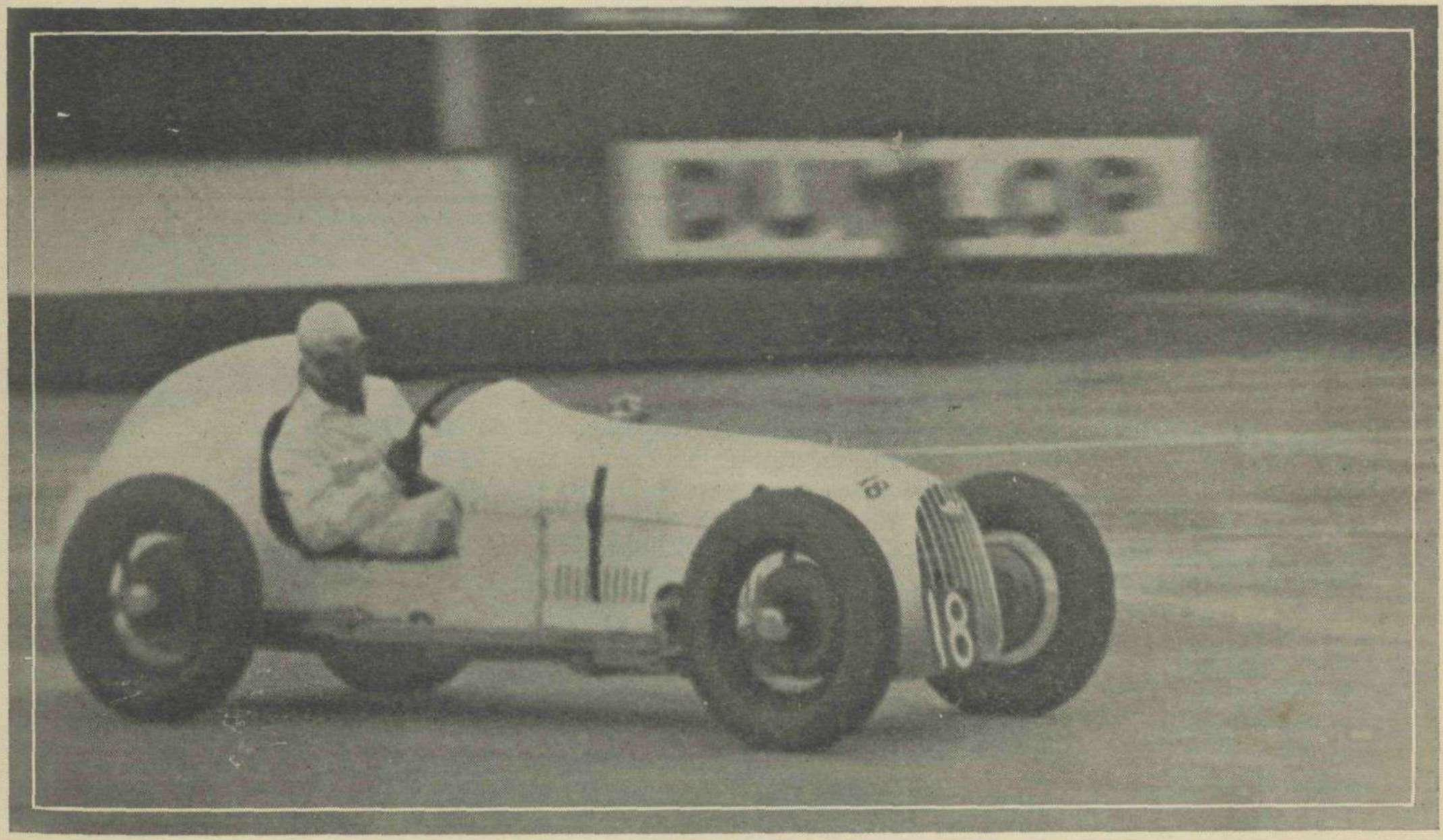
Vol. XVIII No. 4. **ON THE ROAD WITH A 5-LITRE BUGATTI** *April, 1942*

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PESSIMISM UNDER CONTROL

IN the last Editorial which graced this page we pointed to the need to plan now for the future of the Sport and expressed the hope that after we have won the war motoring in all its forms might be more favourably viewed in high places and influential circles than it has been up to the present in this country. There is no harm in spending some of the limited time during which we relax from our war labours in discussing and planning the shape of things to come in our world, nor is there anything unpatriotic in occasionally coming together that old friendships and enthusiasms are not allowed to die out. However, more than that we must not attempt until our endeavours in other directions have resulted in Victory. Then we should act quickly, every one of us, to secure better motoring conditions. Writing protesting letters to the daily Press and addressing one's local M.P. may seem petty, but if results can thereby be achieved let us swallow any false pride we may possess in this direction. Lower taxation rates, fairer motoring legislation and better roads have been long overdue. A very big proportion of persons in this country holds its private motoring in exceedingly high esteem, as witness the numbers amongst one's friends and business acquaintances who intend to re-license their cars for the April–June quarter, although only permitted petrol for some 80 miles' driving in each month. After the war, when so many new conditions will be pleaded, let us do all we can to secure a reasonable motoring state of affairs.

We have said that the Sport has negligible status and recognition outside technical circles, but there were pointers that this need not always be the case. The daily Press spent lots of money in sending special reporters to distant places for the purpose of reporting even quite small Continental races and took elaborate steps to ensure that the stories came through. The weekly motoring Press did likewise. Shelsley Walsh meetings were regularly put on the air by the B.B.C., as were the I.O.M. Motor-Cycle Races, and Brooklands, Donington and other venues have been the subject of proper broadcast commentaries. The Society papers began to give occasional motor-racing supplements, and a "Day at Brooklands" featured in the more popular *Picture Post*. When a real International Grand Prix was held at Donington Park a quite respectable attendance resulted, and on the Continent the spectator-interest amongst ordinary citizens has long been very evident. Let us then do all we can, to the upper limit of our abilities, to swing the balance over and let the Sport and science of competition motoring take its rightful place in the twentieth century scheme of things after the war. The Government must not be allowed to forget the part the high-speed i.c. engine plays in modern warfare.

ALFA-ROMEO WINS SECOND BUENOS AIRES GRAND PRIX

Jose Canziani on a V12 3.8-litre car averages 67 m.p.h. Field includes six Alfa-Romeos and two Maseratis

THE second Grand Prix of Buenos Aires was run off in January over a 1½-mile circuit on the riverside of the town of Argentine, embracing wide, good-surfaced avenues. Training went on for a week beforehand and on the day of the race. Three 15-lap heats and two other events were held the day before the big race, which was run on a simple handicap, over 40 laps or 60 miles. Also on the day of the Grand Prix, before this race, a 25-lap final of the previous day's heats, but for the "Specials" only, was contested. The practice period was rendered very entertaining as it was divided into classes—cars up to 3½-litres, cars up to 3.7-litres and cars over 3.7-litres. In the first category, Barbalarga was fastest in 1 min. 24.2 secs., handling a converted Model "T" Ford. Similar cars driven by Ramonda and Pian were the runners-up. In the next division, Martini's Mercury managed 1 min. 25 secs., and Puopolo's Graham and Rossi's Ford V8 were next fastest. Of the big stuff, Mario Chiozza, with a Mercury, said to be a two-engined car, set the record lap at 1 min. 22 secs., or 66 m.p.h., and Pessanti's Chrysler did 1 min. 24.6 secs., while Meneghetti's Hudson clocked 1 min. 25 secs. There were no fearful incidents.

The first of the 15-lap heats saw Garat lead until his flywheel broke up, whereupon Barbalarga won easily in 21 min. 50.9 secs., at 61.8 m.p.h. Pian's Ford "Special" broke its gear lever. The next heat was won by Martini's Mercury, in 21 min. 49.8 secs., with Puopolo's Graham second and Moyano third. The last 15-lap heat saw Chiozza's remarkable Mercury win in 21 min. 31.8 secs. from Blanco and Donzino. Nanni's Hudson was wildly cheered for very good stability when it lost a rear tyre at speed. A 10-lap race for previous non-finishers must have seen some feverish work to get sick machinery well again. Pian's "T" Ford won easily in 14 min. 16.1 secs., and

RESULT

1. Jose Canziani (3.8 litre Alfa-Romeo), 53 mins. 49.5 secs. 67 m.p.h.
2. Oldemar Ramos (Alfa-Romeo), 54 mins. 3.5 secs.
3. Mario Chiozza (Mercury).

Nanni's Hudson again threw a tyre and finished on the rim. The last race of the day was for the racing cars proper. Apparently pole position was contested in some preliminary lappery, in which Ramos and Canziani tied in 1 min. 16.7 secs., or 70 m.p.h., a new lap record. Landi, a Brazilian driver, with an Alfa-Romeo, managed 1 min. 19.5 secs., and Malusardi (Alfa-Romeo), Forrest Green (1½-litre Maserati), the Brazilian Avelar (Alfa-Romeo), Ochateco (Alfa-Romeo), and Riganti, with the latest straight eight, four-valve-per-cylinder 2.9-litre Maserati, were runners-up. Canziani yielded pole position to Ramos, but nevertheless proved the victor.

The race day proper opened with a 37½-mile final for the home-brewed type "Specials." Chiozza's Mercury won easily from Pian's "T" Ford. Donzino's clutch burnt out on the 22nd lap when he was in second place, and he was half suffocated by fumes when he retired two laps later, one lap from the finish. Blanco broke a connecting-rod.

The Grand Prix brought 19 starters, of whom 11 had earned the right to compete by finishing in the first 11 places in the previous race. "Specials" had one minute's start from the real racing cars. Chiozza's Mercury was on pole position and he led lap one, with Canziani out ahead of the second group. Riganti's Maserati retired after being lapped by the Mercury, and Canziani caught the slower cars by lap seven and was in second place on lap ten, 11 secs. behind Chiozza, whom he disposed of by lap thirteen. The Alfa-Romeo, which we believe is one of the 3.8-litre V12 jobs which ran at Tripoli in 1938, took 53 min. 49.5 secs., an average of 67 m.p.h. Ramos (Alfa-Romeo) was losing ground, but got home second 14 secs. later, in 54 min. 3.5 secs., and Chiozza's Mercury was third, 2 secs. ahead of Landi's Alfa-Romeo, Malusardi sliding off the road when going strongly in third position in avoiding a slower car at a corner—he was still third, but smashed his gearbox in regaining the course. Avelar, Green, Martini and Brisco were next home. The winner wore full racing kit and dark goggles, and the Alfa-Romeo bore No. 1 and the name "Colmena" in large letters on its bonnet.

MORE FRONTENAC

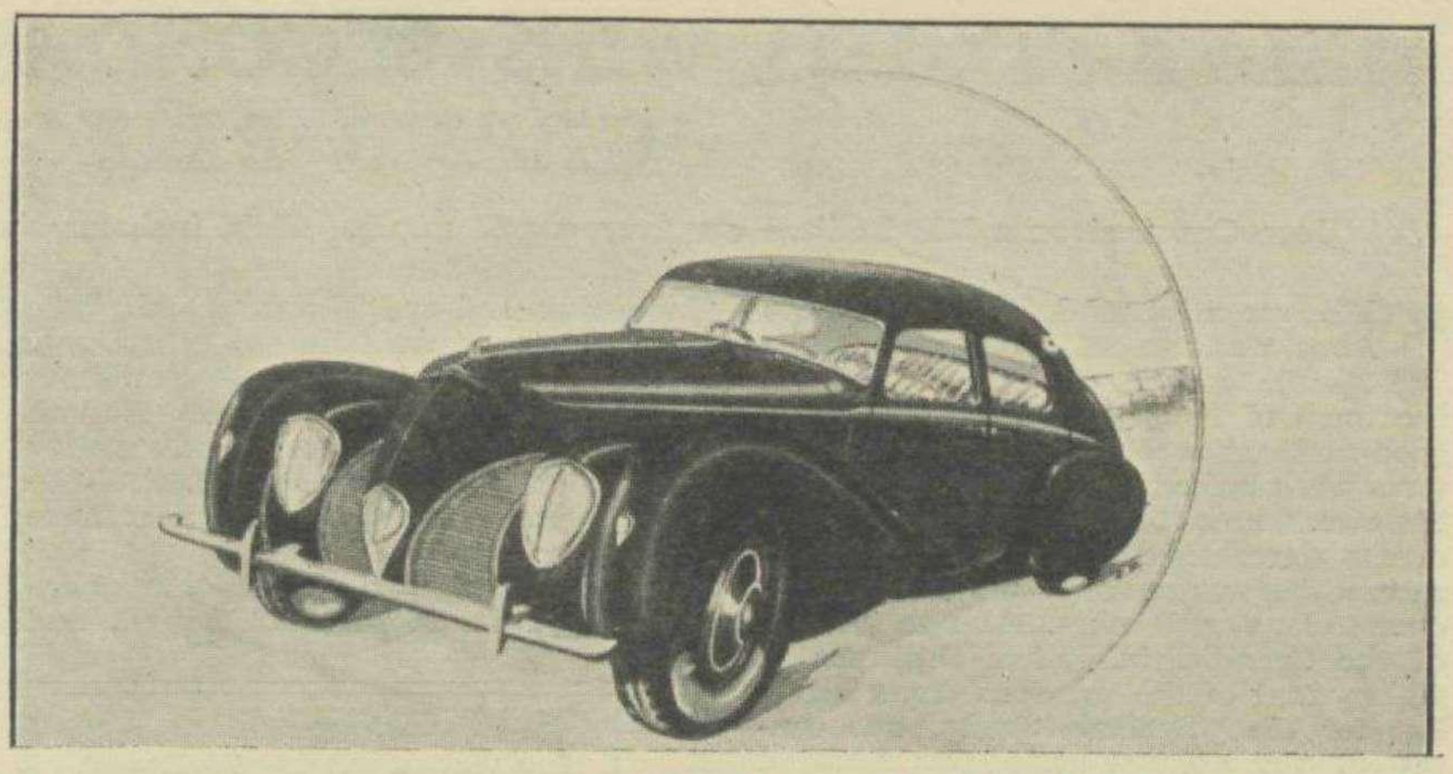
[Last month H. L. Biggs gave some technical details of Frontenac Fords. A correspondent to "N.A.R.N.," the American Midget Car Racing Weekly, recently enquired whether early racing Chevrolets were "revamped" Model-T Fords or "Special" racing cars. In view of Biggs's article the reply may be of interest, and we accordingly reprint it from the January 22nd issue of the "National Auto Racing News."—Ed.]

THERE were three Chevrolet brothers—Gaston, Louis and Arthur—who came over from France about 1905 and they were all race drivers, though Gaston and Louis were the most prominent. They raced Buicks and other cars and at one time raced the Carnation at Indianapolis, which was a very small car for those days of heavy cars; one of them burned at Indianapolis the first or second year the track was opened, and while it was still dirt. Gaston was killed at Indianapolis. Louis organised the Chevrolet Motor Co. and built a light four-cylinder motor with overhead valves, rocker arm type. We are quite sure that this was before Chevrolet raced any converted model-T Fords. The dates are not quite clear from memory, but around 1919 Louis and Arthur built the Monroe 500-mile race cars and later the Frontenac race cars. These were complete cars and the motors were patterned after one of the French racing motors with two overhead camshafts. Later they built some eight-cylinder D.O. Frontenacs. About 1920 Louis and Arthur began to make overhead valve cylinder heads for the model-T motors. These were rocker arm heads somewhat similar to the head used on the early Chevrolet stock car. Several of these motors were raced in the "500" around 1923 and one or two finished in the money. The rocker arm cylinder heads were also made for stock model-Ts and many were sold. Later a D.O. cylinder head was made by Arthur for the model-T Ford motor. Louis and Arthur separated and each began to make aeronautical motors, one in Indianapolis and one in Baltimore. The motors were good, but for some reason did not become successful commercially. We understand that Louis is now deceased. Arthur is in the Diesel line.

We have reworded the matter somewhat. The date of the organisation of the Chevrolet Motor Co. is given as "shortly after the original model-T Ford." However, this is described as "the original light four-cylinder car with the water pump in front of the radiator," which was surely the model-N Ford? This renders this reference valueless as dating the first Chevrolet, as the "N" was considerably earlier than the "T," we believe. We have recently come upon records of a Frontenac which A. E. Moss, who afterwards drove one of these cars at Brooklands, ran in the 1924 Indianapolis "500." Apparently it was a Barbour-Warnock Ford, with standard Ford crankshaft and rods, single carburetter and a 16-valve, twin o.h. camshaft Frontenac head. It appears to have a slightly offset, single-seater body and the manifolding protruding from the bonnet. The camshafts are described as shaft-driven, whereas the Type D.O. "Fronty" head apparently had chain-driven camshafts. We believe that the car Moss afterwards brought to this country, and with which the Conan Doyles and Dick Nash were associated, was a 2-seater.

SOME NOTES ON STREAMLINED SALOON BODYWORK

A Review of Recent Examples

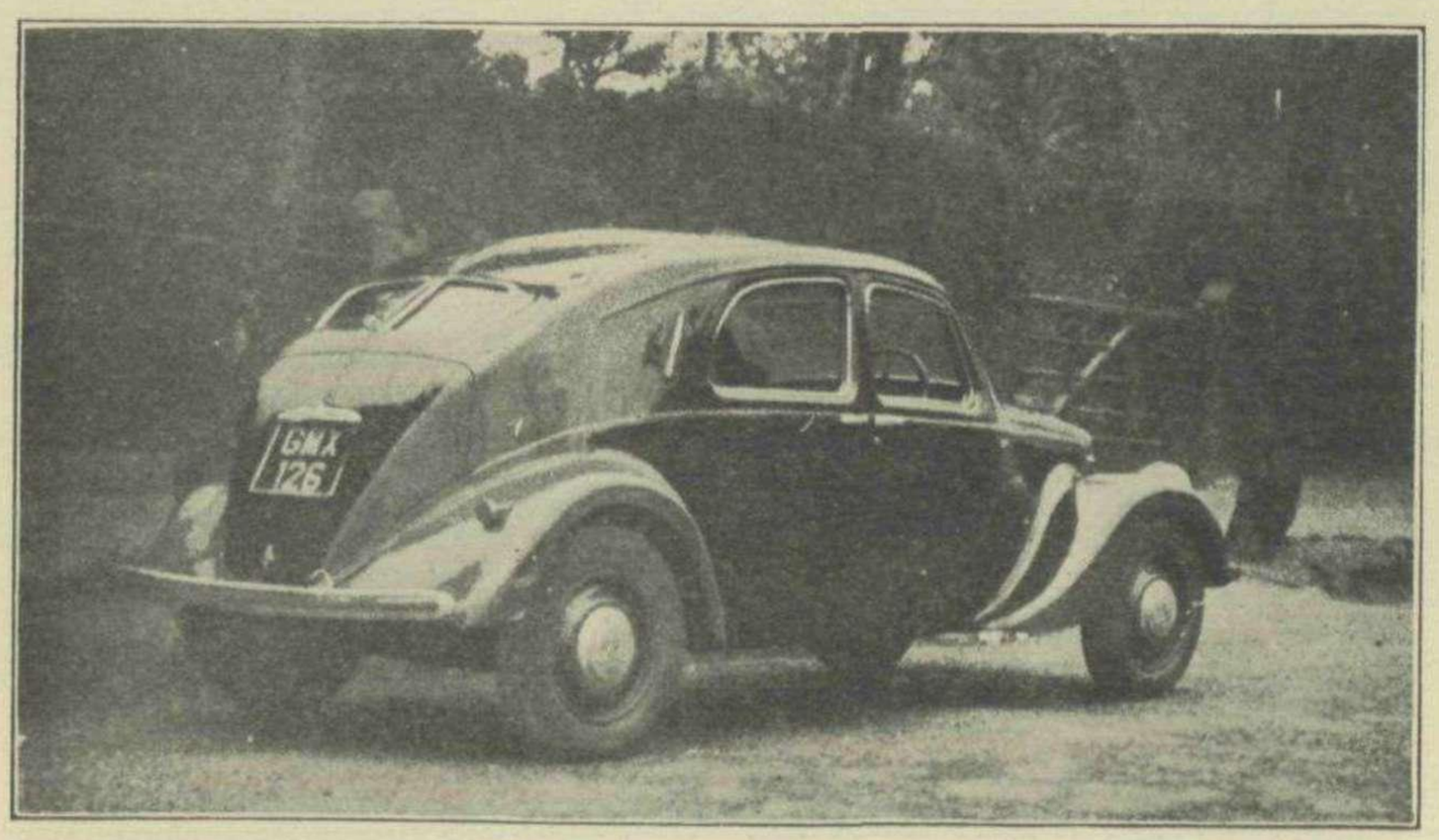


[There is a general suggestion, backed by many authorities, that after the war there will be widespread adoption of streamlined closed coachwork for fast cars. In the February issue of MOTOR SPORT Cecil Clutton reviewed the history of streamlined bodywork for racing cars and suggested a formula for assessing the comparative merit of streamlining. In this article Flying Officer W. Scafe, R.A.F., reviews recent designs of closed streamlined fast cars and discusses probable future trends. His remarks will be of especial interest to those who attended Laurence Pomeroy's lecture at the I.A.E. on March 8th.—Ed.]

