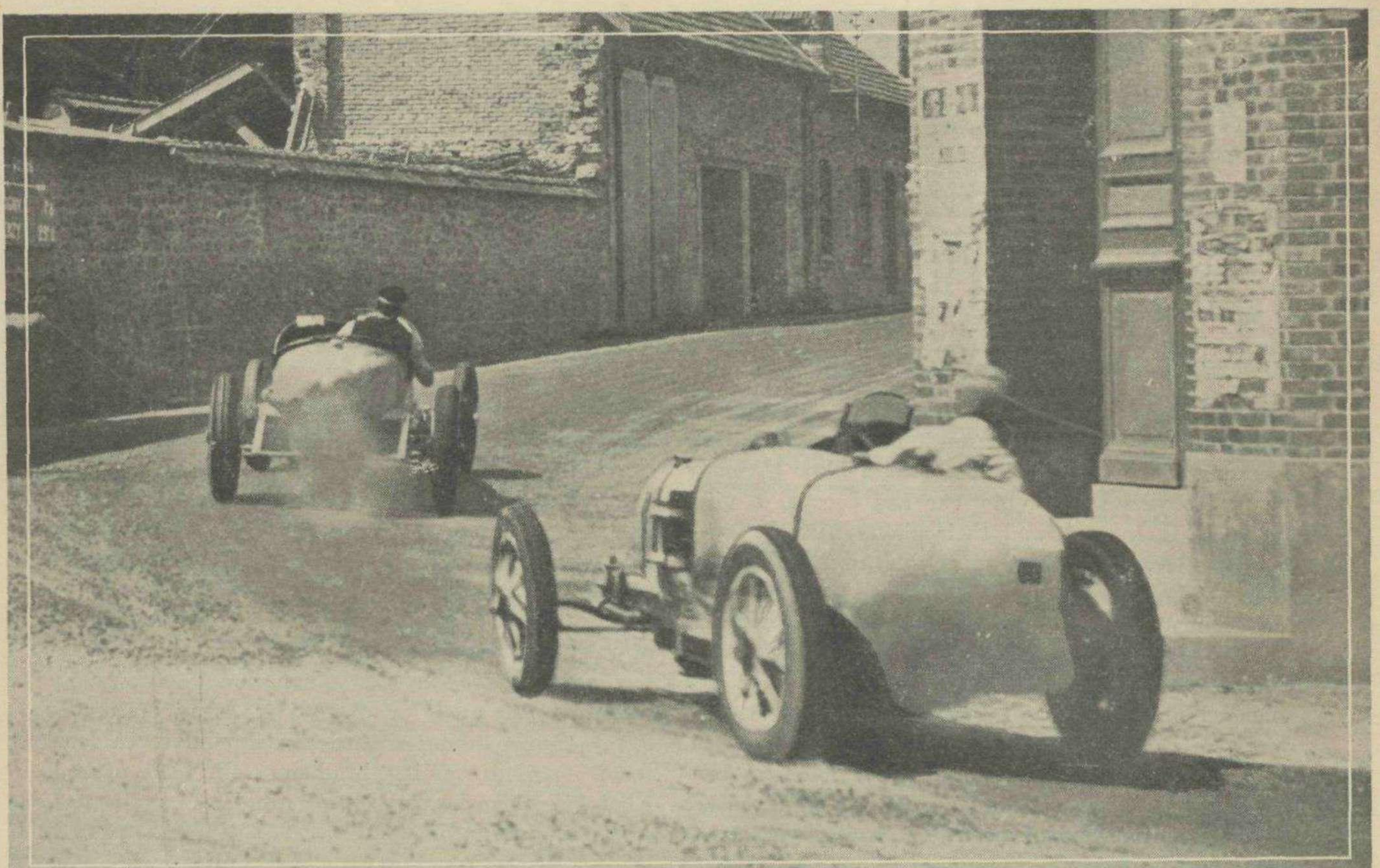
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MOTOR SPORT

INCORPORATING

Speed

ONE SHILLING
MONTHLY



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INCORPORATING SPEED AND
THE BROOKLANDS GAZETTE

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IT HAS COME

AFTER June 30th the basic ration of petrol for private cars will cease—it has been dwindling for some time. That will come as a blow to many people to whom the motor-car has become a vital factor in their work and their play. But they will not grumble, only resolve more than ever before that Nazi Germany and Japan shall be crushed. Nor does this change in fuel rationing imply that our roads will be used solely by commercial and Army traffic. Private cars, and fast cars at that, are extensively engaged on journeys of very great moment to the war effort, and fuel will continue to be issued to them. Pioneer and present-day enthusiasts alike can congratulate themselves that many cars so employed are of sporting types, some even dyed-in-the-wool sports cars, for speed is at a premium in modern warfare and the sports car is no longer a hall-mark of the young and irresponsible and the rich and idle. It is to be hoped that where people can prove that they have been using basic fuel for business purposes the equivalent will be granted now in "supplementary" rations—incidentally, "supplementary" is no longer applicable. Some difficult situations can be foreseen, with an individual's sole petrol ration made out for a specified vehicle, especially with big mileages and a minimum of repair facilities the order of the day. Some provision should be made for getting a second vehicle on the road right away in an emergency, as one could previously on "basic," and certain main police stations vested with powers relating to coupon transference would probably meet the need. Tricars, offering considerable performance at £5-a-year tax, for which "basic" will presumably continue to be issued, at least to the end of September, should be in great demand for business standby and purely pleasure purposes alike.

We must not grumble at the new cuts, for we are at war. But we hope that after June we shall not see, as we have on more than one occasion very recently, V8s used for picnics by Army officers or Army trucks taking aboard girls bound for a local dance—engines running, headlamps on, while parked. That will make us very cross indeed. . . .

Then, when this wave of anger has passed, let us remember that the authorities, who have to depend on the common sense and good faith of those they place in positions of trust, can only take disciplinary action when these flagrant cases of abuse are clearly placed before them. The role of "common informer" is anathema to the average Briton, but when brave seamen's lives are the price to be paid to ensure adequate supplies then we think personal prejudices should be overruled. So, you who are still permitted to use the precious fuel, see to it that you exercise every economy; and you who are deprived—temporarily—of your most-appreciated relaxation, make sure that no case of waste is allowed to pass unnoticed.

POWER PLANTS FOR FLYING MACHINES

Some Very Early History

[So many of us have to do with flying these days that some early history will not come amiss, and Cecil Clutton, in the article that follows, certainly writes as a true historian.—Ed.]

"And flying machines are possible, so that a man may sit in the middle, turning some device by which artificial wings may beat the air."—*(Roger Bacon, 1214–1292.)*

ROGER BACON may perhaps be described as the universal genius of the Middle Ages, and aeroplanes were not the only things which he foresaw a matter of seven centuries ahead of their time.

There had, of course, been lunatics throughout the ages who, pinning themselves to, and their faith in, some grotesque device, had hurled themselves to gruesome deaths from a variety of high places. But it fell to the universal genius of the Renaissance, Leonardo da Vinci (1452–1519), to make the first scientific study of flight by watching the action of birds on the wing. He sketched out a fairly sensible scheme for a man-driven flying machine (it was, however, never made, as far as can be ascertained), designed a practicable parachute and discovered the lifting power of a horizontal airscrew. Tiny models of the latter, driven round by a spring, actually rose in the air, and were thus the first heavier-than-air machines to achieve some measure of flight.

But it needed 300 years before another flight was effected, when, in 1783, the Montgolfier brothers began making successful flights in hot-air balloons; but the history of ballooning and gliding is not pertinent to this article, which is concerned with the engines which were later applied to them.

Continuing for the moment with lighter-than-air machines, in 1852 Henri Giffard constructed a cigar-shaped airship, 40 ft. × 144 ft., containing 88,000 cu. ft. of gas, and attached to it a steam engine weighing 350 lb. complete with boiler, developing 3 h.p. and driving an 11-ft. airscrew at 110 r.p.m. It achieved 6 m.p.h. in still air, but was not generally a great success. Some experimenters continued in the same way and others tried electricity as a motive power, but in 1872 Herr Paul Haenlein made the first airship fitted with an internal combustion engine. It was a four-cylinder engine using coal gas, which it drew from the envelope, developing 6 h.p. Only captive flights were made with this machine.

The first machine with a genuine petrol motor was made in 1879 by Baumgarten and Wolfert. The motor was a Daimler, probably of 3½ h.p. Dr. Wolfert was killed in later experiments, when an airship with an 8-h.p. motor took fire and crashed.

Turning now to the more interesting subject of heavier-than-air machines, the first genuine flights were made by a model of Stringfellow's in 1848. This craft was a monoplane of amazingly modern design, and it can still be seen (in times of peace) in the Science Museum. The span is 10 ft. and the tiny steam engine weighed only 8 lb., having a cylinder measuring 18 mm. × 50 mm. A later engine, weighing 13 lb., delivered 1 h.p. The construction of these engines was a great feat and his grasp of aeroplane design as a whole was some 50 or 60 years ahead of his time. Subsequent experimenters owed much to his pioneer work. A somewhat similar machine, made by Professor Langley in 1896, was a conspicuous success, flying three-quarters of a mile and attaining a speed of 30 m.p.h.

The first man to leave the ground *on* a heavier-than-air machine was the famous Hiram Maxim, who, in 1894, constructed a monster machine weighing upwards of 3 tons. He powered it with two steam engines delivering a total of 362 h.p. These engines were miracles of lightness, weighing only ½ lb. per h.p.—a figure not surpassed for many years—and even when complete with boiler and water the power-weight ratio was only 5½ lb. per h.p. This machine was only allowed to fly as a captive, but so great was the lift developed that it broke its bonds and took a short, but undoubtedly free, flight before the horrified constructor turned off the steam and it crashed to earth.

It is interesting that further experiments were carried out with steam engines during the thirties, and they have, of course, the merit that their efficiency is not diminished by the rarefied atmosphere at great heights.

In 1898 Professor Langley started constructing a full-sized aeroplane which was to be driven by a petrol engine. These experiments went on till 1903, but (whether owing to faulty design or faulty launching gear has never been really decided) the machine never flew and is, therefore, mainly of interest owing to its remarkable engine, which was made by the Professor's assistant, C. M. Manly. After certain preliminary experiments he produced a positive marvel of efficiency, lightness and advanced design, in the shape of a five-cylinder water-cooled radial, developing 52.4 h.p. at 950 r.p.m., equal to 2.4 lb. per h.p., or 3.6 lb. per h.p. with ignition, tank, radiator and water. The water jackets were brazed round each cylinder (the first experimental engine was cooled by wet cloths tied round the cylinders!). Ignition was by coil and sparking plugs. There was one master connecting rod and big-end, the other four rods being attached to it by collars. The inlet valves were automatic and the exhaust valves were push-rod operated, being actuated by a cam ring turning against the engine. It is indeed sad that such a magnificent effort was not crowned with the success it deserved, for the motor which first carried the Wright brothers into the air was a greatly inferior business.

We now come to the first successful flight by a man-carrying, heavier-than-air machine which, as everyone knows, was achieved by the Wright brothers. The exact date upon which their efforts were crowned with success was December 17th, 1903. They, too, built their own engine, which was a four-cylinder of 4-litre capacity (112 × 100). It ran at 1,300 r.p.m., and while it was never tested on the brake, it was reputed to deliver 12–15 h.p. This would be equivalent to the almost unbelievably low m.e.p. of 20 lb./sq. in., and it is difficult to believe, even in 1903, that such an engine would not have developed between 18 and 24 h.p. at 1,300 r.p.m. The weight was 240 lb., which, although giving a poor power-weight ratio, was (and would be to-day) very good for what was, in fact, a fairly ordinary motor-car engine of 4-litre capacity. It lay on its side (the aviator, by contrast, lay on his stomach) and had aluminium water jackets round each cylinder barrel—the heads were not cooled at all. The connecting rods were of tubular steel and the pistons of cast-iron. Ignition was by low-tension magneto and the cooling water was circulated by a gear type pump. The valves were horizontally opposed, the inlets being, of course, automatic. In later experiments the Wrights employed vertical four and six-cylinder in line units.

The first successful European aeroplane and engine was the 1906 Antoinette. The engine was a 90° V8, developed 50 h.p. and weighed only 5 lb. per h.p. It was technically interesting as being steam cooled and solid fuel was injected into the cylinders by a variable-stroke fuel pump. This system, again, has been the subject of much modern experiment, as it is not affected by the angle of the machine, nor by altitude.

Other pioneers in the field of early aero engines were Anzani, who solved the problem of using head-down cylinders which did not invariably oil up the plugs, and also made the first two-row radials. It was using an Anzani three-cylinder engine that Blériot made the first Cross-Channel flight in 1909.

In 1908 appeared an engine which was to sweep all before it for several years to come—the famous Gnome rotary, designed by the brothers Seguin. Even they, however, were not innovators, for in 1895 the firm of Millet had produced a racing motor-tricycle in which the engine was a five-cylinder fixed to, and rotating with, the back axle! This alarming machine was not crowned with success, and the people who were willing to drive it must have been exceedingly few.

The Gnome had the very favourable power-weight ratio of 3½ lb. per h.p., and by 1913 it had grown as many as 14 cylinders in two rows, developing 180 h.p. The hollow crankshaft acted as an induction pipe and pure castor oil was fed in with the mixture, having the merit, for lubricational purposes, that it

Continued on page 94

"DESIGN FOR LIVING"

[In this rather unusual article, which we have had to pare down considerably on account of space limitations, Graham C. Dix writes, as an ordinary, observant motorist, on his hopes and aims for the future. In fact, a "Design for Living," by someone whose life is very closely bound up with motoring. Whether or not readers agree with the views expressed, they will sympathise with the author's plea for a statement of what is expected of the Motor Industry after the war by ordinary enthusiastic drivers.—Ed.]

MEMORIES of Brooklands! "Bira," Dobson, the Barnato-Hassan: yes, they are memories; but best of all was the sun glinting on the polished metal body of the Railton before Cobb took it to Utah. Break the Land Speed Record? Of course it would! This was a car; not the usual mammoth lorry with which we had previously broken records by brute strength. The Railton gave a little more speed with much less power and weight. Let us now design engines worthy of the rest of the car.

There was the never-to-be-forgotten trip to the Donington Grand Prix of 1938. Our Riley Sixteen seemed to hold its own with all save Frazer-Nashes, etc. Breakfast at the "Warwick Arms" was followed by an early arrival at the course to visit the paddock before watching the start. Enough has already been written about the race itself and about the German cars. There is no need for me to reiterate, but I must mention two things which impressed me very forcibly. First, in the hectic scramble for the first Redgate corner, Nuvolari was away in front. Secondly, the incident later when a quantity of oil was dropped on the track between Holly Wood and Hairpin, where I happened to be standing. The German cars were taking this section in a long, controlled slide. If I remember correctly, only three cars encountered the patch before the warning flag was put out. They were Hasse, Seaman and Nuvolari, in that order. Hasse's Auto-Union immediately got out of control, its tail ripping up several yards of fencing and demolishing a hut. Seaman skidded on to the verge and came to a stop, stalling his engine and losing a minute in restarting. Nuvolari came along fast. He was in third place, I believe. His tail slewed out sideways on to the grass, but he kept complete control, driving along the verge until he had straightened out and wiped any oil from his tyres, and meanwhile he found time to employ one hand in shaking a fist in anger at all and sundry. In my opinion, their reaction to these unforeseen conditions does prove beyond all doubt the relative skill of these three drivers.

Visits to Prescott have been rewarded by seeing Abecassis, Fane, Wimille and Mays break the record, in spite of the climb's short existence prior to the war. Trials have been but poorly represented in the West, and my chief memories are of an Allard "Special" with all four wheels off the ground as it came to the level road at the top of Nailsworth Ladder after an extremely fast climb.

While dealing with sport, perhaps a word or two on the allied subject of photography will not be amiss. Photographs are an aid to driving, and they do help enormously in providing evidence of the performance of cars under cornering and braking stresses, etc. Most professional photographers use either giant plate cameras or miniature focal-plane cameras of the Contax or Leica type. Both these are very expensive and complicated to operate. They are wonderful instruments and in certain circumstances the amount involved is no doubt justified, but for ordinary purposes I would like to point out that such expense and complexity are unjustified. My camera is a Zeiss "Ikon," taking pictures $1\frac{3}{4}" \times 2\frac{1}{4}"$, with an f3.5 lens and a Compur shutter capable of taking up to 1/500 sec. This shutter being of the ordinary type does not cause the distortion which so frequently spoils photographs taken by focal-plane cameras. These points, when taken in conjunction with a Kodak Super XX film, give perfect results for any vehicle speed and in any light. In addition, it will focus down to $3\frac{1}{2}$ ft., which is useful when recording engine details, etc. This camera cost me £7 10s. about four years ago second-hand. A suitable Leica in similar condition would have cost at least £30. Is it worth it?



