. Seaman crashed in practice, due to a locking brake. The following week-end Caracciola turned the tables by winning the Swiss G.P. at 99.3 m.p.h., covering the 227-mile course at Bremgarten in 2h. 17m. 39s., Lang second and Brauchitsch third. So we come to Monza, and the Italian G.P., which Caracciola took at 81.5 m.p.h., or 360 kilos in 2h. 44m. 54s. Again Lang was second, but Rosemeyer's Auto-Union was now third.

The G.P. of Masaryk was yet another victory for the great "Caratsch," who won for Mercedes in 3h. 9m. 25.3s., or 86 m.p.h. for the 271 miles of the Brno circuit. Brauchitsch was second, the Muller-Rosemeyer Auto-Union third.

The last Grand Prix of 1937 was the great race at Donington, which every Britisher who saw it must still remember vividly. Brauchitsch had a tyre-failure while hard in pursuit of Rosemeyer, and the latter won in 3h. 1m. 2.2s. at 82.86 m.p.h., Brauchitsch second and Caracciola third. The first two men tied for fastest lap at 85.62 m.p.h., a record. So ended the last season of Formula Libre-weight minimum racing, the scores being: Caracciola four firsts, two seconds and one third; Rosemeyer three firsts, two seconds and three thirds, one shared with Muller; Lang two firsts, two seconds and one third; Brauchitsch one first, four seconds and two thirds; Nuvolari one third; Howe one third; Farina one second; Ruesch one third; Kautz one third; Muller two thirds, one shared with Rosemeyer; Stuck one third; Hasse one first and one third; and Delius one first, one second and one third. Marque score: Mercedes: seven firsts, eight seconds and five thirds; Auto-Union: five firsts, three seconds and seven thirds; Alfa: one first, one second and one third; E.R.A.: one third.

The year was not quite over for the German teams. Richard Seaman demonstrated the Mercedes-Benz at the Crystal Palace circuit during the closing meeting and at the German record-week at the Frankfort *autobahn* some remarkable records were established. Rosemeyer took the Auto-Union out and captured the Class B s.s. mile record at 138.674 m.p.h., flying kilometre at 252.47 m.p.h. and flying mile at 252.45 m.p.h. Auto-Union also went for Class C records, taking the s.s. kilo at 105.515 m.p.h., s.s. mile at 123.966 m.p.h., flying 5 kilos at 215.089 m.p.h., flying 10 kilos at 212.232 m.p.h. and flying 10 miles at 211.80 m.p.h. Later he took the flying kilo, Class C, at 218.83 m.p.h., and the mile at 219.51 m.p.h. The Class B flying kilo was later set to 117.14 m.p.h., this, like the s.s. mile, also constituting a world's record. A flying 5 kilo record was set at 251.4 m.p.h. The bodywork was as at Avus, with the wheel-fairings removed for s.s. records and closed cockpits were used for the flying-start runs. This car was actually quicker than the short-chassis, specially-lightened job. Mercedes came along with a 12-cylinder three-speed twin-blower car which blew its nose cowling in and became unstable at around 245 m.p.h. Caracciola probably wasn't sorry when a lorry took it back to Stuttgart.

SOME NOTES ON THE 1½-LITRE ASTON MARTIN—continued from page 418

drawback is that some miles are required for proper warming-up, and in these days of restricted use and short journeys, this leads to oil-dilution—particularly with Pool petrol—and worn cylinder-bores, unless steps are taken to ensure that the proper running temperatures are speedily reached. The writer uses a thick muff which covers the entire bonnet and lower half of the radiator, and which is retained by snap fasteners. This remains fitted except in the very warmes weather, and besides ensuring rapid warming-up, will keep the engine warm for hours in the coldest weather. (The top half of the radiator is, of course, covered when the car is standing.) When running, the temperature is kept at between 80° and 85° C by means of the shutters.

In conclusion, several people have fitted superchargers to the 1½-litre Aston Martin. Different types of supercharger have been tried, at maximum pressures varying from 7 to 15 lb./sq. in. with, of course, the necessary reduction of compression ratio, but as far as the writer has been able to ascertain, none of them has been really successful, and the marque for some reason does not seem to lend itself to high density induction.

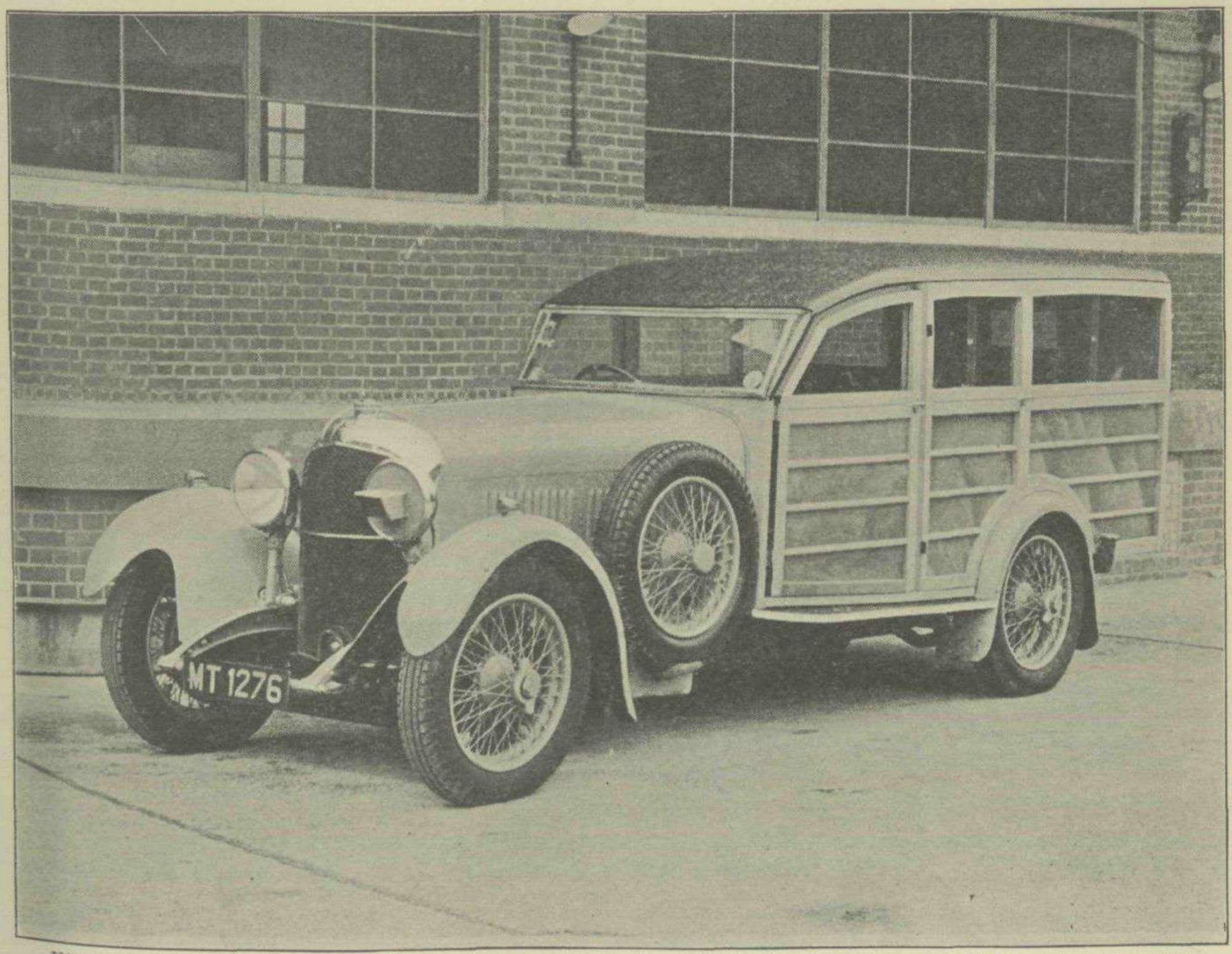
OLD-SCHOOL BENTLEY

A Test Run in a 4½-litre. The appeal is there, no matter what the age or type

WHETHER it happens to be their ideal or not, enthusiasts cannot overlook the satisfaction of a drive in a Bentley of the old school. Recently we were able to cover rather less than 100 miles in a rather unusual 4½-litre and definitely the appeal was there. True, this war has made a difference. The car could only be tried over a small mileage and then on a run of sanctioned necessity and, moreover, the purpose for which it was used made necessary the big eight-seater utility coachwork that it carried, whereas in ordinary times a lot more petrol and an open-bodied car would have been taken, without question. Nevertheless, it was a Bentley and a 4½-litre at that. By now you have probably guessed that the body was a product of G. E. Wallis and Sons Ltd., of 8, Duncannon Street, W.C.2, who have been specialising in thus fitting out thoroughbred vintage chassis for war service.

The car itself was a 1928-9 4½-litre, chassis number F.B.3317, engine number F.B.3314. To-day it carries a very practical eight-seater Wallis utility body, although from the shape of the scuttle, the close-up front wings and the valences behind them, open coachwork of a sporting order appears to have been worn in happier times. Say what you will, or won't, against vintage cars there was solid satisfaction in examining the Bentley. From the driving-seat you look down a shapely grey bonnet with lines of rivet-heads flanking the external hinge, the near-side sidelamp just about visible and the huge plated headlamp on the off-side plainly so. Open the near side after lifting the immensely-rugged triple fasteners and there is revealed much of interest to those who appreciate an engine in which pressings play no part. The huge starter-motor lives within the cast rear engine bearer, the oil-level indicator is an enclosed float, the oil-filler proudly exhibits the openwork "B" . . . The water-offtake pipe, with its five brass connections to the block, contains a thermostat and the four-branch exhaust manifold runs into an incredible length of silencer—one rear-seat passenger, at least, appreciated the typical Bentley burble.

The high tension leads run in a conduit from the magneto, which has a bulge in the bonnet to accommodate the contact-breaker cover and the arrangements of links from a cross-shaft remind one that twin magnetos are used. On the other side of the engine are the two S.U., type G.5 carburetters feeding into the semi-external manifold with its two priming-taps. The steering-column is on the most generous lines and it was very good to find an external radiator-cap, hexagon topped for a spanner, but otherwise plain, from which ran supports for the radiator-grille. The rev.-counter drive is from the front of the camshaft and the dynamo, via a fabric coupling, from the rear. Fuel-feed from the 15-gallon rear-tank is by a big autovac, which has a decent filler of its own, and an air-pressure gauge on the fascia and an external pipe-union near the



Vintage Bentley in its performance and manner of going, this Broadmead Utility 8-seater is very well suited to war service or as a race-tender when happier day return—an amusing and practical combination of qualities

OLD-SCHOOL BENTLEY—continued

sober filler-cap on the tank extension indicate one-time motoring of an order to call for the additional feed.

All that, of course, is quite normal 4½-litre practice so far as general items are concerned, but so satisfying to true believers as to be worthy of mention, we feel. Other points, besides, seemed in keeping with the car. A Bosch horn beneath the bonnet; a grey Hartley mask quite dwarfed by the headlamp behind it; new Dunlop "90" 5.25 in. by 21 in. covers, with the exception of one British Bergougnan; the balance weights on the Rudge wheels, of which the spares lived one either side of the scuttle; gaitered front-springs; and spring-steering-wheel. The bonnet gives access to the rear of the bulkhead without being unduly lengthy. The grey finish and Bentley front parts blend really well with the unusual fawn body of 25-years'-seasoned silver spruce and birch. The car rear wings and short running-boards are retained and the sloping roof and screen are a clever means of both blending curving lines with the inevitable "squareness" of a utility body and of easing wind-resistance. There is no driver's door, access to the bucket front seats being through the wide near-side door. There is no partition behind these seats, but separate access is given to the remainder of the seats via an identical door just behind the front one. Two more persons sit on a bench seat, set to the offside to give passage to a four-place rear bench. Upholstery is plain leather and the quality and finish of door-hinges, locks, and bolts, window-catches and similar fittings is in keeping with the care taken with the general construction; the bodywork is certainly a credit to the house of Wallis.

The roof consists of fabric over close-spaced wooden laths, the tailboard hinges down and can be locked shut to overcome a 30 m.p.h. speed-limit, and a fabric roll-flap with gauze "window" closes the end of the body. Sliding safety-glass windows run all along the side, those in the front doors wind down and the single-pane screen opens right out on outriggers. The space inside the body is tremendous and as useful as it is impressive. We really feel that in the changed conditions which will exist after the war many private motorists may show a preference for this type of body to the normal saloon. That is too big a subject to enlarge upon here, but certainly these bodies are giving fine old cars a new lease of justifiable existence under present conditions. Known as the "Broadmead Utility Vans," they are made at the Maidstone works (telephone reference: Abbey 7333—Mr. Jaques) and the Invicta, which we tested is £250, overhauled and with new tyres.