FROM 1936 up to the present time there has been a strong tendency, particularly on the Continent, towards streamlined coachwork on sports cars, both in open and closed form.

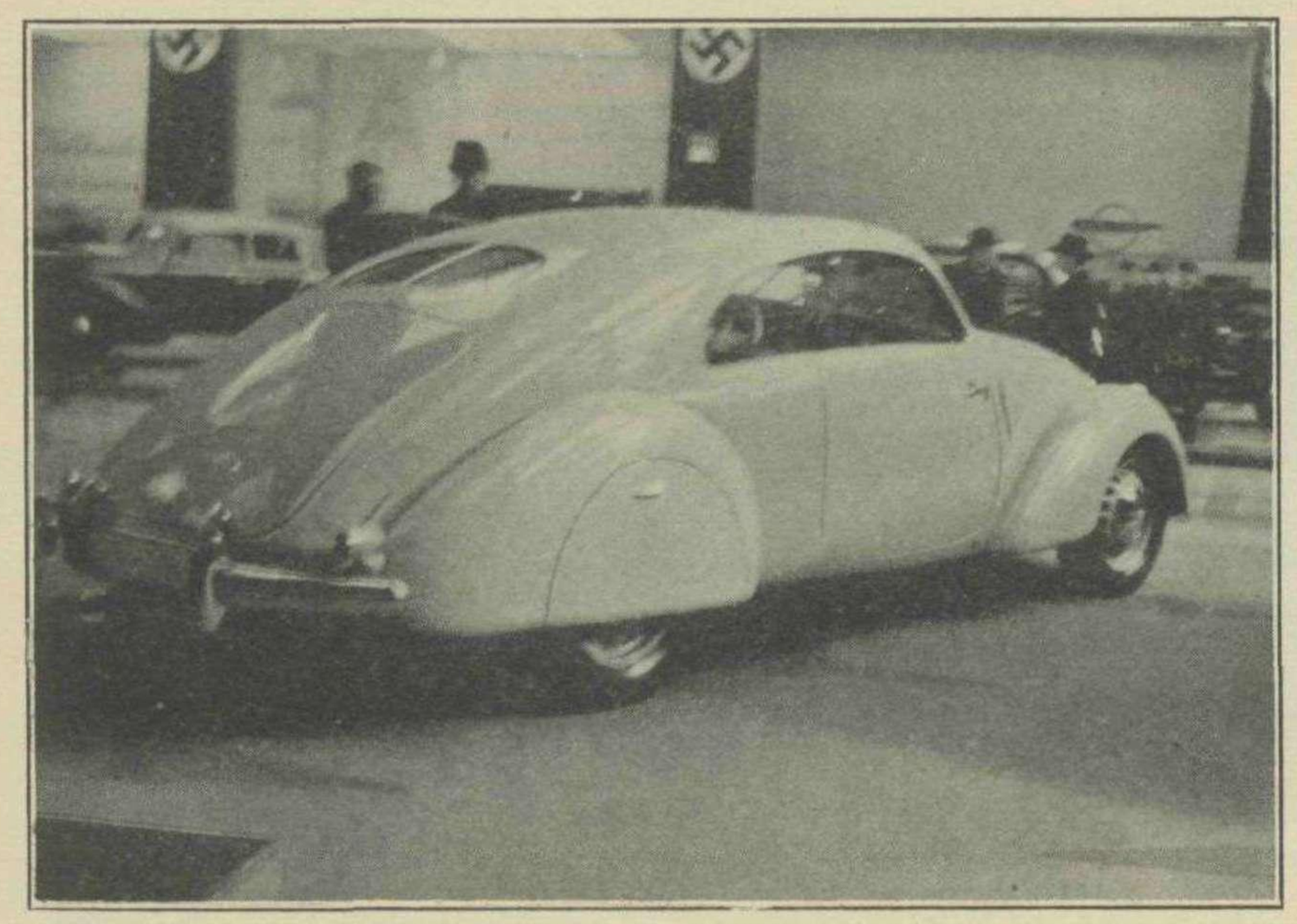
The advantages conferred by this type of body were most striking, figures for both maximum speed and fuel consumption showing a very marked improvement over similar chassis not thus equipped, and it is hard at first to believe that this improvement was solely due to a different body. Speeds that previously were only attainable by cars with highly-tuned or supercharged engines with a high fuel consumption were now possible with untuned engines of quite normal and moderate power outputs. Higher gear ratios could be used, giving very economical fuel consumption. Furthermore, the first cost of producing such cars is not excessive, and they are therefore likely to be a sound business proposition for their manufacturers. Indeed, it seems likely that the aerodynamically streamlined saloon is to prove the sports car of the future, as sports car races just prior to the war showed us. There are, of course, certain drawbacks to streamlining as with most things in this world. First, there is the difficulty of cooling brakes and tyres adequately when they are encased in fairings. Inaccessibility of engine and chassis is bound to be increased and the type of body, which extends to the full width of the car, taking in the wheels, and which has a long tail, is very liable to dents, scratches and similar damage, a factor which leads to raised insurance premiums. Many of these problems can and will be overcome, and the bodies of this type already built have been highly successful and are of great interest.

One of the first examples of the true aerodynamic saloon was the German Adler. One of these broke International long-distance records in 1935, and in the following years they competed successfully in Continental sports car races, including in their list of successes first place for the Rudge Whitworth Cup at Le Mans in 1938 after a display of very consistent running. The cars were 2-seater coupés with the body extending to the full width of the car, taking in the wheels. In 1938, too, Sommer drove a saloon Alfa-Romeo—a 2.9-litre—at Le Mans and led the race for a considerable time. The body was Italian-built and resembled that of the Adler in its general lines. In 1939 Sommer again drove an aerodynamic Alfa-Romeo at Le Mans, this time a 2.3-litre six-cylinder car. He was troubled by excessive heat and an electric fan was fitted to cope with this. In 1938 N. S. Embiricos, the Greek E.R.A. driver, had a special streamlined body built for his 4¼-litre Bentley. The wind-tunnel testing was carried out by Rolls Royce, Ltd., while the construction was by Paulin, the French coach builder. Early in 1939 the car was tested in Germany, over the Autobahn. Maximum speed proved to be in the region of 118 m.p.h., while phenomenally low fuel consumption figures were obtained. At the end of July of the same year the car covered 114.84 m.p.h. at Brooklands, driven by Capt. G. E. T. Eyston—the fastest "hour" yet by a fully equipped "sports" car. This car was a 4-seater, two-door saloon, with the wheels outside the body in streamlined wings. A team of open streamlined Lancia "Aprilias" came to Donington for the 1938 Tourist Trophy. They were quite fast and led the 1½-litre class for about half the race, but were most alarming to watch on the corners. Eventually they all retired with brakes inoperative, due to the fact that the drums were enclosed in the bodywork and were thus out of the airstream. In August the streamlined 1,500-c.c. Fiat saloon was tested by Gordon Wilkins of *The Motor*. This car was one of the most striking examples of what can be done in



Practical, present streamline—the 1.3-*litre* 80-*m.p.h. Lancia "Aprilia"*

SOME NOTES ON STREAMLINED SALOON BODYWORK—continued



An example of enclosed rear wheels and restricted rear-passenger head room for streamline purposes

this direction. Maximum speed was over 90 m.p.h., while consumption was about 40 m.p.g. at 60 m.p.h. The car cost around £350. Soon after this came the war, putting a stop to things of this kind, but not before a streamlined V12 Lagonda had been completed for the purpose of bettering the Bentley's hour "record." The body was by Lancefield and was similar to that of the Bentley in general outline. The war, of course, prevented the Lagonda from showing what it could do.

In 1940 the Aston-Martin concern made an experimental model. The framework of the body was tubular and was integral with the chassis. The car could not be called fully streamlined: its lines were a compromise between the old style of body and the streamlined type. The wheels were outside the body, which was a four-door saloon. It was B.M.W., however, who produced what was probably the best example of streamlined saloon design. In 1939 a Type 328 B.M.W., with an Italian body constructed of electron, finished fourth at Le Mans at an average speed of 82.4 m.p.h.

In spite of the fact that Germany was at war this car and another of similar type, but with rather improved lines, ran in the Brescia Grand Prix of April, 1940, the event which replaced the late-lamented Mille Miglia. The newer car won the race with the greatest of ease from a fleet of 2.5-litre Alfa-Romeos, and demonstrated its superiority over the Italians throughout the race. Its maximum speed was about 130 m.p.h. The engine output was around 130 b.h.p., an amazing figure for an unblown 2-litre. Bugatti ran 3.3-litre cars with tank-like bodies in sports car events between 1936 and 1939. An unsupercharged example won the French Grand Prix in 1936 and the Grand Prix d'Endurance at Le Mans in 1937, while a supercharged edition won the latter event in 1939 at a record average speed.

These examples of some of the more outstanding cars produced form interesting pointers for future development.

It seems likely that future vehicles of this type will have the wheels enclosed in the bodywork, which will extend to the full width of the car, as in the Adler, Fiat and B.M.W.

Such an arrangement will allow seating accommodation for three in the front and ample luggage space behind. Headroom for rear seat passengers need not be unduly cramped if the body is designed carefully. Extensive research and tests will be needed to determine the best forms, wartime aircraft research probably being of great value in this respect.

The question as to whether or not an undertray should be fitted will arise. This is considered unnecessary by some if the wheels are enclosed. If they are not enclosed, the fitting of an undershield will result in a most marked improvement. For instance, that most superb of machines, Mr. Lycett's 8-litre Bentley, gave two more m.p.g. after such a shield had been incorporated. The ground clearance at the rear end should be greater than at the front, to prevent an aerofoil effect at high speeds, which would result in the front end losing adhesion.

Light weight is obviously an essential, as the modern sports car must be light, and cars built on "Sydney Harbour Bridge" lines will not be tolerated in an (we hope) enlightened post-war world. Alloy construction is an obvious way to achieve lightness, but is extremely expensive, a factor which would rule it out, except in the more expensive sports cars. Electron and duralumin were used in the Bugatti and B.M.W.

A V-shaped windscreen will probably be universal, as a curved one is extremely trying to look through for long periods, the road ahead appearing to come towards one in a crooked line! Screen and windows will probably be made of safety glass, as Perspex becomes badly scratched and discoloured with use. To ensure a smooth exterior, pull-out door handles, as used on Lancia and Fiat, would be employed, as well as aircraft-type fairing fasteners, while it goes without saying that headlamps, horns and number plates will be built-in. The position of the radiator is difficult to decide upon, as at first sight it appears a pity to build a nice streamlined body and then to go and cut a big hole in the front to let in air. In practice, however, there are many advantages in the conventional position, and it is likely to remain, with a slot to admit the air placed low down, with another behind the radiator to allow it to escape.

The difficulties and drawbacks, too, have to be overcome. First comes cooling of tyres and brakes. Wind scoops, directing a stream of air on to brake drums and tyres, worked effectively in the "3.3" Bugatti. Alloy wheels with

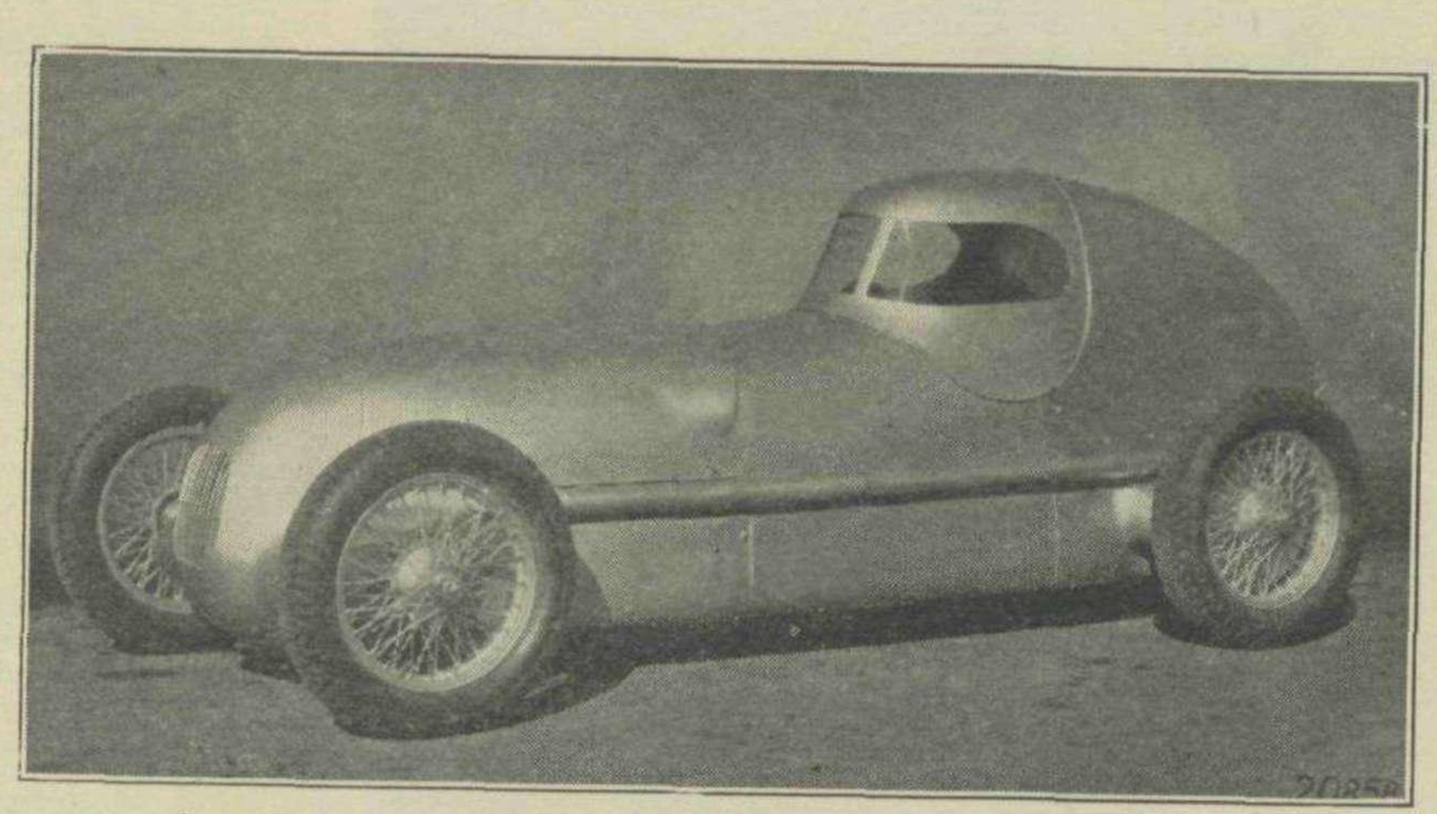


An Adler streamlined saloon

SOME NOTES ON STREAMLINED SALOON BODYWORK—continued

finned spokes might also be necessary on the faster cars. With a full-width body engine accessibility is likely to be impaired. Detachable side panels, held down on sponge rubber with aircraft screw button fasteners, should go a long way to improve this.

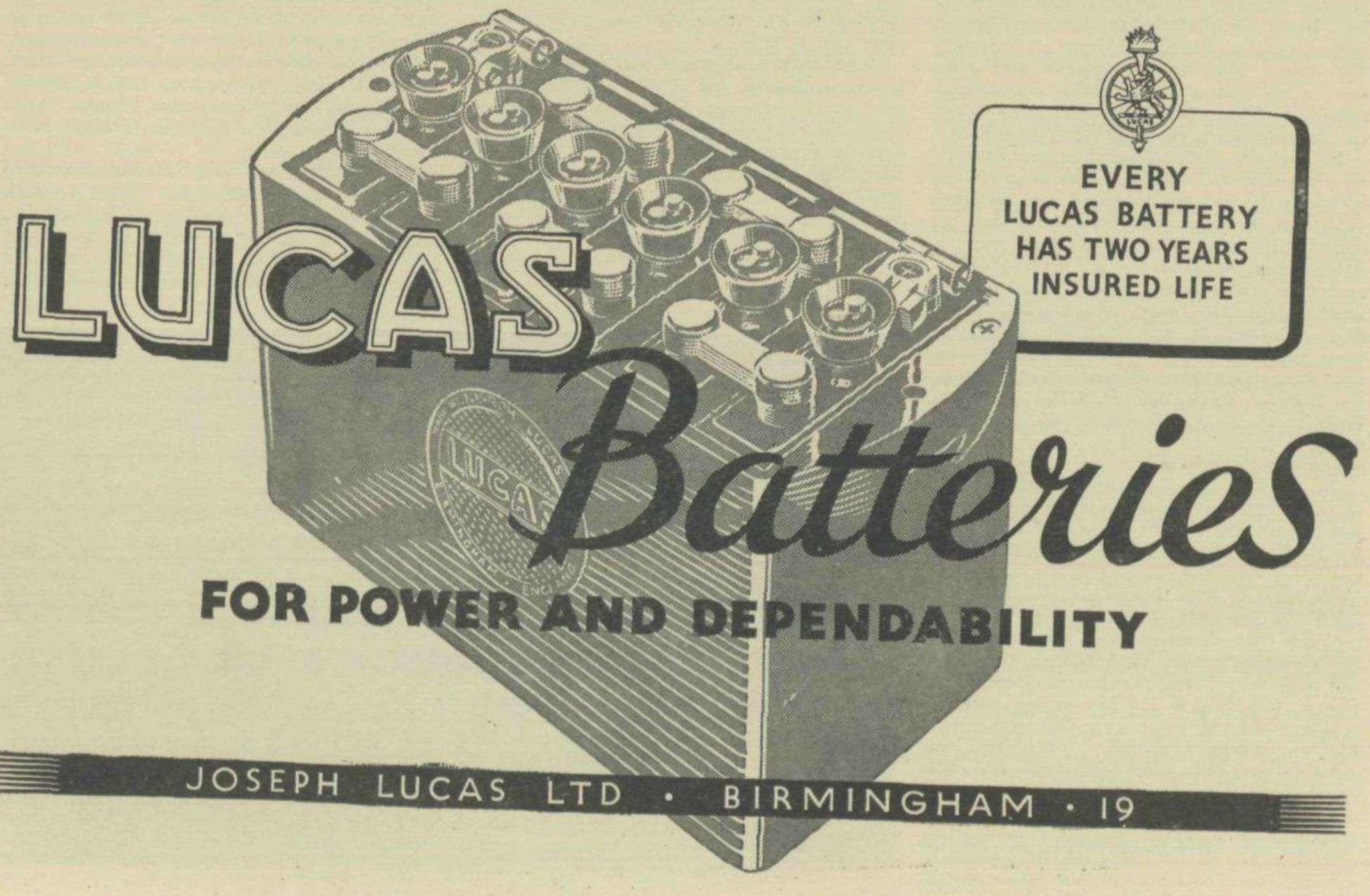
Clean lines are likely to retard the process of deceleration and normal brakes will be hard put to slow such a car down from high speeds. This difficulty was experienced by Major Gardner during his record runs on the M.G. During tests at Brooklands the streamlined Fiat and a standard unstreamlined car of the same marque were driven level at the same speed. The engines were switched off simultaneously and the streamlined car was found to roll about half as far again as its companion before coming to rest. These facts seem to indicate the necessity of a form of air brake for the faster machines. In a high-speed saloon it will be extremely draughty and unpleasant to open a window at or near maximum speed, so some form of air conditioning will be needed.