"Visits to Prescott have been rewarded by seeing . . . Wimille . . . break the record"

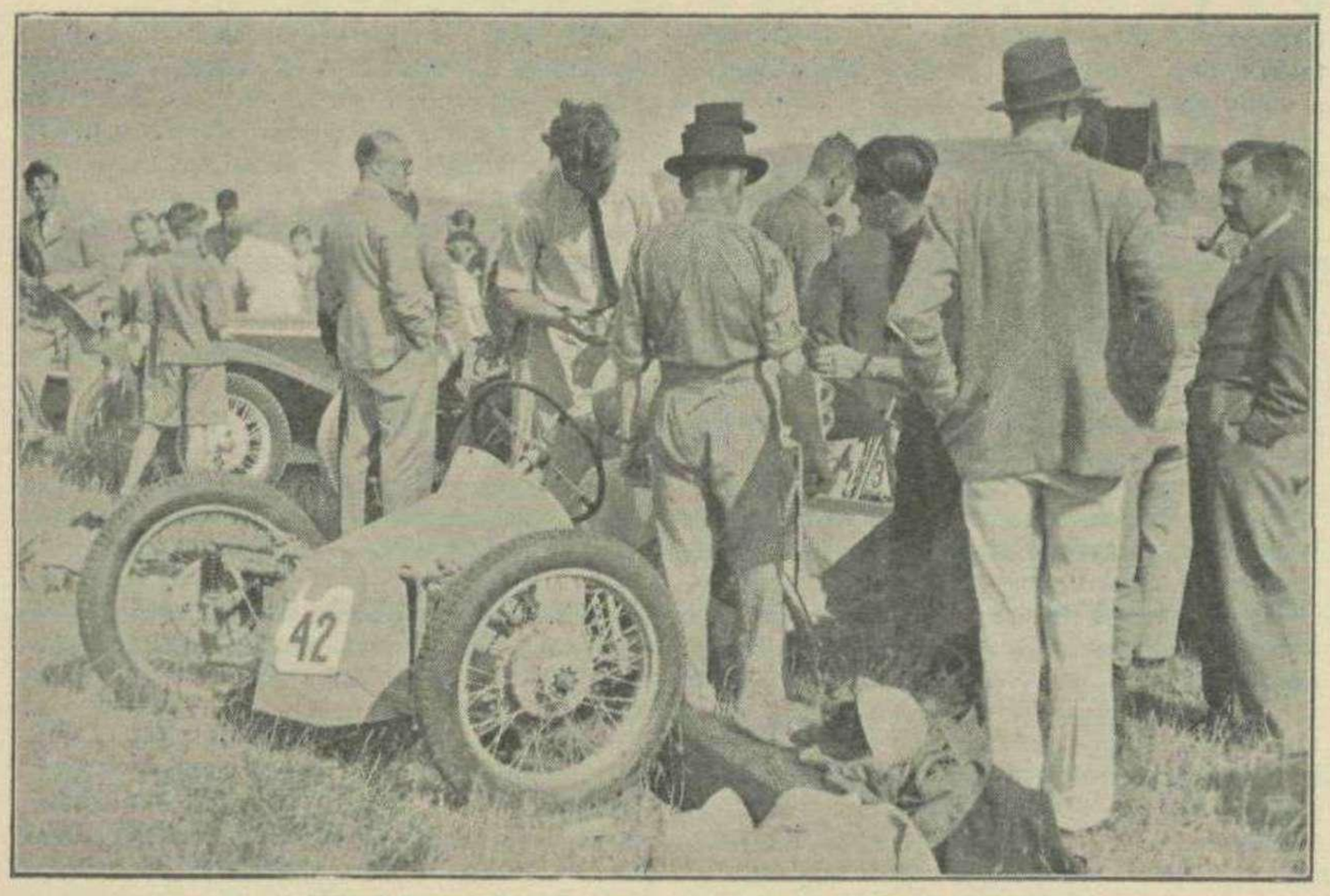
I append here some of my findings after many years of car ownership and observation. These may be dangerously generalised, but conformation to the laws I hereafter lay down has at least given me good value for my money in cars which have been about the cheapest on the market.

I have found that it pays in the long run to restrict engine speed, whatever the bore and stroke, to 3,500 r.p.m. steady cruising speed and not to run on the intermediate ratios up to more than this under normal conditions. This gives a much better petrol consumption and prolongs the life of the mass-produced engine considerably, while it has little appreciable effect upon the time taken for journeys. In the case of my Vauxhall Ten it would allow an average of 36 m.p.h., including all stops for petrol, while to have driven all out would not have raised the figure by more than a mile or so per hour, on account of the comparatively low top speed. It is cruising speed which counts, not a series of flat-out bursts which the engine cannot hold.

In the popular car class I have frequently noticed a deterioration in coachwork finish after a year or so's use. Perhaps my practice is worth recording in that, although it is contrary to the advice of all those who should know, whenever I have sold one of my cars the buyers have all commented on the excellent condition of the body. I never clean a car more than is absolutely necessary. On taking one over I give it a thorough wash, followed by a generous application of Simonize wax polish. After that perhaps two washes during the summer and autumn, then I let the body hibernate until spring is well advanced, when with the arrival of fine days it has the clean up of the year. My theory is that the wax protects the cellulose and one good layer of mud protects the wax. Then the severest weather can do no harm, because it will not be able to penetrate all these defences. Care should be taken in removing the mud, because in the course of time it becomes very hard, and if it is not taken off by first softening it with water, it will scratch the surface.

On both my Wolseley Wasp and the Vauxhall Ten I did over 30,000 miles. On each of these cars the brakes were taken up for wear in the linings at about 16,000 miles. Without further attention, both cars would easily lock their rear wheels when I sold them. While this may have been achieved to some extent by early training on a Bullnose Morris, I attribute it chiefly to the fact that both were hydraulic systems. I have driven cars equipped with every type of brake mechanism and have no hesitation in saying that the hydraulic method is by far and away the best and the only really satisfactory one. With other types one gets unequal application, snatching, slackness of control, frequent need of adjustment, or some other fault. I have never

"DESIGN FOR LIVING"—continued



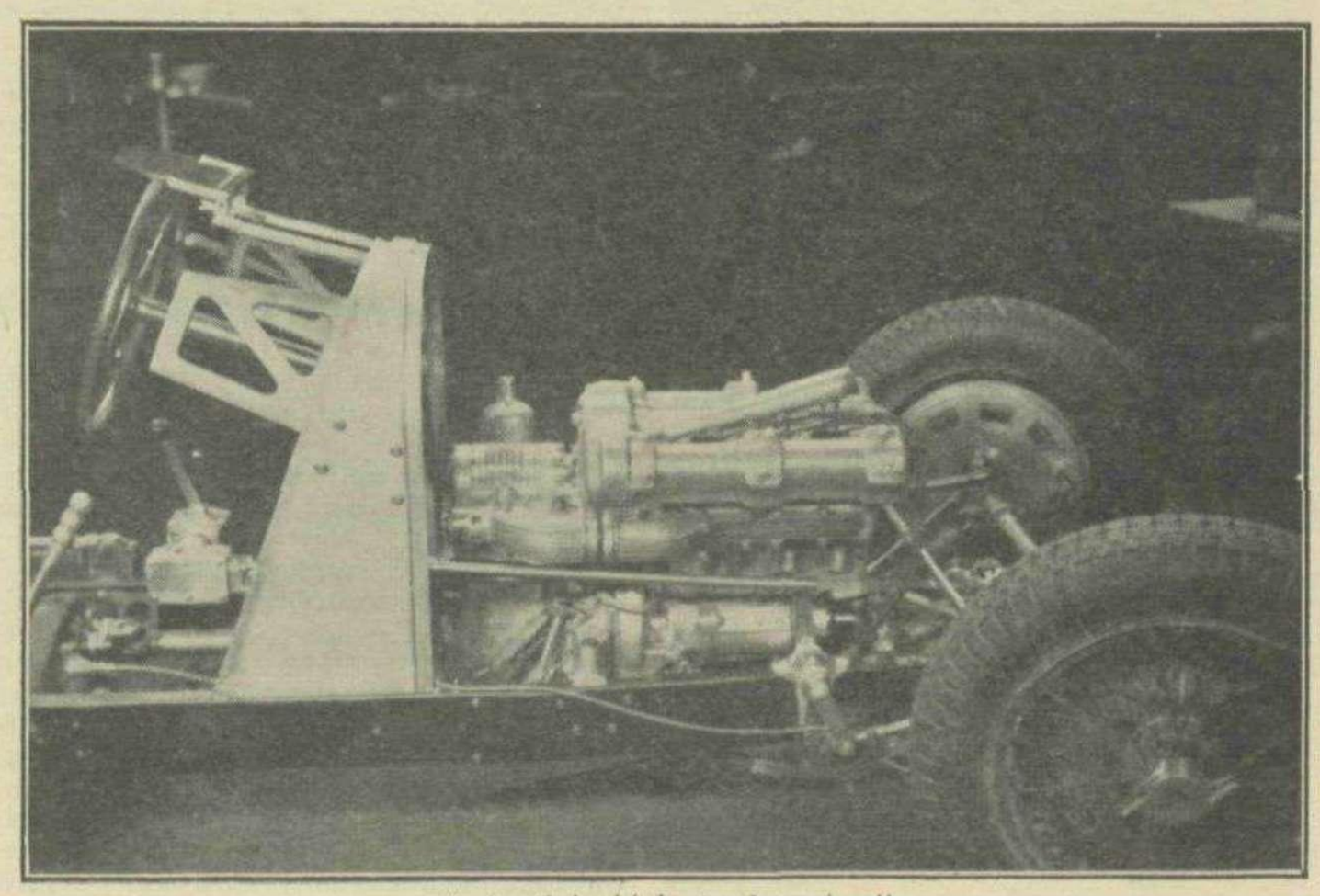
"The 'Specials' I saw . . . gave me fresh heart"

heard of the old bogey of fluid leakage actually happening, either on private cars over a long and rough usage, or in the case of the many racing marques fitted with them. Perhaps their chief advantage is that the lines can be tucked away under the chassis, while other movements need accessibility for adjustment and greasing, and necessarily reduce the ground clearance considerably.

It did not take me long as a motorist to discover some of the shortcomings attached to the cars I owned. Visits to Prescott showed me that other people dislike the same things as much in racing as in ordinary life. The "Specials" I saw there, including the Freikaiserwagen, the Becke Powerplus, etc., and one of the Bolster "Specials" at Brooklands, gave me fresh heart, and I set about obtaining an elementary knowledge of automobile construction. I did not want to acquire too much, however, or I might fall into the same pits as other designers who are supposed to be so good at their work that they are actually paid for it. Accordingly I read MOTOR SPORT and various books published by people who know cars and use them properly, and Maurice Platt's "Elements of Automobile Engineering," as well as other works on the internal combustion engine, etc. As a result I arrived at a point when I started to evolve two designs: one for competition events of all kinds and the other for the road. Owing to the very small prospect of being able to enter for races for some time, the competition design did not progress very far. On the other hand, that of the road motor is almost completed. Construction proper cannot start until the end of the war, but it is hoped to try out some of the ideas in an experimental chassis built from scrapyard relics. This at least will provide some fun and may yield some valuable experience. I do not propose to describe this car, as in principle it will follow the tenets laid down hereafter for post-war cars in general. In looking around the scrapyards for suitable parts I have discovered many interesting cars and parts of cars. One friend told me that during the last year he has seen a complete G.N. in a garage, disused, but otherwise in fair condition. But—he could not remember where the garage was! To the writer, G.N.s are only legends, but if only half of them are true would it not be a vintage car with a vengeance, and wartime economy to boot!

All thoughts of the "Special" were temporarily abandoned. The chase was on. Every one, motoring and non-motoring alike, was instructed to find it, spurred on by promises of untold rewards. The search has been very thorough, but, so far, in vain. Doubts are beginning to assail. Was it blitzed? We are still looking, but a little less animatedly. There is no further clue at all. Garages and breakers flatly refuse to believe that there is still one in existence. [There is actually a touring G.N. very visible to prying eyes from a certain busy London thoroughfare.—Ed.] Then I found a 350-c.c. Douglas flat-twin solo, which I bought complete for 5/- and took home on the luggage boot of the Vauxhall. After complete stripping and rebuilding, it is taking the place of my D.K.W. for short journeys, at a total cost to myself of 17/6. When I took off the cylinder heads I found wads of oily paper wrapped round the valve stems and projecting into the combustion space. There was a 9-h.p. Alta 2-seater being tuned in a shed attached to a breaker's yard. In the same yard was a 3-litre Bentley with front axle, steering and magnetos missing. A couple of Salmsons have come to light, as well as an Amilcar with leaking head, while a Vernon Derby was receiving attention in a filling station. Rumours of a White steam car led to the certain knowledge that it had been broken up a year or two ago. A friend's uncle used to build a few steam cars in a small town near here about the beginning of the century; he built his factory right at the bottom of a steep slope, so that he could demonstrate the vehicle's ability to pull from cold. Even in those days it only required a short time to obtain a sufficient head of steam to operate fully.

Motor-cars should be divided into two main types to meet the two main needs of their owners. Those cars which are to be entered for competitions involve rather different considerations from ordinary road motors, whether the latter be of the sports or family type. In short, racing cars need the absolute maximum performance no matter what the cost, combined with a minimum of reliability, which can be restricted to, say, 500 miles. Road cars, on the other hand, are governed by their economy of operation. The family man wants the most seats with the least power; the commercial traveller the greatest carrying capacity with the



"Austin's high-speed engine"

"DESIGN FOR LIVING"—continued

smallest engine; the sports enthusiast the greatest speed and accessibility, still using the smallest engine. By the term "smallest engine," I mean that engine which will be most economical to operate, taking into account the type of car and the requirements of the driver.

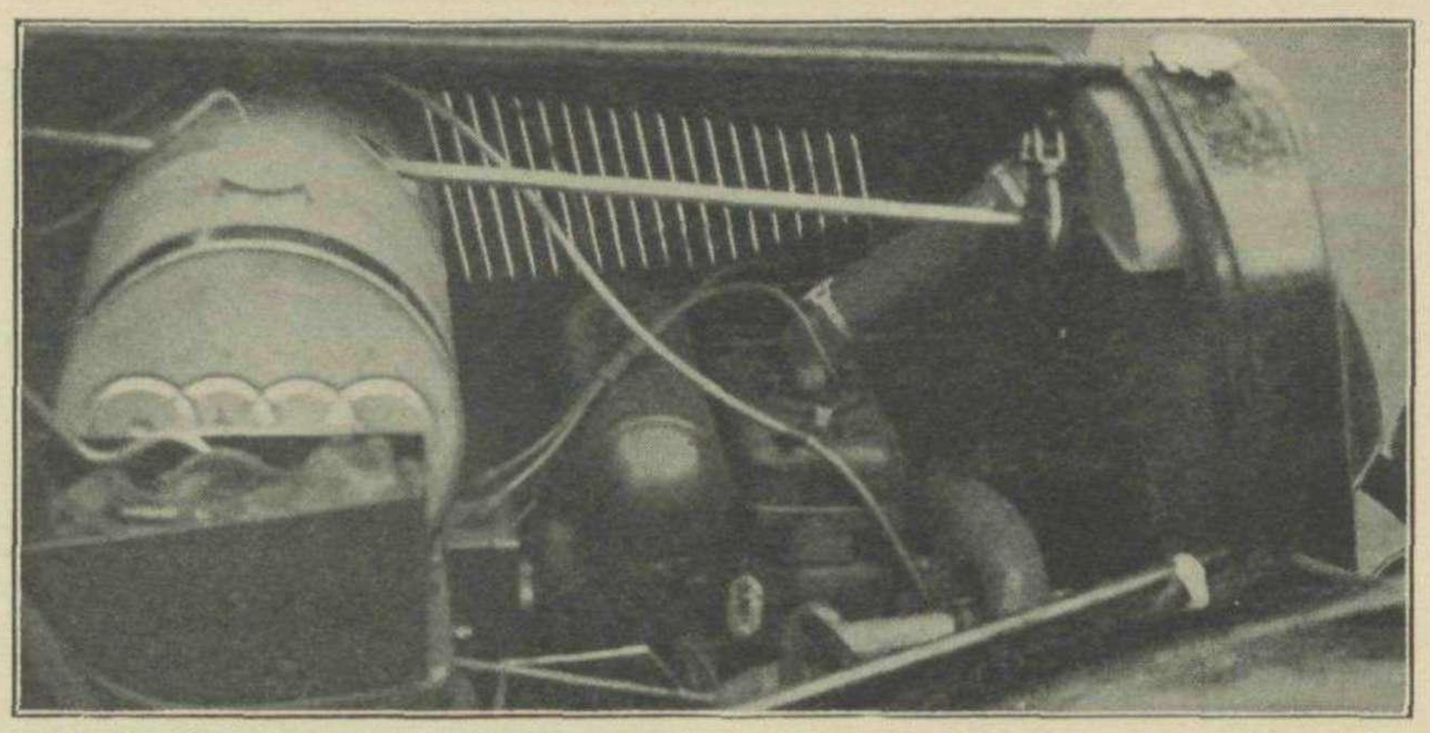
In the racing field I can find little fault with the latest European designs. Maximum performance means high engine speed, and that means lots of little cylinders. This performance can only be utilised if there be adequate wheel adhesion, and in this respect there is room for investigation of four-wheel drive.

I hesitate to mention my opinion that, even in racing-car design, we are several years behind the Continent, with the exception of M.G.'s early efforts at torsion springing and Austin's high speed engine. In the voiturette class we were achieving results in spite of, and not because of, our cars. There were signs that when the other countries got down to this type seriously we should again be outclassed. Yes, I know it costs money; money which we had not got. But there is still room for individual effort and I am looking forward to seeing Parnell's Challenger back up this statement.

I have often wondered why, with our knowledge of superchargers and heat-flow problems generally, we have not taken the study and furtherance of two-strokes and rotary valves in hand. For racing cars here are two methods which, taken singly or together, would immediately increase power output. Or do the engine designers like setting themselves tricky problems, such as creating hot spots around the valves, then introducing sodium-cooled stems and alcohol fuel with no other object than to cool them down?

With road cars the principal considerations are price, extreme economy, and reliability of operation. Although they have to cover a multitude of needs there is no reason why they should differ in basic principles, if those principles be sound ones. There are far too many bad cars on the market to-day. After the war let us forget all about them and make fewer models, but better ones. I am not going to put forward a detailed design, but rather a few notes upon which a design may be based. Let us take the engine first. The needs are cheapness of manufacture, good power output, economy of operation and reliability. All these needs are covered if we adopt the two-stroke type and combine it with the use of large cylinders. The simpler castings and the few moving and machined parts make for cheap production, as do fewer and larger cylinders. The smooth running of the two-stroke would easily permit two cylinders to be used up to 1,100–1,200 c.c., "fours" up to 2–2½-litres, "sixes" and "eights" following in step. Two-strokes develop power well down in the speed curve, thus making for fewer gear changes and higher top gears. The latter would in turn give a higher cruising speed, which is one of the features most lacking in present-day small cars.