Maybe some readers feel we have laboured this utility aspect of the Bentley too much, so let us consider the car on the road. Once in the driving-seat it becomes almost like an ordinary 4½-litre, save for the clearance of the front seats from the body-sides and the slight reduction of visibility, as much due to the straight-line screen-frame as the roof-pillars. The driving-seat adjusted fairly close to the wheel, although travel was restricted by the hand-brake, which is inside the r.h. gear-lever. Retard the ignition, the beautiful little control-lever for which is in the wheel-centre, switch on both magnetos and the engine comes to life on the starter with a deep, soul-inspiring note from the big fantail. The revs. rise rapidly as the light central throttle is depressed and the lorry-like clutch-pedal, moderately heavy to depress, takes up the drive as if nothing in the world will stall the engine, yet quite gently with only mediocre care. As the carburetters cease to "plop," the tiny mixture-control can be turned further and further towards "weak" and each magneto tested separately. The engine-speed in built-up areas is a mere 1,000 r.p.m., actually 1,050 on the Jaeger when the speedometer showed "30," or 800 r.p.m. in the Royal parks. Incidentally, how nice to find such unobtrusive "meters," the rev.-counter reading to 4,000 r.p.m., the speedometer to 120 m.p.h., both beautifully calibrated. The gear-change needed a lot of learning—not surprising when you saw the size of the flywheel and reflected that probably the clutch-stop could do with adjustment. Starting in first, the lever went straight quickly into second, and then nice judgment was required to find third, a rapid, rather brutal movement combined with a double-declutch, seeming the best of several methods tried. Thereafter a brutal, rapid movement with single-clutch action engaged top. The downward changes were normal double-declutch actions, calling for ordinary judgment. That the clutch was up to its work is indicated by the little difference noticeable between starting in first or second gear, and the ability to get away in third, uphill, with a full load, without undue slip. On the indirects the gear-whine was considerable, especially in third, and the urge was undoubtedly there. Fuel conservation made a series of tests out of the question, but we reached 3,200 r.p.m. in first and 46 m.p.h. in second gear and accelerated from a steady 10 to 30 m.p.h. in 7.6 secs., with a leisurely change up from bottom to second. It has to be admitted that the engine was not entirely happy towards the upper end of the speed-scale, but there was really little desire to extend it. At 45 m.p.h., which seemed an unnecessarily slow cruising-speed, the engine was turning over at 1,550 r.p.m., which increased to 1,800 r.p.m. at 50 m.p.h. When in a hurry 60-65 m.p.h. became a very pleasant cruising-speed, the r.p.m. at the latter figure being still only 2,450. At this speed the cumbersome body was forgotten and one hand sufficed for steering, the action being very light. Very slight vibration was felt at the wheel and kick-back only over bad going—very rarely did this latter reaction become excessive and always it died rapidly. The car rolled less than we expected in cornering, and when it did could easily be "caught" by purposely over-steering. With two hefty Canadian soldiers (note, Hitler!) in the rearmost seat, and an airman and soldier immediately behind us, some care was necessary, the near-side wheel arch having a tendency to foul the tyre on right-hand bends. Even so, the Bentley got along in quite unusual style for a "utility," passing a very potent-looking M.G. Incidentally, eight persons in all were helped on their way—no W.A.A.F.s or A.T.S., either! Incidentally again, not a few people obviously recognised the car as a Bentley, notwithstanding its war-time lines. The highest speed reached was 70 m.p.h. (on the speedometer, which gave a suggestion of accuracy or almost-accuracy), equal to 2,640 r.p.m., and any short straight was good for 60-65 m.p.h. The body rather magnified chassis-noises that could probably have been largely damped but was not unduly noisy in itself and was devoid of wind-roar. A very pronounced clatter came from the scuttle at around 1,800-2,200 r.p.m., but vanished at other speeds. The brakes were adequate except at very high speeds given fairly heavy pedal pressure and could doubtless be adjusted; there were anti-distortion bands on the front drums. The handbrake had an excellent ratchet and could be used to augment the foot-brakes, albeit rather too fiercely if carelessly applied. The horn was really useful and the push, on the offside door-pillar below a dipper-switch, convenient when once located with the finger. Fumes were rather noticeable by the front-seat occupants, but the engine showed a healthy oil-pressure, varying with engine-speed, of 20 lb./sq. in. at 40 m.p.h. to 30 lb./sq. in. at 65 m.p.h., being just over 20 lb. at 50. It was possible to run down to under 10 m.p.h., or about 400 r.p.m. in top, and pull away cleanly and the engine was not sensitive to the ignition advance and retard, although retard seemed to assist when starting. The wooden fascia, with the old, padded scuttle above it, carried, from left to right: Clock; tube-type fuel-gauge; Ki-gass below; rev.-counter; speedometer; lamp-switches below; pull-out dash-lamp above; ammeter and ring-type lamps switch with the typical Bentley indicator-window; starter-push; magneto-switches and mixture control; oil-gauge reading to 60 lb./sq. in., and big air-pressure gauge reading to 5 lb./sq. in. The last-named was disconnected, and the pump absent, otherwise only the fuel-gauge defaulted. The scuttle stayed absolutely steady, and the radiator filler-cap generally so, nor did the admittedly heavy bonnet weave. The car was really very pleasant to handle at 60 m.p.h. cruising-speed. It lacked mirror and indicators, these accessories being especially missed in traffic when the rear flap was down; they would be very easy to fit, however. The steering-lock was entirely adequate, the action not heavy when manœuvring, and the turns required, lock to lock, were 1⅞. There was little castor-action, but no tendency to wander, control being essentially accurate, and hardly any play was evident in the connections. Fuel-consumption was difficult to assess, but it was better than 10 m.p.g.; probably 15 m.p.g. driven not too vigorously. This Wallis production is essentially practical. It was possible to forget this aspect entirely and enjoy this old-school Bentley for its own sake. MOTOR SPORT need not emphasise the fascination of a car which possesses space and arrangement to justify entirely every drop of fuel it consumes and yet which is virtually a vintage sports car, with all that that implies.

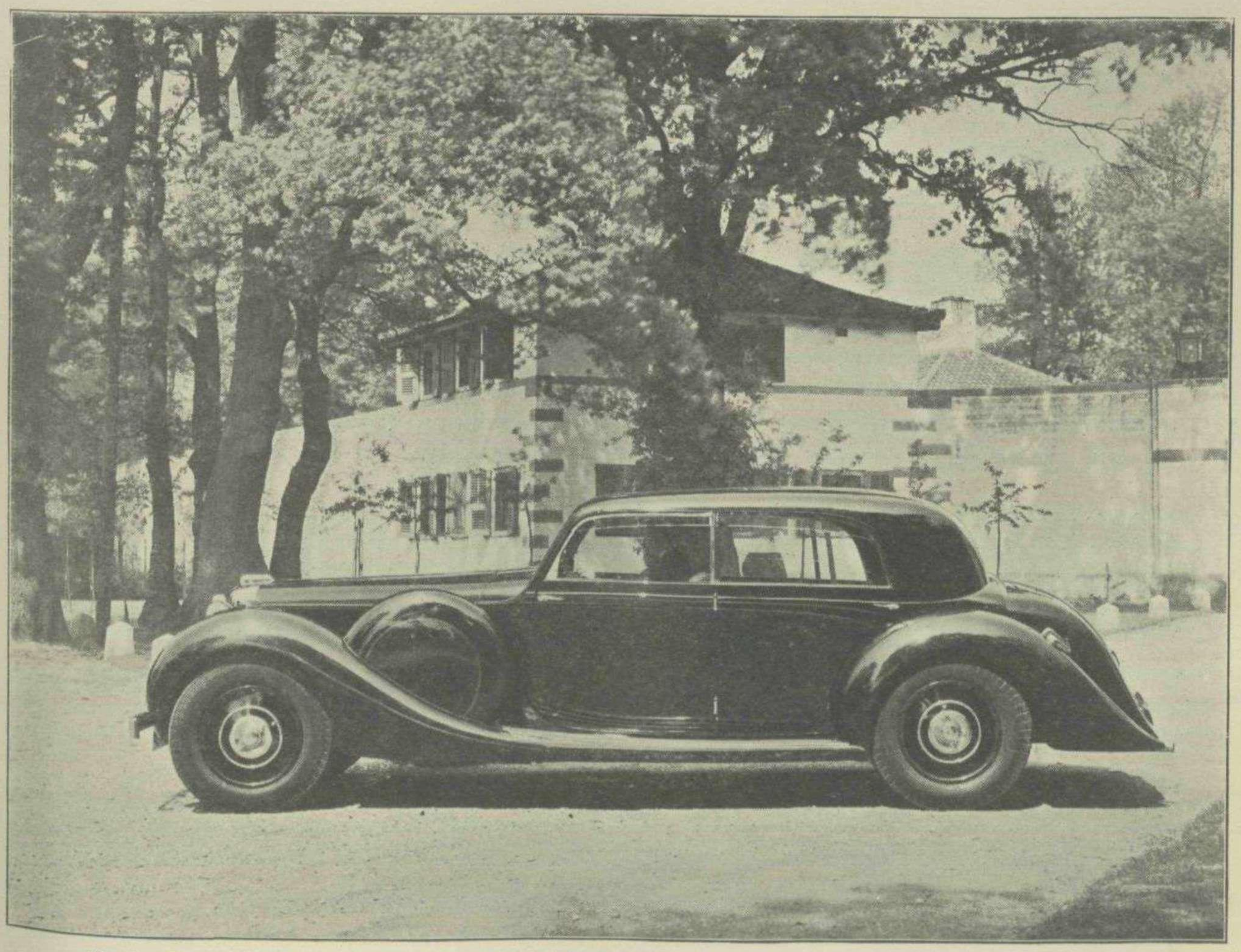
FURTHER IMPRESSIONS OF THE V12 LAGONDA

A Road-Test Report of one of the most outstanding of modern high-performance Cars

ON that Sunday when the victory V campaign began we were able to take out on test the only remaining demonstration V12 Lagonda, and are thus able to qualify and supplement some impressions of this interesting car which Peter Clark wrote for us last October. As it happened, the car was the medium-chassis 11 ft. wheelbase saloon. The need to economise petrol restricted the test to just under 124 miles, shared amongst five drivers. Even so, within these limitations, it was very evident that the V12 Lagonda is one of the greatest automobiles that has ever happened. So often we commence a test-report by saying that the driving position is excellent and visibility good. Certainly this is so with the Lagonda. The separate driving-seat adjusts easily and really far forward, and the variable angle of the squab, set by operating two screwed stops, is a point we especially appreciated, as only too often one has to recline in an inefficient posture because the seat allows of no other position. The wide and actually very lengthy bonnet looks quite modest from inside the car, and not only are both off and near-side front wings visible, but the top of the near-side headlamp as well, so that the size of the car is of no moment even to a new driver. The screen pillars are on the thick side, but one sits so close to the screen, which is nicely raked and noticeably wide, that visibility is not impaired. The central gear-lever, in a ball-gate, is slender yet not springy, and comes almost up to the steering-wheel rim, in an ideal position. The hand-brake, on the right, is too close to the cushion when the driver's seat is fully forward, but it has a racing fly-off action which to some extent relieves this difficulty. The pedals might be a trifle larger, including the right-hand treadle accelerator, which is just a metal strip, while the other two are high off the floor ramp, at rather too great an angle. These, however, are minor points which we did not grow as accustomed to as would have been the case had a test of our normal duration been possible.

ON THE ROAD

One's first impression is of the extreme silence of the engine, and very soon the V12 is up to 80 m.p.h. in the same imposing absence of all apparent effort. When the starter engages and the engine runs-up, there is quite a burst of exhaust noise, but thereafter all is silence, only a slight tremor under the floor reminding one that 180 b.h.p. is being produced mere inches away. We took the car briskly over Staines Bridge and could not have gone more than a few miles before we had considerably exceeded 80 m.p.h. The Lagonda is like that. You imagine you are progressing at 45 to 50 m.p.h. and further depress the very light throttle-pedal. There is no increase of effort, no sensation that you are going at all fast, except wind-noise round the body; a glance, however, shows the speedometer to be going from "70" to over "80" . . .