An early racing enclosed-body design—the Mercedes-Benz Renlimousin

An advantage of a properly streamlined body will be to eliminate the wind noises, so apparent in fast saloon cars with bodies of normal design.

The streamlined saloon is very definitely the car of the future, and the sports car of the future in particular, as that Brescia Grand Prix of 1940 showed. This is hard in some ways to those of us who love the vintage machine, but that it will come is as certain as was the replacement of the old fabric, stick and wire biplane by the stressed-skin metal monoplane in the aviation world. Even so, let us hope that we shall still see well-preserved Bentleys, "30/98" Vauxhalls and similar things motoring in 1960.



ON ENTHUSIASM *versus* HUMAN NATURE

THINGS are not always what they seem, as two aircraftsmen in a West Country town discovered some time ago, when, "fed up with street-corner pubs," they were advised to try "The Queen's," through the swing doors of which they unsteadily penetrated, to be confronted in the palatial entrance hall by quite the sternest W.A.A.F. commandant of a commandeered premises they had ever seen. This is especially true these days of men and their motors. From a low-performance or no-performance saloon may step a well-known racing driver, while in the cockpit of a familiar racing car a garage hand will as likely as not be cursing the Fates for landing him the unwanted occupation of moving a car the owner of which is far too busy working in his country's interest to move it himself to a place of safety or to his new location. We must all work hard if the day is not to be too far distant when we can look forward to seeing racing cars in action again and cease to regard them, as the wife of a well-known sportsman has it, as "one of those things we may never need." Not, of course, that she is serious, although misplaced patriotism is ever ready to misconstrue British humour. Actually, there are very few able-bodied people these days who cannot help the war effort in some way or other, whether they are on or off duty. I had intended, during a recent short leave, to set down a few random observations on why some people buy one sort of car and some quite another sort, and why not very many enthusiasts operate the stark kind of car they might be expected to run. However, I spent my leave touring R.A.F. aerodromes with a friend who was on business bent, and I found that there was so much to do on this short "busman's holiday" that I had no time for more than a very limited spot of editing of other people's excellent and indispensable contributions to this paper. The evenings, when busy folk might be expected to relax somewhat, you now spend combing provincial and country towns for somewhere to sleep, for nearly every available source of accommodation is taken by the military, by civilian war-workers and by dodgers of possible bombs. So much so that in one big town not so very far from London we all but missed seeing Walt Disney's "Reluctant Dragon," which would have been a pity indeed. However, the opportunity now arises to set down some of these thoughts, for better or for worse. Study of the "Cars I Have Owned" articles, which we have been publishing and which are so readily forthcoming, provide much of the food for thought on this subject, because, in my own case, before the war I was in the fortunate position of being able to drive most of the modern, up-to-date fast cars so that personal transport requirements could be satisfactorily met by utility types—not necessarily of the entirely conventional kind. It is only latterly that the need of a 70-m.p.h.-cruising, at least 80-m.p.h.-maximum, sports car has become evident, alas! at a period when the need to economise fuel, the lack of opportunity for seeking and inspecting suitable cars, and the repressive aspect of having truly enjoyable motoring limited by the coupon nightmare, prompts the retention of humble, reliable little cars. How one envies those who do extensive official-duty mileage in sports cars that were in sufficiently good health when war came to be put forward as decently reliable duty-transport! . . . .

Regarding the thing from a peace-time standpoint, surprise is felt, and requires to be explained away, as to why so few apparently dyed-in-the-wool enthusiasts ran stark, performance-first cars of truly thoroughbred outline and character. Every so often—maybe it goes in cycles—I experience a desire to own a car with all frills unnecessary to cruising at, at least, 70 m.p.h. removed. One visualises a Frazer-Nash chassis, with something like an A.C. Six power unit, mounting two bucket seats and a bolster fuel tank over the chains, and precious little else. Variants come readily to mind—a modern Hillman or Vauxhall Fourteen engine for performance with reliability, or a Riley Six to get below 1½ litres, or perhaps our old friend the push-rod four-cylinder Meadows to help the job along and uphold vintage traditions at one and the same time. Yet one does not lift so much as a little finger to commence construction. Why? Purely personal aspects apart, I think the answer is the considerable expenditure necessary, in money where new or second-hand vehicles are concerned and in time as well when it is a question of building up a "Special." In this country motoring has always been an expensive pursuit, and never more so than at the present. Consequently, your youthful enthusiast, very keen to own a stark motor-car of vivid performance, is limited to a sober sort of contrivance. Possibly he gets a speedometer mile-a-minute out of a doctored Austin Seven, or even greater gallop from a decidedly elderly Morgan, but he will invariably do so at the expense of reliability, decent comfort and convenience.

At a time of life when the social and entertainment value of car-ownership is very readily appreciated, the hottest-headed enthusiast is soon apt to take a very plain view of continual breakdowns at inconvenient times and localities, frequent reluctance on the part of his car to commence functioning at the word of command, and repeated drenchings due to bodywork either conspicuous by its absence or entirely lacking in effective element-insulation.

For a time, the owner feels his energies and expenditures should be directed towards something saner, which is why firms like Rowland Smith kept a goodly stock of M-type M.G.s, "Porlock" Singer Juniors and sports Austin Sevens on their books in peace time. I cannot help feeling that the transference of the enthusiast's affections from two bucket seats on a chassis to a chassis hidden beneath pneumatic cushions, hood and side screens is closely related to the warped judgment of England's young women, who regard any young man who dons shorts and gets covered in slime playing Rugby football as some sort of a hero, but who express undisguised scorn at clothes well lubricated with oil mist from a home-tuned engine of a quite decently potent motor-car. Doubtless we are to blame, for charm and beauty is not expected to share the mud, whereas oil mist seldom differentiates between driver and passenger! The motor-cyclist and his pillion fairy I leave to social psychologists to explain away. Be that as it may, the sports car is invariably replaced by something less fierce. A business career, perhaps, or some like factor makes remote the day when the pukka enthusiast's car can again be contemplated. If your enthusiast has meanwhile embarked on an engineering career he will see in a new light the technical problems involved in going fast in the desirable manner while courting a reasonable measure of dependability, so that the task of "Special" construction is likely to be postponed even longer. You may say that the true enthusiast will surely own a real car at all costs, even if he runs something humble as a hack. The thought of an enthusiast going about his business in an old Austin Seven or elderly Jowett that he may spend his every penny on occasionally dicing in a G.P. Bugatti is indeed a splendid thought; it is also asking a lot of human nature. . . . Mostly your G.P. Bugatti owner does his ordinary motoring in a Type 57 or a Rolls-Bentley. . . . The fact is that the car plays such a very big part in our everyday existence that even those who are able to differentiate between automobiles and motor-cars find it hard to sacrifice too much on the altar of stark performance.

The Government does its very best to encourage the utility motoring outlook by taxing private motoring so very heavily. If a tax rebate could be had on a second car in use at the same time as another vehicle, the enthusiast would have more scope; but, as things are, a car on the road seems a greater asset than a car just about to be ready for the road. That, I think, is the real reason why, although this country is by no means lacking in enthusiasts, the roads are chock-a-block with little boxes, are fairly well populated by high-performance devices and are not infrequently enlivened by sports cars—but are only very occasionally shattered by the passage of really fast cars devoid of all excess equipment that does not contribute to sheer performance. If your once-youthful enthusiast strikes the road to success or has usefully rich parents he is even less likely to run such a car, because something of that sort, one has to admit, seems somewhat silly when you can do 130 m.p.h. in a car like a Bugatti Elektron coupé. . . . Certainly young men like Charles Martin and Charles-the-Brack, and Kenneth Evans and the late Richard Shuttleworth ran very stark motor-cars indeed—but they were cars without passenger accommodation and they had their fun at places, which you may just remember, like Brooklands and Donington.

All this is apt to make you a little sick at times, when you reflect that not such a terribly long time ago all motoring was of the stark variety, even if you tried to forget that it was so and used the car to meet the girl-friend, or take your fiancée for a drive or to get home on leave, or

ON ENTHUSIASM versus HUMAN NATURE—continued

what have you. For the impecunious owner, at all events, this was the case even for the first few years after the end of that war promoted to end all wars. I have owned early small cars long after they were current models. I have known the humiliation of being left in a cinema car park long after all the hermetically sealed boxes have purred away, and I have abandoned a car miles from home because three of its four wheels had shed their tyres all within a few miles. I have changed my entire wearing apparel thrice in an evening in deference to Jupiter Pluvius and I have been taken to task by a policeman at the Bank for emitting too much smoke from the exhaust of a splash-fed engine—all of which is no reflection at all on my present very excellent seventeen-year-old "Eight." But certainly I have never encountered anything like the trials and tribulations that the so-called pioneers of the late 1910's and early 1920's experienced in their everyday journeyings, on their lawful and unlawful occasions, in cars of the quaintly-termed "New Motoring." So are we not terribly pampered to-day? And these early motorists did do it in largish slices and big doses, for a pre-1914 aviator of my acquaintance tells me that he used to think nothing of coming from the Midlands to the Hampshire town where I am myself now stationed for a business conference, returning the same day, in 1914 or thereabouts, in a V-twin Humberette, of the sort a friend has left in my garage until such time as he can rebuild its back axle—not that we intend to venture far in it even then. . . . . And someone wrote only a quite brief letter to *The Autocar* in 1919 to say he had done 616 miles in 48 hours in a 1915 Ford taxi during a recent strike. Think of that, when next you wind up your sliding windows and set the dual screen-wipers in motion. . . . .

Of course, enthusiasts of real dyed-in-the-wool calibre do exist, as witness the doings of the Vintage Sports Car Club, whose members' motors were mostly stark and exciting in the extreme—all praise to the original committee for finding 400 or so followers of the cult. But even there, many of these vintagents only motored excitingly as an interlude from the other sort, as our "Cars I Have Owned" articles sometimes emphasise.

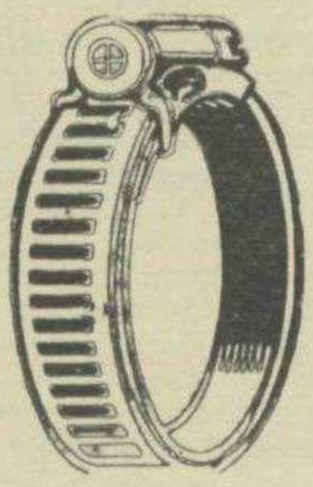
What will happen after this war is won is a matter for speculation. Young men bored with wartime routine in offices and factories and other young men finding a spark-advance lever better substitute for a gun-firing button than a direction-indicator switch may seek to achieve their 90 m.p.h. behind an aero-screen and strapped-down bonnet as frequently as it is safe to do so. How many will be able to do so and also enjoy the social advantages of a self-propelled glasshouse depend on whether the existing lunatic taxation system is eased. Whether there will be prolonged demand for cars which go like a motor from Bourne one moment and become a mere portable test bench containing an advanced style of engine the next, I do not profess to know. Whether any of us will be able to work remuneratively enough to look beyond cars of the M.G. "T" Midget and Morgan "4/4" type to things like Squires and Aston-Martins and Atalantas and H.R.G.s again I do not know. I can only hope that facilities will be granted to rich sportsmen to motor *a l'outrance*, over closed circuits towards a chequered flag. I dare to hope that, in addition, a victorious mechanized Army and a supreme Air Force will make the whole of our little island motor-conscious to a degree hitherto unknown, so that young men will be encouraged to regard motoring as a sport rather than as a pastime, and one which young women now of the A.T.S., F.A.N.Y. and W.A.A.F.—not forgetting those girls who have quietly taken over the daily handling of delivery vans and even quite bulky lorries, every bit as expeditiously as their sisters in the Services, I suspect with not half the training—will share with their menfolk. If such a time comes, cars able to cruise at 70 m.p.h. and attain at least 80 m.p.h. will be in very large demand.

Even if Government encouragement is not forthcoming after the war, and the world is not full of ex-tank drivers doing their 90 m.p.h. up and down our narrow North Road, we can hope that fast cars with good handling propensities will be in the ascendant. The pooling of resources—under which scheme it is apparently necessary to term one's combined selves a Scuderia - of - the - Something - or - Other—offers a possible solution to those

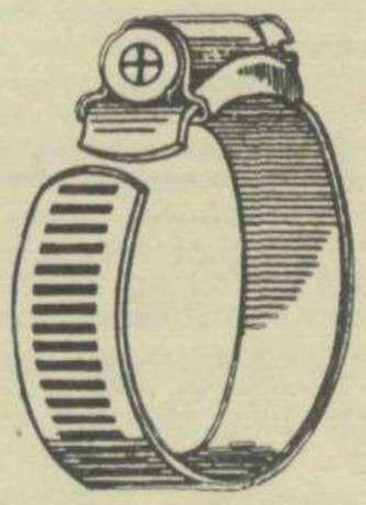
Continued on page 87

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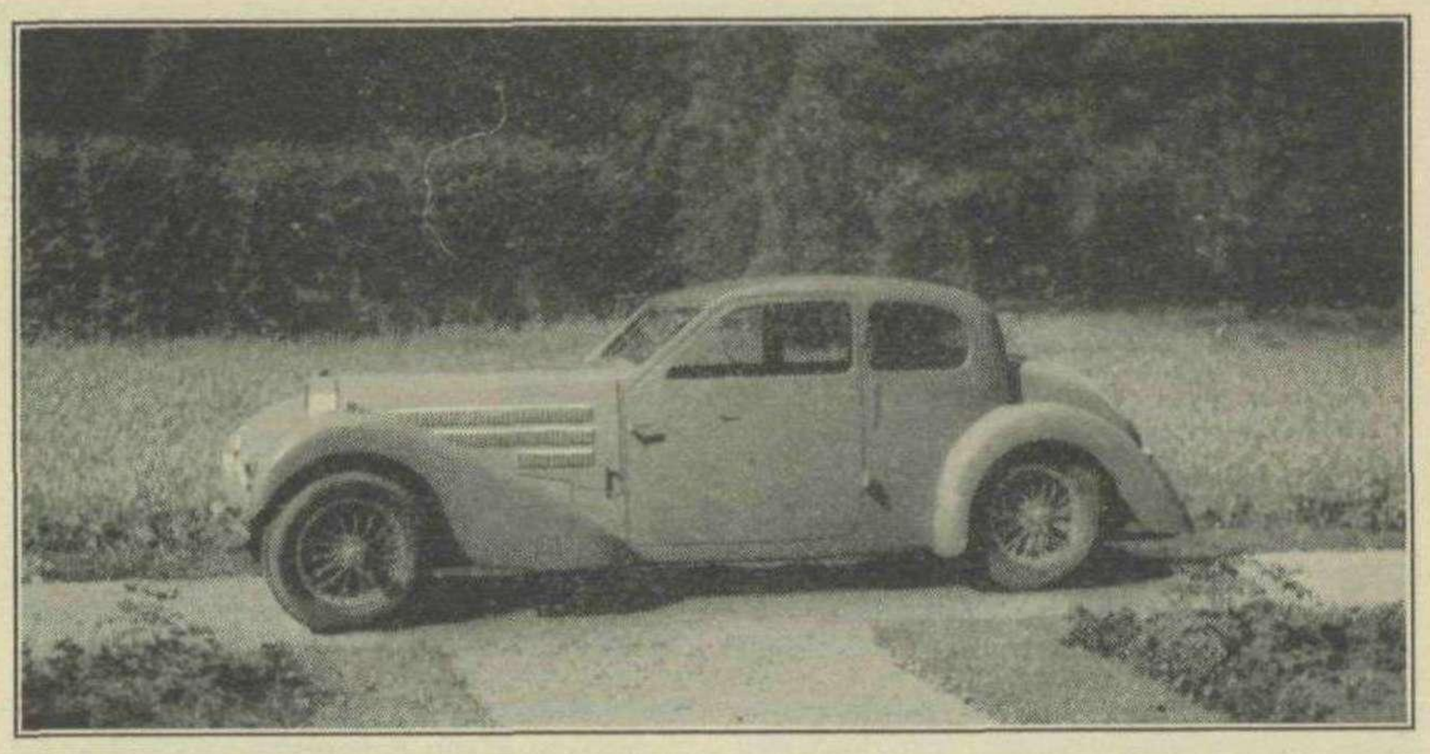
PLEASE MENTION "MOTOR SPORT" WHEN CORRESPONDING WITH ADVERTISERS

ON THE ROAD WITH A 5-LITRE BUGATTI

A War-time Run in a Type 46 Saloon and a Survey of Bugatti Touring Types

By

CECIL CLUTTON



BUGATTI type numbers are a perpetual stumbling block, even to the most enthusiastic and elect. Some pin their faith in the belief that the cubic capacity and type numbers bear some reference to each other, such as that the 4.9-litre is the Type 49 and the 5-litre the Type 50. It is, therefore, tiresome to find that the Type 49 is of 3.3-litre capacity, that the 4.9-litre is the Type 50 and that the 5-litre is the Type 46! No less confusing is the series of Types 57, 57C, 57T, 57S and 57SC. One might reasonably suppose that the Type 57S would be the supercharged edition of the Type 57, but not so; it is an almost entirely different, unsupercharged model, and it is the 57C which is the blown form of the Type 57.

Misapprehension about these type numbers sometimes manifests itself in the shape of amusing remarks by dealers. Recently, for example, one was loudly proclaiming the merits of his latest acquisition—"a genuine 4.3-litre, old boy"—which turned out to be an ingenious telescoping of a 2.3-litre, Type 43! Another well-known firm of sports car dealers spent a long time not long ago advertising an entirely mythical "Type 57 f.s."—by which one can only conclude they intended a Type 57, 4-seater!

Broadly speaking, it is not a bad method to divide Bugattis up into three families. First of all the various four-cylinder models; then the roller-bearing straight eights, and, finally, the touring straight eights. The four-cylinder cars include the original Type 13 of 1910 (1,327 c.c.); the typeless 5-litre "Black Bess"; the Brescias (Type 23); the 1925 1½-litre, Grand Prix Type 37; and the touring, 1½-litre Type 40, introduced in 1926. The roller-bearing straight eight machines are those upon which the firm really made its name in competition, starting with the three-main-bearing, 2-litre, Type 30 of 1923, and proceeding *via* very many types to the final 2.3-litre, double o.h.c. supercharged Type 55, first made in 1931, and continuing in production up to the war. It had a top speed of some 112 m.p.h. in generous touring trim. Very famous were the various editions of the Type 35, which furnished the victorious Grand Prix types up to 1927, and other Grand Prix models were the 1926 1½-litre Type 39 (or 39A with blower) and the 1931 Grand Prix Type 51. A favourite production model of 1927 was the Type 43 single o.h.c. 2.3-litre.