It is within the realm of possibility that the use of these units would also reduce the weight slightly. The low engine speed, combined with petroil lubrication, would continue to give 70,000 to 80,000 miles without a rebore, and the simplicity of the unit would very largely cut maintenance costs. Turning now to the remainder of the car, the centre of gravity would be lowered by the general use of front-wheel drive, which would also promote safety in icy weather in the hands of inexpert people. Weight would be saved in the chassis by its construction on the cantilever principle from welded tubes and the body would be formed by covering these with sheet metal. For the greater part these panels could be spot-welded to the tubes, but at any place where accessibility was required they could be secured by bolts. Money saved upon the reduced engine cost could partly be employed in the use of independent suspension and the remainder spent upon further use of light alloys. Independent suspension need not cost much more than conventional springing to manufacture, provided that the system chosen lends itself to quantity production. Thus the ordinary car. Bigger engines and bigger chassis would then give most motorists all they would want. Sports cars would require smaller, and consequently lighter, chassis and bodies, and, if preferred, a larger engine unit than standard could be installed. For those who could afford the additional expense, rotary valves and low-pressure superchargers come into view. There would then be no difficulty in getting 45 b.h.p. per litre before any real tuning was indulged in. Combined with light construction and a high gear ratio such a sports car would show its heels to anything at present factory built. Acceleration and road-holding could be improved if the power warranted it by the use of four-wheel drive. Thus should I like to see our cars after this war. . . . You may say, "What a lot of rot! I don't want anything like that!" Well, if you don't, say so. Tell other readers what you do want. It pays to stop and think, so that we may present a concerted list of what we want incorporated in post-war designs to our manufacturers. Have you had a car in the past upon which you had no criticism to offer? American car companies have been giving the public something new each year, very often simply to keep up a fashion, much in the same way as in ladies' clothes. The 1942 American cars offered an automatic gear change which Laurence Pomeroy has shown to change gear 18 times in a two-mile journey, compared with a normal box with fluid flywheel making no changes at all. Is this Progress? Some attempt has been made at streamlining, but the result is an increase in weight and ungainly bulk, which they have attempted to disguise by making a front-end like the jewellery counter of a 10-cent store. Do the Americans want this unnecessary mechanical complexity and exterior gaudiness? I doubt very much whether they do, but they don't say what they do want, and so their current fashion leaves them no choice. . . . I want a motor-car, not a cuddle-box with automatic window winders and square yards of chromium plate. I want quality of design rather than floodlit tool racks and twin tone horns. Say what you want and let us together see that we get something at least bearing a resemblance to our hopes! In the 1920's we had Sunbeam, Vauxhall, Bentley and Lea-Francis to show the world. In the 1930's we had Alfa-Romeo, Mercédès, Lancia and B.M.W. shown us. Our flag, which had been held high since motors were first made, was thrown away and another strange one put up in its place. Let us remember the glory of the 1920's and together retake our former and rightful position. If I have aroused some enthusiasm and thought with regard to our post-war plans, then I shall not have written in vain and this space would not have been better employed in valuable and minute descriptions and pæans of praise on some vintage machine. Let our pleasure and knowledge not be of an entirely negative character through continuing to suffer our modern cars in silence, falling back on the vintage types. After this war let us help the Industry to make us better cars by co-operating with them, telling them what we want and making sure that we get it.



The author has great faith in the two-stroke engine and has found his nearest approach to the ideal up to the present in the little D.K.W.

EVOLUTION OF A SHELSLEY "SPECIAL"

Some of Barry Woodall's endeavours, recounted by Monica Whincop

DURING the summer of 1934 I developed blood poisoning, which involved a stay of eleven months in hospital, but before this contretemps I had insisted upon being taken to Shelsley Walsh. Needless to add, it rained all day in true Shelsley fashion.

During my spell of imprisonment my parents moved further out into the country, so that my first garage and workshop gradually took shape in the old-world atmosphere of oak beams and formal gardens, my peaceful convalescence being spent studying the principles of the internal combustion engine. I was naturally delighted to find a three-wheeler Morgan in the village garage, its Blackburne engine dismantled and thrown amongst the general debris; the mechanics were sympathetic and allowed me to spend many hours reassembling the bits, giving me great assistance and encouragement. When completed, the car was offered to me for £7, but parental permission to purchase was unfortunately withheld. However, a few months later I was permitted a 1929 Calthorpe 350-c.c. o.h.v. motor-cycle, fitted with h.c. piston and several other modifications. This machine, although giving much pleasure, confirmed that my main interest lay in cars and not motor-cycles, so, during December, 1936, I decided to commence building my first "Special," my original intention being to put the Calthorpe engine into an ash frame (an idea provided by "Bloody Mary"), with motor-cycle forks for the rear suspension. The drive was to be on one wheel only, with Austin Seven hubs. This idea was fortunately short-lived, as I discovered a G.N., complete with full road equipment, in the district. I sold the Calthorpe for £3 10s. and bought the G.N. for 30/-. It was duly towed home, to the amusement of small boys and the concern of my friends. The body was removed, the brakeless front axle replaced by a Singer component, and the steering centralised. After several other modifications had been incorporated I realised that the engine was far from satisfactory for a sprint machine, so I decided to search for a really good "twin."

It was whilst looking for this engine that I came upon a 1931 Morgan, fitted with competition tyres and used solely for trials work by the previous owner. Unfortunately, it passed into the hands of a friend, owing to my inability to raise sufficient funds at the time, but in March, 1937, I induced my mother to give it to me as a birthday present. I ran it as a road car until the following September; but, after spectating at a Donington meeting, I decided to make four wheels my ultimate goal, and in a short space of time I located and bought a "Brooklands" Austin Seven. I advertised the Morgan locally, but it attracted little interest, which was probably rather a good thing, because it made me decide to fit the engine into my "Special," plus Morgan front suspension.

With this idea in mind I met Kenneth Harper, a local Morgan enthusiast, and we rapidly became firm friends. Ken sportingly offered to help me build the proposed "Special" during the winter. We spent many hours, often working far into the night, constructing our four-wheeled creation. Our ambition was to have the car completed in time for the opening meeting of the new Prescott hill climb, and although we had initial setbacks we never changed the basic design. The Morgan frame was strengthened by steel side members, and I can still vividly remember the hours spent drilling holes with a breast drill and bending angle iron to the desired shape. The village blacksmith was consulted several times, but we found that we used more energy explaining our requirements than actually doing the job ourselves!

During the winter months my mother would pay frequent visits to the stable, showing much interest in our activities, although she would often remark: "But when I came yesterday it was almost finished!" Of course I would explain that most parts were impossible to obtain, either new or second-hand, therefore I was obliged to make them myself. Her second remark: "What are you going to do with it when it's built?" was slightly more difficult to answer. I rather suspected that her incredibly innocent expression was due to her knowledge of my carefully guarded plans, but that she was hoping that I might still be induced to change my mind. However, my reply never altered from: "Maybe sell it, but I shall have to race it first to prove its speed." This fortunately saved further argument, and in due course I entered "Chatterbox," as we had christened it, for Prescott.

The great day arrived, Ken Harper and my cousin Victor acting as mechanics and supplying the tender car. On this occasion the last-named was Vic's Daytona Hornet "Special," although by the time we had piled in spares and equipment there was precious little Daytona visible. I took my seat in "Chatterbox" and duly became hooked to the rear by a flimsy steel tube, or so it seemed from my view! Fortunately the journey proved uneventful and we reached the venue at about 10.30 a.m. on the Saturday (practice day) and were greeted in an extremely cordial manner by the organising club. We proceeded to our allotted space and began to unpack our equipment. The entire day seemed to be spent in changing chains, due to the axle having bent under load. We were naturally depressed, but by the time we left the "Hop Pole" at Tewkesbury that evening, having partaken of their magnificent grill, we felt much happier and made plans for the morrow.

Before leaving a still-sleeping house on Sunday morning I carefully put two tickets on the hall salver, a bait which I am glad to say worked! We reached Prescott to find that delightful scrutineer, Mr. J. D. Aylward, awaiting our arrival to explain that we must obtain an efficient fireproof bulkhead. This caused great activity; Vic and the Daytona were off to the nearest village, having apparently seen an enamelled sign "Lucas Batteries Charged Here." With the squealing protest of tyres, the sign was rapidly conveyed back to the paddock. Tin snips and copper locking wire did the rest!

The meeting proved that the torque-arms were not in line with the countershaft, and this in turn caused chains to fly in all directions. My parents apparently discovered the tickets and duly arrived in time for the first run; fortunately they were completely captivated by the excited atmosphere and I had no further opposition. Perhaps the following extract from the *Light Car* will best describe my debut: "E. B. Woodall in a J.A.P.-engined chassis (composed of girders very suggestive of the side members of a bedstead) motored up with the driving chain he probably needed most dangling uselessly."

Work was soon commenced to rectify the trouble, "Chatterbox" being completely stripped and the back axle remounted; this involved an incredible amount of labour, especially as the distorted axle had necessitated overcoming sundry other snags before reassembly. On test it appeared perfect, but on letting the clutch in with maximum r.p.m. once again the axle bent, damaging the selector gear and bevel-box. "Chatterbox" was then towed over to the Morgan works and left in their tender care. To overcome future chain trouble I decided to fit a centre bearing, and after much thought this was finally contrived; using the old rear wheel forks and two bottom halves of a Chev. rear spring anchorage. These latter, cupped together, formed a housing for the ballraces; slits were cut in the centre between the races and a $1\frac{1}{4}'' \times \frac{3}{8}''$ iron strip placed therein and duly welded, the forks being reversed (left being put on the right and right upon left), the whole ensemble then being bolted to the iron strip. Since this modification the axle has given no further trouble. Another modification I incorporated at this period was a special induction system with twin Amal carburetters.

My next entry was again at Prescott, Ken, Victor and the Daytona forming the crew, and we were welcomed on arrival at the paddock in the same delightful manner as before. My first run took 54.34 secs., and considering my previous bad luck I was quite satisfied that "Chatterbox" could be made to motor well if carefully assembled.

My mother tells an amusing story about this meeting. She was watching at Pardon Bend when it was announced that I was on the line, whereupon a man standing beside her turned to his friend and remarked: "Oh, you must watch this fellow; he comes into the corner (Orchard) incredibly fast, and if anyone comes to a sticky end he will!" On leaving Orchard Corner I broke a chain, jammed the selector and turned completely round!

After this event I began to build "Chatterbox" a body, the tail being completed in time for the September Backwell Hill Climb. It was about this

EVOLUTION OF A SHELSLEY "SPECIAL"—continued

period that I heard of a good mechanic, an ex-racing motor-cyclist, in the district, so I arranged for him to accompany me on the afore-mentioned Bristol run. It was planned that he should be introduced to "Chatterbox" the evening before the event, and that I should pick him up in the Riley "Kestrel" family hack, some 20 miles distant from our house. We reached the stable at about 6.30 p.m., Joe being so enraptured by the sight of chains and a J.A.P. engine that it was after 4.30 a.m. when he was finally conveyed home, the arrangement being that he should call at the house by 8.30 the next morning. Unfortunately, he arrived to find me still asleep, and by the time he and the family had shaken me into consciousness practising had already begun. In an attempt to make up for the lost hour I put the car on to my boat trailer, but the extra weight proved too much, cracking the trailer chassis and reducing our speed considerably. We arrived a few moments too late for practice and I was only able to walk up the hill to form a rough idea of the course and so planned a slow first run. Although not making full use of the available power (I misjudged the first bend) I clocked 27.8 secs., being beaten by Wilkes, who did 27 secs. dead. However, "Chatterbox" won his first tankard.

Shelsley was the next fixture on the sprint calendar, but the whole day we seemed to be dogged by bad luck. Only one practice run proved uneventful, and even this was slow (52 secs.), owing to my unfamiliarity with the course. The second run was made with clutch trouble; we removed the engine to rectify it, spending much valuable time hunting for the tiny balls from the clutch race amongst the paddock gravel. Practice had ceased by the time everything was reassembled, so we returned home, hoping for better luck on the morrow.

My first run on the Saturday morning was successful as far as the Crossing, after which the magneto proceeded to scatter in all directions. The ensuing search revealed all but the contact breaker ring, so the Riley "Kestrel" was pressed into service and we dashed some 20 miles to obtain a spare. The "Kestrel" must have broken all local records *en route*, but unfortunately we returned to the paddock two minutes too late to put in the qualifying run, so we became rather depressed spectators. A few days later the "Chatterbox" equipage appeared at Beechwood Speed Trials, but the car proved unsuitable for the course, as I was hopelessly undergeared.

My last event during 1938 was Prescott, and once again St. Christopher seemed to bear me a personal grudge, although he did at least allow my soul to be lifted at the prospect of being the fastest unblown car until almost the last run of the meeting, when Bear's 3-litre Bugatti, having unexpectedly reappeared after a violent attack of axle trouble, recorded 51.35 secs. against my best time of 54.02 secs. This meeting was overshadowed by the threat of war; one couldn't help capturing a little of the sadness in the outwardly buoyant atmosphere. During the winter "Chatterbox" was fitted with a complete body and overhauled in anticipation of the next season. I also began work on a new car, the "Prescott Special," but owing to lack of funds it was never completed. It was to have been a four-wheel-drive job with two V-twin J.A.P. engines, surrounded by masses of ingenuity and B.S.A., G.N. and Morgan parts.

My 1939 season began with the Stanley Cup event held at the Crystal Palace. This was "Chatterbox's" debut on a road circuit and I thoroughly enjoyed the experience, even though our previous bad luck still appeared to follow us! Once again I will quote a Press extract, this time from the *Motor*: "Woodall with 'Chatterbox,' a compound of three-wheeler Morgan and some other breed, led well at first, had trouble, rectified it, and proceeded with great determination to the finish." The trouble referred to was grit under the float needle and resulted in the special fuel badly stinging my face as it was blown back from a completely starved engine.

My next hill climb, Prescott, was also uneventful. I recorded a very poor time and developed sundry running faults, but I thoroughly enjoyed the closed Bugatti Club Meeting held in June. The class run solely for "Specials," with a cash prize for the fastest time, greatly intrigued us, and I believe that it was much appreciated by other hybrid builders.

My desire to compete in road-racing events rapidly developed during the summer months, so I began to search for a suitable car. Eventually I found a "Brooklands" Riley Nine, which seemed to fulfil my requirements, but before commencing my plans for reconstruction I decided to use it as my road car, and I was agreeably impressed by its general handling and design. After this purchase my finances were somewhat low, so I decided to miss the International Prescott, but to enter for the July meeting at Wetherby. At this event "Chatterbox" very mysteriously became immobilised, owing, I later discovered, to the highly developed maternal instinct of Joe, my mechanic. The last minute preparation of the car, three nights of snatched sleep, and the added rush involved by the construction of a special tow-bar fitment before the "Chatterbox" equipage could be attached to a friend's ever-willing car, and the all-night drive to the course, had left me in a somewhat lethargic state. We unpacked and proceeded to fit Coventry racing chains during a thunderstorm accompanied by torrential rain; this seemed to be the last straw, so, having at least two hours to spare, I decided to curl up in the tow car. Joe, whilst passing the car, apparently thought that I had lapsed into unconsciousness and hit upon the diabolical scheme of removing a portion of magneto to ensure my being a non-starter. My faith in fellow-drivers was almost shattered that afternoon, Joe and my friends allowing me to believe that they were as surprised as I at the failure of a spark. However, all is now forgiven!

Shelsley Regs. arrived, but I didn't feel justified in entering, especially as I had accepted Percy Maclure's and Horace Richards's invitation to act as mechanic in their pit for the T.T. Alas! the war clouds had gathered and the T.T. became just a hectic preparation before the chameleon change from white overalls to uniform.

I sold my "Brooklands" Riley some months ago, but its place is now taken by a REAL motor, the "White" Riley, a car with which in due course I hope to add to my already numerous memories of the Sport. The stable, which I call "Scuderia C.R.S.," is at the moment composed of "Chatterbox," the "White" Riley, a Riley-G.N. trials car and two spare G.N.s, to say nothing of my vast store of Riley bits! All is ready to go into action as soon as this war is over, with a choice of motor according to the season of the Armistice, although I sincerely hope that it will not be too long before I smell Castrol "R" and P.M.S.2 again—somehow Army fuel lacks excitement, even though the trucks possess quite a turn of power.

POWER PLANTS FOR FLYING MACHINES—continued from page 89

did not combine with the mixture. The oil consumption was terrific, though the engine needed all it could get. The inlet valves were situated in the pistons, being suction operated, and the exhaust valves were push-rod operated in the heads, which also housed the plugs. Current was led to a terminal and the loose end of each plug lead wiped it as it went past—a delightfully ingenious yet simple solution of an apparently insoluble problem! The engines were, of course, air cooled and revolved at some 1,100 r.p.m. There can seldom have been an engine of such eccentric design which achieved so overwhelming a success as did the Gnome, largely on account of its reliability.

Design in 1909 was adequately dealt with by J. Lowrey in an interesting article in the January, 1942, issue of MOTOR SPORT, and progress thereafter followed fairly normal lines. This article, therefore, is mainly restricted to sketching in outline the development of the aero engine during the 60 years from Stringfellow's successful model in 1848 to the epoch-making Gnome of 1908.

By comparison modern power-weight ratios represent a marvellous advance: 1 lb. per h.p. is not uncommon, and the record stands at about .75 lb. per h.p. But by comparison with modern low-output aero engines the early units do not show up so disadvantageously, for the ratio of engines now supplied for light aircraft, developing anything from 10 to 60 h.p., is seldom better than 2 or 3 lb. per h.p. Again, modern small-car practice works out at 8–10 lb. per h.p., although, of large engines, the V12 Lagonda achieves the very creditable ratio of about 2 lb. per h.p. in Le Mans tune. It would be most interesting to know the ratio on the 1937 Auto-Union and Mercédès-Benz, which must have been lighter than 1 lb. per h.p. by quite a noticeable margin.

CHAIN GANG CONSCRIPT

IN the April issue of MOTOR SPORT there appeared an article entitled "Cycle-carists," relating some of the trials and tribulations encountered by two enthusiasts during a 70-mile journey in a 1931 Morgan. This article was described, in an editorial note, as "a warning to those who turn to cycle-cars as a counter to petrol ration cuts."

Sir, as a recent and accidental cycle-carist, I must rise in protest against such utterly libellous comment. What's more, I am even willing to support my protest by evidence, relating my recent experiences with an even earlier Moggy.

I had no intention of becoming a cycle-carist and initially I figure in this story merely as an accomplice. It all began on a Thursday, when that remarkable publication *Exchange and Mart* contained an advertisement for an Aero Morgan, and Neville (that isn't his name, but nobody ever calls him anything else) decided that he wanted it.

That evening I found that my H.R.G. contained a tow rope, two bicycle lamps, two passengers and, under protest, myself. So, on a bitterly cold winter night, I headed out through Bagshot, Windsor Great Park, Slough and then on to unfamiliar roads towards Amersham; much asking, a few miles of "Follow that 'bus and you can't go wrong" (we did!), and we duly reached the address quoted in the advertisement.

"The Morgan? Yes, it's round at the back, but I don't know anything about it: it belongs to my husband, and he's on duty. But if you go down to High Wycombe Green Line Garage you may find him in."

A brief interval and we were at the aforesaid garage, where our luck was in, and, surrounded by conductresses in the canteen, we duly discovered Driver H. Four up now, we returned up the hill to the Morgan's lair.