The V12 Lagonda looks essentially a car of to-day, as it most certainly is. It ranks amongst the most advanced-design, modern luxury cars, and even in this form has a maximum speed of over 100 *m.p.h.*

FURTHER IMPRESSIONS OF THE V12 LAGONDA—continued

The manner of going suggests high gearing because, although it will literally go everywhere in top gear without protest, it does not really commence to move until beyond 30 m.p.h. in that gear and is not very evidently brisk from low speed in third gear. Once it starts, however, it goes up to really rapid rates of progression more easily than any car of our acquaintance. Its cruising speed may be put at anything the road allows; in our case up to about 84 m.p.h. Equally intriguing is the surge of the rev.-counter-needle round to 5,500 r.p.m., the maximum limit of engine-speed. A check of the readings on both dials showed that at 2,000 r.p.m. in top gear the speedometer shows 40 m.p.h., and that at 2,500 r.p.m. in third the m.p.h. reading is again 40. At 70 m.p.h. in top the engine is doing 3,500 r.p.m. and at 75 m.p.h. just over 3,700, most comfortably within its limit. The highest speed we attained was about 84 m.p.h., corrected, solely because no by-pass road was at hand and we did not feel justified in winding things up to a greater extent over the narrow, reasonably busy highway into Winchester on which visibility is limited by a series of undulations. At this speed the engine was doing 4,200 r.p.m. and there was plenty of throttle in reserve. A rough check of the speedometer over a measured distance of approximately half a mile suggested that it was rather less than 7 per cent. (4 m.p.h.) at an indicated 50 m.p.h. Making the Lagonda come down to this speed was like braking most cars from 50 to 30 m.p.h. for a built-up area, and at 84 m.p.h. we had no compunction at all about removing our hands from the wheel and placing them behind our head. The steering had a good deal of free movement in the push-pull rod-joints, but with occasional straight-line correction, there was no impairment of accuracy, and the castor action was extremely vigorous after a sharp corner. Although slight bonnet and some headlamp movement was evident, no column judder is felt and only the very tiniest suggestion of return motion through the wheel. The steering is generally very light, even "silky," in action. In our opinion it is, nevertheless, too low-geared, 3¼ turns being demanded, lock to lock, albeit the lock is very generous. The suspension gives extremely fine riding over all surfaces, level-crossings and hump-back bridges included, and at both low and extreme speeds. Nor is the independent front suspension possessed of any peculiarities, and definitely it is not unduly soft, failings found in quite a number of i.f.s. systems. The Lagonda must be cornered really "roughly" to make the tyres protest, and it is not prone to rolling, save, perhaps, on slow corners—remember this is virtually a town-carriage of 11 ft. wheelbase! The Lockheed brakes were well-suited to the speed, but the brake pedal would have been more comfortable to operate had it been clear of the steering-column; it is directly under it, which prevents easy use of the ball of the foot. The car slows securely from any speed, to the accompaniment of a not unpleasing low hiss, but quite heavy pedal-pressure was required and definitely the action was not progressive, which rather spoils the fun in a car so fast that it must, perforce, be braked for the majority of the twists and turns on which British roadmakers pride themselves. We formed the opinion that the brakes were due for adjustment and had been warned that the shoes might snatch for the first few miles. The clutch takes up the drive efficiently and positively and asks only moderate pedal-pressure. The gear-lever locates reasonably well and double-declutch changes go through very nicely; the synchro-mesh is also good, but seems to prefer not to be hurried. Incidentally, in forming an opinion of the gear-change, one realises how very seldom one changes gear—actually we ran steadily, and turned on full lock, at under 8 m.p.h., or 400 r.p.m., in top gear, slower than which the hand-throttle would not take us. The engine opened up thereafter with no hesitation and no pinking. There is an over-ride control taking effect on the rear springs only, operated by the left-hand lever in the steering-wheel centre. The effect is not really very noticeable from the driving-seat, but the rear-seat occupants appreciated the "soft" setting over bad surfaces at low speeds, while, at "hard," a notorious hump-back bridge at Frimley was taken in perfect style at 54 m.p.h. This control-lever, and the hand-throttle, have serrated ratchets and are a trifle harsh in movement. Ignition advance and retard is entirely automatic. The normal engine-temperature was 65-70° C., and oil-pressure between 70-75 lb./sq. in. The 18 in. steering-wheel has four rather unusually-placed spokes, but these do not obscure the instruments.

Reverting to performance, we did not try for extreme speeds on the gears, but the engine-speed went very responsively up to 4,800 r.p.m. in first gear and 5,300 r.p.m. on second gear, during an acceleration test. Normally, we started in second and made upward changes at about 3,200 to 3,900 r.p.m. To humour a falling fuel-gauge, only one acceleration test was made, during which the change from first to second was foolishly muffed. Even so, with full complement of occupants and against a stiff headwind, using the rev.-limits aforementioned in place of the readily-attainable 5,500 r.p.m., 0-50 m.p.h. took 12 seconds, 0-60 m.p.h., 14.3 seconds, and 0-70 m.p.h. 20 seconds, checked by two stop-watches. Incidentally, the initial getaway was superb, the clutch going in at 3,000 r.p.m. A check from a steady 30 m.p.h. to 60 m.p.h. in top gear showed 13 seconds. The former test was finished in third gear, when 70 did not give rise to any change of demeanour. At fifty in second, a *very* regular achievement, the engine-speed is a mere 4,500 r.p.m., and in third, 2,450 r.p.m. Similarly, in top, the V12 goes along at nearly 85 m.p.h. on every reasonable occasion, the engine doing 4,300 r.p.m.; the Lagonda not only is smooth and silent at this pace, but somehow imparts a *sense* of this well-being to the occupants. It also rides rock-steadily and handles magnificently at what is still a very rapid road-speed. To some extent wind-noise is disconcerting, but this seems largely dependent on the strength of the prevailing head-wind, and no attempt has been made to streamline the saloon, the windows having liberal, curving rain-valences and the waist-line a wide external "decking." The roof, though, is quite low and top-hats would presumably remain beside their owners. The four-door, four-light saloon body is Lagonda Ltd.'s own and beautifully finished, while the detail work is really nicely done. The car will seat five, but the outer arm-rests rather restrict space in the back, where two persons are comfortable, but three a thought intimate. The external appearance, long lines well-balanced by the rear boot and flowing wings, black finish relieved by very thin and modest chromium beadings, place the Lagonda amongst the most imposing and dignified cars that have ever been built—which statement is written in all sincerity.

MATTERS OF DETAIL

Fuel being low, we pulled the car on to a popular grass parking place some eight miles out of Peterborough, and got down to a prolonged study of detail matters. Reading from left to right, the fascia carries: a rather small cubby-hole with lockable lid, thermostatically-controlled cigar-lighter energised by push-in action, rev.-counter reading up to 6,000 r.p.m., central electrical panel, fuel-warning light and interior lamps switch to each side, speedometer reading to 120 m.p.h., ammeter, fuel gauge, oil-pressure gauge and water-thermometer as small dials within one large dial, and a very effective pull-push knob controlling the soft/loud notes of the horn. The electrical panel possesses a push-button starter-switch, normal lamps switch, oil tell-tale lamp switch, rheostat control of separate instrument-dial lighting, as distinct from the dash-lamps, and the wiper switch. The Berkshire wipers have separate "start" knobs, the screen winds out to give excellent visibility in fog, and there is a central mirror of rather limited vision—at least, with three persons on the rear seat, all anxious to watch the dials! The speedometer and rev.-counter are A.T., the electric instruments H.K.S., and the clock a Smith & Sons (M.A.) product. The rear blind, controlled effectively from a slide-control by the driver, the interior lamps had their own individual switches and there was a padded footrest to the left of the clutch-pedal, with a nicely-acting headlamp-dimmer therein, so set as not to operate when the left foot was merely at rest on the pad. There was no chance to test the lighting arrangements, but one of the Lucas P100 headlamps had a Hartley mask and there was a central Lucas fog-lamp. Different Yale keys, incidentally, were needed for locker and boot, cubby-hole lid and door, the lock of the last-named being in the front passenger's door-handle. Twin fuel filler caps are used, one in each rear wing, and the spare wheel lives under a detachable cover on the off-side; there appeared room for a spare-wheel shelf under the boot, if required, on moving the locked panel carrying the twin rear lamps. The rear boot would hold about five large suit-cases, but there is no provision for carrying anything on the lid, which has a strap to hold it open; the locker-floor has a slight downward slope to facilitate unloading, and the fuel-hoses run through

FURTHER IMPRESSIONS OF THE V12 LAGONDA—continued

it. Apart from this really capacious locker, there is a small shaft above and behind the rear-seat squab. Upholstery is in high-grade leather, and there is a "companion" in each rear arm-rest. The rear doors possess deep pockets and the front doors have plainer ones, held partially closed by centrally-fitted elastic "pulls." The driver's door-handles are well clear of his elbow, and the windows wind down rapidly; there are no "pulls" for rear-seat passengers. The sliding-roof action is normal, and the rear seat has a folding arm-rest. The doors hinge about very slender central pillars. A curious point was that rev.-counter and speedometer needles moved in opposite directions. The coachwork is the makers' own, and they deserve great credit for it. There was not a trace of body-noise. There is a propeller-shaft-tunnel running the length of the car, but it does not unduly impede leg-room. Helmet-type wings give a very modernistic touch, without appearing quite so accentuated as on the first V12s. The tools are sensibly laid-out in the well-known Lagonda dummy spare-wheel cover on the near side, and a useful inspection-lamp is included; the cover hinges forward and does not detach like that of the real spare-wheel container. Here, too, is the operating lever and selectors for the D.W.S. hydraulic four-wheel jacking system. This operated most effectively, and caused no concern to a lady of slight build. The bonnet fasteners functioned well and the petrol gauge was very accurate, a not-too-vivid "tell-tale" light gives warning of impending immobility with some four gallons still in the tank.

It was not easy to assess fuel consumption, but we would put it at about 11 m.p.g., driving hard, and that with a car weighing, we believe, about 39 cwt. 2 qr.

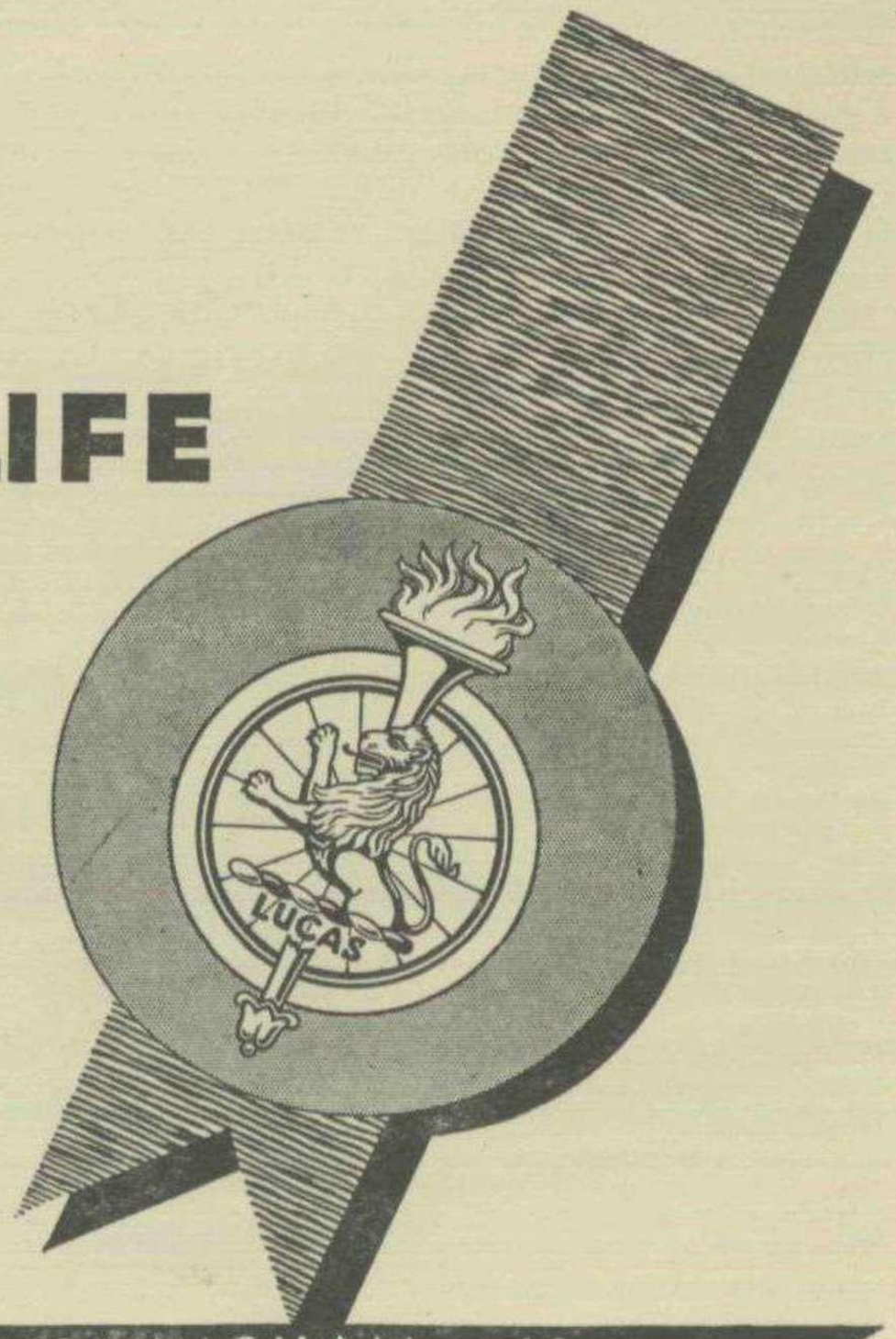
The radiator has dummy shutters of rather flimsy aspect, and a normal external filler-cap, opening on a hinge.

The engine is truly imposing, with its big, polished valve-covers emphasising the wide angle of the "V." The exhaust off-takes on the outside of the blocks are set beneath aluminium shields which, in conjunction with the mesh-sections in the bonnet, isolate them in a "box" from other components. Fuel-feed is by twin horizontally-opposed S.U. pump with a Zenith filter below. The two down-draught S.U. carburetters live between the blocks, and ignition is by Delco, with one distributor per block and automatic control only by governor and suction. Behind a light bulkhead are accommodated two 6-volt batteries and the fuel-pumps. A six-bladed fan assists cooling and there are supplementary water off-takes from the rear of each cylinder-head. The oil filler now lives on the off-side valve-cover, as on the Le Mans cars. There is a big air-cleaner over the carburetters, and vernier adjustment of ignition-timing. The arrow-type oil-level indicator is on the off side of the sump and is lit at night by a tiny electric lamp.