But roller bearings have certain disadvantages for the ordinary man. They have to be warmed up exceedingly carefully; they have a fairly limited life and are very expensive to renew; and they are mechanically noisy in operation. The competition Bugatti models also had a reputation for being somewhat temperamental, and all these factors undoubtedly put off a number of otherwise potential buyers. Such people must, therefore, have been very pleased when le Patron devoted his attention to a plain-bearing, silent and generally reliable touring car, whose first manifestation was the Type 44 of 1927. The earlier models had jet lubrication to the big-ends, and the general result was the somewhat excessive lubrication of the sparking plugs, while not enough oil reached the bearings. The later models had pressure-feed and were generally very satisfactory motor-cars, with a normal top speed of 80 m.p.h. at 4,000 r.p.m. They were rather squat and displeasing in appearance as a whole, a large number being fitted with very overblown Weymann saloon bodies.

In 1929 appeared the 5-litre Type 46. It was primarily intended as a town carriage and continued to be produced, I believe, right up to the war to special order. The cylinders measured 81×130, giving a total capacity of 5,350 c.c. and an R.A.C. rating of 32.5 h.p. The crankshaft was carried in five plain bearings and lubricated on the dry-sump principle. A single overhead camshaft, driven from the front of the engine, operated three vertical valves per cylinder, and there was coil ignition to no fewer than 16 plugs, all in a row along the offside of the engine, looking, as some wit remarked, just like a row of semi-detached cottages. By contrast to all these plugs and valves, there was only one carburetter, it having been M. Bugatti's opinion for many years that if you want more carburation you should supercharge and not multiply the instruments. The results he has achieved with single carburetters are really remarkable and suggest that he knows more than a thing or two about manifold design. It is interesting to note that he has long been an adherent of the American pump-type Schebler & Stromberg carburetters.

The small flywheel and clutch are enclosed, and in contrast to the ordinary Bugatti wet, multi-metalplate clutch the 5-litre had a dry clutch, the alternate plates being lined with Ferodo. The gearbox is integral with the back axle and the long propeller shaft is of tubular type. The gearbox is very compact, carrying only three forward speeds, whose ratios are 9.8, 5.45 and 3.9 to 1, respectively. With 32″×6″ tyres and 3,500 r.p.m. as top engine speed, this gave maxima of 33, 60 and 83 m.p.h. In top, however, this limit could be exceeded, and a top gear range of 4 to 90 m.p.h. is mentioned in the maker's catalogue. The petrol consumption claimed is 15 m.p.g. and the chassis weighed 23 cwt. The earlier models had the pressed aluminium wheels with short transverse "spokes" between the brake drum and the rim, similar to those of Types 49 and 50, but later examples had normal wire wheels. Telecontrolled shock absorbers were provided fore and aft. A development of the Type 46 was the Type 46S, which was the same car with a low-pressure boost; it was produced in 1931.

The next development in the touring types was the Type 49, brought out in 1930 and continuing until the introduction of the Type 57 in 1934. It was in many ways a cross between the Types 44 and 46. The cylinder dimensions were 72×100 mm., giving 3,257 c.c. and a 25.7 h.p. R.A.C. rating. The carburation and ignition (16 plugs all in a row, now very close together and equidistant) were similar to the Type 46, but the lubrication was wet sump and the single o.h.c. (three valves per cylinder again) was driven from the superior position in the middle of the engine. The clutch is wet and the four-speed gearbox is in the normal position. Forward ratios are 11.6, 7.51, 5.37 and 4.17 to 1. Speed in the gears is supposed to be limited to 3,500 r.p.m. and 4,000 r.p.m. is mentioned in top, giving maxima of 25, 38, 54 and 80 m.p.h. In point of fact, all of these can be exceeded. This model was exceedingly flexible and silent, and possessed excellent road-holding and superlative brakes. In my humble and somewhat eccentric opinion it is the best Bugatti of all, but not many people agree with me. My own example, with a close-coupled saloon body, was owned for several years by K. W. Bear and completed a quarter of a million miles before

ON THE ROAD WITH A 5-LITRE BUGATTI—continued

indenting for a new set of bearings. A peculiarity of this model was an exceptionally difficult gear change either up or down into second, while a remarkable weakness was a propensity to silted radiators. Both Types 46 and 49 are very reliable starters, while the dual ignition is also a strong contributory factor to their exceptional flexibility.

Last of all come the various editions of the Type 57, introduced in stages from 1934 to 1938. The cylinder dimensions were the same as the Type 49, but there were now double o.h.c.s and single ignition. The traditional Bugatti clutch gave way to a normal single-plate affair with the gearbox in unit. The earlier examples had rigidly mounted engines, which were rather rough and noisy in action. The later ones became notably smoother and more silent, and were flexibly mounted. Gear ratios were identical to those on the Type 49, but permissible engine speed went up to 5,000 r.p.m., the crankshaft being a superb piece of work. In 1938 the Type 57 became available with a blower, and was then the Type 57C. This put the power up from around 130 to some 160 b.h.p., and the motor-car could travel along at over 100 m.p.h. with luxurious saloon coachwork. These most recent cars had superlative hydraulic brakes and shock absorbers, the latter very large, of direct-operating piston-type. The Type 57C was even more flexible than the Type 57 and sold at the modest chassis price of £745.

The Type 57S had a more powerful edition of the Type 57 engine and a practically Grand Prix chassis. The front axle was articulated, giving a slight degree of independence, and some of the cars were fitted with the fantastically expensive and much vaunted de Ram shock absorbers. Subsequent experience has given rise to doubt whether they were all that fancy painted. The Type 57S ran up to 5,500 r.p.m. and, I believe, gave some 160 b.h.p.—an amazing figure for an unblown 3½-litre engine, which owners suffered for in the shape of poor starting. This was entirely cured in the blown Type 57SC, which was (practically) only manufactured in 1937. The makers claimed 15 m.p.g. and 130 m.p.h., while specially tuned works examples topped 150 m.p.h.

It is one of my greatest regrets that I have never travelled in a Type 57S or a Type 57SC, but I have been in a late and an early Type 57, and while each was certainly a remarkably fine production, it seemed to have lost some of the essential Bugatti character, which is so fully apparent in the Types 46 and 49. It is for this reason that the latter two retain the foremost place in my affections, despite the superior performance of the various forms of Type 57.

Having given a general perspective of the plain bearing straight eights (from which I have purposely omitted the somewhat rare and peculiar 4.9-litre Type 50), I will now proceed to some impressions of a Type 46 on the road.

One of these was recently acquired by Ferry Pilot Rodney Clarke for use after the war, and he licensed and ran it for a short period, just to find "what it was all about" before more or less laying it up. It was during this process that Laurence Pomeroy and I had an opportunity of testing the carriage. From a mechanical point of view the whole machine was in splendid condition, though not in the best of tune. The ignition was not perfectly *au point* and there was a fairly noticeable vibration period in the transmission at high speeds. "Pool" petrol was not entirely acceptable to the large cylinders (some 670 c.c. each) and all tests were conducted with four up.

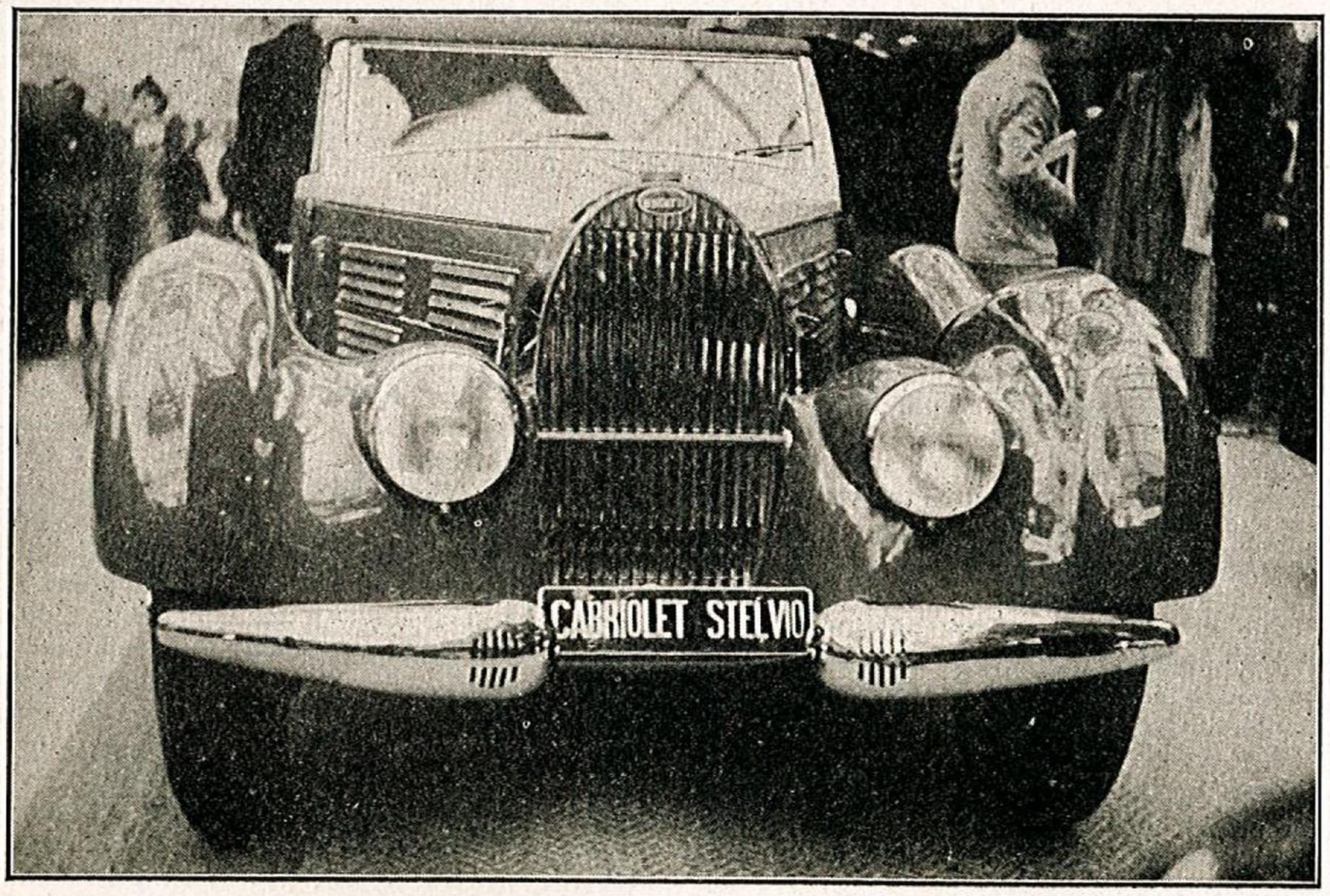
This particular car is undoubtedly one of the most handsome ever, as is universally agreed by all beholders, and I very much wish that an illustration of it could have been reproduced. The body is a two-door, four-light Weymann, with a large travelling trunk behind. The wheels are of the aluminium type. Some 5-litres are rather "lumps" in appearance, but this one is essentially "sleek." An overall height of only 5′ 3″, as against a wheelbase of no less than 11′ 6″, largely contributes to the exceptionally fine appearance. Nor is there any counter disadvantage in the shape of inconvenient floor wells (the floor is flat) or inadequate head room. Under the bonnet a positively virtuoso display of fine workmanship rejoices the eye. The big engine is rigidly four-point mounted, the bronze engine brackets being of considerable interest. In addition, a tubular member passes from side to side of the chassis, underneath the back end of the engine. The oil tank is on the dash. The cylinder block, which incorporates the camshaft drive, measures a trifle less than 3 ft. from front to back. There is a tubular cross-member immediately behind the clutch and another just in front of the gearbox. The considerable space between is entirely unbraced.

The exhaust note is pleasantly subdued, but not obliterated, as is the modern rather tiresome habit, and it has the invariable Bugatti "beat" when idling. As usual with the centrifugally-operated clutch, the pedal pressure at low r.p.m. is quite negligible, and the drive takes up with perfect smoothness. Some of the early 5-litres were reputed to have an insuperably difficult gear change, but this is certainly not the case with Rodney Clarke's car. There is a certain difficulty in getting out of any gear, making clutchless gear changes practically impossible, while the travel of the lever is fairly long and heavy. Changes are effected fairly quickly with a normal double-declutching movement, and a straight-through upward change can be made at the expense of some noise. However, so powerful is the torque of the engine, even at 200 r.p.m., that the gear lever can practically be ignored and all ordinary motoring is conducted on the 3.9 to 1 ratio.

For high-speed cruising this ratio would seem rather low, having regard to the long stroke, and one feels that a ratio of about 3.6 to 1, giving 25½ m.p.h. per 1,000 r.p.m., would more than justify the very slight loss in flexibility. As things are, the cruising speed is not more than 70 m.p.h., although on our trial run even this was not agreeable, owing to the transmission vibration, which noticeably held the car back. Making the necessary allowance for this quite easily rectified shortcoming, however, the performance of the car was a complete delight. Powerful acceleration and easy cruising on a fairly high ratio is always most impressive, especially when coupled with the smoothness of an eight-cylinder-in-line engine.

Despite the handicaps of four passengers, "Pool" petrol and imperfect ignition, the acceleration time for 0–50 m.p.h. (using first and second gear) was 16 secs., while the top gear acceleration from 10–30 m.p.h. only occupied 11 secs. Both these distinctly creditable figures are undoubtedly capable of about a 12 per cent. improvement under reasonably favourable conditions. The brakes were pulling rather badly. When properly adjusted they would undoubtedly be powerful, but not, in all probability, as good as those of the Type 49.

Continued on page 87



Perhaps the greatest of them all

CARS I HAVE OWNED

[Capt. L. Roy Taylor, a friend of that great enthusiast Donald Monro, carries on this series, which, quite frankly, has already run far longer than we thought possible.—Ed.]

I FEEL quite strongly that this subject of "Cars I Have Owned" should be left to those whose names are household words in motoring circles. However, my very good friend Donald Monro, to whom I owe a great debt of gratitude for introducing me, in a humble way, to the competitive side of the Sport, suggested that my recollections might be of interest, so I will try to set them down as concisely as possible.

I must first of all explain that I have always been a somewhat "hesitant" enthusiast, in that I have always admired, but never dared to buy, a dyed-in-the-wool, out-and-out sports car (with one exception), and that my adventures have been guided more by the principle of buying within my price limit of £100 to £200 a car, within four years old, of as high as possible an original cost. My argument being that, however quickly second-hand values drop in the first two or three years, the subsequent annual depreciation is low, provided the car is maintained in good condition, although I must admit that this has not always been the case.

My first car was bought at an auction sale for £17 and was a 1924 "Aero" Morgan three-wheeler. Some enterprising previous owner (there were many) had, with more enthusiasm than intelligence, cut away the centre torque tube, which, as Morgan owners know, provides most of the chassis strength. He had then, with the possible aid of the local blacksmith, introduced an old Salmson gearbox. The result of this was quite good, provided the surface was free from pot holes, but on a rough road the chassis flexed so much that the universal coupling, thoughtfully provided at the rear of the box, came to pieces with sickening regularity. I therefore completely stripped the whole thing and restored it to its original condition (my first venture into motor mechanics), producing quite a good Morgan out of it.

Some rather alarming activity amongst the tramlines of Birmingham definitely decided me that four wheels were necessary, so, with the aid of another £20, I became the proud possessor of a 2-seater 8-h.p. Singer of about 1926 vintage. It had a nice overhead-camshaft engine, but looked as if it had been painted with a yard brush(!), and as it was painfully slow (about 45 m.p.h. maximum), I part-exchanged it for one of the boat-shaped Rover Tens of 1927 or 1928, a beautifully made little car with quite a taking performance.

This was in 1931, and I kept this car until 1933. I improved its smoothness of running by fitting a ball race in the centre of the torque tube, and spoiled its appearance by fitting cycle-type wings, which made the body appear much too high off the ground. She was still going well when I sold her, and saw several years' service in, I am sorry to say, a much-neglected condition in other hands.

Then came what I always consider to be my most trouble-free car—a 1931 Wolseley Hornet E.W. 4-seater, purchased at 9,000 miles in 1933. Fast and completely reliable, I kept it for 18 months and only sold it because another car took my fancy; it is possibly still running, for I saw it just before the war, although I did not get the opportunity of a close inspection. I think these little cars have been rather maligned as regards speed and reliability, for it never gave me a moment's concern, and on one memorable day, in the summer of 1934, after seeing a friend on to the "Royal Scot" in Glasgow, I was on Carlisle Station in time to meet the train coming in. I never worked out the average speed, it might not be as high as I fondly imagine, but I remember I had to hurry!

I fitted this car with complicated headlamp brackets (in the hope that others would mistake it for the more expensive Wolseley Hornet "Special") and also with some of the first Michelin R.L.P. tyres, which were a complete success and improved the riding considerably. Then I fell for a 16-h.p. Standard Avon "Swan," one of the prettiest cars ever designed. After that I had one of the original S.S. (just a shade *too* exaggerated, although a satisfactory car), but I sold this just in time, for within a few weeks of selling it its flywheel fell to pieces at considerable velocity! Strangely enough, although this same car had passed through several hands in the interim, it came into my hands again many years later and did subsequent long service as a hack.

After the S.S. came a fine Standard Avon (1934 model), and this, although by no stretch of imagination could it be called a genuine sports car, had a most satisfactory performance, smooth and effortless, although of only 16 h.p. Unfortunately, after having been rebored, it developed chronic overheating and I sold it, though for several years afterwards it performed excellent service as a town car and tender to a "36/220" Mercédès-Benz belonging to a friend in Stafford and was subsequently part-exchanged by him for a Rolls-Bentley.

Some chance remarks on the merits of A.C.'s gave me the desire to try one of these excellent cars and, finding the second-hand prices to be reasonably low, I bought a 1933 drophead coupé, a very attractive car, both to look at and to drive. It was soon obvious that this had done a very considerable mileage, and this was borne out by a chance visit to the Park Lane showroom, where it was recognised as the original 1932 Show Model and was known by A.C.'s to have run a very long way indeed. The only real trouble was a nasty sort of knocking movement in the clutch, which was put down as rear main slackness, so I took the engine out and fitted new mains and at the same time new pistons and liners, which did much to cure the trouble. Incidentally and in passing, surely the A.C. is possibly the only car on which such a major operation can be successfully carried out by the owner-driver?

A comparatively hot summer gave me a renewed urge for another open car, so the A.C. was changed for a 1934 open 4-seater of the same make, once the property of the well-known disabled driver, L. P. Jacques, one-time Advertising Manager to Motor Sport. This was undoubtedly one of the most pleasurable cars I have ever owned, having plenty of power, good road-holding, good brakes if kept adjusted and a very excellent gear change. But it had the fault of a bad wobble on the scuttle and dash at anything much over 70 m.p.h., which no amount of bracing would cure. After 12 months of this I began to hanker for a Railton, and a good home was found for the A.C. It is still running well in the same ownership, but does not get much use, as it spends most of its time in the garage being polished, down to its most remote details, and is so much beloved by its owner that, when I thought of buying it back from him a few months ago, he would not accept a generous offer.

The Railton, a light 4-seater, was, of course, a wizard car and gave much pleasure, but I am always sorry that the process of Anglicising these fine cars was not extended to the brakes, springing and steering, as, in spite of twin Telecontrols and the original dampers, it always gave the impression of driving in a sponge. The bodywork, too, on this particular car was not too good and did not quite give me that pride of ownership which is so essential in maintaining one's enthusiasm for a car, so I cast around for something really British to take its place.