Unveiled this tricycle revealed itself in the somewhat illegal light of our torches. I think I probably went slightly pale at the sight, but it was too dark for anyone to notice. Really, though, it looked as if it had come out of the Ark. Out in front was a s.v. water-cooled J.A.P. motor, with finned detachable valve caps and a sort of cut-up tobacco tin as carburetter inlet. The wings were almost, but not *quite*, S.S.100. The tail was certainly pointed, but, with an utter disregard of convention, it appeared to be turned *up*. However, I think I must have had more carrots for lunch than Neville, for he seemed blind to all the crudity, which was half hidden under a merciful veil of darkness.

Well, to cut a long story short, the damn thing worked, so some pound notes changed hands, bicycle lamps were draped around the Moggy, and Neville departed uncontrollably (I suspect) up the road. Diving into our car, we set off in pursuit, heard the bump as he took to the kerb on the first corner and came up astern just as he changed into top gear. After that all was well until, about a mile on, the horses suddenly stopped working on a hill and the driver said he had cold feet; we said we would have cold feet, too, driving that thing, but then we discovered the feet were cold because a broken fuel pipe had deposited a gallon of petrol on them.

With one accord we started tying the Moggy behind the car, and the rest of the journey home was done on tow. I'm afraid we still broke the law, as, although one cannot illuminate speedometers of open cars at night, I'm sure we did not always observe the 20-m.p.h. limit for three-wheel trailers; in fact, on the bumpy but open road through Windsor Great Park we must have been doing something around the Morgan's normal all-out velocity, but it had insufficient brakes to be able to protest and, anyway, if you go slow you may get rammed behind! We broke the rope a few times, which was unfortunate, since it was the landlady's best clothes line; but we arrived all complete and the towee was thawed out successfully. He *was* quite cold, since Mr. Morgan fits air conditioning, cabin heating, or what will you, in the form of a vast hole in the dashboard passing air from the radiator into the cockpit; very nice, but when the engine is dead and it is freezing hard the effect is the same as at least one modern cabin heating system gives by dint of far greater complication!

The second chapter of this story began the next morning, when Neville first saw the Morgan by daylight. He seemed faintly moved, but was bearing up well, and in the evening he went off to see his fiancee, with a copy of *The Motor Cycle* under his arm containing pictures of all the modern Morgan models. He returned later, and suddenly propounded the belief that a car with no reverse gear was n.b.g. I regret to say that, to this day, we strongly suspect feminine influence to have been behind this sudden loss of enthusiasm for Morgans, but Neville denies it, so I have merely stated facts without (much) comment.

Now, as a bloke who knows what he wants Neville may not be so hot, but as a car salesman he is positively devastating. I thought I was safe, being happy in possession of an "1,100" H.R.G. and a sort of two-wheeled American car, but it was not to be. In a weak moment I said, "Sell the old Squariel for me and I'll splash half the proceeds on the Moggy." As if by magic a bloke appeared with twenty-five pound notes in his hand, and by the time we had recovered from a demonstration run on very snowed up roads I found myself with 12½ quid and a Moggy. Just like that. You can now forget Neville, who fades out of the story; he was last seen driving the world's slowest Morris Minor saloon, so I think he is now doing sufficient penance for selling me a cycle-car!

Having become a Morgan owner, the device obviously had to be taxed, but first came the formality of insurance; needless to say, this involved certain difficulties, but "engineers' certificate," etc., eventually appeased the company and insurance and licence appeared.

Now, as one brought up on synchromesh, with only comparatively infrequent doses of unaided right-hand cog-swopping, I was a little bashful about my first drive in the cycle-car, but, unfortunately, a personage known to quite a few as "Enoch" heard what was afoot and insisted on dragging the Editor of this high-class journal (advert.) along to watch.

Item 1 on the programme said, "Start engine." It sounds simple and it is an item which recurred frequently, but with geared-up starting handle (at the side of the vehicle!), 500-c.c. pots with lots of compression and a valve lifter which didn't, it was quite tricky. Eventually we discovered that "starting handle" was a misnomer, the correct technique being to kick-start, and the peace of the neighbourhood was soon disturbed by the familiar V-twin bark.

As regards controls, the Moggy was faintly unorthodox. Acceleration was by hand throttle on the wheel, likewise choke and ignition controls; clutch was normal, even if cone, and a foot pedal tightened a piece of tape wrapped round the rear hub. The front brakes (for which Allah and H. F. S. Morgan be praised; early models had none, only the bit of tape) worked off the hand lever, while a right-hand lever worked the two-speed semi-Frazer-Nash transmission.

Apart from very haywire carburation, departure from rest proved surprisingly easy and rapid, and the change up to top gear was safely achieved. Came a long corner and halfway round an urgent desire to reduce speed. Frantic groping failed to find the hand throttle, till the fact that it had turned through 180° with the steering wheel was realised. Hastily it was pushed down, to turn off the power, for I in my innocence had yet to comprehend that, when on full lock, one moved the lever *up* to close the taps. . . . Yes, I am still intact, so is the Morgan, but I'm not sure quite why.

Coming out on the open road, I began to realise that, if it is in good nick, even a s.v. J.A.P. can make 7 cwt. go places quite well; as I sailed past him at a furious 50 m.p.h. the be-Gwynned Editor came to a rather similar conclusion. Quite a few miles were done on sundry tests, with assorted passengers and promising results, but two things became extremely obvious: one was that my continued survival depended on the replacement of the hand throttle by a foot ditto (apart from cornering worries, could you double-declutch a change down when the right hand has to cope simultaneously with widely distant throttle and gear levers?); the other being that there was little prospect of any lasting peace between myself and the prehistoric Zenith carburetter fitted.

Item No. 1, I regret to state, has yet to be dealt with properly. I have a foot throttle, admittedly, and I have used it for quite some time now, but it is a fantastic affair of rubber bands and wire, such as even Heath Robinson would disown. Maybe by the time you read this I shall have something better, but, me being me, maybe not. Item No. 2 was dealt with by the acquisition of a common or Morris-

CHAIN GANG CONSCRIPT—continued

Cowley S.U., with awkward diagonal flanges; an effective, if ugly, adapter was produced and the new carburetter was installed, together with a sort of Cox Atmos gauze between adapter and manifold. To my surprise it worked, the engine starting at the first attempt.

With Bowden control of jet position it soon became obvious that carburation was still wrong, but was at least hopeful. Out came jet needle and micrometer, when it became highly obvious that the last car to use this gasworks (a Wolseley Hornet) must have been petrol cooled. A needle giving about 30 per cent. less juice was put in and made a definite improvement, while a still weaker one made matters even better, but correct idling setting still gives excess richness under load. The next move is to make up a needle, but, since "the dean" and I insist on a needle being accurate to a tenth of a thou, it is a slow job. The specification is out, but a chance to borrow the lathe for a long enough period is still awaited.

There came the day when Tony called and rashly deserted his J2 M.G. to make a conducted tour of this district's collection of rare machinery by Moggy. All was well, apart from a spot of wheel lifting and broadsiding, until we came to leave the yard where such things as Alta, Gwynne and Tracta live; sad to relate, depression of the clutch pedal produced no effect save a ticking noise. Rude comments from Tony, who, when he is not wrapping it round telegraph poles, keeps his very standard M.G. in lovely condition.

Education proceeding apace, I discovered that the Morgan clutch-withdrawal gear was held together purely by split pins, of which we were one short. . . . Fortunately, the vital bits were still hanging around and repairs took a mere couple of minutes.

Well, the Moggy continued to motor, mostly locally, till there came an invite to go and say goodbye to a friend's Meadows Frazer-Nash, said 'Nash living about 35 miles away. Ever in search of adventure, the Editor decided to come too, so on a cold Sunday morning we set out.

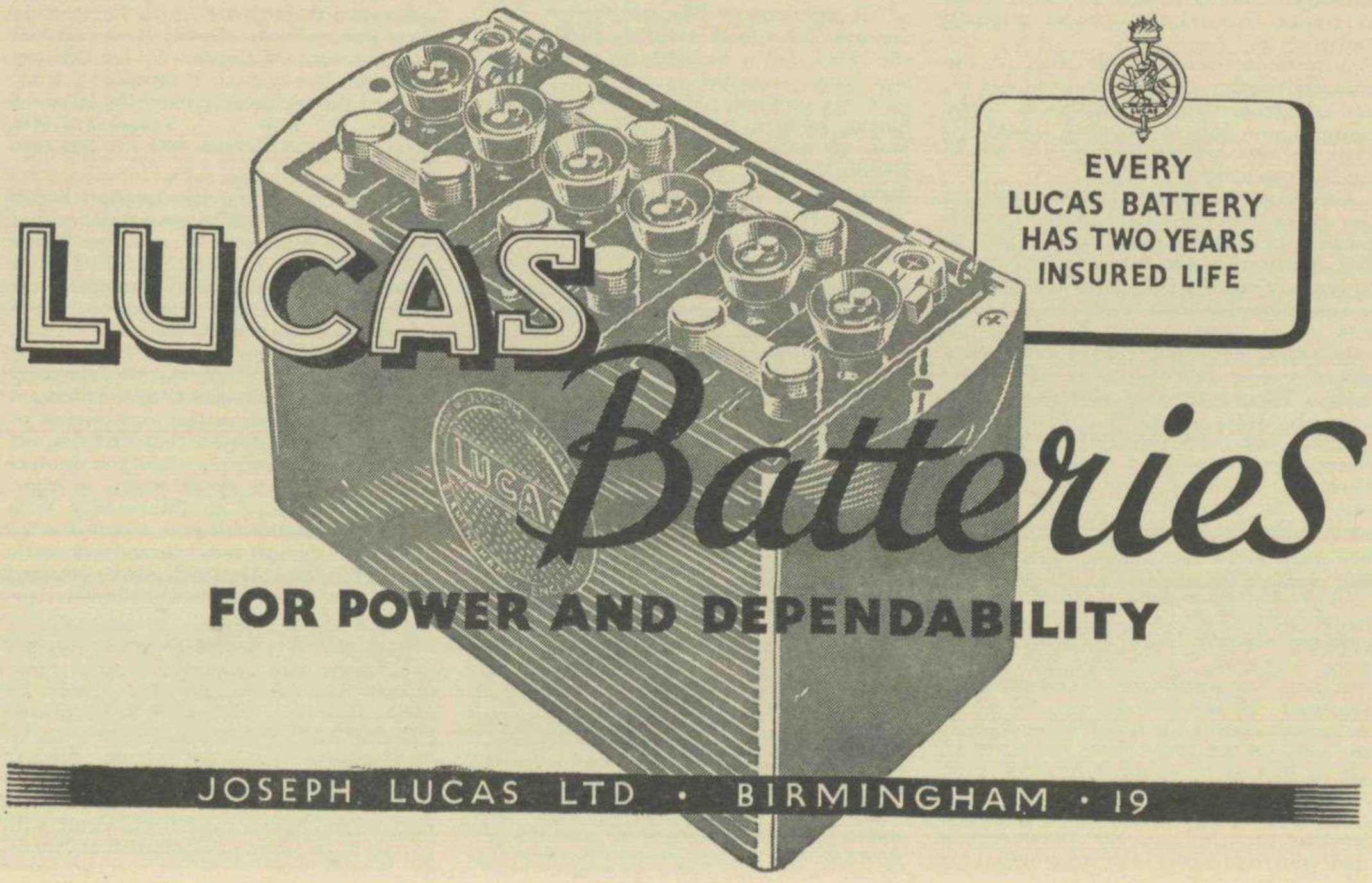
Here comes a part of the story which I know you won't believe.

We had gone about six miles quite briskly when about 75 per cent. of the power faded gently away. A halt to investigate exonerated the phoney throttle control and there was no sign of seizure, so we restarted, and lo and behold the horses were working once more. Then, after a similar distance, the power went again, but this time we spotted the trouble—icing. The outside of the carburetter was all hoar frost, while the Cox Atmos gauze had iced over and in effect shut the throttle. Yes, it's true; I *do* know carburetter icing when I meet it, even though I've never had it on the ground before. Main causes were an unheated inlet manifold, three heat insulating washers where the carburetter adapter and gauze were fitted to the manifold and the latent heat of evaporation of "Pool." Effect was either we cruised at a speed of 31 m.p.h. flat out or we did quick bursts of 10 miles with stops to thaw out between bursts.

However, in contradiction of the theory that it is no good trying to go places in a Morgan, I will say here and now that only once that day did I feel truly doubtful of getting home safely, and that was *not* the Moggy's fault. The fact is, the Frazer-Nash owner insisted on being allowed to drive, and though I know quite well that she can dice a motor better than I can, one begins to have horrible doubts when, from the passenger seat, one sees a corner coming up at 'Nash speed!

Returned home, any question of a hot air supply for the carburetter was temporarily waived and the induction gauze was removed as being the main collector of ice. So on the Monday evening I picked up "Enoch" and a stop-watch and headed for our measured stretch. A most unpopular piece of road this for, dead level, with timing marks over half-a-mile apart and with no downhill approaches, it has ruined not a few people's reputations as owners of fast cars; in fact, since it proved too distant for Mr. T. P. and his 96-m.p.h. Midget, we are still waiting for someone to go

Continued on page 99



CARS I HAVE OWNED

[Some readers seem to have tired of this series, while others are very emphatic in their requests that it should go on, so this month we are publishing a rather shorter article than usual, by E. J. H. Griffiths, who, like so many other contributors, was a firm supporter of the Vintage S.C.C. before the war.—Ed.]



The author mentions a six-cylinder O.M. Here is Peak's car of that make tackling a stop-and-restart test in a 1938 Vintage S.C.C. Trial

I LEARNT to drive on a 1924 16-h.p. Wolseley tourer which we have at home and then I bought my first car, which was a 1926 Austin Seven 4-seater tourer. I tuned the engine and found that by setting the tappet clearances to 0.003" and 0.005" on the inlet and exhaust valves, respectively, I got 53 m.p.h. on the "clock." This car went very well, my best run being from Beaumaris in Anglesey to near Oxford in 5½ hours. I sold it eventually and bought a 1927 "12/50" Alvis 2-seater with dickey. There is no need for me to say much about this as most enthusiasts know what marvellous cars they are. I discovered that it had been all over the Continent, touring with other cars, such as Hillmans and Vauxhalls, and that the Alvis was the only car which did not break down. When I had it rebored 0.040" was taken out of the bores, this being its first rebore in 12 years.

I had it for two years, in which time I covered many thousands of miles, including driving it in the Vintage Sports Car Club's Chiltern and Gloucester Reliability Trials and in the V.S.C.C. and Bugatti Owners' Club's Night Trial in 1938. Unfortunately, my battery packed up at the halfway mark, so I slept the night in the car on Salisbury Plain. I woke up at six o'clock the next morning nearly frozen stiff, started up and motored back to town *via* the Phœnix Hotel at Hartley Wintney, where we thawed ourselves and had a splendid breakfast.

I also bought a 1926 "12/50" Alvis. I found this motor in a pigeon barn, where it had been on blocks for six years; it had only done 5,000 miles since it left the works. When I got the engine going, the tick-over was very quiet and there was no timing wheel rattle. I have had the engine down and it is in perfect condition; I started to make it into a trials "Special" just before the war started, but I did not finish it and probably won't until this lot is over.

I then sold my first "12/50" Alvis and bought a 1928 six-cylinder O.M.; this was a nice-looking motor, having a maximum of about 80 m.p.h. and quite good acceleration. However, it developed little-end trouble within the first week, so I got rid of it and bought a 1926 s.v. Anzani Frazer-Nash. I only had it a week when it ran a big-end, also I found the centre main bearing had gone when I took the engine down. I had new mains and big-ends put in and the crankshaft reground, and when the engine was run in after reassembling I had great fun with her. I could take every corner I knew around the country at about 15 m.p.h. faster than I could with my "12/50" Alvis. My maximum speed was 76 m.p.h. at 2,800 r.p.m.; "gear" changing was a great joy and very quick indeed without the clutch at the right time; road-holding and cornering were excellent, and generally it was a grand car to drive. I bought my "12/50" Alvis back from my friend, who was returning to Switzerland, to save it from the scrap-heap, as he could not sell it.

I had had four very cold winters of open-air motoring, so I decided to try a saloon. I bought a 1928 "4½" Bentley after selling my "12/50" Alvis and 'Nash. The Bentley was a grand car, with a perfect divan in the back, where I spent many a comfortable night on long journeys. She had very good acceleration (seldom did anything beat me away from the lights) and my top speed was about 85 m.p.h., doing 18 m.p,g.

I found the petrol situation hopeless when this insane war started, so I sold her and bought a 1932 Austin Seven saloon.

I was soon able to get a supplementary ration, being on war work, so I bought a 1935 21-h.p. Talbot drop-head coupé as the best approach to a vintage car I could find in the district. This was a very smart-looking motor and went well, but the Wilson gearbox packed up on me in a ford one night. The firm I bought the car from could only offer me a 1937 Morris Eighteen fixed-head coupé, with a boot at the back, in exchange. It went well, but was my idea of a typical smart modern car; the cornering was poor, springing like a rocking horse, and it needed four turns lock to lock on the steering and, of course, was all tin.