Having concluded this visual survey of the engine, we made a very interesting test. Much comment having been passed about the inaccessibility of the Lagonda's plugs, we decided that No. 4 in the off-side block was the worst-placed and set Joe Lowrey to remove it against the stop-watch. Using the spanner from the tool-kit, he had the plug out in 17 seconds and back, with its lead (push-on terminals) on, in 50 seconds, a total of 1 minute 7 seconds. To provide a comparison he later did the same operation on his own H.R.G., which has screw-on terminals, and had No. 4 plug out and home in 37 seconds. So, with the proviso that it is essential to use the special spanner with rubber centre which grips the plug, and that gloves are desirable if the engine is hot, the V12 Lagonda does not show up at all badly in the matter of rapid plug-changing. Other points we noted were that chassis-lubrication is entirely automatic, that no internal "pulls" are deemed necessary to vacate the car, and that the disc-wheels are shod with 6.50 in. by 18 in. Dunlop "Fort" covers. After this examination we reluctantly returned this great car to its makers, regretful only that a far longer test had not been possible; we look forward to conducting such a test when

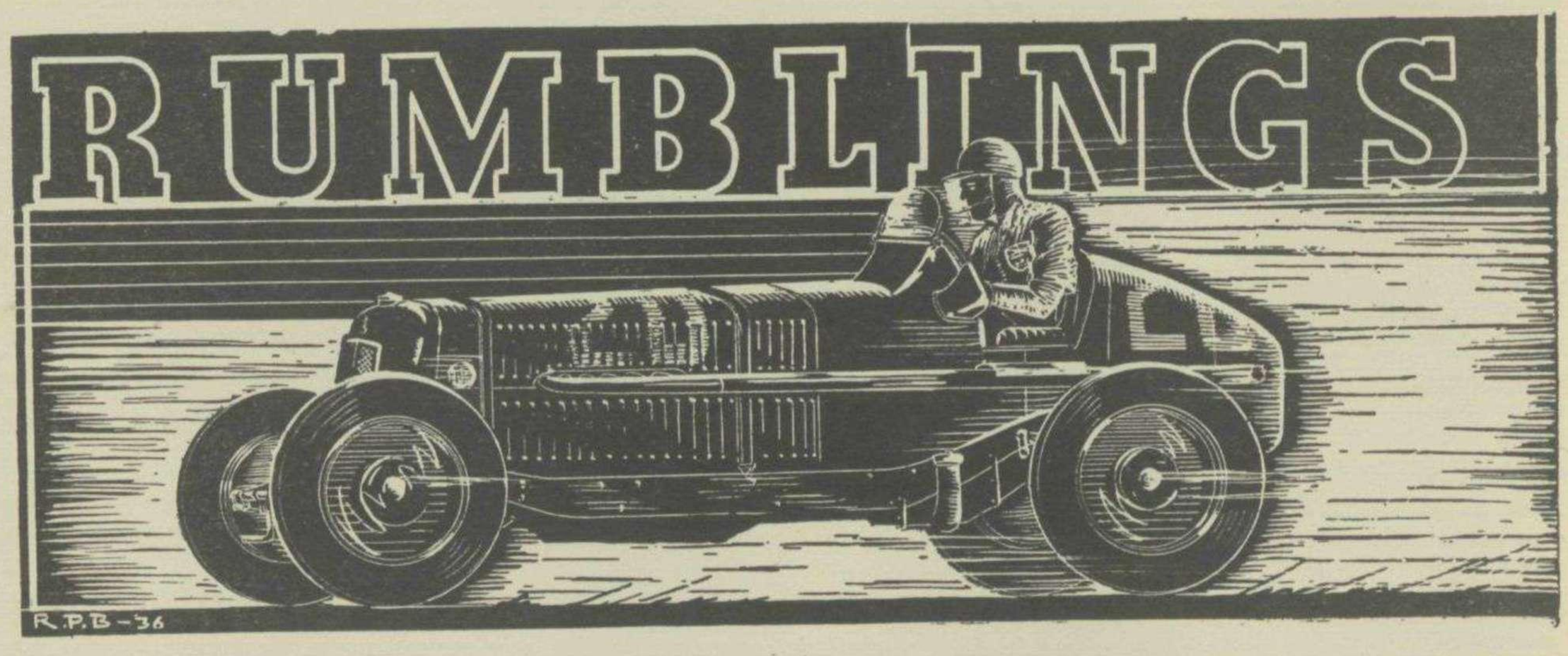
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Richard Bolster

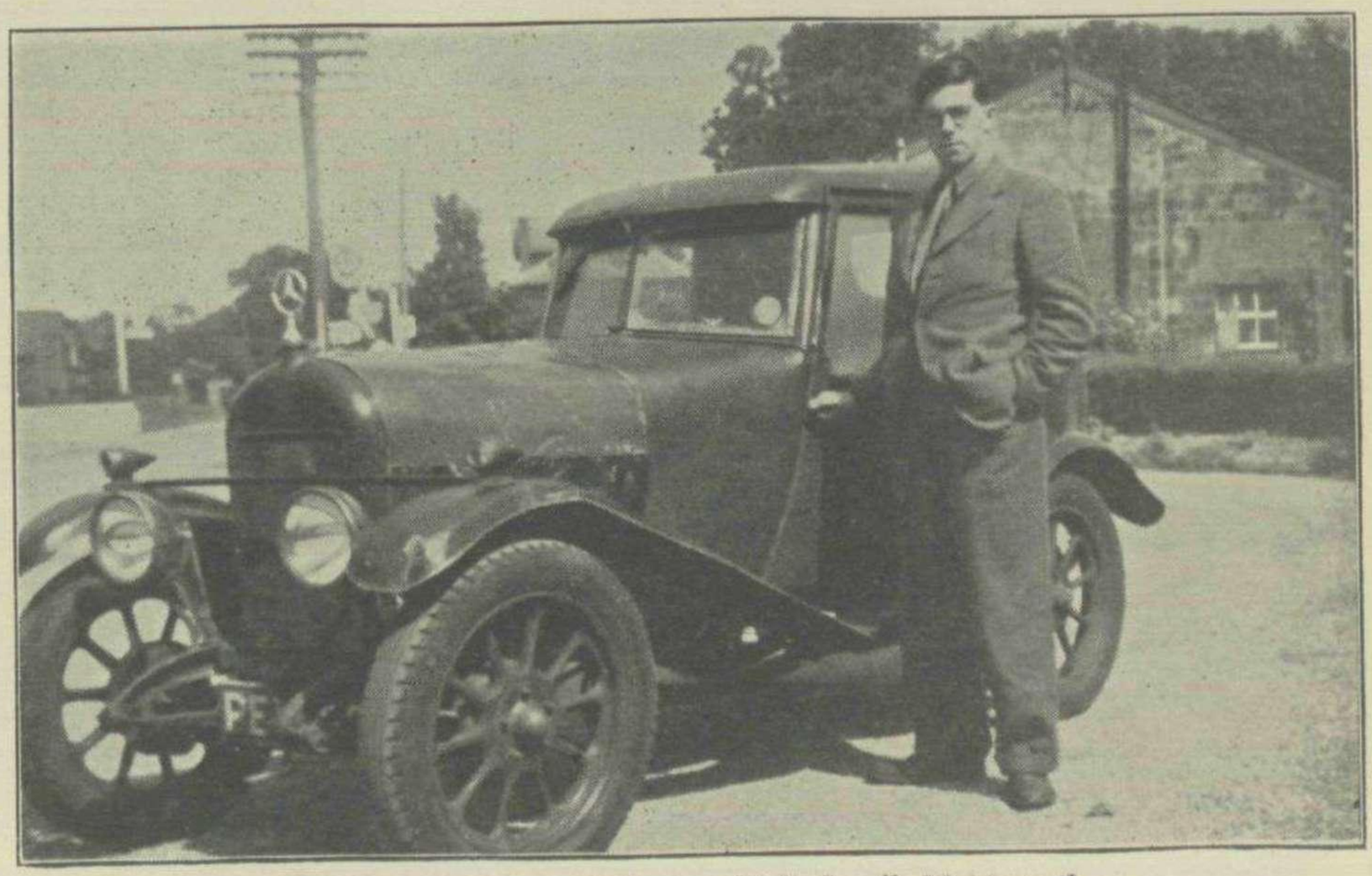
WE were sorry indeed to hear that Richard Bolster, brother of John Bolster, had been killed in action with the R.A.F. Richard was one of the young men who have been doing so much to win the war for us; he represented all that is best in the well-to-do young British sportsman. We recollect hearing John telling the story of how he got accepted as a pilot officer with the R.A.F. in his own brisk way, although he was in a reserved occupation. We believe he was posted to a fighter squadron, but was piloting either a bomber or a long-range fighter over Germany when he failed to return. He started running an o.h.c. V-twin G.N. in sprints with brother John and then built, and raced with some success both in short events and at Donington, that queer M.G. Magna-engined G.N. with multi-carburetters, rear-set Darracq radiator and high-seating position. At this time he also handled "Mary" and the "30/98" Vauxhall. Later came the car possessed of four single-cylinder Rudge engines in line along a G.N.-ish frame. This answer, as it were, to Charles Martin's "square-four" job only ran decently once, when it took its class at Shelsley Walsh. Growing tired of it, Richard produced a Hudson-engined "Special," doubtless basing it on the remarkably potent Skinner Special so effectively handled by his brother's wife. The cancellation of the 1939 autumn Shelsley meeting prevented the car showing what it could achieve. Richard sought to motor fast and with excitement in another sphere. He got into the R.A.F. when others had been unsuccessful, after a rather stormy interview with Authority. His celebration was quite something. Now his motoring, in the Hudson "Special" and the R.A.F., is finished. *C'est la guerre!*—but our sorrow is no less.

Langhorne Match Race

It seems that two match races have been staged at Langhorne Speedway, U.S.A., between Le Begue and Trevoux with their Talbots and the winning Indianapolis Offenhauser. The American car won.

Party

It is very inspiring news that another Enthusiasts' Party is being staged by the Vintage S.C.C., E.R.A. Club and Bugatti Owners' Club, next month. This time the venue is in London and no arrangements are made for a car rally. The place is the Rembrandt Rooms, S.W.7, and the date October 5th. Party starts at 12 noon, lunch happens at 1.30 p.m., George Monkhouse will give his classic film show thereafter and there is tea to follow. An exhibition of motor-racing pictures will be an added attraction. The charge is



W. Boddy and his 1925 *Gwynne Eight described last month*

RUMBLINGS—continued

10s. 6d. per head and tickets were available from D. B. Tubbs, 21, Cranmer Court, Sloane Avenue, London, S.W.3, by post only. We expect all the available space is taken by now. Once again the thanks of all enthusiasts must go out to Messrs. Heal, Clutton, Rivers-Fletcher and Eric Giles. Thanks indeed!

Appeal

The Austin Seven was so universally admired as a racing-car, and this make of baby-car has given so much pleasure to divers enthusiasts that there should be an extremely good response to Lord Nuffield's appeal for donations to a fund to perpetuate the memory of the late Lord Austin. The appeal reads as follows :—

Every member and unit of the British Motor Industry and its connections will, I am confident, agree with me that the loss we have suffered by the death of Lord Austin is irreparable.

His modest and retiring nature did much to mask the true value of his achievements, but their outstanding qualities must be apparent to those who, like myself, have closely followed his career, and his place as a clever and original designer will be indeed hard to fill.

To refrain from an endeavour to perpetuate his memory would be a grave and even discreditable omission, and I therefore hope you may be willing to associate your Firm with the Austin Memorial Appeal which I have undertaken to make, and which I have initiated with a contribution of £1,000. The Austin Company has promised a similar amount.

The exact type of the Memorial will depend on the total amount subscribed to it, but as Lord Austin was himself so justly famed for his benevolence, it is considered that it might most appropriately take the form of a special endowment to be administered by the Motor and Cycle Trades Benevolent Fund.

Any amount sent to me, however small, will be acknowledged with gratitude. Cheques should be made payable to the "Austin Memorial Fund."

It will doubtless not be overlooked that with Income Tax at 10s. any subscription made to the Benevolent Fund under a seven years' covenant will result in the Fund receiving double the amount subscribed.

NUFFIELD.

All donations should be addressed to The Viscount Nuffield, Morris Motors, Ltd., Cowley, Oxford.

Odd Spots

Since Messrs. Foulis & Co. have recently published "Dick Seaman—Racing Motorist," by Prince Chula of Thailand, we are reminded that some volumes of his privately-published works, "Road Racing, 1936" and "Road Star Hat Trick," still remain. Many people were disappointed after his first book, "Wheels at Speed," had been sold out, so those who do not wish to miss the other two should order them now at 8s. 6d. each from the Secretary, 113a, Dalling Road, London, W.6.