To my everlasting joy my fancy then lighted on a 1934 Vanden Plas Alvis "Speed Twenty" drophead coupé—this in 1938. What a really fine car this is! I have no doubt that my admiration for this car will not be shared by everyone, which is perhaps fortunate, as the second-hand price, in spite of its first cost of nearly £1,000, was really reasonably, or shall I say unreasonably, low (even although it was sold to me by a well-known Midland firm as having done 10,000 miles *less* than a previous owner knew it had done when *he* sold it!)

Many sheets of paper have been wasted by enthusiasts in the quite justified praise of Vauxhall, Bentley and the like, but I am surprised that so little has been written about the Alvis "Speed Twenty." One of these cars, of fairly recent vintage, can be bought within reasonable striking distance of the price of, say, an old Bentley in really first-class condition, and, to my mind (apart from the reflected glory of Bentley traditions), there can be no comparison between the two, in favour, of course, of the Alvis.

Smooth power there is in plenty from the fairly stiffly rubber-mounted engine. Speed is ample (my own car, weighing 32 cwt., will clock a genuine 87 m.p.h. without very much difficulty on decent petrol, Discol for choice) and acceleration is definitely good. Road-holding is second to none, and the i.f.s., though admittedly

CARS I HAVE OWNED—continued

a little hard on front tyres, is superb. Springing is definitely of the "right" type, although on the hard side; for some reason the Telecontrols fitted to the rear of my car have always given trouble. The four-speed, all-synchromesh gearbox is definitely "usable," although perhaps a little heavy; careful alignment of the engine and box, which is separate, is very important for smooth running.

Engine and chassis finish, and underbonnet cleanliness, have always been rather a fad with me, and the Alvis would satisfy the most exacting. Every possible part is chromium plated or beautifully black stove enamelled. Bodywork, although perhaps a little too heavy, is naturally of the first order, and the car looks and feels definitely a thoroughbred. As for reliability, I can only say that my car has done over 70,000 miles, 40,000 in my own hands, and uses no oil (Simplex rings having been fitted at about 40,000 miles), and during that mileage I do not think I have had more than two involuntary stops.

During the time I had this car some sort of a hack was found desirable, and so I started looking out for a "£5 car." (How I envy Londoners their scrap yards, which seem to sprout the most exciting cars, never costing more than £5 !)

I found in one of these delectable paradises a very good and nearly new Austin Seven chassis, lacking the rear portion of its van body.

A further search, covering most of Staffordshire, Cheshire and Lancashire, procured another Austin Seven which had taken a nasty knock at the front, and the best parts of both (at a total cost of £11) were amalgamated, and an Austin Seven complete in every detail resulted and was eventually sold for £45, the only car on which I ever made a profit !

It was at this time that the residents of our very desirable neighbourhood began to complain of the scrap-yard-like aspect of our garden ! The money thus forthcoming was spent on a 1933 "J.2" M.G. Midget, suffering from rather an excessive mileage I subsequently found, so this I completely dismantled, rebuilt and re-cellulosed in my own workshop.

Thus the war found me with the Alvis and the M.G., when the War Office, finding a use for my professional qualifications, drew me into its fold.

The Alvis was carefully laid up and the M.G. sold, and in a sudden zeal for economy a very nice (looking) coupé of a quite famous make was purchased. Over this car a veil must be drawn, for I have never really recovered from the many weary miles I travelled in it trying to keep up even a moderate speed; suffice it to say that after two months it was sold for the price I gave for it.

I must admit that I was then rather caught on the rebound, for I fell for a most attractive 1,750-c.c. twin o.h.c. unsupercharged Alfa-Romeo, which I soon found was suffering from a very great deal of "unfair wear and tear." The chassis was 1929, and I believe it started life as a 2-seater, but was fitted with a most attractive 4-seater saloon body, of restrained streamline shape, by Bertelli, in about 1934.

However, in the very little time at my disposal I started to go over the whole car and eventually got it pretty well right. Although old and not particularly fast, there is something very nice about the feel of this car, and the finish of the whole job is of a first-class order; and it will also put up a very reasonable average on a long run. However, although I never had any real difficulty getting spares from Thompson & Taylor, what with the entry of Italy into the war and needing complete reliability for my work, I decided that it had better go and very reluctantly I sold it, at a very poor time from the financial point of view. I was genuinely sorry to do this and should very much have liked to have kept it to use after the war, but having the Alvis laid up I had nowhere to put it, so it had to go.

Posting round for something economical, reliable and yet interesting to drive, I found a 1937 "T.A." M.G. in very nice order and so far this suits my purpose most admirably, though having had it only about a month it is really too soon to say much about it.

Other family cars of which I have had pleasant recollections include a 1923 10-h.p. Humber, a very well-made, sedate car that did a great mileage; an Armstrong Siddeley Fourteen, a good goer, though "over robust"; two Essex Terraplanes, both excellent cars; a 1927 Crossley Ten, a comfortable but slow car; a 2-litre Rover 1931 Weymann saloon, rather exciting, but with an awful gear change and brakes that did not work when the engine stopped; a 1935 Crossley Ten, rather too fussy; a 1929 sleeve-valve Daimler, of expensive memories, which put up the best smoke screen I have ever seen; a Ford V8; and a fine Railton saloon, once belonging to Jack Hulbert, which is still knocking up an amazing mileage in the hands of my father.

In addition to playing about with full-size cars, I have also been an enthusiastic model car builder, and no doubt some of your readers will have seen some of my work, noticeably the Shelsley Walsh "Newsome" Trophy and the Bugatti Owners' Club "Monro" Trophy. I am at present engaged on a model of Monro's Invicta, but am afraid under present conditions it is not getting on very fast.

I forgot to mention my father's first car, a Violet-Bourget, which he bought in about 1916; what year it was I do not know. Nor did I ever ride in it, for under no circumstances would it ever go when required to, and I think he only kept it about a fortnight ! Can anyone say what they were like ? [This was later, surely, the French Violette cycle-car, with 500-c.c. flat-twin engine, as raced in the Bol d'Or ?—Ed.]

Since writing the foregoing notes nearly 12 months have passed and I am now in a position to say more about the "T.A." M.G. Midget. This, I find, is not one of those which cruises at 96 m.p.h., even under the patronage of St. Christopher, but on one occasion both speedometer and rev.-counter conspired to synchronise at 89 m.p.h. I make no claims as to *timed* speeds, however. Bought at 27,000 miles, this car has now done 41,000 miles, mostly in the rough country of Mid-Wales.

In spite of the fact that at most times she is made to go as quickly as conditions permit, a rebore has not yet been necessary and oil consumption has not reached that stage when one gets fussy about checking what it actually does do, though there is no doubt that long fast runs do lap it up quicker than previously. There is, however, little smoke and little smell, and with no more than ordinary attention the rev.-counter will go round to the 5,000-r.p.m. mark on the gears without any fuss and with little noise.

As regards the engine, no mishaps have occurred and, with the exception of taking up the big-ends at about 33,000 miles, no dismantling has been necessary. A new battery and tyres and a new front spring are the only other replacements so far necessary, and it has not been "decoked" during the last 10,000 miles and shows no signs of needing it. Petrol consumption, driven hard, varies from 35 to 38 m.p.g. The body work, though getting no more than a weekly wash and polish, is "as new" and quite free from squeaks and rattles, and the chromium plating is of excellent quality. Candidly I cannot speak too highly of this car, and I do not think that anyone who requires a *completely reliable* car for heavy work, yet having all the feel and much of the performance of the more out-and-out sports jobs, can improve on the "T.A." M.G. Midget.

Incidentally, for anyone, like myself, who is a bit "rheumaticky" in cold weather, the all-weather equipment is excellent. It does, however, require bigger shock absorbers and the steering is rather heavy for so small a car, otherwise I have little criticism to make.

Whenever I go to a new town one of the first things I do is to locate the local scrap yard, and during the summer I picked up a very nice C.I.S. 9-h.p. Amilcar. After a 17-mile tow in pouring rain behind the M.G., I got down to stripping it, with the idea of rebuilding. The chassis was in splendid order, but the engine was not so good, for the valve guides, which are not replaceable, were oval and the flywheel would not tighten up on the shaft. After doing quite a lot of work on the engine, I decided that, both from the point of view of condition and design, it was not worth spending a lot of time on, so I bought a Riley Nine engine to replace it.

This is in the process of being fitted and is going in (so far) remarkably well, the only trouble being that the very thin Amilcar prop-shaft is difficult to connect up to the Riley gearbox. The chassis has been overhauled and, as it appeared to be very cocked up at the back, has been lowered in relation to the back springs. The body is to be rebuilt, making use of the rather nice pointed tail, but considerably widened.

If anyone has any use for the old engine I shall be pleased to let them have it for the cost of the carriage.

THE 1921 T.T. VAUXHALL ENGINE

[Although the T.T. Vauxhall engine was designed by Harry Ricardo over twenty years ago, its design and construction are such that it remains an object-lesson to students of design and a source of enduring interest to racing-car historians and enthusiasts for the Vauxhall marque; consequently, no excuse is needed for publishing Cecil Clutton's notes thereon.—Ed.]

SOME racing cars start fast and get increasingly slower, while others gather speed with advancing age. The 1921 T.T. Vauxhall is certainly one of the latter, for it was perhaps the most efficient design of its time, while, as developed by Mays and Villiers, it continued to be a potential "f.t.d." up to the outbreak of war. It was certainly the most powerful engine in the 1921 T.T., and it was only put out of the running by petty bad luck.

It is quite worth examining such an interesting engine in some detail, and this is easily done by anyone having access to Vol. II of "The Internal Combustion Engine," by Ricardo, who, as is well known, designed the engine. This article is for the benefit of those who have not read Ricardo's engrossing book.

The engine had four cylinders, 85×132, giving the capacity of 3 litres, to which this race was limited.

Taking the bottom end first, rigidity is the outstanding feature, and it is doubtless this characteristic which has enabled the engine to give something like three times its original output in supercharged form when over 15 years old. The crankcase is of deep barrel shape and the aluminium water jacket is cast in one piece to increase rigidity. Long bolts run from the water-jacket lugs to the bottom of the crankcase, passing through the massive main bearing supports *en route*.

The main bearings (between each cylinder) are ball and the big-end bearings double roller. All are splash lubricated. The crankshaft was necessarily built-up, with the crank-cheeks shrunk on to pins of case-hardened, low-carbon steel. The diameter of the pins appears to be some 34 mm. In the event of the crankshaft having to be withdrawn and broken up, unhappy indeed was the lot of the mechanic who had to line it up again. The flywheel is in the centre of the engine, which was done to even out torsional vibration and shorten the effective length of the crankshaft.

The rods were of low-carbon mild steel, and it may be presumed that these were replaced by something stronger in later life. The pistons were of the very light slipper pattern evolved by Ricardo, and which were also fitted to early "30/98's." The cylinder liners are wet and made of steel. Water seals were secured by means of rubber rings. The water circulation round the liners was reduced to a minimum so that the liners should run at a high temperature and so reduce the viscosity of the oil film on them.

The cylinder heads are of hard bronze, cast in pairs. The combustion chamber is of pent-house pattern with the valves inclined to each other at 90°. There are four valves per cylinder and no fewer than three plugs, in line, down the centre of the head. The outer two were intended as a stand-by, but they must have greatly diminished the water spaces around the valve seats. Indeed, a head so riddled with holes must be very prone to cracks across the seatings, and it is believed that this was, in fact, a problem when the engines came to be highly tuned.

The valves themselves are well radiused. The diameter of the inlets is 1.34″ and of the exhausts 1.3″. The lift of both is .354″. Being well masked they were able to have low acceleration, thus facilitating the use of light springs. The valve timing is not quoted by Ricardo, but in view of the good output at low revs., it may be assumed that the overlap was not excessive. The diameter of the head is nowhere larger than that of the bore, and the fatal gas pockets of the 3-litre Bentley were thus avoided. It was originally intended to run the car with a high compression ratio and alcohol fuel (it will be remembered that this was the first race in which such fuels were seriously exploited), but owing to troubles with head design the low ratio of 5.8 to 1 was adopted and straight petrol used. Thus, the pistons were only very slightly domed.

In passing, it is interesting to note how difficult it is to obtain a high compression ratio with this type of head. The writer recently owned, for a time, two of the contemporary T.T. Sunbeam engines and contemplated raising the compression; but it was discovered that 8 to 1 was the highest readily practicable, despite the greater bore stroke ratio of the Sunbeam, namely, 65×112.

The two overhead camshafts are driven by trains of gears at the front of the engine. They run in six plain bearings, to which oil is supplied under pressure at 25 lb./sq. in., and are contained in aluminium housings. The valve springs are exposed. The cams are of small diameter and operate the valves *via* light push-rods and curved followers of slipper type. The arrangement seems unduly complicated and heavy, after going to the trouble of putting the camshafts upstairs.

The porting seems to be very smooth and water enters the block immediately above the exhaust valves, on the near side. There were two carburetters, one feeding the outer and the other the inner two cylinders. This, of course, was done in order to avoid robbing, blowback and the other difficulties caused by valve-timing overlap, and the arrangement is undoubtedly a sound one.

The gearbox is in unit with the engine.

The engine was designed to run for prolonged periods at 4,000–4,500 r.p.m. with 5,000 r.p.m. as a maximum, primarily imposed by the valve gear. These speeds were exceptionally high for the date, from the point of view of both crankshaft and piston speed, the latter reaching 4,400 f.p.m. at 5,000 r.p.m. In later life it is said that the engine was regularly taken to 6,000 r.p.m.

The engine peaked at 4,500 r.p.m., when it gave off 129 b.h.p., equivalent to 124 lb./sq. in. m.e.p. This is a truly phenomenal figure, having regard to the date, compression ratio and cylinder dimensions. The highest m.e.p. occurs at 3,000 r.p.m., when it is 142 lb./sq. in., the power output being then 98 b.h.p.

It is just possible that these outputs were obtained on a higher compression ratio than 5.8 to 1, as the author has seen a figure of 118 b.h.p. at 4,400 r.p.m. mentioned by a reliable contemporary authority, though even this would be very creditable.

The engine was extraordinarily economical, being capable of travelling 33.9 miles at 48.5 m.p.h. on one gallon of petrol. The car was geared to do 25 m.p.h. at 1,000 r.p.m. on top gear, the maximum speed being 115 m.p.h. at 4,600 r.p.m. In later life the maximum was far higher than the chassis was capable of, but a speed of 160 m.p.h. has been mentioned!

It is interesting, for a moment, to compare this engine with that of the winning Sunbeam. The latter was a straight eight, 65×112, with the cylinders arranged in two blocks. Two overhead camshafts were driven through trains of gears at the front and operated four valves per cylinder through a considerably more direct mechanism than the Vauxhall. A single plug was situated in the centre of the head. The casting of the combustion chambers seems rough and the different heads have widely differing capacities. The porting could easily have been better.

The crankshaft ran in substantial plain bearings, which made the engine exceedingly long, compared with the G.P. Ballot, by which it was clearly inspired. In contrast to the normal eight-cylinder firing order, the Sunbeam is arranged as two four-cylinder engines coupled end to end, with the crankshafts at 90° to each other. This has advantages from the point of view of carburation (the Sunbeam had two carburetters), but this gain is probably more than offset by the unbalanced couple which it introduces. Vibration does, indeed, seem to have been a trouble with these engines, and the excessive length of the shaft, combined with the absence of any damper, would not minimise it. The Vauxhall, by contrast, was notably smooth-running.

At a later date one of the Sunbeams was fitted with a stronger vibratory crank, and with this it was said to be safe and smooth up to speeds in excess of 5,000 r.p.m. For the 1921 race the limit was 4,000 r.p.m. when the output was 110 b.h.p., equivalent to a modest piston speed of 3,000 f.p.m. and an m.e.p. of 120 lb./sq in. They seem to have performed in the race with great reliability, apart from trouble with slip from the multi-plate clutches, which nearly cost them their victory. The Vauxhalls were put out with trivial failures. The low output of the Sunbeams was to some extent counteracted by their lighter weight, which was 22 cwt. as compared with 25 cwt. for the Vauxhall. The Sunbeam chassis also gives the impression of being a much better job than the Vauxhall. The Sunbeam engine certainly bears a far closer relationship to modern touring practice, and one of these cars should make a delightful road vehicle.

But as a *tour de force* the 1921 T.T. Vauxhall will always stand out as a high-spot of racing design and achievement.

AN AMERICAN PARADOX

Joe Lowrey discusses a peculiar contradiction in the development of aircraft and motor-cars in the U.S.A. and Britain, and finds America's light aeroplanes more absorbing than her cars

DURING the immediate pre-war years a rather remarkable paradox began to become apparent to those who interested themselves in flying as well as in motoring. America, which had developed the powerful "floating drawing-room" type of car to the exclusion of all others, was going in for light, sporting aircraft. Whereas England, home of small cars, was specialising in considerably heavier and more powerful private-owner aeroplanes.

During the first two years of this war, when the United States of America remained at peace, this development proceeded apace; the fact that I have been able readily to obtain literature and information from firms concerned this year suggests that these concerns expect to continue expanding the light aircraft market in the future. Meanwhile, civil flying of a "pleasure" nature being, I believe, almost at a standstill on both sides of the Atlantic, we can study recent developments at leisure, and perhaps learn a few lessons to our advantage.

As typical of the aeroplanes in question, and for the purposes of comparison with road vehicles, I have decided to deal with machines coming below an arbitrary weight limit of 8 cwt., this being about the weight of most Morgans and other British three-wheeled cars.

In this country there are, I admit, certain aircraft in this category, but they are few in number, and in the main they are rather of the "toy" nature and fitted with engines which are either foreign or are converted car and motor-cycle designs. In America, on the other hand, in 1941 13 firms offered 22 types of "under 8 cwt." aircraft and more than one firm counted its annual output in thousands.

Of these various American machines the vast majority are 2-seaters, though there are individual single-seater and 3-seater types. Power outputs of the engines used range from 40 to 90 h.p., the average being about 65 h.p., while the average weight is only about 6½ cwt. It is safe to say that there is no really popular British machine that is not at least 50 per cent. heavier and more powerful than these.

From the car aspect quite a lot of interest attaches to the design of these 65-b.h.p. 6½-cwt. 2-seaters. Quite a considerable proportion of their weight must be represented by the wings, yet the machine as a whole must withstand the buffeting of air speeds of over 100 m.p.h. and the bumping of rough grass traversed at about 60 m.p.h., while amateur pilots probably make quite a proportion of their landings some feet above the ground.

Naturally, different manufacturers have different ideas on design, but the most popular type is a high-wing monoplane, rather reminiscent of the old British D.H. "Puss Moth" on a smaller scale; for various reasons, closed cabin machines are definitely in the majority.

Reasonably typical of their class are various Taylor-craft models, and it will be found that these machines are fabric-covered, over a mixed wood and metal structure. The wing is largely of spruce, while the fuselage is of welded alloy-steel tube. It being a cabin machine, the fuselage is really deep and four braced longerons give the necessary strength for a remarkably low weight, the overall length being about 22 ft. The machine is quite well equipped with instruments, wheel brakes, etc., can exceed 100 m.p.h., and when cruising at just over 90 m.p.h. it can better 20 m.p.g. Not bad on 65 b.h.p. and 700 lb. . . . .

While these facts and figures are of undoubted interest and may well give a pointer to a probable line of sports car development, I must confess that I personally have been even more interested in the engines used in these machines. While the American Menasco is comparable with our Gipsy or Cirrus, and the Kinner or Ken Royce with our Pobjoy, the lower-powered engines for these lightweight machines are scarcely comparable with anything hitherto produced in this country.