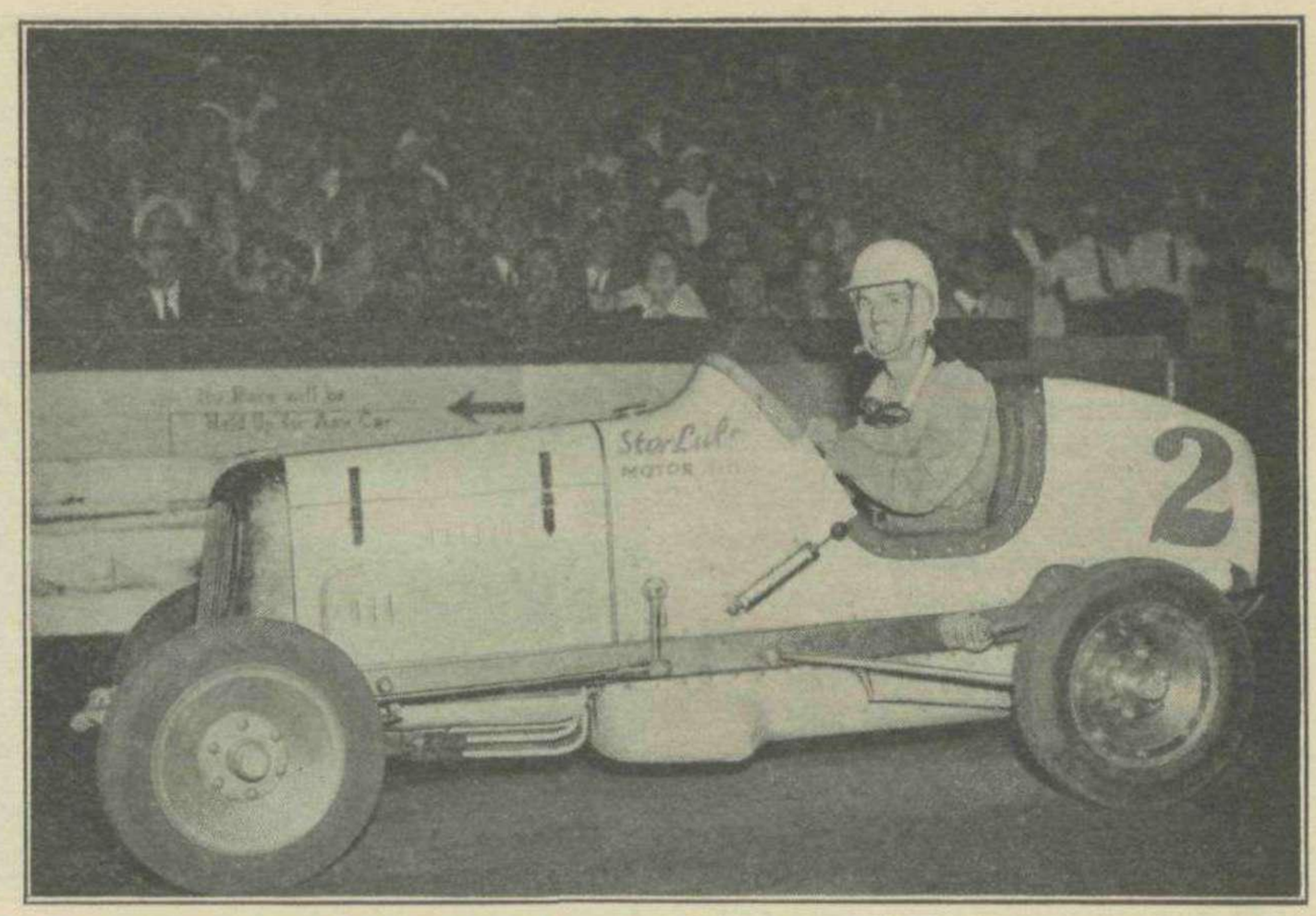
One day I was passing Wray's place in Kenilworth when I spotted a 3-litre "Red Label" Bentley. Unfortunately, there was no time for running it in, as the engine had recently been completely overhauled; also in the garage was a very smart 1931 2-litre Lagonda, which I bought.

There was a G.P. 1½-litre Bugatti, a modern-type Aston-Martin 2-seater, an Isotta-Fraschini, another Aston-Martin saloon and a "Speed Six" Bentley—the best collection of motors I had seen since the war started.

The Lagonda is a great success and a grand car to drive; my wife and I have had some very pleasant motoring in her. The acceleration is quite good with the clutch stop in use, the maximum is 78 m.p.h. at 3,200 r.p.m. and she does 24 m.p.g. and corners at speed very well; I think it is the best motor of its type on the road. There is a specially laid-out dash panel with a large rev.-counter in the centre, all the essential gauges and independent light switches. On the front of the car are two 12" Lucas P.100 lamps, which I am looking forward to using; there are also two Bosch horns, a Bosch windscreen wiper and the plugs are Bosch.

Last winter a careless idiot hit me and bent my chassis considerably; his Vauxhall Twelve was only fit for the scrap merchant's, but I hope to have my car on the road again soon! Meanwhile, I am using a 1924 "Ulster" Austin, which goes like a bomb in spite of some wonderful noises from the engine and gearbox.

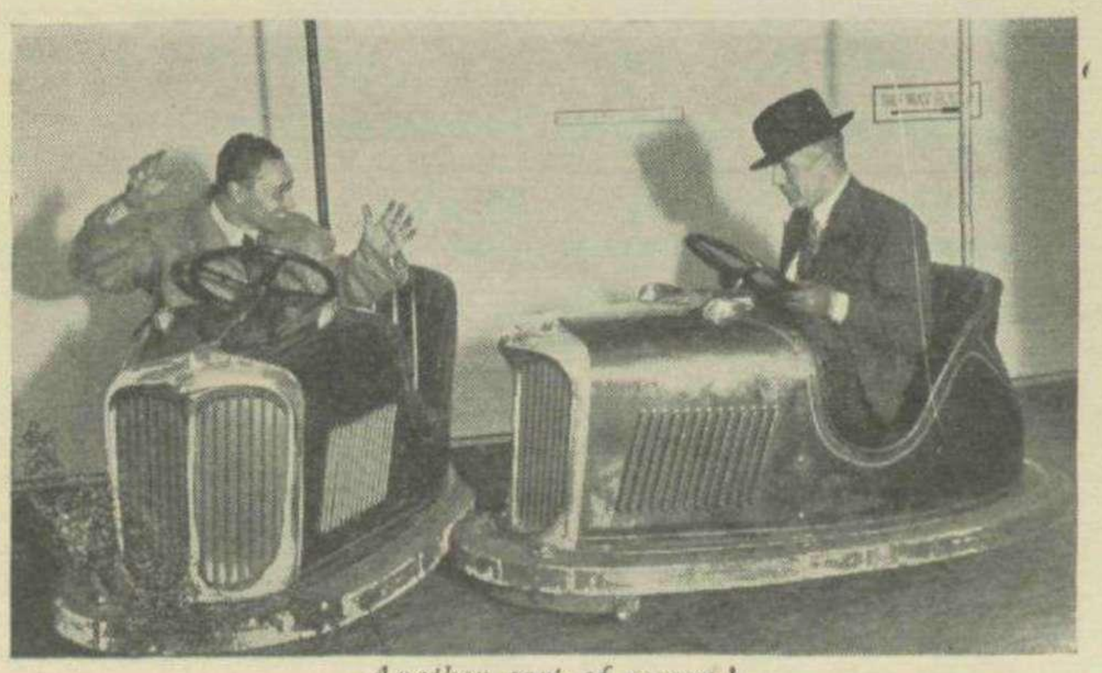
ON THE ONLY RACING LEFT



SOME time ago I received an extra thick copy of *N.A.R.N.*, America's midget-car racing weekly—the 1941 Christmas number, with Daddy Xmas in a midget on the cover and a review of the 1941 speedway season inside. It is the size of this special supplement which brings home to you what a vast business this American midget doodling is. As it looks like going on, at all events for a while, and is the only regular motor racing now happening in an insane universe, we really should sit well up and notice it. For this reason I asked a friend to review the 1941 season for me and his remarks were published last month. True, he seemed rather to sneer at this kind of racing, and I must confess I have no taste for it myself—and that goes for what cinder-shifting we have had over here and not for our allies' racing alone. The reason why I hold midget racing in low esteem is simply because midget-car racing is nothing more than a staged spectacle. Little cars on little wheels can run around little artificial tracks, and little artificial tracks, dirt, board or what have you, can be planted almost anywhere where a crowd can be relied on to come and goggle. Very often in a local fair ground. . . . Consequently, I cannot but link the midget-car driver with the professional strong man, the "Wall-of-Death" rider or the parachute-dropper in an aerial circus, except that he foolishly risks death more often. . . . The sort of people I once met at a London midget drivers' club did nothing to make me retract this opinion. I am fully alive to the enthralling spectacle which a dozen closely packed midgets in action can offer, cornering at the flat-out speed of a baby car and sometimes going as fast as a good sports car on the straights. I see no especial reason why cold water should be thrown on this, shall we say, bastard offspring of the Sport, now that thousands of war-toiling beings relax by watching it each "nite." But to compare it with the racing of cars for purposes of research, or to gain marque publicity, we must not.

Just to give you some idea of how professionalised is this class of racing in America, let me quote a bit of bother they had recently. It seems that a paper apologised to the widow of a driver who had crashed for saying the doodle-bug involved was badly damaged, after the widow had written in protest, on the grounds that she might lose money when selling the wreck. . . . The fact is that most of the American midget drivers regard racing as a means of earning a living, and remaining "in the money" occupies their attention and their families' attention very fully. One driver has publicly announced that he was counting the days until he could quit racing and live in his own house with his own family on the proceeds. Without labouring the evidence, obviously there is a world of difference between racing your own full-size racing car or driving a manufacturer's racing cars in European events and figuring as a doodle-chauffeur in the States.

However, this is the only racing left and we may as well take more than a glance at it. The fundamentals were very nicely expounded by my friend in his article in the April issue of MOTOR SPORT, so let me endeavour briefly to survey the 1941 American speedway season.



Another sort of circus!

In Southern California racing seems to have happened at Gilmore Stadium, Atlantic Speedway, Orange Empire, Southern Ascot and Balboa Stadium. "Dynamo" Walt Faulkner gained 27 "firsts," 13 "seconds" and 6 "thirds," driving E. R. Casale's blue V8, and was undoubted champion. Quite long races were held, such as the 150-Lap Thanksgiving Grand Prix and the 100-Lap Gold Cup Inaugural Event at Gilmore. Walt Turley sustained fatal injuries at Orange Empire and four or five drivers sustained serious injuries. Incidentally, the Gilmore Stadium is a ¼-mile clay oval, on which the midgets, weighing about 1,000 lb. and running up to 6,000 r.p.m., were said to go round the swerves at 50 m.p.h. and to reach 80 m.p.h. on the straights. Balboa Stadium saw speeds some 5 m.p.h. higher and at Atlantic Boulevard the fastest paved ½-mile circuit in existence, 45 m.p.h. on the corners and 70 m.p.h. on the straights were realised. Culver City is another Southern California course, which has 35-ft. wide straights and 45-ft. wide turns, the lap being ¼ mile. It opened with a 10-mile main race and after a few events the surface was badly cut up.

The Southern Tier Auto Racing Club had 42 drivers and 30 cars on its books and sponsored sprint events at 10 tracks in New York City and Pennsylvania. Top honours went to Amos Hill, on points; he drove a Riley at the Syracuse State Fair.

Farmer City, Ill., with a population of 1,000, introduced midget racing to corn-belt region fans at a one-tenth-mile horse exhibition fairground track in the fall of 1938. Last year it ran Gilmore-type racing at a former wheat field and attracted excellent Press publicity by featuring a Press box for the editors! Fourteen races were promoted by the Fair Board, some of 50 and 100 laps (only 5 and 10 miles, remember) and no one was seriously hurt; 44 drivers competed.

Houston Speed Bowl seems proud of its wild racing and boasts "at least 26

ON THE ONLY RACING LEFT—continued

complete roll-overs in 33 meets "! Many bad injuries are reported in some detail, but there were no fatalities. Eight meetings were cancelled on account of rain and one because of a hurricane. Well over 100,000 "fans" are reported to have attended and the competitors received $18,768, or an average of $569 a meet. After a slow start, various county fairs held successful midget races in Kansas City and big-car racing took place at the County and State Fairs. The Wichita West Side Softball Park saw 20 meets and the local boys seemed satisfied enough with prize money based on a percentage of the "gate." The first midget-car fatality in this State happened at this track, in a heat feature. Under the promotion of Bill Heiserman, Castle Hill Midget Speedway had a very successful season. Purses totalled $34,060.50, $2,000 being paid on one 100-lap race. The paid attendance in 1941 was 125,505 persons, or an average of some 6,275 spectators per event, at all classes of events. Hustling Henry Banks was champion, handling a Caruso Offy.

Western Pennsylvania and Ohio saw meets at the ¼-mile New Kensington Dirt Speedway, at the ½-mile high-banked Uniontown, Pa., Track, at the ½-mile Canfield Fairground Track, at Akron Rubber Bowl, Smithfield and Bedford Banked Track; 5,000 "fans" attended at the initial meet at Uniontown on Labour Day.

More encouraging is the big-car racing at a 1-mile banked track at Oakland. Hal Cole won a 100-mile race with a 255 cub. in. Miller, at 88 m.p.h. There were 18 starters. Twenty-four cars started in a 200-mile race, again won by Cole. Then they had a 250-mile Stock Car Race, won by Al. Eames's Ford V8, with Phillips (Ford V8) second and Schock's Chrysler third. The winning Ford averaged 73.46 m.p.h. Still they couldn't avoid accidents. Blackwell was in eleventh place when Agabashian turned over on lap 200; Blackwell turned his head to observe the crash, lost control and himself crashed, with fatal results. Another car burst a tyre and crashed. Finally there was a 500-mile race with 33 starters, before 15,000 spectators, in September—on a rough-surfaced 1-mile oval! Cole "broke a clutch shaft" after 184 miles, but came back in 50 minutes without his shirt, but with a new "clutch shaft." The front end of a Hispano-Suiza fell off after 304 laps and its driver was killed. In the end a Riley driven by Barnett won at 75.86 m.p.h., the driver doing his 6 hour 35 min. 35 secs. drive unaided. A Plymouth was second and a Miller, handled by a "roadster grad." (inexperienced driver to you!), third, all three finishing with "both frame rails broken," from which I surmise the side members were a queer shape.

Right at the commencement of the 1941 season the A.A.A. announced a minimum purse of $1,100 for ½-mile big-car events, the piston displacement for which was lowered to 205 cub. in.—rather less than 3.4 litres. The first of their big-car meets was watched by a record crowd of 34,000, who saw "Vic Nauman take the feature," whatever that may mean.

A lengthy article is devoted to Ralph A. Hankinson, described as the Dean of Auto Race Promoters. He is said to have had "a Barnum-ic flair for showmanship," and to have "shown Barney Oldfield, Ralph De Palma, Ray Keech, Frank Lockhart, Fred Frame, Wilbur Shaw, Lou Meyer, etc., to fans the country over." Somehow Percy Bradley and Harry Edwards and Leslie Wilson and Eric Giles are not in the same street (fortunately!), and I'm not sure whether Fred Craner "showed" the German aces or whether they showed Fred Craner (and the rest of us), but the fact remains this was racing of a very different sort! Anyway, you see why I call speedway racing a circus. . . .

That, then, is a review of the last season's racing of the only sort left to us. I find myself interested, but not impressed. I will conclude by reprinting from *The National Auto Racing News* of December 18th, 1941, an article on Promoter Bill Heiserman, as it gives a very good idea of speedway finance and attendances :—

A check-up of season data for 1941 on the Eastern racing front shows that pioneer promotor Bill Heiserman continues to rate as tops in the midget racing division for the seventh straight year. For the fifth straight year Heiserman has topped the $50,000 prize-money mark, a record that has never been approached by any single promotor or group of promotors.

Bill continued to operate his big plant, Castle Hill Speedway, for the fourth consecutive year and also completed his third straight season of indoor races at the Bronx Coliseum. Although he dropped the Bridgeport Track after five seasons, Heiserman moved his New England interests to Springfield, Mass., and in partnership with Larry Doyle gave that section of the country its most successful season of midget auto racing.

In all, Heiserman promoted 80 meets, 10 more than in 1940, and enjoyed a far more successful year, playing to a total paid attendance of 266,679 persons. Total prize money for 1941, not counting the meets run in December at the Bronx Coliseum, reached the impressive total of $62,603, making the all-time total for Heiserman promotions the neat sum of $340,439.

A breakdown of the figures shows an attendance of 80,000 at the indoor meets at the Bronx Coliseum; 130,000 at Castle Hill Speedway; and 65,000 at West Springfield Speedway. Prize money figures at Castle Hill were $34,060.50 for 37 meets; N.Y. Coliseum, $15,997 for 24 meets; West Springfield, $12,546 for 19 meets.

The 1941 season was Bill Heiserman's tenth in the speedway promotion and one of his best. Bill will sit tight with his trio of speedways for 1942, due to the present war conditions.

CHAIN GANG CONSCRIPT—continued from page 96

really quickly. Anyway, the venerable Moggy, with its crew of two, clocked precisely 52 m.p.h. average, and we went home well satisfied with the results.

Little more remains to be told, for since then the Morgan has been doing honourable but undistinguished service locally, even taking on a job of towing when "Enoch" bought himself a Calthorpe motor-cycle for a quid.

If after reading this you have come to the conclusion that an old Morgan is sound enough transport for anyone sufficiently enthusiastic to tolerate its little eccentricities you will have come to the same conclusion as I have. My example is reasonably brisk and accelerates magnificently, despite s.v. and only two speeds—incidentally, t.v. on bottom gear is about 30 m.p.h. Braking is not too bad and, although it *is* possible to lift a wheel, one can dice round corners in ordinary sports car manner without anything peculiar in the handling becoming apparent; probably the later models handle even better, but I'm not complaining. I admit that, so far from buying a Morgan of my own free will, I had a Morgan thrust upon me; but, now that I belong to the Chain Gang's junior branch, I have become converted, and the Moggy is *not* for sale.—J. LOWREY.