* * *

Clutton appears to have overlooked R. J. Munday's Brooklands lap at 114.23 m.p.h. with his four-seater "O.E." "30/98" Vauxhall, during the 1932 "Gold Star" Handicap. This is faster than the lap by Windsor-Richards, claimed by Clutton in his article in the July issue as the best lap-speed of an "O.E." Vauxhall, although only by ½ m.p.h.

* * *

R. M. Sanford was married recently to Mavis Gordon.



Letters from Readers

Sir,

My car, at present undergoing expensive overhauls, is a rather "teased-out" Montlhery-type M.G. Midget (C.0284) of 1932 vintage. I would appreciate any information concerning these cars, especially if it leads me to a handbook or a picture of the "works," as the car is now far from standard.

I am, Yours etc.,
J. F. UNDERWOOD,
S/Lt. (A), R.N.V.R.

H.M.S. "Ark Royal."

* * *

Sir,

I only of recent months discovered your excellent publication, although I have for years been a regular reader of the weekly motoring papers. I feel I must offer you my congratulations for the excellent way you are carrying on in these difficult times; your magazine is packed with interest from cover to cover, and is now eagerly anticipated.

From my own point of view one of the best features is the "Cars I have Owned" series, and as an owner of cars in the past varying from the Bull-nose Morris to Ford V8 via Lea-Francis, Riley, etc., I would be very happy to prepare an article if this would interest you.

I have never, unfortunately, been a club member, but hope after this "spot of bother" to become a member of a club up here, and possibly take part in rallies, etc. I would be very pleased if any local enthusiast who happens to see this would care to visit me.

Meanwhile, hearty congratulations, and thanks for many hours of enjoyable reading.

I am, Yours etc.,
G. B. C. HENDERSON.

31, Hamilton Drive,
Cambuslang,
Glasgow.

[We have invited Mr. Henderson to write for the "Cars I have Owned" series. Will those wishing to visit him please contact direct.—Ed.]

* * *

Sir,

Sub-Lieutenant G. P. Shea-Simonds, R.N.V.R. ("Cars I have Owned," June) was mistaken in supposing my quarrel is with the "100 M.P.H." Invicta, with which I have had little experience. *My* Invicta was an earlier car—virtually the old 3-litre chassis with a 4½-litre engine and capable of a none-too-safe "90" or so—its manifold sins and wickedness having been largely eliminated, so it was at least claimed, in the 100-m.p.h. model; yet Mr. Shea-Simonds, I observe, "admits that reliability was not one of the more conspicuous qualities" of his own car. Which being so, what of poor me with the unexpurgated version?

I am, Yours etc.,
F. LYCETT.

Maidenhead.

Sir,

When petrol rationing came into force I realised that I should have to do something about it. My car is a 1933 Singer Nine sports 4-seater fitted with two 30 m.m. downdraught Solex carburetters, giving about 28 m.p.g. I wrote to Solex, and they suggested new main and pilot jets. I fitted these and got 30-32 m.p.g. The engine is in excellent condition, as I rebored it when the war started. I decided to convert it to a single carburetter, so I visited my local scrap yards and searched for a Singer Nine, either a car or a van. I then bought for a few shillings the inlet and exhaust manifolds and carburetter, also the fixing clamps and exhaust-pipe. After several months my average consumption has been 37 m.p.g., which I think you will agree is quite good. I also converted a Singer Nine Le Mans 1936 belonging to a friend, and he is now getting 36 m.p.g., so obviously my scheme works. And now a few notes for those who wish to apply it. You must buy the exhaust pipe as well as the inlet, as this is a different size and has a different flange to the one already fitted, and the new exhaust-flange is offset to clear the bottom radiator hose. You will need to pack the pipe to fit the silencer, due to the smaller size. Buy also the two clamp bars, as the twin carburetter layout has not got these. Buy the ball-joint and connection on the carburetter and make up a short bar to connect to the accelerator-control. The carburetter will probably be a 26 mm. Solex, and since this has come from a Singer Nine it should be correctly tuned.

As to performance; top speed is 60-65 m.p.h. instead of 70, hill-climbing and acceleration are down about 10-15 per cent.; up to 3,000 r.p.m. not much difference is noticed, but above this the engine speed mounts slowly, which is where you really miss the twin carburetters. However, the performance is still quite good, and no difference is noticed in starting, so I consider the conversion is well worth doing. There is still possible improvement, I think, by three means:

(1) Fit a standard camshaft in place of the sports camshaft now fitted;

(2) Fit a reconditioned carburetter;

or

(3) Fit a Cox Atmos economiser.

If I get the chance to try any of these I will inform you.

It should be possible to convert other cars the same way, for instance: early M.G. Midgets, an O.H.V. Morris Minor manifold and carburetter will interchange; likewise the early M.G. six-cylinder engines will inter-change with Wolseley Hornets; the Hornet Special could be converted to Standard Hornet manifold and carburetter, Riley Nine likewise. I think you will agree that it is easier to tune one small carburetter for economy than two large ones.

I am, Yours etc.,
E. R. GREEN.

Bradford-on-Avon

Sir,

Following my letter published in the February issue advocating that our manufacturers should follow the Continental lead in car design, I feel I cannot let Mr. Hutchison get away with his accusations against the latter marques (under the title "The Strachan Stir-up" in your June issue) without some attempt to defend them.

Mr. Hutchison first says ". . . . most writers have selected the outstanding Continentals for their comparisons—*i.e.*, the Lancia, B.M.W. and Fiat—all of which are more expensive than the average English family 'barouche.'"

It is not correct to compare these cars with "the average English family 'barouche'"; they rank with our best sports cars of the same price class—Jaguar, Riley, M.G., Triumph, etc. The Continentals quoted offer more up-to-date design and comfort, and are at least equal in body-room, acceleration, maximum speed, and petrol consumption. Mr. Hutchison must not forget that in the case of the Italians the very cars he mentions do form the average family "barouche."

The writer goes on to say ". . . there is a mighty lot of cheap rubbish produced from the Continental factories as well—to wit, the Opel, Hanomag, D.K.W., and small Mercedes models. These do not compare at all favourably with the British Austin, Morris, Wolseley, Ford, etc., either in performance, finish, reliability, or quality of workmanship and design."

I shall deal with these cars in the order of my knowledge of them.

I have never seen a Hanomag and know nothing of the marque. The Opel, I am given to understand, represents an American financial victory over international currency difficulties, rather than an achievement of engineering design. All who know the small Mercedes models, however, will agree that they are famed for the finish, reliability, and quality of workmanship and design which Mr. Hutchison says they do not possess.

I am able to state a positive case for the D.K.W., owing to the fact that I own one of these cars at the moment. Let us compare it with my previous mount which, I believe, is the most advanced British 10-h.p. on the market.

The D.K.W. has a disadvantage—8 m.p.h. less maximum speed, and less acceleration over 45 m.p.h.; but it climbs the same hills in the same gears, at the same speeds; it has similar acceleration to 45 m.p.h., similar rigidity of chassis, and steering control and comfort over rough roads, and similar luggage-space; it has more passenger-room; it will corner at much higher speeds with greater passenger comfort, and does ten more m.p.g.; the engine capacity is 700 c.c. against the British 1,200 c.c. In addition, I save tax and insurance, while it is an established fact that this type of engine has a

LETTERS FROM READERS—continued

repair-free life of about double that of a four-stroke.

I should like to make it clear that I have no accusations, stated or implied, against British cars, because the things they do provide—ease of maintenance, accessibility, etc., as well as the silk blinds, door-pulls, ash-trays, cubby-holes, and what-nots, mentioned by Mr. Hutchison—are perfect. The writer goes on to say that John Citizen prefers these refinements to constructional ones, such as independent suspension and front-wheel drive.

Is that really the case, or is it a convenient excuse for our manufacturers to retain existing models? When I think of the vast numbers of Fiat 500s and Citroen Twelves on our roads to-day in the cheap car class, and the increasing number of Lancia Aprilias, B.M.W.s, etc., among our dearer, semi-sports cars, I feel the latter to be the case.

The whole question—American, Vintage, British, Continental—must be settled upon a commercial basis. It is generally agreed that modern Americans, while having many good points, are unsuited for our roads, both in size and rateable horse-power. Vintage cars as such do not come into the question at all, but the suggestion that vintage-type vehicles should still be built must be actively combated. Such vehicles, like fake antique furniture and mock Tudor houses, writhe in the shame of their spurious qualities.

If this country intends to build cars for home consumption, it must also have an export market in order to spread costs sufficiently to achieve a reasonable selling-price. To regain this lost market, our cars, sports and family alike, must advance in power, speed, aero-dynamics, controllability, comfort, economy, and ease of operation; this market we held once, when the cars which are preserved so carefully to-day by the Vintage enthusiast were not vintage at all, but new and in advance of everything the Continent could offer to compete with us.

I should greatly appreciate information on the tuning of water-cooled V-twin J.A.P. engines, with particular reference to compression-ratios, blowers, and eventual b.h.p. to be expected.

I am, Yours etc.,

GRAHAM C. DIX.

Bristol.

* * *

Sir,

In your "Rumblings" paragraph headed "Sunbeams" (July issue) you mention the 1924 blown 2-litre as driven by Segrave to win the only British victory in the French G.P. Actually, of course, the 1923 machine was an *unblown* car.

The car to which Jack Barbour has so neatly fitted a 2.6 M.G. unit was that driven by the late Trevor McCalla, in Irish events 1934/35. This machine is the one that killed D. Resta during record attempts, at Brooklands in 1925. Afterwards rebuilt, Miss May Cunliffe had a run of successes at Southport and elsewhere driving this same 1924 2-litre.

Jack Dunfee bought the Sunbeam in 1929, and took world's and class records with it. The car broke the rear-axle, once during a "500" at Brooklands, and again on the line in the 1931 French G.P.

Next owner to race the car was T. McCalla, who won one or more Irish road races, and was placed in others.

Can any reader confirm which, if any, of Bout's two Sunbeams was burnt-out at Brooklands, around 1931-32?

By the way, W. K. Johnson is from Canada and is, I think, in the R.A.F., not the Army.

Thanking the Editor for his great and successful efforts to keep MOTOR SPORT going,

I am, Yours etc.,

HAROLD PRATLEY.

S. Woodford, E.18.

[Our "1923-1924" error arose through insufficient deletion of an unwanted sentence.—Ed.]

* * *

Sir,

It has been suggested to me that, as a one-armed driver with sporting inclinations, my experiences may be of some interest, so I make no apologies for the ensuing effusion.

Before a potential disabled driver goes to the expense of buying a car, it is as well to have some idea of the likely success of such a venture, and though this to a large extent must necessarily rest with the individual, there are one or two points which may not immediately come to mind. It is not a mere question of the physical difficulties to be overcome, but goes a good deal deeper than that. There is what might be called the psychological aspect of the case to be considered, and, whilst making no claims to be anything of a psychologist, I think it is obvious that the success or otherwise of a one-armed driver depends primarily on that driver's mental make-up. Just as in the case of the fully-equipped driver, where it is fairly common knowledge that some people, however much experience they may acquire, will never be at home in a car by reason of their temperament, so with the one-armed driver. Whilst some people would, through no fault of their own, be completely incapacitated by their loss from ever driving at all, others, again with no conscious effort on their part, find that their difficulties are the purely physical ones engendered by their disability, and the purely mechanical ones engendered by car-design, all of which can be overcome without a great deal of trouble. It is not, I think, very difficult to discover if one has the nerve to continue driving, especially if one has been a driver previously, as one's mental state is very soon apparent on emerging from the seclusion of hospital, and even before that.

Having made up one's mind on this point, the next business is the acquiring of a car, and there are not really very many snags attached to this, apart from the initial difficulty, which is the extent to which one is tied down by the special fitments necessary, and I am not certain that my own case is representative on this point, of which more later. In my case I had a friend, who was also a driving-test examiner, and who gave me his advice on the fitments required. The first thing was a preselector gear-box, which rather narrowed down the field of selection, and as I had to have a sports car, which to my mind implied something open and preferably two-seated, this narrowed the field still further. Finally the choice lay between 1,100 c.c. Alta and 9-h.p. Riley "Imp," which were in production that year (1935), the "Imp" getting the decision on expense considerations.

Modifications to this motor were comparatively slight, and I found the works very helpful in carrying them out. As I was now left-handed, the gear lever quadrant had to be moved from the right to the left of the steering-column, and on top of this quadrant was mounted a Y-shaped bracket carrying the switch for the traffic indicators (extras which were mounted at the bottom of the windscreen pillars, though not interfering with the fold-flat screen) and the headlamp dipping switch. These I could reach comfortably with my fingers without removing my hand from the wheel. This question of removing my hand from the wheel became almost an obsession with the examiner, and was, I think, carried a little to excess. For instance, I had to have a horn button mounted on the offside door, which I could work with my knee, though this was later discarded in favour of one on one of the steering-wheel spokes. Also, on my pass certificate I found that the centrifugal clutch, fitted as standard in conjunction with the preselector box, was made one of the essentials necessary to my holding a driving licence, the idea being that I should not take my hand from the wheel to hold the car on the handbrake when starting off uphill. This displeased me and I very rarely used the clutch, preferring to risk damage by using the bottom gear brake band as a normal type clutch, added to which, after a little bit of tuning, the engine would never run slowly enough for the centrifugal clutch to act as such.