For these machines the type of engine which is almost universally favoured is the air-cooled horizontally opposed four-cylinder. There are many different types, ranging from 40 to over 100 b.h.p., made by such firms as Franklin, Lycoming, Akron, and Continental, but the units fitted to the "under 8 cwt." machines are usually of from 50 to 80 b.h.p.

Reasonably typical of the class, the "145 cubic inch" series of Lycoming engines are worthy of description. In this case, with variations in compression ratio and operating speed, power outputs range from 50 to 75 b.h.p.

The basic construction of these engines is two main castings, each comprising two air-cooled cylinder barrels and one-half of the central crankcase. Detachable aluminium cylinder heads are bolted to these and carry two parallel push-rod operated valves per cylinder.

The crankshaft is a short four-throw type, carried in three steel-backed copper-lead bearings; in most cases it is a good but unremarkable affair, with hollow journals; but in the case of a 75-h.p. engine, which uses an airscrew reduction gear, pendulum-type torsional vibration dampers are an interesting feature.

The induction system of these engines is, I think, almost unique, in that an up-draught carburetter mounted under the engine feeds to a junction box cast integral with the sump, the mixture being oil heated. The effect is probably similar to that given by the now obsolete water-jacketed induction pipe (impossible on an air-cooled engine!), and while it would be ill suited to use on a car, it probably has considerable merit for the steadier operating conditions of an aero engine.

As regards general dimensions, considerations of engine width usually call for a short stroke in horizontally opposed engines, and in this case a 92-mm. bore and 89-mm. stroke are used. This gives a swept volume of 2,370 c.c., and the h.p. by the R.A.C. formula used for car tax here is 21. In the case of the intermediate (65 b.h.p.) model, the compression ratio is 6½ to 1, the rated power being developed at 2,550 r.p.m. (1,490 ft. per min. piston speed) on 73 octane fuel. The weight is 155 lb. with single ignition or 165 lb. with dual magnetos.

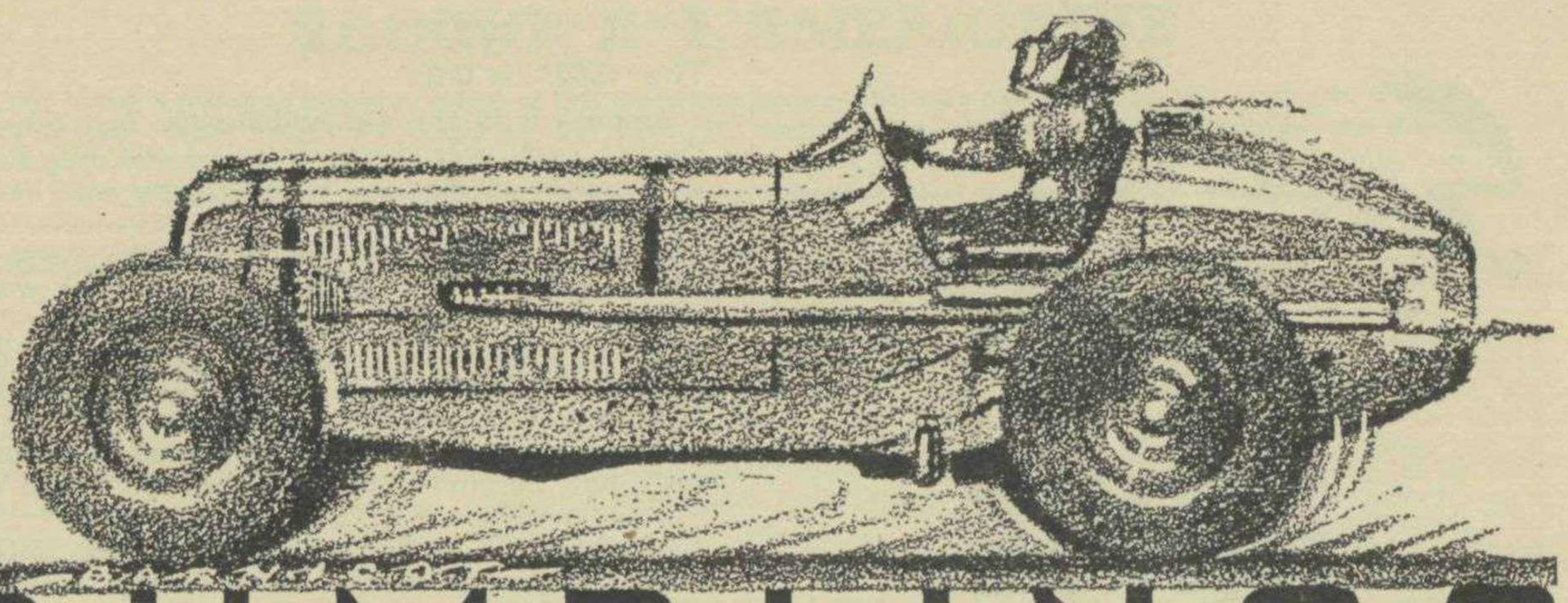
As an indication that, while the "flat four" type of engine appears to have been adopted by different manufacturers with surprising unanimity, design has by no means stagnated, the 171 cubic in. engines of the Continental Motors Corporation are interesting.

In contrast to the Lycoming engines, 98-mm. bore and 92-mm. stroke give a swept volume of 2,780 c.c., but lower operating speeds are used and the power outputs of the different models, ranging from 50 to 80 b.h.p., are almost identical. The engines are built on quite different lines, the Continental engines having aluminium heads screwed and shrunk on to four forged steel cylinders, these being in turn bolted to a split aluminium crankcase, and the weight is perhaps 10 lb. more than that of the rival product.

One interesting detail of the Continental engines is that, as an optional extra, the carburetter may be replaced by a system of timed fuel injection into the inlet ports. I have not got any very full details of the system, but it *seems* to work on a very simple idea of metering the fuel according to engine speed and throttle position only. If this is the case, claims that the correct mixture is given at any altitude must be taken with a large pinch of salt, but there may be more to the system than is apparent from the manufacturers' rather vague literature.

It is difficult indeed to foretell the future, and certainly astrology is one subject on which I am *not* an expert, but I think it is very probable that some time, when "it" is over, there will be a boom in private flying; quite apart from utility transport, countless "birdmen" will want to demonstrate their prowess to the girl friend, and all the "kiwis" and "professional passengers" who have spent the duration making sarcastic remarks about "aerial chauffeurs" will have to prove to themselves and others that this flying business really *is* child's play.

When this boom comes the accent will almost certainly be on economy, and it is to be hoped that our aircraft and engine manufacturers will not allow the light 'plane market to be monopolised by even our present Allies from across the Atlantic. And, maybe, one fine day we shall even be offered a road vehicle with a performance owing not a little to close study of these generously powered light aircraft.



RUMBLINGS

2,000 Different Makes

THROUGH the kindness of a reader we now have in our possession a most remarkable publication, of which we had previously heard, but of which no copy had been forthcoming. It is an insignificant-looking little book, but there is a wealth of interest between its plain covers. G. R. Doyle set out to compile a list of the makes and the manufacturers' addresses of every car that ever went into anything like serious production and, his task accomplished, he published the result under the title of "The World's Automobiles—1881 to 1931, a Monograph on Fifty Years of Car-building." The early part of the book outlines simply and in most pleasing language the early history and subsequent development of the motor-car, and this forms a preface to this remarkable list of makes. The list includes 2,000 makes that were in production as private passenger cars from 1882 to March, 1931. Apart from giving the nationality, fate and period of business of each marque, interesting technical notes appear frequently, and different designations applied to one and the same car are fully covered. One is astonished at the infallibility of the list. We tried the rarest makes we know, and they all turned up. We took a 1920 list of cars and picked out the obscurest light cars—all were there in Doyle's list, with one exception, and that one which we had doubted as ever actually going into production. All the early cycle-cars and tri-cars appear, even the Vagova, of which a six-cylinder 750-c.c. supercharged racing example was built for the 1924 200-Mile Race, although never seen in this country. The amount of entertainment value this list provides is astonishing; but more than that, it forms a most valuable source of reference as to the origin of now defunct makes and the status and activities of pioneer manufacturers. Although 2,000 makes are included, the author apologises for not being able to cover some 200 American makes which blossomed prior to 1895 and faded out within two years.

France, Italy, Austria, Great Britain and Germany had cars before 1889, and the author quotes the first American car as the Duryea of 1892, the first Belgian car as the Miesse of 1896 and the first Swiss car as the Martini of 1898 or possibly the Vivinus. Holland followed with the Spyker and Spain seems to have come in in 1902. An analysis of marques shows a world's total of 3,180, of which 503 existed in 1931—so if you consider you have exhausted motoring history, think again! The author fills odd spaces with witty paragraphs, S. F. Edge wrote the Foreword and pictures appear of various early cars and of 1931 Lanchester and Rochet-Schneider. Altogether a most stimulating little work. The reader who sent the book believes copies are still available from the author. Up to the time of writing we have been unable to confirm this, but in case anyone wishes to try to obtain a copy, publication was from Windmill Hill, Ruislip, Middlesex.

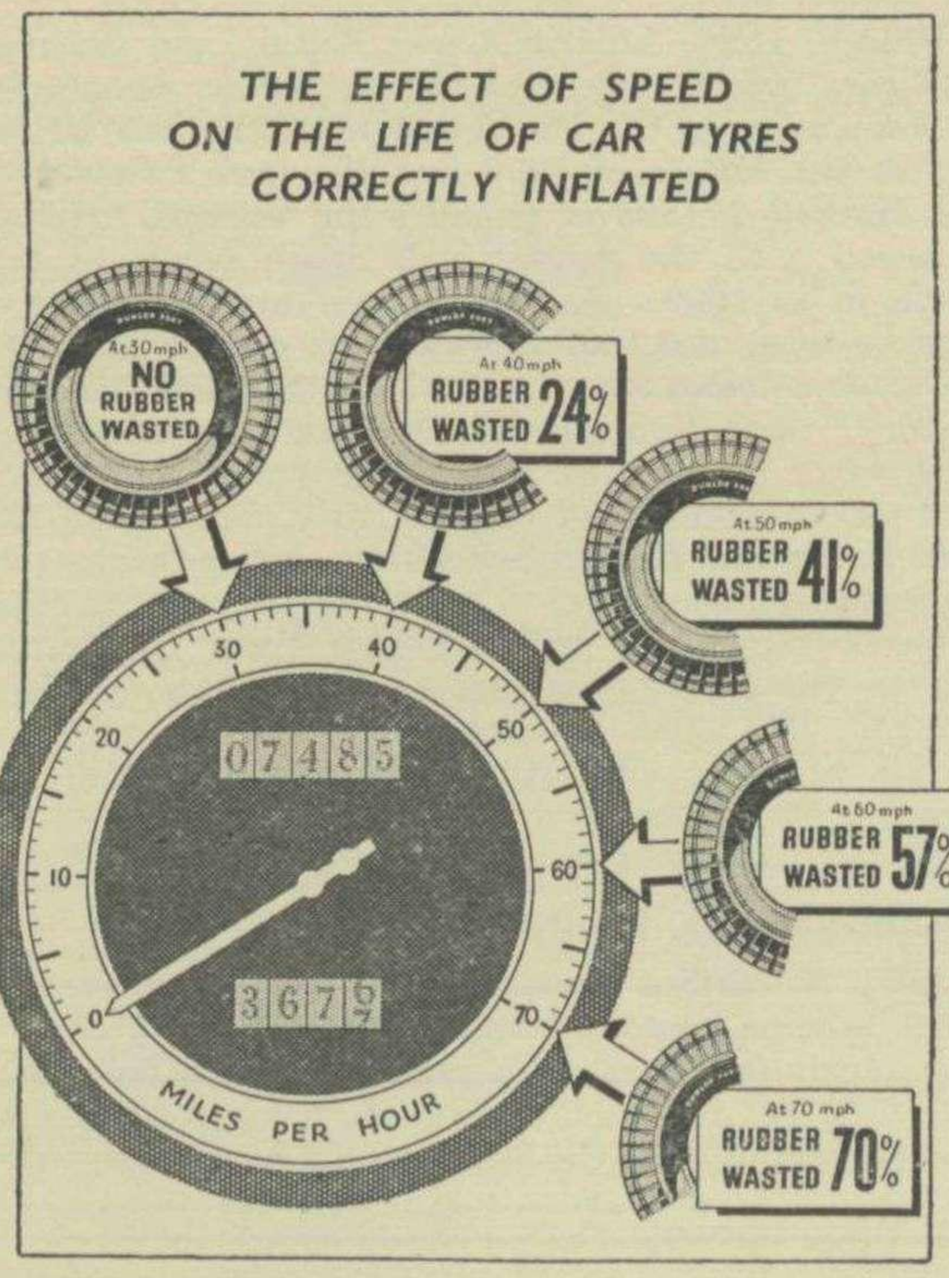
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Headlines, Mr. Printer!

Isn't it curious how the popular Press loves to label anyone remotely connected with fast cars, or apparently-fast cars, as a racing ace or a lady speed queen? Yet it so seldom reports a big race decently and invariably does the Sport untold harm by referring to long-distance trials as midnight races and the like. The other day the *Daily Sketch* came out with the headline, "Racing Ace Teaches Army," or something of the kind. Who is this one-time racing driver? Why, Capt. Crickmay, of the R.A.S.C. Crickmay drove a Morris Cowley in the 1927 Whitsun B.A.R.C. Meeting and finished second in a 75-m.p.h. Short Handicap, from the limit mark, 50 yards behind Ashby's Riley, which averaged under 68 m.p.h. At the 1929 Easter Brooklands Meeting he won a 75-m.p.h. Short Handicap at 77.66 m.p.h. by nearly a mile, driving the R.L.B., which was, we believe, an Aston-Martin-engined "Special." Of such stuff are aces made.

Save Rubber-

DRIVE SLOWLY!



DUNLOP TYRES last longer

2H 113

RUMBLINGS—continued

The "500" is Off

America is in the war and for the first time since the last world war there will be no 500 Mile Race at Indianapolis in May. "Pop" Myers, who had sold many advance tickets up to the suspension of the race, as promoter and manager of the "500," has announced his retirement from active work and will relinquish his desk in his office on North Capital Avenue, Indianapolis, for the duration. Albert Rickenbaker, a brother of Captain Eddie Rickenbaker, President of the Indianapolis Motor Speedway Corporation, is the man who is in charge of closing the track and the downtown racing office. Small offices will be maintained at Indianapolis, however. The doodle-bug folk are in a happier position, although badly worried about the tyre shortage. President Roosevelt has sanctioned the continuance of night baseball matches as relaxation for a war-tuned nation and it is expected that midget car racing, by day and by night, will go on as well. Some guys get all the luck.

* * *

A Powerful Book

One of the brighter aspects of this war is the number of good books about it that we are able to read while they are still topical and not when it is all a bad dream which everyone will wish to forget. In such a category is "I Had a Row with a German," by "R.A.F. Casualty," just recently published by Macmillan's. It is a very powerful, yet withal a very simply told, account of a Squadron Leader's experiences with the Royal Air Force as a "Hurricane" pilot during the war. His machine caught fire and blew up, after accounting for a useful number of German bombers, and the author's account of his spell in hospital is, perhaps, more remarkable writing than is his very sound description of his flying experiences. Royalties on this little work go to the R.A.F. Benevolent Fund, so by spending 5/- on it at the earliest opportunity you will be doing this deserving institution a good turn, as well as buying admirable entertainment for yourself. We only wish we could print the author's short but convincing appeal on behalf of this organisation, on whose behalf he had the happy idea of writing his book. If we could do that we should be certain that you would invest 5/- as we feel you should invest it. So, when you see a bookshop remember "I Had a Row with a German."

* * *

That Basic Ration

The concluding sentence in last month's General Notes erred on the side of optimism without being actually mistaken. If only utility motoring is to be permitted, then it is goodbye for a time to one of our most-cherished relaxations. However, if it will hasten the end of hostilities and help even in a small way to bring victory, then followers of the Sport will make the sacrifice willingly—but not necessarily cheerfully. The little boy who, under persuasion, gives the largest orange to his sister may enjoy a self-righteous glow at having done the right thing, but he still feels that he would have derived more material satisfaction by following his own inclination.

RACING A L'AMERICAINE

[We asked a friend to supply a review of 1941 American racing—the only motor racing left—and this is what he writes. Next month we intend to deal with this subject editorially, attempting to review the divers midget races of 1941 in detail and to show the vast difference between the racing they get at "nite" in the U.S.A. and the scientific fast motoring contests Europe used to know before the war.—Ed.]

I THINK the Editor of Motor Sport is going mad. It's a pity, for he has done a good job of work keeping the paper going in these difficult times and it's been nice knowing him, anyway; but, really, when he starts wanting a review of American midget-car racing, and asks ME to write it for him, I can draw no other conclusion.

Joking apart, I don't feel qualified for the job; there is a popular fallacy to the effect that we speak the same language as the Americans, but while I may wrestle with French technical literature, and even converse with Polish pilots over the "intercom" in what they fondly believe is the English language, I find American strains my linguistic inabilities almost to breaking point.

Having thus apologised for wasting precious paper, I had better get on with the job to the best of my ability. If I fall down on translation, remember I haven't been in America at any time since the war, and my recent information comes largely from a journal which, despite a superficial resemblance to the *Daily Mirror*, is actually known as *The National Auto Racing News*.

One very prominent feature of American automobile—sorry, motor— racing is that, whereas in England and most of Europe there seems to be an idea that wars and motor racing don't go together, the Americans are going strong on both "pastimes." It may not be so for long, since even if the United States is self-supporting as regards gasolene (petrol to you—if you can get it), they won't escape the discovery that rubber comes from Malaya and that machine tools can be used for other jobs than building parts for doodle-bugs.

However, up to the time of writing the great sport of auto-racing has continued almost unaffected by the war, so I will continue my not unpleasant assignment of reviewing last year's racing.

In the United States of America racing seems to have been split up recently into two main classes, the midgets and the big cars. One could really devote a complete article to each branch of the sport, but out of sheer kindness of heart (or laziness) I have decided to spare you this; instead I shall talk mostly of the popular midgets, with just a few references to the larger cars, such as figure in the 500 Mile Memorial Day classic at Indianapolis.

Well, in the March issue of Motor Sport Mr. H. L. Biggs gave a really excellent write-up of "Fronty" Fords, which were the backbone of American racing in the fairly distant past, and I think I can safely assume that anyone reading this will have read that article. Nowadays, of course, the "Fronty" has gone, but its spirit still remains, current racing machines bearing a far closer relation to it than the latest production automobiles admit bearing to the automobiles of that period.

It is in the chassis, particularly, that the old "converted Model T" idea is apparent, for transverse springs and radius rods remain the almost universal form of suspension. There may be sturdier hubs, and perhaps a tubular front axle beam, but the same old chassis layout remains. It is really rather remarkable that, whereas Europe has come to regard this form of suspension as "lousy, but cheap," the American racing drivers stick to it so consistently, and one is forced to conclude that it has definite merit for the special conditions encountered. It is certainly a fact that the use of a transverse spring gives a wide springbase and low unsprung weight, while radius rods prevent the axle doing anything very peculiar in the way of movement; but normally the uncontrolled lateral movement of the car on the spring shackles has always had rather devastating effects on stability. My own theory is that, under short-lap track conditions, the short straights and unidirectional corners keep the cars permanently under a side load in the same direction, so that this lateral float never becomes apparent and, in consequence, one can use the ordinary Ford layout without having to pay Mr. Ballamy to persuade one's car to go round corners at the same time as its axles.