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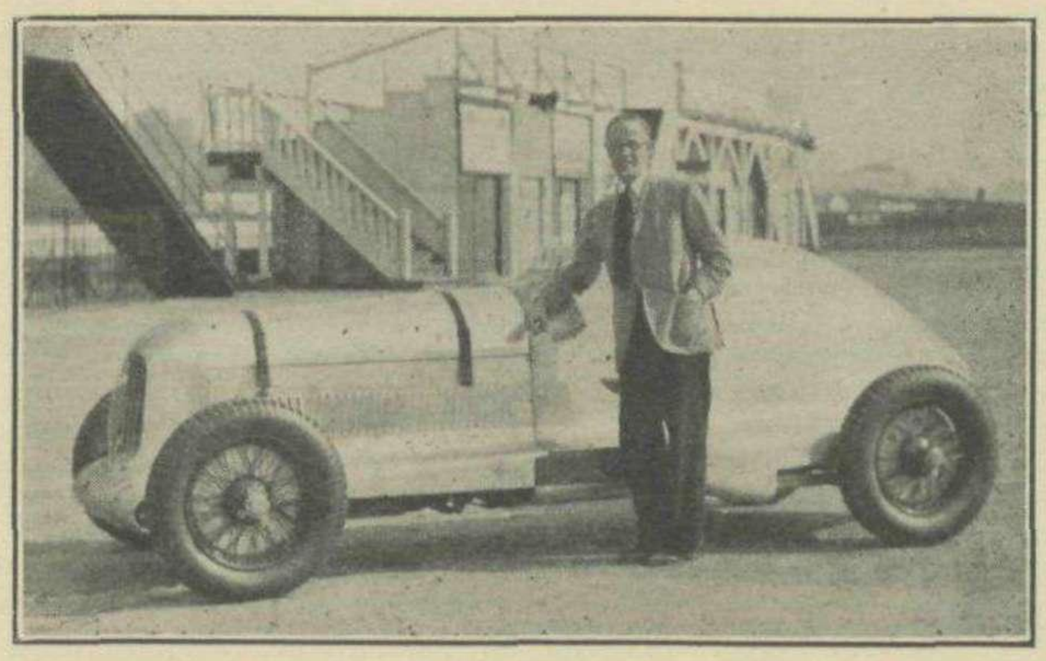
GEO. ROESCH ON POST-WAR DESIGN

MANY people are wondering if we are devoting sufficient attention to post-war design, in view of the export market struggle which will be the industry's main concern following the armistice. So many designs were rushed out in 1919 only to prove, in many cases, commercially impracticable that during this war it would seem a good thing to look to the future. We shall not go back to the state of affairs which existed in 1919, when one of the ways of regaining the road was to build a cycle-car in your cellar with the aid of a small lathe and a stock of raw materials—*The Model Engineer* published instructions for so making the "D" Ultra in May, 1919. Competition for world markets will be intense and the call will be for sound cars of good performance and complete dependability. Consequently interest attaches to the paper which Geo. Roesch, the famous Talbot designer, now chief engineer to David Brown Tractors, Ltd., read before the I.A.E. in London on April 21st, entitled "Post-War Automobile Design." Geo. Roesch opened by suggesting that new cars, more scientifically designed than their predecessors, would appear after the war to cater for new needs. Larger outputs and lower costs to suit post-war economy could be expected and less will be sacrificed to conventionality and fashion, more attention being paid to utility and performance in relation to total cost to the user. Safer cars are required, because by that is meant also cars with better performance. Smoother and more silent vehicles are demanded, because they make for quicker travel from point to point with less fatigue. The constantly increasing pace of living must be catered for. Values of performance, expressed by speed, acceleration and deceleration, can only be fully assessed when compared to other characteristics, such as visibility, stability, silence, smoothness, comfort, appearance, road conditions and cost.

The author expressed the opinion that weight reduction would depend on whether aluminium or other lighter metals will be available after the war at a cost which will justify their extensive use in popular cars. On more expensive ones full advantage will be taken of the opportunity thus provided to improve performance by this means. The material question will underlie any advance contemplated in design. The size and weight of the mechanism could be reduced by first choosing the smallest and lightest wheel for the size of car and then cutting down the two axles to minimum dimensions, and so on. The lighter the unsprung weight the easier the problem becomes, because low weight cannot be obtained without good supple suspension—here the author quotes modern racing cars. It is claimed that the experimental Ford plastics car weighs 1,000 lb. less than the corresponding car made of steel. A complete change of proportions has produced the result. It was the same design treatment which brought out the Model-T Ford and, later, the Austin Seven.

The author went on to define the merits of front-wheel drive and said that the design and manufacture of the Citroen have shown a way to good performance and low cost. Objections to f.w.d. include reduced tractive adherence of the front wheels, employment of four universal joints, heavy steering and possibly increased car length, with consequent added weight. In other respects it gives a degree of road-worthiness only found in the best orthodox-construction vehicles, and with modern silent gears and universals the front transmission is unnoticed. Lack of adhesion is offset by a forward, low c. of g., and satisfactory universal joints are now obtainable. Careful design, eliminating friction, lightens the steering and length adds to appearance. Modern conditions have improved the prospect of the f.w.d. car, but not to the point of making it the ideal form of utility vehicle ; it is attractive for a special market.

Roesch next praised the practical aspect of the early rear-engined de Dion Bouton, with radiator in front and engine under the seats ahead of the axle, particularly characterising the use of a small, compact engine. Roesch considers that sitting the drive alone between the front wheels, as in the Rumpler and more recent Dubonnet, is not a commercial proposition. Success with rear engine location depends on using a small, light engine, and air cooling to get the weight down is found in the German "people's car" and in the V8 Tatra, the noise of which would be unacceptable in this country. In the author's opinion the advantages of rear engine location were more illusory than real. Progress here will depend upon light air-cooled power units much quieter in operation than now, and this type of car will not easily win favour again. Of conventional layout the author remarks that it is the result of 50 years' development and gives the designer the opportunity to be original in further improving the best that has so far been produced. To reduce weight, chassis and body must be considered as one. The tendency has been to go over to chassisless construction ; the author prefers the separate frame. After dealing with bodywork in some detail, the author considers the engine, quoting the Trojan and D.K.W. as examples of two-stroke construction and the Rover Eight and the Franklin as exponents of air-cooling. He does not believe either will become general, but, after disposing of the two-stroke as firing unevenly at low speeds and wasting fuel, says of the D.K.W. that it is the exception confirming the rule. Solid-injection c.i. does not yet show promise for car use, but supercharging increases its prospects in the distant future. Roesch suggests that now that Ford has introduced a six-cylinder-in-line motor, the V engine will recede further into the background. [Rolls Royce and Lagonda should contribute to the discussion here.—Ed.] Small bores do not allow two rods on one crankpin in a V engine unless the engine is specially lengthened, and Roesch once produced a 4.5-litre straight eight which was nearly 6 in. shorter than a certain V12 of similar capacity. He criticises the small V-construction still used in Italy, with its extra width, balance, greater complications and manufacturing difficulties. [Yet Lancia built its great reputation on this type.—Ed.] The present orthodox four or six-cylinder engine will satisfy the need of most cars.

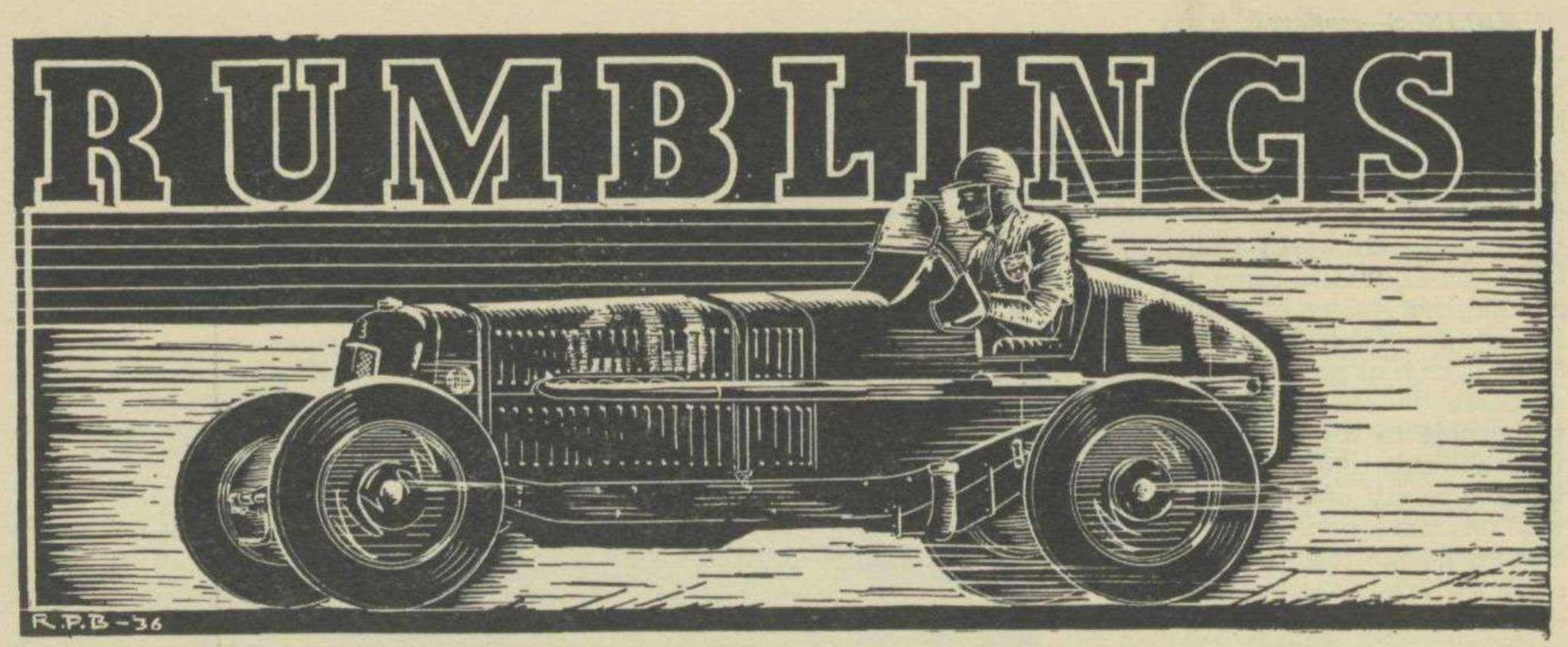


The author of this latest paper to be read before the I.A.E. was responsible for the Talbot, of which Dr. Roth's largely standard racing version is depicted here

Sleeve valves in an aluminium cylinder seem most attractive, but although the Burt-McCollum single-sleeve principle has been adopted on certain aero engines, unfortunately car conditions of application and working are different. No change from poppet valves can safely be foreseen, but these can be improved, particularly by better cooling.

The need of a very stiff and stable combined cylinder block and crankcase was emphasised, and integral counterweights and hollow pins for cast crankshafts will give better balance and durability and reduce bearing wear, so that main bearings can be narrower and will absorb less friction. [Talbot crankshafts were fine pieces of work.—Ed.] The importance of adequate oil filters and fillers and of cylinder lubrication on starting and rapid heating up of the lubricant were emphasised. Fuel injection will have to be tried. The author favoured pump cooling, with fan and thermostatically controlled draught. The author considered that for a long time to come only expensive cars of high performance

Continued on page 109



Unsolved Problems

ONE of the problems to which enthusiasts are wont to devote quite a deal of attention is what becomes of classic racing cars when their racing days are finished. Anthony Heal has made that puzzle rather easier for us than it used to be. But there are still many gaps, and the "Chittys" are worrying the knowledgeable quite a bit just now. I believe that someone bought a spare Maybach engine from Count Zborowski and dropped it into an early chain-driven Mercédès chassis, so creating a replica which really was not a "Chitty" at all. But up to the time of writing I have not been able to discover whether it is this car which was hastily fitted with a Bentley radiator by Hanks when Shea-Simmons had her and shipped her to the U.S.A., where she was rebuilt, or whether it is the car still owned by Mr. Hollis, of Dover. Just now, however, I am more concerned about the identity of certain curious cars which competed in post-the-last-war B.A.R.C. Brooklands meetings than where they are now—for doubtless these particular cars have long since been broken up. I cannot "place" them, and in this I am not alone, for I set Laurence Pomeroy the puzzle and I believe he is still unravelling it. Perhaps *you* can throw some light on the matter? First, then, is a Napier of 11½ litres, which J. S. Spencer brought out for a 100-m.p.h. handicap at Whitsun, 1925. It was described as a G.P. car, and, even then, was noted as "very ancient." It started slowly and laboriously and retired after one lap, but at the Autumn Meeting it finished third in a 75-m.p.h. Long Handicap, averaging some 90 m.p.h. After that it seems to have disappeared. I imagine it was quite definitely pre-1914, and it was not the 1903 G.B. Napier which the Blake brothers revived many years later. A G.P. Napier would be a most interesting possession, but the question is, which car was this, let alone where is it now? Then there was the old Nazzaro which Chamberlayne used to drive about the same time and which was once in the news because someone broke into its shed and tampered with it on the eve of a race. I have never been sure of the date of this car and whether or not it was a road-racing job.

In 1926 a car appeared on the Track which was described as having a Sunbeam airship motor in an M-type Napier chassis. It crashed in practice and the girl passenger was killed, which finished its career, although it started in one race before that. Who built it and was it the Napier I have just referred to? The "huge-engined" Bugatti in which Preston deported himself on the concrete I was able to investigate fairly thoroughly and it turned out to be the 1913 chain-driven 5-litre "Black Bess," now beautifully restored by Col. Giles. But what of that 3-litre Singer which de Jongh ran once or twice in 1925? I have a hunch it would be a pre-1914 car, because some quite famous Singers competed at Brooklands in those days, whereas this make was not represented after the Armistice; yet if this car was over 12 years old at this time the fact seems generally to have escaped attention. You may say that Brooklands cars, like flies in the autumn, just fade away one by one, but at least road-racing cars which have gone to Brooklands for a final spell of racing are usually remembered, and traceable, for many years afterwards. Yet I have never found out which G.P. Rolland-Pilain it was which appeared at the Autumn Meeting of 1926 or who brought it to England, while that beautifully proportioned 3-litre Austro-Daimler, looking every inch a Brooklands car, but actually a Targa-Florio job, which poor Clive Dunfee drove into so many second places, has vanished entirely, after lying first at Palmer Reville's in Merton, then in a Wimbledon showroom and later at Arthur Baron's. Here, again, for which Targa was it constructed and how did it fare under the Sicilian sun before it saw the Weybridge concrete? Which reminds me that a friend who still piles up huge weekly mileages on business of national importance was recently whiling away some spare moments in a Midland breaker's yard when he came upon a pre-1914 Peugeot chassis with two bucket seats and a bolster tank. The engine was missing, but now, I fancied, we had

RUMBLINGS—continued

solved the fate of the 1913 G.P. Peugeot reported to be in this country. However, I am told the chassis in question has wooden wheels. . . . Any solutions?

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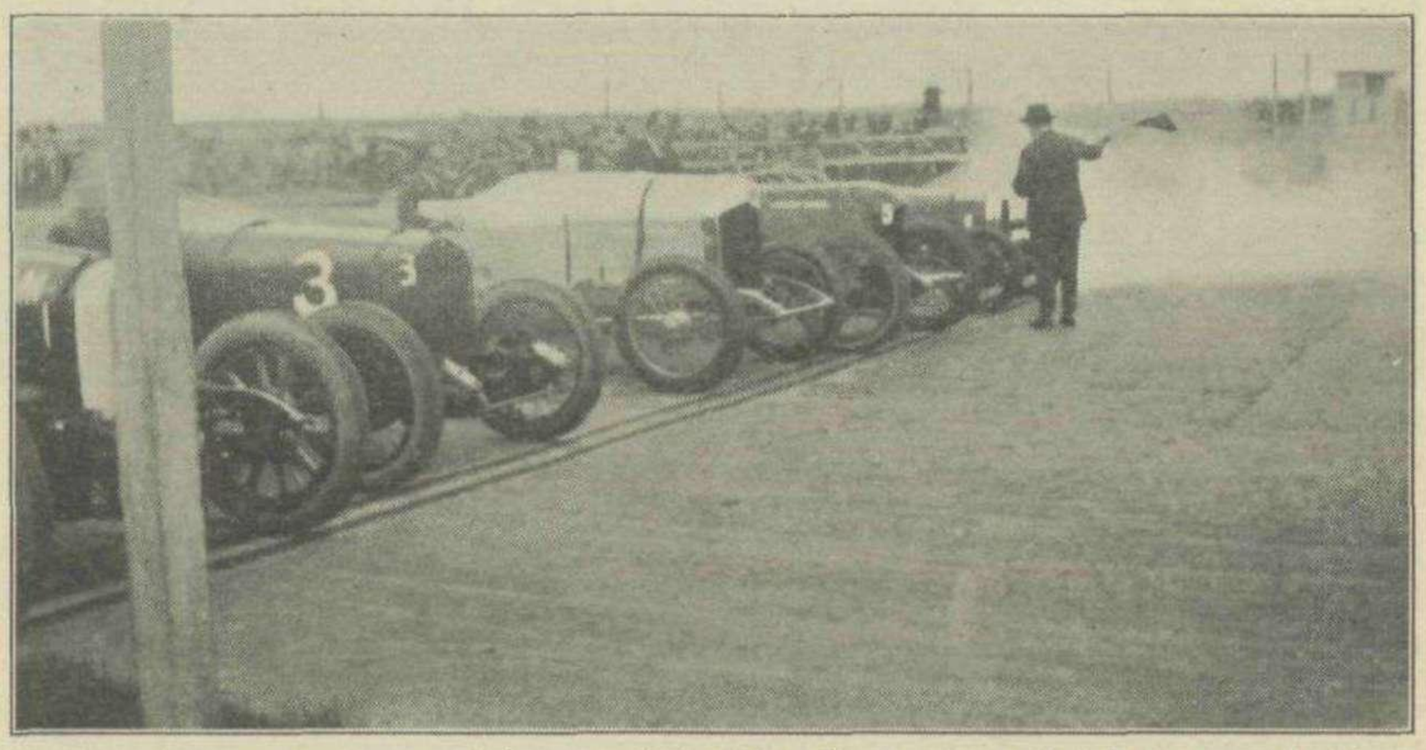
That Register

Publication of the Register of the Unique seems to have been well worth while, judging by the number of enquiries which came in. It is, perhaps, rather curious that many of them about cars in the South came from the Midlands or beyond, so that one wonders how on earth the enquirers expected to be able to collect the things these difficult times. But clearly there is plenty of interest in the old or more unique vehicles. Several people just posted post-cards with the reference numbers on, instead of enclosing stamped cards for reply, but the Editor bore the brunt and all enquiries have been dealt with. Just recently I was informed of six or more pre-1914 veterans behind a wood yard only a few miles from my present home. A three-cylinder Swift, a V-twin Hillman "Dobbin" and a really early Wolseley were rumoured to be amongst them; but, alas! they have vanished without trace. We located the showman who was reputed to have been the owner just as he was tending his traction engine at a local fair. We felt hopeful, for the friend who had seen the old cars five years earlier had had a chit from this very showman, entitling him to purchase any number of them for cash. A vivid blonde in charge of a coconut shy directed us to the engine and signed to the unshaven occupant that he was wanted. Yes, he remembered the cars, but they all went to Blackpool, 20 of them sold for £14 the lot. We were visibly shaken, but responded to the suggestion that we should inspect a few remaining ones in a shed yonder. Here all we found were some disused "Dodgem" cars, and it slowly dawned on us that it was of these our informant had been speaking. We still do not know whether it was for these lifeless vehicles that that chit was issued to our friend nearly half-a-dozen years earlier . . . . More promising is news of a two-cylinder Colibri with external brake and gear levers, said to have been running very recently, now for sale for £10 in a York breaker's, and a £5 1914 Rover running until very recently at Liverpool. On the whole the list seems to have been worth while. It is most interesting to learn that the Veteran Car Club has its own Register of old cars. This embraces 180 cars owned by members and certified as pre-1905, 193 owned either by non-members or not yet certified as pre-1905 (of which 81 are known to be pre-1905) and 79 believed to be of 1905–11 vintage. That makes one gasp, but it seems possible that we have found a few not known to the Veteran Car Club, and we intend to send them a list of all the pre-1914 cars submitted for entry in our Register of the Unique, although, strictly, those of 1905–14 vintage should be the concern of the veteran section of the Vintage S.C.C. Good luck, too, to Capt. J. J. Hall's proposed veteran motor-cycle club. We shall always be glad to hear of more veterans that might be saved from the scrap-heap.