Having obtained a car and a driving licence, the next thing is to discover the snags attached to driving entirely one-handed. Probably as a result of getting used to the new conditions, coupled with the satisfaction of driving again, very little difference is noticed at first, once the controls have been mastered, and it is only after a considerable mileage has been covered over some regular route, with the average speed rising successively each time that route is covered, that it is realised that to start with one must, almost unconsciously, have been using a good deal of extra care. It is only after these initial stages have been completed, and when speeds are beginning to approach the normal that the pitfalls become apparent. Where a difference in technique becomes most obviously necessary is, as may be imagined, in cornering. To turn a corner away from the driving hand, in my case one to the right, the wheel has got to be pushed up, and there comes a time when, if speed is a little excessive, it is impossible to get one's hand past top dead centre, which is apt to be a little alarming. Corners in the opposite direction are comparatively simple, as the wheel is then being pulled down, but even here it is not all quite plain sailing, a little excess speed being again slightly disturbing, as skid correction becomes considerably more difficult one-handed. I mention this excess speed on corners as I think any

LETTERS FROM READERS —continued

driver, however careful, sooner or later finds himself being a little exuberant in this direction.

Following naturally on the subject of cornering comes the question of road-holding and a suitable steering-gear. As to the first, whilst I do not say that an out-and-out sports car is the only car for a one-armed driver, I do say that he will be well advised to have one which has at least sports parentage, as steering, road-holding and brakes will then have been developed by experimental, and not hit-and-miss methods. As for steering-gear, I consider it essential for a one-armed driver to have a car fitted with high-geared steering (the Riley's was 1¼ turns lock to lock) as, though low-geared steering may be lighter, high gearing cuts out any suggestion of winding, which it is quite impossible to do quickly one-handed. The hand can be kept in one position on the wheel all the time. High-geared steering is quite light at any reasonable speed, when its qualities are most needed, and at lower speeds, when quickness is not so important, lightness or otherwise does not matter so much. This lightness is considerably affected by shock-absorber adjustment and by attention to tyre-pressures, and I mention these points, obvious though they are, because they are of such importance to the one-armed "dicer." On the Riley the shock-absorbers, ordinary friction-type Hartfords, were, after experiment, kept very tight, in spite of the resultant necessity to split-pin as many nuts as possible, to the detriment of the body and shocker bracket. Tyre-pressures, after converse with a certain tyre representative, I found made a considerable difference to steering lightness if kept harder (2 lb. per sq. in. in the Riley's case) at the front than at the rear, and this, though dead against all instruction-book rules, seemed to produce no ill-effects. The very obvious device of keeping the steering-gear thoroughly greased and free I mention as being so very necessary, and yet so often overlooked, though not, I hope and trust, by MOTOR SPORT readers. This greasing question was the cause of my scrapping the beautiful (?) automatic lubrication system on the Riley, after it was discovered that practically no oil at all was reaching the steering-box; it was replaced by the messier, but more certain, grease nipple-grease gun system.

As for the ordinary run of maintenance, there is not a great deal that a one-armed driver cannot do himself, if he is prepared to spend a little extra time and patience on each job. Greasing, changing oil, etc., are all easily managed, and wheel-changing is by no means an impossible feat, though inclined to be a little prolonged, especially if the wheel hubs are a bit stiff on the splines; a spot of grease and fairly regular attention is well repaid. It is rather embarrassing for an enthusiastic sports car owner to have to stop some passing family saloon to ask for assistance in changing a wheel! Other jobs are quite easily done if one can key oneself up to the pitch of getting them started, particularly as, once started, they have to be completed before any more motoring can be done. Decarbonising, for instance, is quite a simple business if a friend is available for head-lifting and valve-removing. Heavier work than that is rather outside the range of what is possible, even with abundant equipment, a feature which is usually lacking in that impecunious state peculiar to such a large number of the sporting fraternity. For anything approaching a major overhaul, the services of a garage are necessary, with the accompanying disadvantages inherent in the somewhat impersonal methods of approach usually adopted by such establishments, and the likelihood of a large bill. Thus it behoves a disabled driver to take special care that all maintenance jobs, as well as items such as running in, are faithfully carried out, as a safety factor against having to have work done which cannot be personally guaranteed.

To return to special fitments, it will be seen that these limit the choice of car very considerably. I believe, though I am not certain, that, in the old days before the present system of driving-tests came into being, and the R.A.C. carried out any tests necessary, it was possible for anyone to get a licence for any type of car provided they could satisfy the examiner that they could handle that car safely. Apparently, judging by my own case, one cannot now even go through a test without having a car already modified to suit the examiner concerned. This brings up the subject of road safety as applied to disabled drivers generally. I imagine that in almost every case a driver will have had some experience prior to his taking to the road as a disabled driver, and I contend that that experience added to the increased sense of responsibility induced by driving as such, renders a disabled driver just as safe as any other on the road, and probably a good deal safer than some. The point at issue is this: I know, from a little illicit practising, that I can quite easily and confidently drive any car fitted with a central gear lever. Is there any way whereby I can obtain a licence to drive such a car?

I am, Yours etc.,
W. S. GIBSON.

Lancaster.

[We publish this letter for two reasons. In the first place, we admire the writer's refusal to give up motoring in spite of injury in a car-smash. Secondly, unpleasant thought though it may be, after our soldiers, sailors and airmen have won this war for us, there may be quite a number of would-be sports car owners who have lost a limb. If these comments help to keep them amongst us as active drivers, this letter performs a real service. A good rear-view mirror, and frequent consultation thereof, is something all drivers, disabled or otherwise, should find helpful in "incident-prevention."—Ed.]

* * *

Sir,

I had hardly left the boat from Heysham to Belfast with my H.R.G. when I was pounced upon by two very ardent Belfast enthusiasts, who told me it was the first H.R.G. they had seen.

We met again by arrangement, and I decided to blow my August rations on a spot of dicing. First of all, I was introduced to Irish enthusiasm in the form of these two lads' motors. One, a "2.3" Bugatti in pieces preparatory to fitting a 2-litre Sunbeam engine in it—the Bugatti engine being a bit perforated due to a hard season's dicing in Eire by its owner, Stanley Martin. The other enthusiast, Noel Hillis, owned a 3-litre Talbot with shortened chassis and a very fine racing body attached, the whole outfit reminding me rather of an Alfa.

Later on we took the H.R.G. up Cragantlet, where, I am afraid, two years' pent-up hill-climb urge, assisted by bald Dunlops and an out-of-practice helmsman, put her in the bank, buckling a wheel.

Continued on page 437

READERS' SALES AND WANTS

To meet the repeated demands for something on the lines of the old Spare Parts Announcements, we have instituted a system of inexpensive advertisements. Each announcement must be limited to **twelve** words, plus the advertiser's sufficient postal address, and the charge will be 1s. 6d. per announcement, payable at time of posting. The system will be governed by the following rules:—

(1) Each announcement to cost 1s. 6d. and be limited to twelve words and the advertiser's address. Box Numbers cannot be used.

(2) The publishers accept no responsibility for loss of advertisements, non-publication, late publication, or incorrect wording, but will endeavour to insert announcements in the next issue, if posted within eight days of the publication of the previous issue.

(3) No advertiser may submit more than **two** announcements per issue and each must apply to a separate article. Only spares for sale, spares or cars wanted, or **really cheap** cars for sale, should be announced. Prices should normally be quoted.

(4) The proprietors of MOTOR SPORT offer this scheme for the mutual benefit of enthusiasts and can take no responsibility of any sort whatsoever. All transactions must be made to the published addresses and no correspondence can be entered into in respect of announcements, transactions or any other matters arising from the scheme.

(5) Announcements should be sent within eight days of the publication of the current issue of MOTOR SPORT, accompanied by stamps or crossed postal orders to the required amount. Cheques or coin cannot be accepted.

WANTED

ARNOTT or Centric blower for 1½-litre with or without fittings. A. Train, Templemead, Sharnbrook, Beds.

FOR SALE

MORGAN M-Chassis super Sports, running order, quantity spares, £20. Close, 122, Chester Road South, Kidderminster.

Spares Section,
MOTOR SPORT,
21, CITY ROAD,
LONDON, E.C.1

PERSONALITIES IN ENGLAND

AN ARTICLE WHICH WILL INTEREST OTHER OBSERVERS AND PERHAPS AMUSE THE "VICTIMS"

By

H.R.H. Prince Chula of Thailand

[Author of "Wheels at Speed," "Road Racing, 1936," "Road Star Hat Trick," and "Dick Seaman—Racing Motorist."]

THE first race which I ever saw was the B.R.D.C. "500" run at Brooklands in the autumn of 1929. From that time until I became closely associated with the sport, I saw quite a lot of racing, yet I was a distant spectator, and never at any time came into close contact with any of the drivers. Hence the great stars of earlier years such as Barnato, Birkin, Kidston, Kaye Don, Cobb, or Dunfee, were personages seen only in their remote glory.

The first time that I really came into close contact with a racing motorist was in 1934, when my cousin "Bira" and I went over to Belfast to see the Ulster Tourist Trophy. We had gone over in a new Bentley, the 3½-litre type then recently produced by Rolls-Royce. This "silent sports car" had only made its appearance the previous October and there were so far few of them on the road. It so happened then that one of them was going to be raced for the first time—in the hands of E. R. Hall. It occurred to us that it would be great fun if we could go and see the car at close quarters, so we asked the hotel porter to ring up Mr. Hall. After giving our names, he was to say that we ourselves had a new Bentley, so we would deeply appreciate the favour of being allowed to look at Hall's car in its garage. We were delighted when the hall porter came back with the reply that Mr. Hall would be pleased to receive us at the garage that very afternoon.

When we reached the garage, which was some way outside Belfast, and were admitted behind its huge doors, we were met by a short and heavily-built man who might have looked older than his age owing to his scanty hair, but for his cheerful and chubby face. This was Eddie Hall, the only man who had ever raced the new Bentley, who introduced us to his wife, who was also his pit manager.

Hall's prowess as a driver and his fine record are still well known to all followers of the Sport and need no repetition. During the time I saw him in Ulster I found him to be a man who, despite being friendly and kind, yet seemed to talk very much in monosyllables. When "Bira" asked him about what lap he had intended to come in to refill, his reply was something like "Dunno." When he was asked after the 1934 race why he had gone more slowly towards the end, he said "Rain." After he had finished as a close second to Charlie Dodson, and was asked to do a complimentary lap, Hall shook his head, saying "Can't." When he was asked why, he pointed to the bonnet and exclaimed, "Boiling," then again "Bird"—the car had hit a bird, which was stuck to the radiator, causing the engine to heat up abnormally. When racing, Eddie Hall was a symphony in beige. He wore a beige windcap, golf jacket, plus fours and stockings, all of the same colour. As he tore past the pits he would stick out his arm in a way which has since become associated with a somewhat unpopular form of salute. The Bentley which he used on the road had a green open body almost like the racing-machine with, I was told, an alternative saloon body. Hall used to make a "K3"-type M.G. Magnette go round a circuit almost faster than anybody else. When he retired British motor-racing undoubtedly lost one of its most able and colourful personalities.

When "Bira" started to take up racing in March 1935 on a standard Riley "Imp," then graduating to an E.R.A. via an M.G. Magnette, I also became associated with the sport, as his manager. For the first few months we raced without getting to know any of the other drivers, except newcomers and "rabbits" like ourselves. This was due, I think, to the fact that we were both rather timid, and our shyness shielded itself behind a wall of reserve. We still looked upon the great ones with awe and reverence, and I can well remember "Bira" once returning to the paddock at Donington, and being tremendously impressed because his Riley had been overtaken along the straight by Kenneth Evans's M.G. "Q"-type, which went by at "an incredible speed"!

Oddly enough, one of the first amongst the great ones whom I got to know was one of the most famous, and one whom I had admired for so long from afar, namely, Raymond Mays. It was in June 1935 that I had ordered a 1½-litre E.R.A., which was to be my twenty-first birthday present to "Bira" on July 15th. We went up to Mays's house at Bourne to see the car in the course of construction, as the E.R.A. "works" were then in the same grounds. I was to visit that house many times later and even to stay there. I found it one of the most charming and comfortable of houses, and certainly with the largest and best-equipped bathroom I have ever seen. In the days when "Bira" had never won a single trophy of any kind, the glass cases which were filled to the brim with cups of all sizes and kinds were a revelation. I was, however, surprised to find that not all the cups were for motoring events, for just a few were won in dancing competitions. Ray had a passion for blue. His shirt was almost invariably blue, while his ties were also plain blue, but in different shades. He used to change his shirt several times a day and always looked clean and neat in consequence. He puffed almost incessantly at cigarettes and nowadays with the shortage I think of him with much sympathy in that respect. Ray's conversation was always gay and sparkling, and would make one roar with laughter even when he was talking of gloomy disappointment or desperate anxiety, for somehow his subconscious humour would peep out like a rainbow through the clouds. I have not seen him since the war, although he has promised to come and visit me here in Cornwall. I think his exhilarating company is one of the things I miss most in my long exile from motor-racing. How good it would be to hear him say "fantastic," which to Ray everything seemed to have been. How good it will be when we can see him in an E.R.A. again, sitting bolt upright with his shiny blue helmet gleaming in the sun. No one ever looked so "right" in an E.R.A. as Ray did.