As regards motors, or engines as they are called over here, for the midgets, the current numerical favourite seems to be the V8 "60"; in other words, the smaller Ford V8, known to us as the 22-h.p. model. The Americans run up against just the same snags as do folks who have raced Ford V8-engined cars in this country, including overheating, due to the water-jacketed exhaust ports and more oil in the starboard cylinders than in the port, but V8's still seem to be the favourites. There are also a good many Offenhauser engines and a certain proportion of converted motor-cycle or outboard-boat engines. As far as I know, the usual order of weight for one of these midget cars is about 8–9 cwt., which, with a V8 motor "souped-up" (sorry, tuned; this American language is kinda infectious!) to do around 6,000 r.p.m., should give quite a tidy performance.

Tracks used for racing these midgets vary considerably. The form is standardised more or less at a slightly banked oval, but distances vary enormously, from about one-fifth mile upwards, and all kinds of surfaces are used, from cinders to asphalt. Lots of the racing is done at "nite" (confound this Americanese), and apart from numerous tracks holding regular meets a lot of racing is done at annual county fairs throughout the Middle West.

It is rather difficult to classify drivers, since several rival bodies attempt the functions vaguely executed over here by the R.A.C., and, needless to say, drivers are not allowed to drive in events sanctioned by more than one organisation. However, I think pride of place goes to Rex Mays, A.A.A. National Champion for 1941; he was, of course, by far the most outstanding American driver in pre-war Vanderbilt Trophy races. The same organisation lists Bill Holland as Eastern Champion and Duke Nalon as Mid-West Champion. In other spheres among the leading lights were Ray Richards, Roy Russing, Walt Faulkner, and Ted Horn.

Do You Ever Look at the List of Road Tests carried out by MOTOR SPORT which appears on the back page each month? It has proved *INTERESTING TO OTHERS* why not to You?

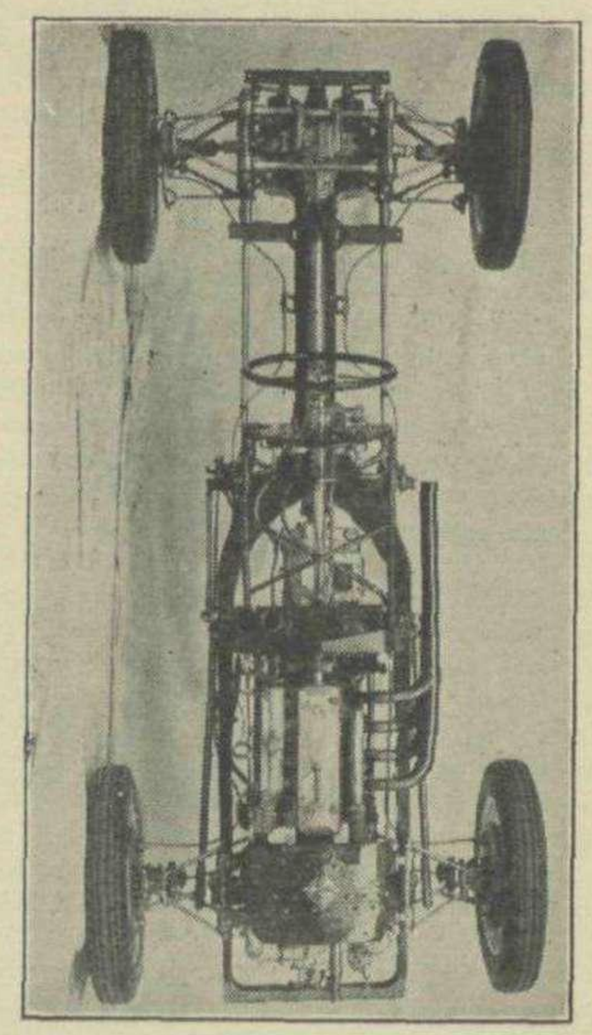
Copies of most of these back numbers can still be obtained at the prices quoted, plus 2d. postage

Write to MOTOR SPORT, 21, City Road, London, E.C.1

Club News

WE HEAR . . . .

In spite of the banishing of the " basic " at the end of June, enthusiasm is still given plenty of expression. Joseph Lowrey is becoming an adept cycle-carist, having fitted an S.U. carburetter with foot throttle control to his s.v. 1928 Aero Morgan. He has also acquired one of the very early 1,100-c.c. sports Altas, with the gear-driven o.h. camshafts. Gordon Wilkins recently sold one of the two Type 328 B.M.W.s he has had since the war began (the ex-Wood car), but is laying up the ex-Aitken job, his existing mount being a f.w.d. Hotchkiss Ten. He seeks a really early veteran, so that he may retire into his garage and toil when private motoring is but a memory. He also possesses a Type 55 B.M.W. and the Singer Nine which he and Jones ran at Le Mans in 1939. Biggs has met an Australian, now in London, who claims to have worked at Alfa's in 1926, to have seen Ascari killed, ridden as mechanic to Brilli Peri and then, in the States, worked on Lockhart's 1½-litre Miller. Breen has a 7½-litre 36 h.p. Mercédès tourer of 1912 vintage, a perfect 1914 Hillman Ten and a touring 1923 G.N.—the last named needing some care and attention—for disposal. Any enthusiast who is interested may acquire all these delectable carriages for an expenditure of 52½ sovereigns. Robin Jackson, Hassan, Tyrell-Smith, Jan Breyer, Seaton Peacey and Newcombe are all with Bristol's, along with Wilkins, who reports that they have by no means lost interest in fast motors. The two-cylinder Riley mentioned last month turns out to be a 1908 model, with good tyres, but a missing valve cap ; she is valued at £10. A local scrapyard has a Clyno and late Swift Ten, alas ! too far gone to be worth saving ; but more cheering was the sight of an " 8/18 " Talbot 4-seater going well in Woking recently. The petrol position should stimulate interest in " gasworks " of an entirely new conception. Peter Clark is taking delivery of a gas-producer Ford Eight from L.M.B. Motors, Ltd., after long experience of this form of propulsion on his Delage, and H. L. Biggs is considering something of the same sort for his Fiat " 500," although, as a sideline, he craves a good motor-cycle and would like to know what happened to the 600-c.c. F.N. which Patchett rode in one of the 200 Mile Sidecar Races, or the 348-c.c. unit-construction F.N.s, similar to the one he owned in 1930. Can anyone help ? Meanwhile, he rides a 250-c.c. 1930 o.h.v. Ariel. We hear that Douglas Tubbs forsook his early Trisscum friction-driven device because it was in such poor order, but if anyone feels like a tough reconstruction job to keep them up to scratch for their war work it used to lie in a breaker's at Bexhill-on-Sea—it is an early small car made at Zurich. The old 1½-litre supercharged Mercédès-Benz tourer, previously mentioned, is the property of Ian Metcalfe, of High Speed Motors, and would probably change hands for £50 or so. Walter Norton has returned from another long business visit to the States, and Harold Koppenhagen got married some time ago. Our congratulations, too, are due to Roddy Seys on his engagement to Anne Robertson-Rodger, Peter's sister. We dropped two unfortunate bricks last month—the Vauxhall-Villiers was, of course, a 3-litre, based on the T.T. Vauxhall engine, and the photograph on page 46 showed V. S. A. Bigg's Allard,



not Silcock's—alas ! there is no opportunity for revising proofs these days . . . H. F. Hart, 1½-litre Singer " Le Mans " owner, was called-up over 18 months ago and has nosed around every village and town to which he has been moved in search of old cars ; he found, and drove for an hour, a 1912 Humber in daily use by a farmer. John Cooper has had a little time in which to poke around his newly-acquired F.W.D. Alvis, which seems to have a non-standard, blown engine, non-standard steering parts and an oil filler as made up specially for the 1928 T.T. cars. He has bought two crank assemblies, together with four spare rods, for his " 12/50 " Alvis-engined Salmson, these having solid, fully-machined circular-section duralumin con.-rods and roller big-ends, as specially made by Alvis, Ltd., in 1926–7, but never used. He plans, too, a large capacity oil pump, vertical racing Solex carburetter and gear ratios of 4.0, 5.14, 7.13 and 10.88 to 1—but it's a case of " as and when." He reports that Pat Stephenson is a Capt., R.A.O.C., out in India, and getting his copies of MOTOR SPORT more regularly than letters ; his " Brooklands " Riley Nine is safely stored. Guy Moss is a Sub-Lieut. in the Navy on M.T.B. repair work, his 3-litre and 6½-litre Bentleys also stored. In case anyone wishes to motor rapidly on " Supplementary," a 1½-litre, supercharged G.P. Bugatti is reported in Derby, for sale at under £100 when reassembled, and the ex-Billy Cotton K3 M.G. Magnette is for disposal in Nottingham for £200. There is also a 13-h.p. Marendaz " Special," believed to have a rebored engine which needs fitting, for around £45, in the same locality. A. H. Bateson, of " Domus," Beaconsfield Road, Woolton, Liverpool, is prepared to take any price offered for spares from his blitzed 1929 Austin Seven " Special," to help enthusiasts. There is an appeal for a good G.P. Salmson, if anybody has one. . . . .

I.A.E. LONDON GRADUATES' GENERAL MEETING

On March 8th the London Graduates listened to a most interesting and diverting talk by Mr. L. Pomeroy on " Lessons from Continental Cars." The theme of Mr. Pomeroy's arguments laid stress on the appeal of the Continental cars to the engineering mind. He asserted that in engine and chassis design and in the development of streamlining, with its attendant virtues, the Continental car was a long way ahead of English products. Only in the coachwork did English cars excel.

He allowed that the present home market was more or less satisfied with the goods it was offered. But he held that with a return to peace-time conditions the prospective purchaser would be more technically minded and would demand improved performance and economy.

These arguments were very briskly discussed, nearly all the 28 members and visitors present contributing their quota of remarks. The general trend of the discussion admitted faults in English cars, yet held that many of the cheaper foreign cars were definitely inferior in quality ; even allowing for the fact, stated by a graduate from Vienna, that Continental cars for export were made to special material specifications.

Mr. Bramley summarised the discussion from the chair and proposed a hearty vote of thanks to Mr. Pomeroy, which was carried with enthusiasm.

[We hope to report Mr. Pomeroy's address more fully at a later date.—Ed.]

750 CLUB

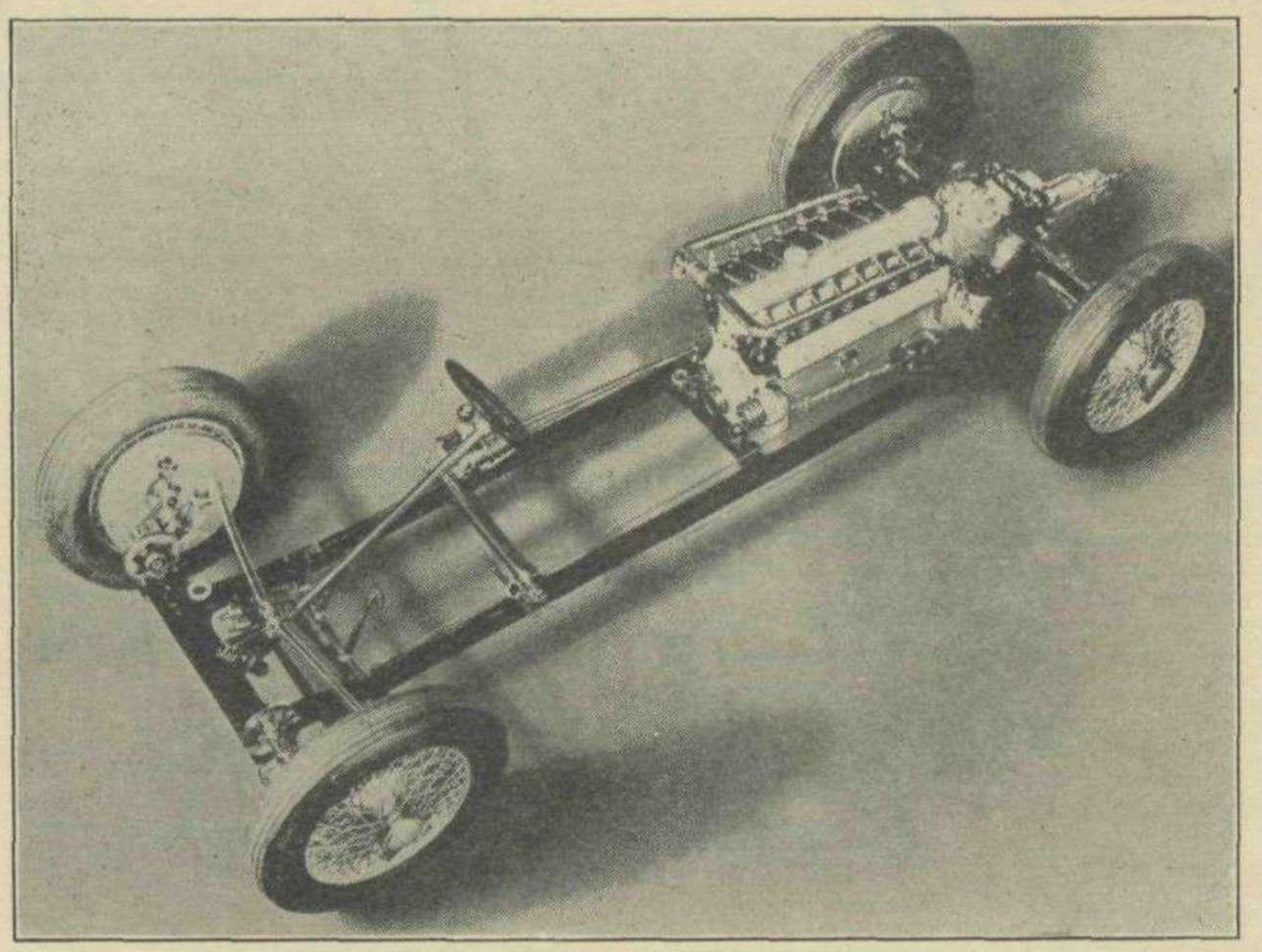
We believe the Film Show is scheduled for April 12th, *not* April 5th. See you there ?

CLUB NEWS—continued

GENERAL NOTES

News of an 1,100-c.c. Alta, of which a soldier-man had to dispose before going overseas, resulted in a pleasing run on a cold but sunny Saturday afternoon amid the Surrey pine woods to try to locate the car. The owner was, as it happened, away on leave, but before the H.R.G. hurried us home to a welcome tea a brief peep was taken at Brooklands and a centre-steering G.N. chassis with Austin Seven front hubs was located—and, what's more, was found to be for sale. Later, the H.R.G. repeated the run one cold evening, hurrying like anything, now four up, to get to the Alta's garage before dusk, a fine, fast run across sandy heathland and down a long ribbon of road to the West, giving rise to many memories of similar runs in happier conditions, ere the night came down and blotted out all view. The next evening the Alta was towed in, again as fast as possible in order to beat the black-out, the stupid home-made tail being set so close to the scuttle that the writer, wedged in the driving seat, lost all sense of bodily feeling before the destination was reached and could hardly be blamed for breaking the tow-rope before the fierceness of the brakes had been adequately assessed. The view over the low bonnet of the straight, tubular front axle and cycle-type wings turning with the wheels, and an exposed prop. shaft and fabric universal joint milling round uncomfortably close to one's left leg, aroused further tender memories. . . . .

Then the Gwynne has been piling up the miles in its own satisfying way, going up to one 750 meeting and then back beyond home, along that fast road through that fine piece of Hampshire scenery, between Farnham and Alton, in search of a 1911 two-cylinder Renault reputed to live hereabouts. The search proved fruitless, but was repeated the following Sunday morning, a rapid return being made that we could lunch and, thereafter, take our place in a fully-laden



" We must not underrate our enemy . . ."

V-twin Raleigh tricycle for a journey to London, and familiar Victoria at that, to hear Laurence Pomeroy address the I.A.E. The return was again made just before black-out, and four hungry mortals voted this 70 or so mile run well worth doing—incidentally, on rather less than 1½ gallons of fuel, and as fast as any Austin Seven. By the way, again the Renault wasn't located—it is " Sarah," the car which Mills part-exchanged to Chambers for " Agatha," and which Derek Matthews bought and drove home in when his Alfa-Romeo blew up at Donington. Matthews sold it to a friend; if anyone knows where the car is now, please send us a postcard.



" Observed section starts "

STOP PRESS!

As we close for press we hear of a few interesting cars for disposal. The Anzani-engined Lea-Francis which Harry Bowler mentioned in his recent " Cars I Have Owned " article is in London and for sale at about £25, some £50 having been spent on it just before the war, when it was 99 per cent. finished, and has not been run since.

Then there are two F.W.D. Alvis 2-seaters, a spare engine, and spare blocks, valves, supercharger, manifolds, camshafts, gearbox parts, front universals, half shafts, crown wheels and pinions, etc., for same, can be had for £50 the lot. A Lea-Francis, less engine, is offered at £5.

The famous twin o.h.c. Aston-Martin " Razor Blade " is seeking a new home, a 1903 single-cylinder de Dion has been seen in Shoreham, and someone is willing to exchange a non-spring-frame 1,000-c.c. Ariel Square Four solo for a sports car, with cash adjustment either way.

" The World's Automobiles," mentioned in " Rumblings," is available as stated, in 1931 edition, at 5/6 per copy.

Scafe has purchased Mrs. Cowell's Frazer-Nash.

* * *

It will not have escaped notice that by prodigious efforts our magazine has been published earlier this month. To save unnecessary correspondence may we mention that the date (April 1st) is not in any way connected with this event, though possibly some of our critics may consider it most suitable.

Letters from Readers

Sir,

It is nearly a year now since I last sought space in the columns of your excellent magazine. In that time I have sold the "Daytona" Wolseley Hornet which I was running and I have bought an M.G. Magnette of 1935 vintage. This car, though fitted with an "N" Type 2-seater sports body, has an engine which resembles the M.G. "K.3" Magnette engine, and I have driven the car myself at over 90 m.p.h. on "Pool" petrol, which proves that the car is no ordinary "N" Type. I accidentally contacted the fellow who owned the car from 1935 to 1937 and he showed me several photographs of himself with the car at Brooklands and during several trials.

Unfortunately, there are no more names in the log book, and apparently the car has not been run on the road since 1937, but I am told that it was raced after this. I wondered if any other MOTOR SPORT reader could give me any information about this car. The registration number is ANF524; I am sorry I cannot give you the engine and chassis numbers, as I have not got the log book down here with me. If anyone would be so good as to contact me concerning this car, please ask them to write through my home address as I am expecting to be moved from this station at any time now. My home address is Brookhouse, Laughton, near Sheffield, Yorks.

As I am not allowed to use a car during my training I have had to suspend my *motoring for a while, and I enjoy reading* MOTOR SPORT more than ever.

I am, Yours etc.,
R.A.F. CADET G. W. DIXON.

* * *

Sir,

May I take this opportunity of congratulating you on your achievement in carrying on in these hard times? I look forward all through the month to the arrival of MOTOR SPORT and then treat myself to a perfect orgy of good reading. Does anyone know the history of a sports Fiat "17/50" six-cylinder job, registered number UR3630, which was deposited in Adlards Motors, Putney, at or about the beginning of 1939?

According to the registration book it was first used in 1929. The body was a heavy "beetleback" 2-seater of sheet metal with cut-away sides and faired scuttle, originally painted grey. Engine was six-cylinder of about 2-litres, with seven-bearing crankshaft, single Solex carburetter and Delco Remy coil ignition. Four-wheel brakes were fitted and it had steel artillery wheels, cycle-type front wings and rear wings faired into the body. I bought it in June, 1939, for 30/-, and after putting in much work on it and getting it in running order (it had been standing out for six months) I was forced to turn it in as scrap in December, 1939.