* * *

Salvage Finds

All good British citizens are now turning out as scrap as much paper and rubber as they can lay hands on. Search for the former sometimes results in the discovery of individual documents too precious to throw away. One fortunate mortal reports finding the first two bound volumes of *The Cycle-car*, at a Tooting bookseller's of all places, and craves a Carden two-stroke in consequence. Then readers have sent us odd finds, numbering a 1913 Show Report from *The Tatler*, motoring pages from a very early Society paper, and an advertising reprint from the official catalogue of the Motor-Car Exhibition at the Agricultural Hall, of the Automotette. Unfortunately, no date appears on the last-named, but we learn from it that this three-wheeler, which had tiller steering and a single rear wheel, cost 130 gns. in London and was made by the Compagnie Francaise des Cycles et Automobiles of Paris. It had a horizontal, single-cylinder "petroleum spirit" motor, capable of a little over 3 h.p. at its normal speed of 450 r.p.m. Water-tank cooling was provided and there were two speeds, of 12 and 24 k.p.h. respectively, by means of two expanding clutches on the motor shaft. Final drive was by belt, and when the handle brake was applied the belt was automatically slackened to put the car "out of gear." Pneumatic tyres were fitted. Does anyone know the age of this "catalogue"?



Some queer cars, many of obscure origin, have lined up for B.A.R.C. races in the eighteen seasons between the two world wars. One of Cushman's Crossley 4-seaters and Hann's "Handy Andy" are seen in the above picture about to get away

* * *

Odd Spots

The Lea-Francis Owners' Club has made quite a good job of its first *Members' Bulletin*, and the subscription has been fixed at 10/6 per annum, or 5/- "for the duration" for Service members.

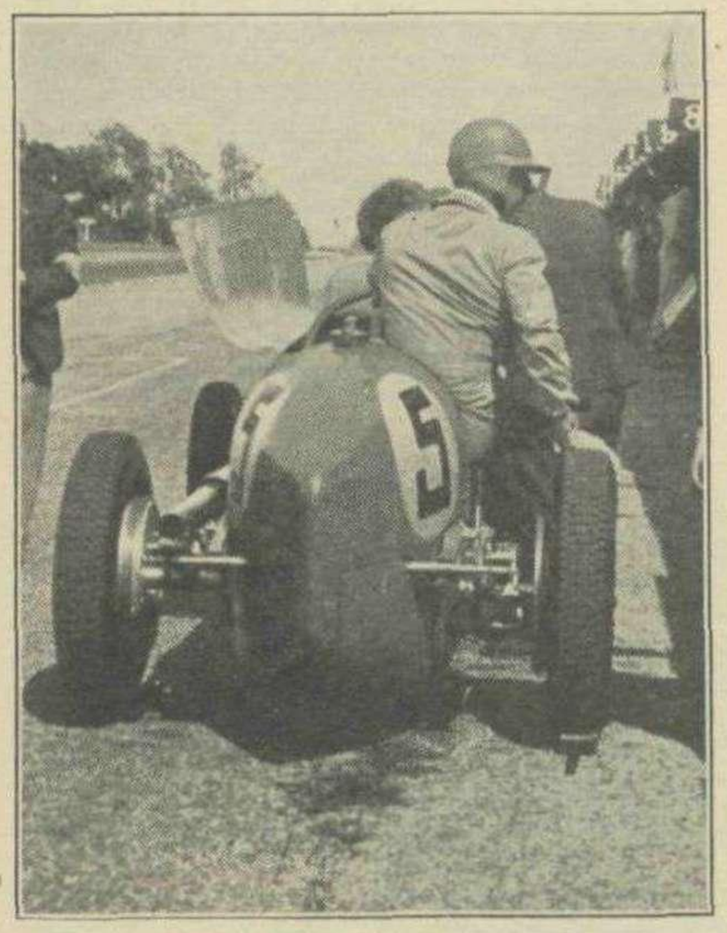
* * *

Tommy Wisdom has written a book about the R.A.F. in Libya—and that should be very good indeed.

Club News

WE HEAR . . . .

Breen is gradually rebuilding his 3-litre "Red Label" Bentley into a very presentable property indeed. It has a decked 2-seater boat-tail body, in yellow, with



touring-type wings, but it is shortly to be sprayed black; the wheels were off for restoving when we saw it. The S.U. carburetters will be replaced by two late-type Zeniths on a 4½-litre manifold to obviate built-in throttles. The whole chassis is in excellent nick and the car did its 82 m.p.h. before it was stripped. Breen's partner is also on a spot of rebuilding, involving a Fifth Series Lancia "Lambda" tourer. He has got over the disadvantage of the forwardly placed windscreen peculiar to this model and the steering column now telescopes to give easy entry and exit to the driving seat. This firm it is which has the chassis of the "Razor Blade" Aston-Martin, which would change hands at around £50. They also have a really beautiful flat-radiator yellow 7½-litre Mercédès tourer with practically new tyres, which they brought up from Ross-on-Wye, with divers adventures, a few years ago. There is a complete spare chassis, too, identical with this car. They have taken over all the "Lambda" Lancia spares from Lancia (England), Ltd., and can supply both new and second-hand parts. K. N. Hutchison is fitting a gas-producer to one of his cars, and there is interest in this sort of thing generally. A 1928-type "12 50" Alvis tourer is reported in fair order, for sale at about £10, at a breaker's at Barnby Moor on the Great North Road, and a 2-litre Marendaz "Special" was destined to be broken up at a scrap dealer's at Wombwell, Yorks. The "Scuderia Chemvamo" has acquired a 1913 Studebaker drop-head coupé which has been carefully stored since about 1915, the total mileage being in the neighbourhood of 1,000. They have also taken over Neve's G.N. "Special" with two dirt-track Douglas engines, the Morgan front suspension of which is reputed to have pre-dated the Freikaiserwagen. MacLagen got it home during 72 hours' leave, the 90-mile journey being accomplished with a Scammell eight-wheeled 15-tonner, which reminds us that Lowrey has a dirt-track Douglas engine and talks of mating it with an Austin Seven chassis, for Class I. A nicely preserved V-radiator Crossley tourer has been seen in action in Surrey. Peter Aitken's Alfa-Aitken was spotted at Sandford's Garage at Leatherhead recently, still bearing racing numbers. It has, of course, a 2.9-litre Alfa-Romeo engine from the "Bimotore" Alfa-Romeo. The gearbox is a self-change Wilson, controlled by a tiny left-hand lever *via* Teleflex control, the pedals are widely spaced, the Alfa twin rev.-counters are evident and the little aero screen is a beautifully executed piece of work. Front independent suspension appears to be from the "Bimotore," and flat massive ¼-elliptic springs are used at the back.

Wike, busy in the R.A.F., mentions that there is a 16-valve "Fronty" Ford in Preston, which has shaft-driven o.h. camshaft and a "Speedway" cylinder head. It is said to have been timed by "Ebby" at 120 m.p.h. for a flying half mile, at Blackpool in 1922, driven by Ewart Bradshaw. The final drive is around 2.5 to 1. Wike throws more light on the H.R.G. engine/road-speed controversy by saying that the final drive ratio of his car appears to be non-standard, at 4.0 to 1. He fully endorses Sam Clutton's praise of the "Twenty" Rolls and reminds us that Manchester has a taxi fleet of them—there were several, also, in Edinburgh. Capt. Leslie Seyd, whose "Cars I Have Owned" article appeared in the March issue, just missed buying one of the 1,100-c.c. Le Mans Chenard-Walkers from a French solicitor as a result of the war. Lacy and Ogle have, between them, acquired the two F.W.D. Alvis unsupercharged fabric 2-seaters and the load of spares mentioned last month. There is a 1903 5-h.p. De Dion at a Shoreham garage, but it is *not* for sale. An alloy cylinder head, a set of Telecontrols and a large-dial rev.-counter with fittings, for "souping-up" a Hudson Eight, are offered by friend Biggs (16, Fyfield Road, Enfield) at £15, or he would sell separately. Harold Pratley, who works on Napier "Sabres" these days, has bought the ex-McCalla 1924 2-litre supercharged G.P. Sunbeam engine unit from Stanley Martin and is hoping it will survive the crossing from Ireland. F. O. Scafe, who wrote on streamlined body-work last month, acquired Mrs. Cowell's Meadows Frazer-Nash at the end of March. He tells us that the streamlined closed V12 Lagonda is at his aerodrome and that Fane's "328" B.M.W. is a frequent visitor. Peter Clark has sold a Gwynne Eight engine to Fisher, the F.W.D. Tracta exponent, who is converting it to run on paraffin, as a stationary engine; incidentally, the Editor wants to know if his is the only Gwynne Eight still licensed. A supercharged Atalanta is in use by an Army officer in the Aldershot district; it has a two-valve-per-cylinder engine, with an Arnott supercharger at the side of the engine and permanently engaged. Cyril Peacock's old Clyno is still giving yeoman service, but he expects to lay it up at the end of June. He thinks he is on the track of another 4-seater Gwynne Eight, like the one he sold to Boddy at the beginning of the war. Incidentally, a letter from Mr. Neville G. Gwynne confirms that the original Gwynne was designed by a Frenchman in Spain. This car was bought by the Chiswick company and largely redesigned. Mr. Gwynne attributes its



Percy Bradley—Will he save Brooklands?

CLUB NEWS—continued

failure to the 3-seater clover-leaf body, which was too small for public requirements at that time. What appears to be one of the very rare original "10/30" Alvis 2-seaters, rough but in running order, is for sale for £2 in North Wales, and the latest batch of veterans to come up consist of a 1904–5 Rover 8 h.p. in pieces, but with all parts in good order; a very fine 1912 Rolls Royce "Silver Ghost"; and a sound Unic taxi of 1912 vintage. Pollack, who is with A.T.A., has sold his E.R.A., we believe to Robert Arbuthnot, and Amherst Villiers is tuning his Opel "Cadet." We very much regret to record the death, in a flying accident, of A.T.A. Pilot Bury. He used to drive a Frazer-Nash in trials and was using a very attractive Type 327 B.M.W fixed-head coupé. A 1908 single-cylinder Renault is reported to be still running in Bournemouth, and a reader is trying to trace a 16-h.p. chain-drive Napier which he last saw three years ago, when it would still do 60 m.p.h. Grosscurth has unearthed another side-valve Aston-Martin, with clover-leaf body, having only recently bought one of these cars in London, and Ellis is all ready to take over Johnson Fergusson's car. A friend of Jesty's is selling his 4-seater Lancia "Lambda" for £20, or £15 without batteries, as no one seems to want to give him any petrol for it, and there is a Type 40 Bugatti for disposal in Torquay, with good tyres, for £25–£30. Will Parnell buy the "Taso" Maserati, we wonder? Powys-Lybbe is due to return to this country soon, from Ireland, and expects to be stationed at a famous Staff College. Nigel Orlebar is toying with the idea of racing on "one-model" lines at a number of C.A.P.A.-type circuits after the war, probably with Ford Ten-engined Austin Sevens.

CIVIL DEFENCE RALLY

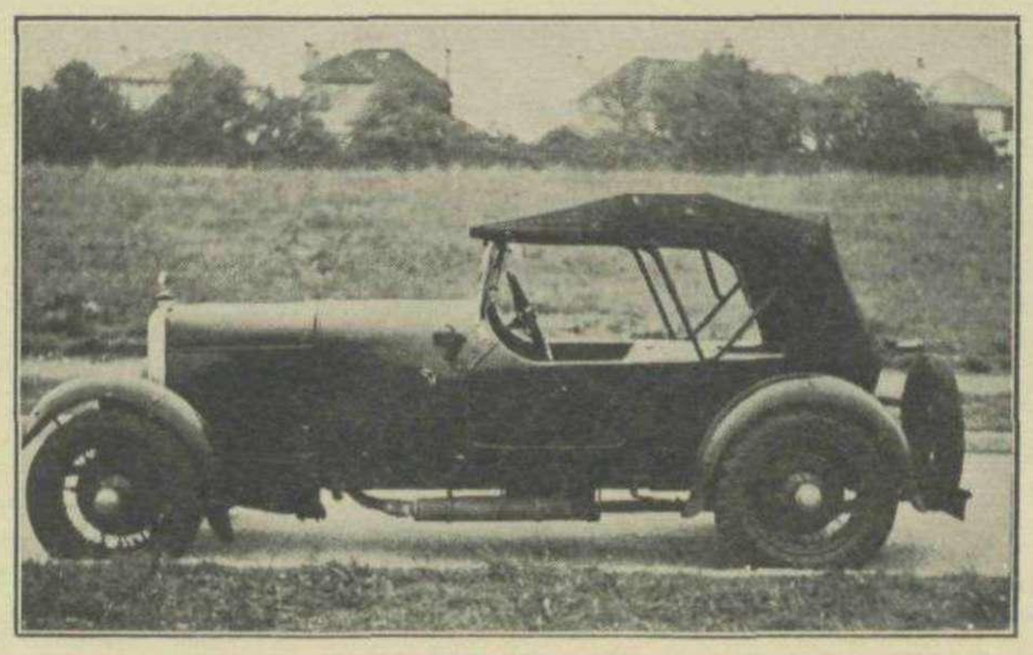
At the beginning of the war we suggested inter-Service and A.R.P. motoring contests, but we were thinking of events in which drivers represented their Service or organisation driving their own cars. Recently a big Rally for Civil Defence drivers took place at the White City Stadium, but they competed in a series of driving-skill tests, using Civil Defence official vehicles. We should say that the tests, which were for the most part taken carefully to avoid undue tyre wear, were good fun and proved that amongst picked personnel there are some very skilful drivers. When we volunteered for national service at the beginning of the war some drivers were enrolled who did not even hold a driving licence and who seemed to regard a family "Fourteen" as a piece of brittle glass. . . . Curiously enough, no one seems to have troubled to work out this rally in terms of seamen's lives. Why not repeat the scheme for provincial posts?

750 CLUB

In very pleasant weather conditions the 750 Club, by dint of hard work on the part of its ever-cheery secretary, S. H. Capon, was "At Home" to fanatics at the "Osterley" on April 12th. So many attended that it is difficult to draw up a list without many omissions, and certainly a grand time was had by all. In the first place, Harmer brought the very beautifully turned out, dark blue, straight eight ex-Shapley G.P. Bugatti on a rope behind a Vauxhall saloon and actually ran it up for a few delirious moments—the ear-splitting note of the unsilenced exhaust was heady music to enthusiasts after 2½ barren years and rather made one overlook the wisdom of the observation that there is a time and a place for everything. Biggs had some genuine German Auto-Union and Mercédès-Benz model cars with him, perfectly proportioned, of the 1934–5 racing cars, open and closed, while T. W. Gillard had patiently embellished one of the Scale Model Altas, even to instruments on the dash—he would be glad of more of these models to treat if anyone can oblige (56, Bushmead Avenue, Bedford). Gordon Woods had brought his newly acquired Gough-engined ex-Mrs. Needham Frazer-Nash, and Martin Wells was there in his B.M.W. Cecil Clutton arrived per 1927 o.h.c. Velocette motor-cycle, and Jenkins on a Matchless "Silver Hawk," and an Excelsior "Manxman" was also present. A short-chassis Lancia "Lambda" from Cambridge and Merten's rugged 4½-litre Bentley represented the "vintage," and a Morgan "4/4" and Symonds's blown "works" trials Austin Seven, with water-piping lagged round its inlet manifold, the more potent moderns. Standard, 1½-litre M.G. and "Ruby" Austin Seven saloons brought clean and decently attired members and enthusiasts like Birkett, and Mallock, Quiggan and Frost came in sports Austin Sevens. Lowrey had come 25 miles or so, three up, in his 1928 Aero Morgan, and Austin "Nippy," Ford Ten, Fiat "500" and the D.K.W. of Bunny Tubbs were all represented. There was also a Marendaz "Special," with its name prominent on a box over the cylinder block and much aluminium paint beneath; Ward's potent lowered Riley Nine; and P/O. Williams's M.G. 2-seater. It was good to see the Grenfells present, with a Riley Nine saloon, and Nigel Orlebar; Stuart Wilton, anxious to acquire Alvis data, although arriving in his Lancia "Agusta"; Anthony Heal, John Jesty and Rivers-Fletcher were all in earnest conversation over matters motoring. Ian Metcalfe could not turn up in his Mercédès tourer, which, by the way, is not a 1½-litre after all and seems to have a permanently engaged "puffer." Altogether, an invaluable break. After lunch Chairman Ballamy showed some quite interesting films. Hon. Sec., S. H. Capon, 159, Upper Tulse Hill, S.W.