Another great driver whom I got to know about the same time, alas, I can never meet again. We used during that first year to have our car prepared at Messrs. Thomson & Taylor's at Brooklands. It was in their workshop that we were introduced to him as he stood beside his white E.R.A. It was his magnificent win in the last Mannin Beg which inspired us to acquire an E.R.A. and it was at his suggestion that we went to Dieppe with our own E.R.A. By now most of you will probably know that I am speaking of the late Pat Fairfield. Despite the fact that he had many successes as an independent, Pat was a born "works" driver, and also had many successes in the official E.R.A. team. He was a most loyal member of a team and was willing to accept and carry out team orders without argument or envy. I do not know whether any arrangements were made between him and Raymond Mays, but I definitely remember Pat telling me at Albi in 1936, when the firm considered that it would be more popular, as the race was in France, if the French member of their team, Marcel Lehoux, should win, that he was told not to challenge. The order was accepted without a murmur, although up till then Pat had not won a single race that season, and it was July already. Pat was genuinely fond of "Bira," and in the Le Mans race of 1937 where he so tragically lost his life he had hoped to race with "Bira" as his partner, and was even prepared to get a Delahaye for it. "Bira," however, was engaged on a big programme of 1,500 c.c. racing and the race at Milan clashed in dates with Le Mans. I still have a letter from Pat in which he said he would rather drive with "Bira" than anyone else. He and Bira had quite a few racing scraps in their career, the most memorable perhaps being in the Grand Prix de Picardie in 1936, and they would talk of it afterwards, discussing almost every lap and corner. I well remember after that race telling Pat that "Bira" was going to drive an Austin in the following Nuffield Trophy and Pat expressing mock relief. I pointed out that there were other E.R.A.s when Pat in his quiet voice said, "This is the only one I'm afraid of." One of the most prized trophies in our collection is a little silver pencil with the inscription, "To Bira from Pat, Monaco 1936"; his charming way of commemorating "Bira's" first win.

Of the other E.R.A. of 1935, the late Dick Seaman, I find it difficult at present to give a brief sketch, after so recently publishing his full-length biography. I

PERSONALITIES IN ENGLAND—continued

have, incidentally, got into some hot water over this, as some wanted more of motor-racing, while others would like to have had more of his private life—then others again did not like the picture I painted of him. My aim was to give a portrait of both driver and man, a man of flesh and blood and not a bronze statue, yet all this within my limited canvas, namely a book with a limited number of pages. Like all portraitists, no matter in what medium, I was prepared in advance for censure from those who knew him, for each, naturally, in his own mind's eye, had a far better picture of Dick than I could ever hope to equal. To "Bira" and myself Dick Seaman was always charming, kind, and friendly, with his pleasant slow way of speaking. I would never under any circumstances say that Dick was conceited, yet he was nevertheless one of those rare and refreshing beings who seemed to have known his own value correctly. He would never waste time with unnecessary modest apologies, yet he would recognise and proclaim his own inferiority or deficiency with merciless accuracy. His determination was phenomenal, and once he had set his mind on an object nothing would ever deter him from following his set course. It was this wonderful determination, as much or more than his tremendous skill in driving and his gift of seeing to the least details, which was responsible for the attainment of his great ambition, namely to be a member of the best Grand Prix team of the time. It was also at Dieppe in 1935 that I met the President of the B.R.D.C. In those days Earl Howe was still running the Delage, which was destined to pass gloriously through Seaman's hands, but disastrously through mine. He was standing in the garage, looking at our new blue E.R.A., when Raymond Mays introduced us. How could a race meeting be complete without his fine figure in a dark blue suit with white stripes, a red carnation in his buttonhole, and a cap worn at a rakish angle? It was Earl Howe who introduced the enormous golf umbrella painted in his own racing colours, which many of us were to copy. Many men have been fond of certain favourite makes of car, but Earl Howe's love of Bugattis surpassed anything I have ever seen in that line. When he spoke of a Bugatti, it was with an enraptured voice.

He was so kind and accessible to the youngest and least important amongst us. No one would ever go to him for advice without receiving his best considered reply. His rich store of racing reminiscences was a source of delight, especially on those many evenings spent in some rather quiet towns on the Continent, where the only attraction was the racing on the coming Sunday.

Cyril Paul was one of the more "veteran" drivers whom I knew well. This was largely through the fact that he was a business associate of Pat Fairfield. Paul, I always thought, was an exceptionally fine driver with immense experience, yet he was so modest and retiring about the whole thing. Motor-racing to him was a business and he took it most seriously, yet it did not seem to prevent him from enjoying it to the full. Nothing ever seemed to ruffle Paul, and win or lose, he was equally imperturbable.

Through Fairfield and Paul we got to know Arthur Dobson, for he too was associated with them for a while. It was at Limerick, in August 1936, that I had the opportunity to get to know him well. I realised then how different Arthur was from many other drivers. Naturally, like most people, Arthur wanted to do well and to win if possible. Where he was so different was that he would not enjoy the race at all unless there was strong opposition, whereas many other people would sometimes be definitely relieved. I have seen Arthur quite crestfallen and complaining about a race being dull because his strongest opponent had crashed or "blown up." This was quite genuine and not a bit "put on." The reason was that Arthur loved the actual scrap first, and was interested in results as a secondary consideration.

H. G. Dobbs we met at Donington in the days when he was its most luminous star with his white, off-set Riley, before there were too many E.R.A.s for him. Dobbs was a perfect person to have in a team, for he was calm and collected even in moments of severe crisis. I remember with great pleasure the time when he drove my Delahaye in turn with "Bira" in the Twelve Hour Sports Car Race at Donington in 1937.

Dr. J. D. Benjafield I knew through "Bira," who got to know him well after they had accidentally met and travelled together to Paris in the "Golden Arrow" express. In those years "Bira" and I used to organise, on Sunday evenings, miniature Grand Prix races along the corridors of our flat. The cars used were without clockwork and had to be pushed for long distances, which I maintain was more skilful than just racing clockwork models along a straight. Dr. Benjafield used to come and race with us Sunday after Sunday, and took it all as seriously as a real race. His great triumph was when his "Mercedes-Benz" won our "Grand Prix de Monaco," for which Bira had devised a circuit very much like the real one, complete with a tunnel and the hill towards the "casino."

Fane was at school with me, but owing to his being a few years younger I did not know him then. I only got to know him well when "Bira" was driving in the B.M.W. team in 1937, and we all stayed together in a farmhouse outside Belfast. Fane was by far the gayest of the party. His fondness for different kinds of headgear is well known and he used to gratify his taste by wearing a woollen tea-cosy on his head as he wandered round the house in a dressing-gown early in the morning.

Charlie Martin was the reverse of Fane for "Bira," because although they were at school together, Martin was older and they never came into contact there. Had he not kept on for so long driving a big car, which was out-handicapped in England and outpaced on the Continent, Charlie, who is one of the best drivers, would have added many more victories to his list. Like Arthur Dobson, Charlie seemed quite undisturbed by the position he secured in a race so long as he had had a good drive. He and Dobson, amongst the more famous, seemed to me to be more indifferent to results than the others, for racing to them was just a sport and they were true amateurs. Dick Seaman, Raymond Mays, Pat Fairfield, or "Bira," on the other hand, seemed to look upon motor racing more as a career, and although they naturally accepted defeat philosophically as sportsmen, a first place was nevertheless of extreme importance to them.

Kenneth Evans was another whom I remember for his charming personality and his readiness to help if one was in any difficulty. Johnny Wakefield, who joined the fray a year or two later than us, was always full of fun, and a gay companion at continental races. One year, at Peronne in France, mosquitoes were particularly virulent in the bedrooms. Johnny was a gorgeous sight as he dashed about from room to room with an enormous spray, covering everything with "Flit." One had only to see his enormous grin to forget one's troubles, even when in the depth of gloom. Reggie Tongue, more serious perhaps, was to be noted for his perfect manners, and he could cope with a long run of bad luck almost better than anybody.

Those were happy years, 1935 to 1939, and I remember them with the deepest gratitude, for they accepted us both as being of themselves, and come what may, their glorious memories will remain with me always.

AERONAUTICAL COMPARISONS WITH THE V12 LAGONDA

These days flying is on everyone's minds and not unnaturally a friend who was out with us in a V12 Lagonda recently thought up some aeronautical comparisons. Fuel rationing limited our test of this great car to under 125 miles, whereas a certain aeroplane did 35,000 miles by way of running-in before having test-figures taken. Incidentally, it completed this mileage in six weeks, an average of 34½ m.p.h. for twenty-four hours a day, inclusive of being grounded for ten days on account of an untoward incident. Its carrying capacity being somewhat similar to that of the big Lagonda saloon, it is amusing to note that the aeroplane's rating, R.A.C., would be 155 h.p., against the Lagonda's 42. The loaded weight of both is within 1,000 lb., the car turning the scales at 5,500 lb., the aeroplane at 6,500 lb. Maximum r.p.m. would be 5,500 and 2,500 respectively, and maximum b.h.p. 180 and 850 respectively. The Lagonda gives about 11 m.p.g., the aeroplane 5½.

BUGATTI OWNERS' CLUB

The annual general meeting was held quietly at the R.A.C. on August 15th. Amongst those present were Col. Giles, Col. Sorel, Eric Giles, Walsham and Clutton. Col. Giles was expecting to go overseas shortly, so K. W. Bear was elected vice-chairman, while Eric Giles was re-elected hon. treasurer and secretary and Cecil Clutton was co-opted to the distinguished council. Prescott has been successfully let, which appreciably eases the Club's financial responsibilities.

LETTERS FROM READERS—continued from page 434

Even so, we put on the spare and had a dice (3 up) round the Ards circuit, in spite of frequent barricades.

We then went to inspect an aged "2.3" Bugatti and looked rather pityingly upon her until one of us, idly sitting in the cockpit, scraped clean a plaque labelled "R. J. B. Seaman."

We then went home and talked cars long into the night, with frequent reference to back numbers of MOTOR SPORT.

Incidentally, anybody so unwise as to mention a certain 96 m.p.h. M.G. had to buy the beer. . . .

All the best for your excellent journal.

I am, Yours etc.,

PETER J. N. EVE.

Walton-on-Thames.

* * *

Sir,

I'm sending in a correction on your May 1941 issue, but first of all a word of congratulation and admiration for the way your paper is getting through to this country. I haven't missed an issue. As to the correction: It's a bigger matter than is at first apparent; on the Editorial page you mentioned past Indianapolis winners. You stated that Maserati won it *once*; now in this country there's a small but rabid group of super race fanatics to whom a foreign sports car or racing car is an almost sacred piece of machinery. We aren't unpatriotic, we simply feel that the finest type of competition comes from a "foreign" victory at Indianapolis every now and then. They've been all too few until three years ago. To us, the ideal situation would be a team of American cars going to Europe and one of them winning a major race.

I don't care about getting any credit for pointing this out; but I *would* like the fact that Maserati won not only *twice*, but did what no other car has ever done before, *the same car won two in a row* (1939 and 1940), Shaw driving both times.

In this country we think this is rather epic; for 19 long years not a single European got as much as second place, then Maserati made a *doubly* good thing of it. So I hope you will be able to make this a *prominent*, easy-to-see correction.

Again let me congratulate you on a splendid job under trying circumstances.

I am, Yours etc.,

DILLWYN PARRISH.

Greenville,
S. Carolina.

[Apologies to the House of Maserati, if it still exists! And congratulations to our Royal Navy and the U.S. Navy. Best wishes, U.S.A.—Ed.]

FURTHER IMPRESSIONS OF THE V12 LAGONDA—continued from page 429

the war is over, perhaps in an open, short-chassis version. When peace returns there will be no need to seek a market for a car which, in 11 ft. wheelbase form with most luxurious, closed coachwork goes up to 100 m.p.h. under reasonable conditions, performs generally like a sports car and yet functions with an entire lack of effort. After which, to conclude with conventional superlatives would be redundant. We will content ourselves by saying that we do not consider the V12 Lagonda an expensive car; the pre-war price of the model tested was £1,600.