If anyone knows anything of this car I should be glad to hear from him, as I am sure it was a "Special" of some kind and may have been the apple of some enthusiast's eye.

I have a copy of the Badminton Library's "Motors and Motor Driving," dated 1902, for disposal if anyone is interested in old motoring books.

In closing, may I say how heartily I agree with Mr. Lycett's remarks in the February issue about MOTOR SPORT'S "bad journalism."

I am, Yours etc.,
2/LT. E. R. GREG.

Tidworth.

* * *

Sir,

Since writing to you concerning my Ansaldo quite a number of interesting vintage cars have been discovered, viewed, and in some cases bought, by members of the small but enthusiastic band of vintagists at Rongotai (New Zealand).

A very vicious-looking Riley caused a hasty descent from a tramcar. Although too recent to come under vintage category it appeared to be the real thing, with a very sketchy body with quick-action tank fillers and quick-action radiator filler. Rudge wheels gave a slight clue to its age, but as I am by no means well up in Rileys I would not hazard a guess.

Soon afterwards a genuine "Ulster" Austin Seven was seen in town, followed by a "Blue Label" Bentley, the latter possessing the most remarkable collection of odd-sized tyres and wheels ever seen *on one motor-car, in spite of which it* still looked a thoroughbred.

Next came an examination of an eight-cylinder 2-litre Bugatti, *circa* 1927; another very good car in very bad condition. Another Bugatti, about two or three years younger, with a frightful Australian-built body, was also examined. A short ride confirmed Bugatti steering.

The Ansaldo is cracking fairly heartily now, so Douglas Woods and I hied ourselves to a local straight, complete with stop-watch, and took a few times. I will refrain from quoting them as they are not yet good enough to cause Mr. Boddy to ask for a few tuning tips, nor do I leave molten rubber behind on my getaway; but 0–50 figures have improved by 6 secs. and I anticipate taking another 5 secs. off this, so my tuning has not been in vain.

I have just purchased the 2-litre Ansaldo (mentioned in my article) that was raced here with such success, and intend taking the better bits and pieces off it for mine, which should yield interesting results. Experiments are also being made with an R.A.G. and an Arnott carburetter, the present Model A Zenith scarcely coming under the category of a sports instrument. The Ansaldo is now completely deprived of hood, and with black body, red chassis and silver wheels and a terrific Vortex silencer replacing the fishtail, looks definitely sinister. The Vortex has given it the most delightful engine note imaginable and I feel quite legal driving past policemen.

Norman Carlton has just bought a "12/50" Alvis and has gone all Alvis-minded. So far I have not seen this car, but if the proud owner can be believed it is very nice indeed.

A few days ago my wife and I had the opportunity of examining a very fierce "30/98" Vauxhall (OE127). This was my first close examination of a "30/98," and fond as I am of the Wellesley-Colley 4½-litre Bentley, my allegiance definitely wavered. It has a particularly narrow 4-seater aluminium body and still stands in its beaded-edge tyres. The owner has been in correspondence with Anthony Heal concerning it, and informed me that it has an experimental engine fitted with duralumin con.-rods. [Surely standard on certain O.E.s.—Ed.] Telecontrols are another feature.

A four-cylinder 1,100-c.c. Thomas-"Special" has been located at Lower Hutt and a trip will be made in due course to view it. Douglas Woods is the ex-owner of this car and I am trying to persuade him to write an article for MOTOR SPORT concerning it.

I was very interested to read in the August MOTOR SPORT of the fine write-up given years ago to a 2-litre Ansaldo, particularly the words "only really rapid stuff bore the simple title of 'sports.'"

The "new" Ansaldo is quite an interesting vehicle, especially for the £5 it *cost me. It has a four-cylinder o.h.c.* engine (72×120) with cast-iron monobloc crankcase and block, this being the only apparent difference from my later model, which has a separate aluminium crankcase. An early type Solex looks after carburation and ignition is provided by the usual "Magneto Marelli." The chassis appears longer than the later model, although I have not measured it yet, and is fitted with a narrow 4-seater body, with fold-flat screen. Two-wheel brakes with beautifully ribbed brake drums exert a distinct retarding action. Tyres are 31″×4.50″ beaded edge, on Rudge-hubbed wire wheels, which look definitely "old school." This engine has not been run, due to the fact that petrol is non-existent at the moment, but a dice will definitely be thrown before it is dismantled. The camshaft bears the legend "28–11–23." For an 18-year-old in the hands of its twenty-first owner it is still in remarkable condition.

If any of your readers should have an Ansaldo instruction book, or any information at all, I would be very pleased to hear from them, as even after three years' ownership of the 1.85-litre I am still working in the dark on some points.

I am, Yours etc.,
G. EASTERBROOK-SMITH,
Sgt., R.N.Z.A.F.

Wellington,
New Zealand.

LETTERS FROM READERS—continued

Sir,

May I amplify your footnotes in January and February issues on the Vauxhall Villiers cars? These were definitely not 4½-litres, but 3-litre T.T. cars modified and supercharged.

David Brown's version was fitted with the original front axle assembly, but I don't think the chassis frame was original. Ground clearance was 8" or 9", and underslung. Rear axle was an ingenious design and manufacture of David Brown's, giving "diff." or "solid" drive by moving a small lever.

According to T. W. Carson, Brown's car was No. 1 of the T.T. team, with spares from No. 3, and No. 2 was developed into Raymond Mays's machine. Messrs. Carson and Martin took Brooklands records with No. 1, and before becoming "Villiers" both cars were raced by John Cobb, Jack Barclay and Dan Higgin, though who raced which I don't know.

I am collecting data on these cars—a slow job at present. I would appreciate any news or photographs of either of the "Villiers" from readers; negatives, etc., will be carefully handled. Also information about any 4½-litre Vauxhalls. There is rumoured to be one still intact, but, apart from the owner's name possibly being Baines, nothing is known at present. Such a car was reported from the West Country, but I cannot confirm this.

Keep it up, MOTOR SPORT; you do not realise what it means to enthusiasts in the Forces!

If Mr. Howard Bateson could give me a few particulars, such as body, colour, etc., or photograph, I could probably help with the Bugatti's history, as I know most of such cars in that district.

I am, Yours etc.,

R.A.F. ANTHONY BROOKE.

[The statement that the Vauxhall-Villiers was a 4½-litre was a careless error on our part, but it has at least drawn these further facts about these interesting cars from Mr. Brooke.—Ed.]

* * *

Sir,

The idea of a "Victory Run" to Berlin after the war is too silly for words. When I first read about it I thought it was someone's idea of a joke, and one in very poor taste.

Until we all become imbued with righteous hate for the Germans and all they stand for—in other words, until the whole nation pulls as one, with the spirit of Russia and of China—we shall not win the war, or even deserve to win it.

I hope the R.A.F. will so blast Berlin that there will be no such place to which to make a "Victory Run" of any description.

Like all my contemporaries who saw active service in the last war, I have nothing but the profoundest hatred for the German nation. I would stick at nothing to see that nation wiped off the earth.

The good red blood of our ancestors seems to have turned to milk in many people now living in this country.

Even if the R.A.C. were to sanction the projected run, I can promise the sponsors, and S/Capt. Hess, that the up-and-doing section of the public will see to it that it does not take place.

Let us win the war first and then think about play. I am, Yours etc.,

C. A. L. MEREDITH.

* * *

Sir,

On glancing through some old copies of MOTOR SPORT, one of the few pleasures remaining to the enthusiast, I noticed in the June, 1941, issue an article by 2nd Lt. J. R. A. Green, mentioning an E.H.P. car, of which I believe I have some small knowledge. The car sounds very much like one I saw in a showroom (Berkeley Motors?) in Euston Road during the Motor Show weeks of 1936 and 1937. I was rather interested in this, although at the time I had a San Sebastian Salmson, and would probably have bought it had it been nearer my home. I made a few enquiries at the time, and although the five or six years elapsed renders the giving of actual names and figures difficult, I believe it is correct to say that Olive drove it at Brooklands and understand that he was a captain or a major, who was connected in some way with a firm named (this is where memory is hazy) Bourdon Motors, of Berkeley Square. Upon communicating with this concern, I was informed that they had a very representative stock of E.H.P. spares, so that it may be possible to trace these.

The lap speed of 114 m.p.h. quoted by your contributor would appear a little high, although I seem to remember it having been placed in a handicap event at about 94 m.p.h. [Olive won the 1926 B.A.R.C. President's Gold Plate Handicap at 89.05 m.p.h.—Ed.]

Incidentally, if there are any Northern enthusiasts building "Specials" incorporating Salmson parts, I have a large selection of spares.

At the present time I am running a Citroen 12 F.W.D. saloon, which fully bears out all the favourable comments recently passed in the motoring Press.

I am, Yours etc.,

93, Ormerod Road, Burnley. J. R. BROWN.

* * *

Sir,

In response to your appeal for information about vintage cars I offer the following, which may possibly be of interest. I had no time to examine them closely, unfortunately, but they were all to be seen about two months ago at Gray's Breakers' Yard, Braidwood, Lanarkshire.

Napier, date about 1920, about 4-litres capacity, six-cylinder engine, condition good. Price asked £30, but I fancy could be had for a good deal less.

6½-litre Bentley, limousine body, year uncertain, less tyres, condition fair (engine looked well kept).

Delage D8, coupé body, date about 1931, condition fair.

Wishing every success to your excellent magazine. I am, Yours etc.,

ROBERT A. MCMILLAN, 2/Lt.
1st Lothians and
Border Yeomanry.

* * *

Sir,

Readers of "Club News" may be interested to hear of the following items noted recently while in a hunt of breakers' yards.

Continued on page 87

READER'S 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

FAN assembly, complete, for 3 or 4½-litre Bentley. Barnicot, Appletree House, Byfield, Nr. Rugby.

WANTED, close-ratio gears or complete gearbox for 1931 International Aston-Martin. Farquharson, 2, Trevor Road, Winton, Eccles.

FOR SALE

ALL spares Alvis "Silver Eagle," three-carburetter. Frank, Little Wenlock, Salop.

Spares Section,

MOTOR SPORT,

21, CITY ROAD,

LONDON, E.C.1

CYCLE-CARISTS

[An account which indicates how enthusiasm prevails in spite of the war and one which may convey a warning to those who turn to well-worn cycle-cars as a counter to increased petrol-ration cuts.—Ed.]

IT was still pouring with rain and we were both pretty wet, having just completed 70 miles on the writer's solo Ariel, when we left Kidderminster in a quite unprotected "super sports" Morgan of 1931 vintage. Well, off we rattled down the road, changing from bottom to top gear with abandon, albeit the engine (a 1928 1,000-c.c. w.c. side-valve effort from Tottenham) was missing a little on account of the large quantity of oil that had been hopefully added to the "puddle" to avenge the death of the oil pump. Having covered half-a-mile or so it seemed that the clutch pedal had ceased to remain on speaking terms with the clutch. We stopped and, lying in the road with utter disregard of the miniature rivers and lakes that abounded, a reconciliation was effected, tools stowed away, but labelled "Wanted on Voyage," and we were again under way. Ten miles were covered moderately rapidly, tail waltzing in an interesting sort of way on the wet road, the driver and passenger indulging in a little mutual admiration the while. Remarks to the effect that these Morgans were "wizard fun" passed frequently; on a hill top suddenly and unaccountably became neutral. A quick drop to bottom gear and on we climbed merrily if a little noisily. At the summit it was discovered that the top gear dog clutch had mysteriously vanished.

With military thoroughness a search party was immediately organised, equipped and sent out, but neither of us found a trace of the missing dog clutch, although every cunning artifice of concealment and camouflage known to the Home Guard was conscientiously employed. Nothing daunted, a spare dog was fitted with the aid of much profanity, the tail clamped down, and off we clanked once again. By this time blackout hour was approaching, whereupon a halt was called at a garage on the outskirts of Redditch, where a most obliging and courteous gentleman supplied us with three bicycle lamps, these being fastened to front and rear with the ubiquitous string, the doubtless efficient lighting arrangements designed by Mr. Morgan being a relic of the past. Lights having been lit, the power plant having been started (see De Bello Gallico—Caesar), yet again we were travelling in the direction of Northampton. By this time the much-worn spare dog clutch had rather lost interest in the whole business and it was found that the horses reached the rear wheel more frequently if bottom gear only was used. And so we progressed through Warwick to Leamington.

At Leamington the main interest was more "Pool," but Home Guard tactics proving once more unsuccessful (War Office, please note), we sallied forth from Leamington in the direction of Daventry and Southam. However, "Old Man Trouble" reared his ugly head once again in the shape of an oiled plug, caused by slow poking around Leamington in search of fuel; the plug spanner being no more than a wishful thought, we chugged hopefully onwards, the remaining pot firing lustily, until a hill (quite 1 in 12) proved too much for a mere 500 c.c. of engine. By various brutal methods, not unknown, we believe, to the Gestapo, both plugs were removed and vigorously cleaned, but would she fire? Certainly not. However, a long push to the village at the top of the hill, and, lo! a petrol pump. This time our Pl. Sgt. was vindicated, as the somewhat irritable female pumper of petrol was soon located and induced to tank up the thirsty Morgan. Yet more oil in the petrol, radiator topped up, ten minutes swinging, and once again both cylinders were delivering a fairly presentable supply of horses and on we clattered. After this, apart from sundry stops to cool off an overheated cooling system, tighten up a loose number plate, add more string to the lights, and beg a spare bulb from a gloriously drunken farm labourer, we proceeded without further ado, admittedly at little more than convoy speed, to Northampton, where a hot and muddy tricycle was finally put to bed at 21.45 hours; and so to large tankards of ale, a hot meal and bed.

Thus even in wartime the khaki-clad enthusiast — proverbially impecunious— still manages to amuse himself in the old tradition. . . . .

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ON ENTHUSIASM versus HUMAN NATURE—continued from page 72

of limited means. Sports cars will doubtless be popular, even if practical considerations temper their type, outline and performance. Streamline closed bodywork obviously has a big future, as all who heard Laurence Pomeroy's wickedly-true observations to the I.A.E. on Continental cars in particular and streamlining in general will realise. The type of car a man chooses to a very marked extent reflects his character and personality. Nevertheless, over a period of years many makes will come up for ownership, so maybe bodywork is more closely thus related. My own choice is for a closed car on Lancia Aprilia lines, if you cannot have that aero-screen. The cost of motoring is so heavy that it seems illogical not to have as many seats as possible, except on one's honeymoon. In any case, a 2-seater, coupé or otherwise, with dickey, isn't so good when one's friend has to be out in the beastliness while you and your wife and his wife are sheltered by the hood. And only the very best tourers are rattle-proof with all the element-excluders erect, and second-hand ones usually haven't any excluders at all, because they have blown inside out or to pieces ages ago. But it's each one his own requirements. I know someone who insists on sports 2-seaters, but they have to have a hole in the tail—to accommodate the dog. . . . One young lady uses a 4-seater M.G. while a more presentable 2-seater M.G. stays in the garage, which she explains to puzzled friends as simply a matter of having somewhere to put the luggage and oddments. John Ogle would probably tell us that saloons are all right, but not as a sounding-box for chain transmission, and I wonder if, for the same reason, an open Mercédès may not be preferable to a closed one when, as Bunny Tubbs would say, the puffing-cogs have been engaged—although, for all that, personally I would prefer it to certain British coffins or any amount of Yank tinware. However, possibly I've overdone this question of car types and owner-personality, for a REAL enthusiast, more cynical than I, when I put it to him how interesting are the different sorts of cars the public buys and the reasons for their choice, said: "Is it? I thought they all bought little sardine tins"!

ON THE ROAD WITH A 5-LITRE BUGATTI—continued from page 74

Maximum speed was not tried for, in view of the transmission vibration, but a little short of 80 m.p.h. was attained without difficulty.

All Bugattis have very wide locks, and even this immense vehicle can turn round in a very small space. The steering wheel requires three turns from lock to lock, which is a pleasant ratio for ordinary use. In a car more prone to tail skidding a higher ratio would be desirable, but on the Bugatti it seems fairly ideal, coupled, as it is, with finger-light operation.

Most modern chassis, with cruciform bracing and flexible engine mountings, are very stiff behind and rather wobbly in front. Bugatti has always gone to the other extreme of an immensely rigid front end, leaving the back half to look after itself, and there can be little doubt that the superb controllability of all Bugattis is largely due to this policy.

Even an 11′ 6″ wheelbase does not lower the cornering ability of this Type 46 and it can be wheeled around fast bends or sharp corners in a perfectly caddish manner. Incidentally, for the best results when cornering the tyre pressures advertised by the makers must be closely adhered to. They are 21 lb./sq. in. front and 28 lb./sq. in. rear, and with any higher pressures in front the steering becomes disagreeably light. For real dicing the telecontrols require to be wound up fairly keenly; but, even so, the passengers continue to enjoy very genuine comfort. For town use they can be slacked right off, when the suspension becomes of a quite transatlantic softness.

In fact, this car is a remarkable combination of American comfort and flexibility, almost racing standards of road-holding and the highest grade of workmanship, qualities which place it among the world's finest automobiles. The performance is not, indeed, overwhelming, but, for my part, I have come to the conclusion that acceleration of the "punch-in-the-back" variety is definitely tiring for everyday use. It is no good saying that one need not use it, because, in point of fact, one always goes as fast as possible. So long as I can accelerate better than 98 per cent. of other road users and cruise at 70–80 m.p.h. I do not ask for any greater performance.

It is for this reason that the Types 46 and 49 Bugattis, together with such cars as the Mark V Bentley and D6.70 Delage, appeal to me as the most desirable of all touring cars.

Rodney Clarke's Type 46 is certainly one of the best of its kind and I greatly look forward to a further more extensive run in it in happier times, when its present minor imperfections have been overcome.

LETTERS FROM READERS—continued from page 85

At a breaker's yard about two miles outside of Chichester, Sussex, on the main Shoreham line, easily get-at-able on the main Bognor Road, "12/40" Lea-Francis, about 1929, practically complete (name of breaker Coe); most of a 14-h.p. Lancia, early series.

At a yard just outside Watling (name Volkes, or similar), the greater part of a six-cylinder Alfa-Romeo engine, believed 22 h.p.

There may be some readers to whom this information would be helpful.

I, incidentally, should be glad to be put on the track of an Amilcar (preferably Surbaisse), a Salmson (preferably double o.h.c. grand sports or San Sebastian, or something similar), old and cheap. Condition not too important, as I have fairly good facilities, also plenty of time, as there is little hope of running anything at present. Perhaps you may hear of something in this category.

Best wishes for MOTOR SPORT.

I am, Yours etc.,

R.N.V.R. H. L. NEAL, Lt.

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4½ LAGONDA Rapide open 4-seater sports; *completely overhauled and made like new*, including re-painting, re-chroming and new hood. Mechanically perfect, fast and economical car.

Also

FORD V8 Cabriolet 1934 model, Canadian built; new unit installed less than 500 miles ago, new hood, tyres and battery, just been re-cellulosed battleship grey. K. Hutchison, Vale House, *Frensham Vale, Nr. Farnham, Surrey.*

M.G. AIRLINE coupe, fitted P.B.-type engine, gearbox and rear axle; engine, etc., 16,000 miles. Extras include Scintilla and Telecontrols. Best offer. Worters, Kingswood, Ulcombe, Kent.

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We wish to thank our large clientele of Bentley and Rolls Royce owners who have supported us so wonderfully since the War, but regret to inform them that owing to Government requirements no further repairs to private cars can be undertaken by us for the duration of the War.

A SELECTION OF MOTOR SPORT ROAD TESTS

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
Wolseley Hornet Swallow 2-seater (1933)	April 1934
Wolseley Hornet (12.08 h.p.) saloon	Sept. 1930

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