TECHNICALITIES

W. O. Bentley designed the V12 and it appeared first at Olympia in 1936, rather hastily presented, and went into production in late 1937. He set out to embrace seven ideals in the one car and has succeeded admirably. The engine is a twelve-cylinder 60° "V" of 75 × 84.5 m.m. (4,480 c.c.), commanding an R.A.C. rating of 41.8 h.p. It develops 180 b.h.p. at 5,500 r.p.m., and over 220 b.h.p. in Le Mans form. A camshaft on each head operates two o.h. valves per cylinder, the camshafts being driven by gears and chain from the crankshaft. The latter runs in four bearings and is balance-weighted. Light alloy connecting-rods run direct on the nitro-hardened journals without the interposition of bearing-metal. Cooling is by pump, with thermostatic control and the S.U. carburetters are exhaust hot spotted. Blocks and heads are nickel iron castings, the blocks being staggered to permit two connecting-rods per journal and are in one with the crankcase. The camshafts are castings and actuate the vertical valves through simple, direct-acting tappets. The light alloy pistons have floating gudgeon-pins. Lubrication is by two pumps, one of which feeds the main bearings and the other the valve-gear and minor engine-bearings, while the baffles in the three-gallon sump open and close automatically in resisting oil-surge. The drive passes through a dry, single-plate Borg and Beck clutch, having an outboard bearing behind the withdrawal mechanism, to a four-speed, separate gear-box with centre bearings held in iron castings. The box is lubricated from a plunger-pump and has an aluminium casing. The gear ratios are 4.73, 6.3, 9.46 and 16.4 to 1. There is synchro-mesh on second, third and top ratios. Transmission is by open shaft with needle-bearing universal joints enclosed at both ends in oil-tight casings, to a semi-floating, hypoid-gear rear axle. Front independent suspension is by transverse links controlled by torsion bars and damped by hydraulic shock-absorbers. Rear suspension is by long half-elliptic leaf-springs outside the side-members, hydraulically clamped under driver-control; a torsional anti-roll rod is also fitted. The frame has 8 in. deep box-section side-members. The fuel tank holds 20 gallons, giving a range of approximately 220 miles. The 12-volt electrical system has a 90 amp. hour capacity. Dunlop 3.62 in. by 18 in. knock-off hub wire wheels are used. At 100 m.p.h. the engine speed in the long or medium wheelbase chassis is 5,000 r.p.m., or well within the safe limit.

Braking is Lockheed hydraulic with 16-in. drums and twin master cylinders. The dimensions of the car tested were: Overall length: 16 ft. 8 in.; wheelbase: 11 ft.; track: 5 ft.; ground-clearance: 7½ in. The short chassis has a wheelbase of 10 ft. 4 in. and a top gear ratio of 4.45 to 1; and the long chassis a wheelbase of 11 ft. 6 in., the weight of the former in chassis form being 27 cwt. The makers are Lagonda, Ltd., Staines, Middlesex.

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THAT HAVE APPEARED IN PAST ISSUES

If you do not see the road test that you require write us a letter. We may have it in stock, but not published below.

Make of Car	Issue
A.B.C. 11 h.p. 2-cyl., 2-seater	Feb. 1926
A.C. 2-litre, short-chassis, 15.7 h.p. 2-seater	July 1936
A.C. 2-litre, 16.40 h.p., 3-seater	Oct. 1927
A.C. 2-litre, 16.66 h.p., 2-seater	March 1926
A.C. 2-litre, 16.66 h.p., 4-seater	June 1934
A.C. "Ace" 16/80 h.p.	July 1937
Alfa-Romeo, 1½-litre supercharged 6-cyl. Charles 2-seater (1929)	March 1934
Alfa-Romeo 1½-litre supercharged 8-cyl. "Zagato" 2-seater (1932)	July 1934
Alfa-Romeo 2.3-litre supercharged 8-cyl. "Zagato" 2-seater (1933)	Aug. 1936
Alfa-Romeo 2.3-litre supercharged 8-cyl. 4-seater (1931)	Aug. 1932
Alvis 11.9 h.p., 4-cyl., "Firefly" saloon	Feb. 1933
Alvis 4-cyl., 12.60 h.p., 2-seater	July 1931
Alvis 6-cyl., "Silver Eagle" 4-seater coupe (1929)	Aug. 1931
Alvis 6-cyl., "Silver Eagle" 4-seater	June 1930
Alvis 3½-litre saloon	Feb. 1936
Alvis Speed Twenty Vanden Plas saloon	Feb. 1935
Alvis Speed Twenty Charlesworth saloon	Feb. 1934
Alvis Speed Twenty 4-seater	June 1932
Alvis 12/70 4-door saloon	July 1938
Ansaldo 2-litre, 4-cyl., o.h.c., 4-str.	Sept. 1924
Armstrong-Siddeley 20 h.p., 6-cyl. 4-seater	July 1933
Aston-Martin Mark II, 11.9 h.p., 2-4-seater	Jan. 1935
Aston-Martin Ulster 11.9 h.p., T.T. 2-seater	Oct. 1935
Aston-Martin Le Mans 11.9 h.p., 2-4-seater	June 1933
Aston-Martin International 11.9 h.p., 4-seater	Aug. 1932
Aston-Martin T.T., 11.9 h.p., racing 2-seater	Dec. 1931
Aston-Martin 11.9 h.p., 2-seater	Jan. 1930
Aston-Martin 2-litre Speed model	May 1938
Aston-Martin 1935 Ulster	Aug. 1937
Auburn 30 h.p., 8-cyl., supercharged 2-seater	June 1935
Austin Seven Boyd Carpenter 2-str.	Sept. 1930
Austin Seven "65" 2-seater	Jan. 1934
BENTLEY 3½-litre, 6-cyl., Vanden Plas, 4-seater	Nov. 1933
Bentley 4½-litre, 6-cyl., Park Ward saloon	June 1936
Bentley 6½-litre, 6-cyl., long-chassis saloon (1928)	Dec. 1936
Bentley 4½-litre Vanden Plas coupe	Aug. 1938
Bentley 8-litre sports 2-seater	April 1938
Bugatti 3.3-litre 8-cyl., Type 57 saloon	May 1934
Bugatti 2.3-litre 8-cyl., Type 55, supercharged, 2-seater	July 1932
Bugatti 2.3-litre, 8-cyl., Type 43, supercharged 4-seater (1930)	Dec 1932
Bugatti 2 3-litre 8-cyl., Type 43, supercharged 4-seater	May 1930
Bugatti 3-litre, 8-cyl., Type 44, saloon	July 1928
CITROEN, Twelve f.w.d. saloon	July 1938
Crossley 20/70 h.p., 4-cyl., s.v. 4-str.	Nov. 1925
Crossley Ten. 1½-litre "Regis" saloon	Jan. 1936
Crossley Ten, 1,122 c.c. 4-seater	April 1932
Crouch Anzani 12.30 h.p., 2-seater	Aug. 1924
DARRACQ 12.32 h.p., Weymann saloon	Sept. 1924
Delage 14 h.p., 2-litre, 2-3-seater	June 1927
Delage 8-cyl., sports saloon	April 1930
Delage D.8 120, drophead coupe	May 1938
Delahaye 3.5-litre "Coupe des Alps" drophead coupe	Aug. 1936
Delahaye 3½-litre drophead coupe	Dec. 1937
D.K.W. "Special" saloon	Feb. 1938
ESSEX Terraplane 8-cyl. 4-seater	Sept. 1935
Excelsior 5½-litre, 6-cyl., super-sports test chassis	Sept. 1927
FIAT 20.70 h.p., 6-cyl., 2-4-seater	April 1933
Fiat "Balilla" saloon	May 1934
Fiat "Ardita" 17 h.p., 4-cyl., saloon	Feb. 1934
Fiat "Balilla" 10 h.p., 2-seater	Jan. 1935
Fiat 6 h.p., Type 500, coupe	March 1937
Frazer-Nash 6-cyl., 1½-litre (Blackburn) 2-seater	July 1933
Frazer-Nash 4-cyl., 1½-litre T.T. Replica push-rod o.h.v. 2-3-str.	Nov. 1931
INVICTA 4½-litre low chassis, 4-str.	March 1931
Invicta 4½-litre Weymann saloon	June 1929
Invicta 4½-litre saloon	Dec. 1929
Isotta-Fraschini 45 h.p., 4-seater	Oct. 1926
LAGONDA 2-litre, 4-cyl., twin o.h.c. 4-seater	Jan.-Feb. 1928
Lagonda 2-litre, 4-cyl., twin o.h.c. supercharged 4-seater	Oct. 1930
Lagonda 4½-litre, 4-seater	May 1936
Lagonda 4½-litre Rapide 4-seater	May 1935
Lagonda 4½-litre, 4-seater	Jan. 1934
Lagonda Rapier 10 h.p., 4-seater	Sept. 1934
Lagonda 16.80 h.p., 6-cyl., 4-seater	Jan. 1933
Lagonda 3-litre, 6-cyl., 4-seater	March 1932
Lagonda 2-litre, 4-cyl., twin o.h.c., 4-seater (1928)	March 1931
Lancia Aprilia, Type 238, saloon	June 1938
Lea-Francis 1½-litre supercharged T.T. 2-seater (1929)	June 1934
Lea-Francis 1½-litre supercharged special T.T. 2-seater	Sept. 1933
Lea-Francis 1½-litre supercharged "Hyper" 4-seater	Aug. 1930
Lea-Francis, 14 h.p., 6-light saloon	Dec. 1938
Leyland Eight (1929), 2-seater	Feb. 1938
MERCEDES-BENZ Type 540K, 5.4-litre, 8-cyl., supercharged, 2-str.	April 1937
Mercedes-Benz Type 500, 5-litre, 8-cyl., supercharged, 2-seater	Nov. 1934
Mercedes-Benz 12.40 h.p., supercharged 2-seater	June 1925
Mercedes-Benz 36.220 h.p. supercharged, 2-4-seater	April 1928
Mercedes-Benz 33.180 h.p., supercharged, 4-seater	Aug. 1927
Mercedes-Benz 2.3-litre, saloon	April 1938
M.G., 6-cyl., Mark I, 4-seater	May 1931
M.G. Magna, "L" 2-seater	Nov. 1933
M.G. Midget "P" 2-seater	Aug. 1934
M.G. Midget "J3" supercharged, 2-seater	May 1933
M.G. Six Mark I, saloon	Aug. 1930
M.G. Midget Double-Twelve racing 2-seater	June 1930 & Aug. 1930
M.G. Midget "J1" 850 c.c. 2-str.	Sept. 1932
M.G. Magnette "N" 4-seater	Feb. 1935
M.G. Midget "PB" 2-seater	April 1936
M.G. 14/40 4-cyl., 3-speed, 4-seater	Oct. 1925
M.G. Midget "T" 2-seater	Jan. 1937
M.G. 14/40 h.p., 4-cyl., super-sports, 2-seater	May 1927
O.M. 6-cyl., 2-litre, 4-seater	Oct.-Nov. 1928
PACKARD V12-cyl. 57 h.p. coupe	Feb. 1934
Peugeot "201" 4-cyl., 1 122 c.c. saloon	Sept. 1931
RAILTON Terraplane 4-seater	Oct. 1934
Railton Light Sports tourer	Dec. 1935
Railton Cobham 28.8 h.p. saloon	Sept. 1938
Riley Nine "Monaco-Special," two-carb. saloon	March 1931
Riley Nine, 4-seater	June 1931
Riley 16 h.p., Big-four Kestrel saloon	June 1938
SINGER 1½-litre, 6-cyl., Le Mans 2-seater	March 1935
Singer Nine, 4-seater	March 1933
Squire 1½-litre, 4-cyl., 2-seater	Aug. 1935
S.S. I special-bodied 2-seater (1933)	Feb. 1934
S.S. I coupe	June 1933
Steyr Type XII, 14.35 h.p., Weymann saloon	Aug.-Sept. 1928
Stutz "Black Hawk" supercharged 4-seater	Jan. 1930
Stutz 5-litre, 8-cyl., 4-seater	Dec. 1927
Sunbeam 3-litre 6-cyl., (twin o.h.c.) fabric saloon	Nov. 1927
Sunbeam 6-cyl., 21 h.p., (push-rod) Speed Six saloon	Dec. 1933
TALBOT "90" Brooklands-bodied 2-4-seater	April 1931
Talbot "105" sports saloon	April 1934
Talbot 3½-litre saloon	March 1936
Talbot Ten "Rally" 4-str.	Oct.-Nov. 1936
Talbot "105" Vanden Plas 4-str.	Nov. 1932
Talbot "90" 4-seater	Nov. 1930
Talbot Ten sports coupe	June 1938
Tatra 4-cyl., 1,154 c.c., coupe	Dec. 1932
Terraplane, 8-cyl. 29 h.p., 4-str.	July 1935
Triumph 2-litre "Vitesse Six" saloon	April 1935
Triumph 10 h.p. "Gloria Southern Cross" 2-seater	June 1935
Triumph 10 h.p. "Gloria" saloon	Jan. 1934
Triumph Nine "Southern Cross" 4-seater	June 1932
Triumph Eight "Gnat" 2-seater	Aug. 1931
Triumph Eight, supercharged 2-str.	Dec. 1929
Triumph Dolomite 14/60 saloon	June 1937
VALE-SPECIAL 832 c.c. 2-seater	Aug. 1933
Vauxhall 30/98 O.E. 4-seater (1925)	Jan. 1936
Vauxhall 30/98 O.E. 4-seater (1924)	Dec. 1930
Vauxhall 20/60 h.p. "Hurlingham" 2-seater	Feb. 1930
Vauxhall 17 h.p., 6-cyl., "Cadet" saloon	Sept. 1931
Vauxhall 14 h.p. "Stratford" 4-str.	Sept. 1933
WINDSOR 4-cyl., 11 h.p., "Special" 2-3-seater	Nov. 1926
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