GENERAL NOTES

After a most satisfying day motoring from Hampshire into Sussex *via* Surrey and back again ere night fell in a very nice specimen of a two-lunger Aero Morgan, dealt with elsewhere in this issue by a more able pen than mine, one or two official journeys were satisfactorily completed, per Gwynne, and then we went over the same route again, this time on an "1,100" H.R.G. After unsuccessful attempts to start a reluctant Wolseley Hornet "Special" coupé, we got away reasonably early and motored, not slowly, through some very pleasant country to an old farmhouse in whose garage a Meadows Frazer-Nash had reposed for its last night in this locality. Its owner roused, it soon came to life and preceded us up the London road, exhaust note healthy, the faint hum of chains audible, save when the "Herg" put out its own battle-cry when accelerating on the indirects. We stopped at a filling station, when so much "basic" went in that you could almost see its level at the bottom of the tank(!), and here a change of drivers took place. From the passenger's seat the 'Nash felt very good indeed, doing its 60 m.p.h. and more with unexpected absence of noise and obviously easily, the acceleration enlivening on the indirects, the front-end typically solid and the whole car riding beautifully. Another change of drivers and we came out on to the arterial stretch by Box Hill, where, the road quite deserted, the two cars ran neck-and-neck at 70 m.p.h., the Frazer-Nash at considerably lower engine r.p.m. than the H.R.G. (the maximum at any time, on the gears, was about 3,300 r.p.m.), and hiking parties on the footpaths beyond the cycle tracks going all happy at the spectacle. A brief pause to admire the Alfa-Aitken at Leatherhead, to the evident wrath of Sandford's foreman, and we took a cross-country route to Staines, to lunch at an hotel overlooking the river. Thereafter the new owner came and gleefully took the Frazer-Nash away and, to spare the late owner's feelings, we took



The side-valve Aston-Martin has been in the news a great deal of late

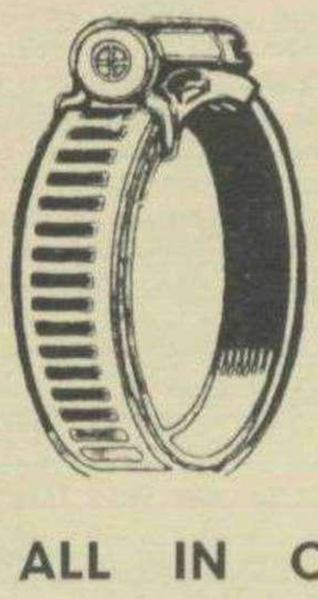
CLUB NEWS—continued

her rapidly home in the H.R.G., now four up. A spot of "no-charge" trouble made a veteran hunt on the coast inadvisable, yet the warm sunshine and Sussex countryside forbade too early a return to base. So, a local newspaper in hand, we pottered about seeking early tricycle machinery, going back truly rapidly after tea—the H.R.G.'s average was satisfying close to the restrained maximum indulged in, for its owner is no mean corner-artist. The following week-end saw us sitting on a suitcase in the back of a 3-litre Bentley bound for London, an eminently satisfying way of travelling, even when the maximum seldom exceeds 55 m.p.h., or 2,500 r.p.m., to conserve the fuel. A most conventional week-end, complete even to a short town drive in a "Ruby" Austin Seven saloon, found us restless, and on Easter Monday, around mid-day, an outlet had to be sought. A 1925 short-chassis Jowett 2-seater, all fairly legal, with good battery, fairish tyres of a size that would suit another car and a spare back axle in the dickey, being offered to us for 60/-, we bought it and proceeded to go home in it. At first steering and brakes seemed fearful and the gale made road-holding precarious; but it was not long before we learnt to let the wheel play through the fingers to allow for the effect of front spring fluctuations on the transverse steering drag-link and to treat the contracting rear foot brake with the respect it deserved, grabbing the right-hand handle brake whenever an emergency seemed about to develop. Then the beauty of the thing became apparent. You tock-tocked along at 35 m.p.h. or so, most comfortably seated, a stubby right-hand gear lever, absolutely asking to be used, controlling a rapid gear change. Visibility was immense, both forward and sideways, and the engine, which really made very little noise, pulled down to astoundingly low speeds on the highest ratio. The 5.00″ × 19″ rear tyres scorned bad surfaces, the dynamo put out a truly prodigious charge in spite of a brightly glowing ignition lamp, the Talbot oil gauge showed a steady 10 lb./sq in., which later built up to an equally steady 20 lb./sq. in., and a little experimentation showed that both dash lamps, the separate blacked-out sidelamps and the "real" Bosch horn all functioned nicely. The speedometer did not, but then perhaps it had been round too many times. The screen was safety glass, the hood stood up to the wind and we have known many fiercer clutches, although this one was reputed to be packed with brown paper in place of the usual asbestos string, and the pedal-travel was truly "Austin Seven." Thus, as we progressed along the North Circular, past a great variety of police vehicles, cross-country to the Staines Extension of the Great West Road and through that town, by whose bridge the early light-cars and cycle-cars used to start on the "Exeter" many winters ago, we came to regard this new possession not as a comic but as very decent transportation. The engine, although misfiring occasionally or even going on to one cylinder for some yards, due, one suspected, to dirt in the fuel system (albeit the long inlet pipe is entirely unheated, the central water pipe from the radiator header tank being blanked off), did not cease to run until we were back in the home village, respectably early in the afternoon and on not too desperate an expenditure of petrol. So much faith had we by now in the Jowett that we promptly went out to tea, nearly to Basingstoke, with two more persons on the front seat. During the week the car did a local evening journey and the next Saturday took us out to lunch and was weighed at the local gasworks for 6d. (10 cwt. 3 qr. unladen), after which it went over our measured stretch (which we had last seen from the confined rear seat of an S.S.I.) at roughly 38–39 m.p.h. Pre-ignition certainly called for a brief halt thereafter, but it was not long ere we turned left just past "The Phœnix" and proceeded along that road up which we once had a glorious run in the "Sixty" Itala, to seek elusive veterans, a three-cylinder Swift and V-twin Hillman "Dobbin" rumoured to be amongst them, at Odiham. Alas! we were too late to save them, so on to Basingstoke for a business call, thence to Mortimer, where General Lambton's butler showed us "Master Charles's" quite perfect Type 37 Grand Prix Bugatti, and on to Theale, where Hanks showed us his beautifully preserved Type 40 Jarvis-bodied Bugatti and a 4½-litre open 4-seater Bentley, to which he has made several modifications for its owner, a keen Officer of Health—this is said to be a really fast "4½" and it has a folding rear screen, apparently because fellow Officers of Health feel the draught when diced about the country in it. Off again to hunt an early racing Darracq in

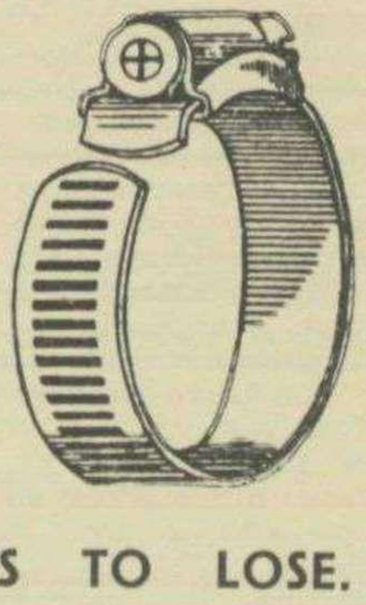
Continued on page 109

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PLEASE MENTION "MOTOR SPORT" WHEN CORRESPONDING WITH ADVERTISERS

Letters from Readers

Sir,

Indirectly through correspondence in MOTOR SPORT I got a 1931 Straight Eight Lanchester sports saloon (chassis No. 8089) last autumn (in case I should never see again the Sedanca I lent to the Ministry of Aircraft Production for the duration 18 months ago). I licensed it for March and my wife and I used the month's basic on a couple of drives in one week. The car is kept at the garage of a private house in Bournemouth, and when I took it out I found that neither speedometer nor fuel gauge was working. Experience of the former model, however, enabled me to form a fairly accurate idea of the performance.

The car had been got ready for the road for me (but no overhauling done whatever) and I started up at once. After warming up the tick-over was perfect; one could hear—if near enough to hear it at all—each cylinder firing. The general feel—engine, gearbox, steering, suspension, etc.—was exactly like the other one. Owing, however, to less weighty coachwork the acceleration and the pick-up on top from low speeds were slightly better. There was an engine period between, I should guess, 45 and 55 m.p.h., but I think it was only a matter of adjusting the crankshaft vibration damper. In spite of its having been laid up for five months and only run, I believe, a few miles in the last two years, all the controls were in good order, except for the accelerator sticking most embarrassingly at times—oil and use were all that were needed—and the self-starter once. Steering, braking (servo assisted) and road-holding were all excellent, and a most comfortable ride was had.

I must confess that after two years of l.h. synchro-mesh it took a little time to get into the ways of the uncompromising sliding box with its short, rigid right-hand lever, beloved of my heart.

Some of your readers will know the steep climb up on to the Purbeck Hills from Creech Grange, near Wareham—this she did comfortably on third gear.

There is no doubt that the feel of a big, comparatively slow-revving engine of this class has a fascination that nothing else can give. This 11-year-old car combines the qualities Mr. Cecil Clutton describes in his article on a 20-h.p. Rolls Royce with a very satisfactory performance.

Starting with 9½ gallons and doing about 127 miles (according to map) she had an *unknown quantity of petrol still in the* tank!

I am, Yours etc.,

Godmanston. W. STUART BEST.

* * *

Sir,

The March issue of MOTOR SPORT was a great thrill for me. First, there was Clutton's article on "Racing Car Evolution 1895–1908," in my opinion the most romantic and absorbing period of all. Perhaps Mr. Clutton could be prevailed upon to write articles on some of the individual cars of the period up to 1908. There are, for example, in this country a 1903 60-h.p. Mercédès, 1903 55-h.p. Gordon Bennett Napier, 1904 40-h.p. Mercédès, 1905 T.T. Rolls Royce and 1907 45-h.p. Renault, not to mention a whole host of lesser types, that used to take part with some success in various motor sporting events, such as the speed trials, hill climbs, trials, etc., of that period. Most of these cars are in the hands of members of the Veteran Car Club and are in first-class running order. Secondly, "The Register of the Unique," which should play its part in saving many a genuine antique. Thirdly, the article on the 1910 Vintage Bollee. There must be many more pre-1914 cars that deserve writing about.

At the risk of being heavily "sat upon," I must say I find these veteran and vintage cars so much more interesting than the "merely out-of-date" models so often written about.

I think the car mentioned in Capt. Roy Taylor's "Cars I Have Owned" article, and commented upon by the Editor, will be a Violet-Bogey, not Violet-Bourget or Violette. Three of these cars were entered for the French Cycle-car Grand Prix, run on July 13th, 1913. They were driven respectively by Violet, Pouliez and Antony. Violet led for six laps and eventually finished third, but was disqualified because one of his mudguards came adrift; the car driven by Pouliez finished seventh, and Antony's crashed, due to a failure of the steering gear. These little French cars were said to be capable of over 70 m.p.h., they had twin vertical water-cooled engines (73-mm. bore × 130-mm. stroke—1,088 c.c., which developed 22 b.h.p. at 2,400 r.p.m.), pressure lubrication, U.H. magnetos, Gobbi carburetters and friction transmission with single-chain final drive. Thirty-eight light cars and three-wheelers were entered for the race, England, France and Germany being represented. England by Morgan, G.N., Duo, D.E.W., Marlborough, B.S.A., Zenith and Clyno. W. G. McMinnies, in a Morgan, finished first at an average speed of 42 m.p.h.; second was M. Bourbeau in a Bedelia.

Does any MOTOR SPORT reader know what has happened to Tommy Hann's 1911 25-h.p. Lanchester "Hoieh-Wayaryeh-Gointoo"? It had a so-called streamline single-seater saloon body and was raced at Brooklands about 1920–21; it was the precursor of "Softly-Catch-Monkey I."

My heartiest congratulations on so successfully keeping MOTOR SPORT going.

I am, Yours etc.,

F. W. HUTTON-STOTT, Junior.

Donnington Hurst,

Newbury.

[We hope to include future articles in the "Veteran Types" series at not too infrequent intervals. The 1903 "Sixty" Mercédès has already been dealt with and Mills's 1907 42-h.p. Renault "Agatha" has been fairly fully written-up in MOTOR SPORT. And I wrote-up the G.B. Napier in "Brooklands—Track and Air" some eight years ago. Certainly, there is nothing like the pre-1914 cars. The Lanchester "Hoieh-Wayaryeh-Gointoo" was actually a tandem 2-seater saloon raced by Hann around 1921–22. It was then converted into the open single-seater "Softly-Catch-Monkey I," which was overturned and set on fire in connection with some filming which happened at Brooklands some time after the car was last raced in 1924.—Ed.]

* * *

Sir,

Congratulations on another excellent issue of MOTOR SPORT, and particularly on getting it out by the 3rd of the month. A grand effort, but I can't recall a single issue in the last five years appearing actually on its declared publication date, and if I ever come down on the 1st of the month and find MOTOR SPORT awaiting me I think I shall drop down dead.

F/O. Scafe's article on streamlined bodywork was most interesting, and I agree with his conclusion that after the war most of our fast cars will have something approaching the lines of a tank, but I still hope something different may survive.

I have not forgotten the fantastic increase in speed which resulted when Major Gardner's M.G. had its narrow single-seater body replaced by one of the all-enveloping type, but for a road car I do still put a high value on accessibility, and since he has recently acquired a Frazer-Nash I hope F/O. Scafe will agree with me here. What I should like to see for every-day use in town, on the open road, and sometimes right off the beaten track, is something rather like a cleaned-up Mark II Aston-Martin. A body of decent lines, but not excessive tail overhang, should incorporate all oddments such as headlights, while the wheels should have fairly generous cycle-type wings; if you can use Dubonnet I.F.S., and so obtain a clean and easily faired axle assembly, so much the better. What I am worried about is, can one thus retain the vintage merits of lightness and accessibility and yet reduce wind resistance to something far below that of my "1,100" H.R.G.? I think it *is* possible.

Incidentally, the non-existent streamlining of the latter was shown very forcibly when, on a moderately windy day recently, some timed tests were carried out over a level piece of road which is just over a kilometre between timing marks: the speeds obtained in the two directions differed by no less than 12 m.p.h.!

There is one suggestion I should like to make concerning the future policy of

LETTERS FROM READERS—continued

MOTOR SPORT. For a long while we have been offered "Cars I Have Owned" articles, and it has been a remarkably interesting and informative series. What I would rather like to see is a parallel series of articles aimed more at the future. In particular, I should like to hear more about the post-war models of which certain manufacturers have already released a few details, and also I think there might be interest in hearing just what sort of machines experienced readers hope to be able to buy after the war.

I am, Yours etc.,
J. LOWREY.

Farnborough,
Hants.

[An article on the lines suggested in the last paragraph of this letter, by Graham C. Dix, appears in this issue. We hope it will be the forerunner of others.—Ed.]

* * *

Sir,

May I please make two small corrections in connection with recent articles of mine?

In my "Racing Car Evolution" article I said that the 1902 Panhard had a transverse front spring containing four leaves, each 75 mm. *thick*. The "thick" should, of course, be "wide." In my notes on the T.T. Vauxhall engine I stated that one of the contemporary T.T. Sunbeam engines was later fitted with a *Nitralloy* crank, but this got accidentally printed as *vibratory*.

About the Veteran Victory Run, I think Mr. Meredith speaks a little wildly in guaranteeing the actions of what he describes as the "up-and-doing section of the public." Whether or not Berlin is the destination of the run, Mr. Meredith should remember that it is being backed by the Austin Motor Company, who, whether in peace or war time, are definitely up-and-doers. I am even inclined to think that their name is likely to carry more weight with the up-and-doing public than Mr. Meredith's.

I am, Yours etc.,
CECIL CLUTTON.

London, W.11.

* * *

Sir,

Can I once again inflict a letter upon you, praising with faint damns?

I was very interested in the current issue of your paper, but there are one or two points where some of your contributors have gone a bit astray, so I thought I would take it upon myself to point this out.

(1) Page 69: the top car portrayed is an Adler; the bottom one a Horch V-8.

In the bottom paragraph, left-hand column, of this page, F/O. Scafe says that the electron-bodied, improved B.M.W. saloon which ran at Brescia won this race. As a matter of fact, owing to various small troubles, it did not do so. The winner was one of the Le Mans saloon cars.

(2) In Clutton's article he has made some errors in his Bugatti types. The plain-bearing four-cylinder model was the Type 22 and the Brescia had a roller-bearing crankshaft; the Type 30 had roller-bearing mains, but plain big-ends.

The Vauxhall engine was, of course, built for the 1922 T.T., as no race was won in 1921. You may be interested to know the cause of the failure of the two engines, which I think has not been published before. On one car a roller cracked and on the other a piece of the skirt of the piston cracked off and by the greatest ill-fortune just happened to jam between the crank and the rod. If this had happened at another moment this engine would probably have finished well up. Before the race the three engines were run on road and bench to the equivalent of 9,000 miles without the slightest trouble, and I have a letter written by Ricardo to my father before the race saying that this very absence of trouble was the thing which worried him most, as he was sure some silly difficulty would crop up at the last moment. How right he was!

I am, Yours etc.,
LAURENCE POMEROY.

London, E.C.1.

[Thank you, Mr. Pomeroy! Only by such knuckle-rapping from erudite readers can the full accuracy of articles be maintained under the present handicaps. Actually, in fairness to Mr. Clutton, he was dealing almost entirely with Straight Eight Bugatti types and did not refer at all to the Type 22 or specify the type of crankshaft with which Ettore endowed the Brescia, nor did he specifically state the type of big-end bearings in the Type 30, although the order of the text did rather suggest this to be an all-roller unit.—Ed.]

* * *

Sir,

I hate to appear as the would-be instructor in matters journalistic, but in the interests of posterity it should be recorded that the streamlined Fiat was 1,100 c.c. not 1,500 c.c., so, of course, the figures quoted are all the more creditable. Secondly, the car captioned as a streamlined Adler is actually the new Horch. This was specially evolved to embody the maximum "autobahnfestigkeit," which connoted a high cruising speed with low engine revolutions, and therefore streamlining. Passenger comfort was studied in some detail and the amenities included a concealed washbowl with hot and cold water laid on—actually! Hence the saying, "My kingdom for a Horch!"

I was shocked to read that you never even see proofs. Knowing the perverse habits of printers, it makes me wonder how you ever make the paper read sense at all.

I am, Yours etc.,
GORDON WILKINS.

Bristol.

* * *

Sir,

I have to thank your excellent paper for being able to obtain another gearbox for my Brescia. In your paper under "We Hear" you mentioned that there was one at a dump in Manchester; you, however, printed the wrong address, and in case any of your readers may be anticipating a visit to this dump, here is

Continued on page 109

READERS' SALES AND WANTS

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

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

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

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

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

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

WANTED

AUSTIN Seven engine, 1933 or later, in running condition, reasonable price. C. J. B. Smith, Half Moon Cottage, High Street, Ripley, Surrey.

30/98 SPARES, particularly balanced cranks. Brooke, 44, Greycoat Gardens, London, S.W.1.

SUPERCHARGER and drive for 2-litre Lagonda, and any other spares. Chaundy, Plas Goulbourne, Rhosnessney, Wrexham.

SCINTILLA Vertex for Type 37 1½-litre Bugatti to replace Delco-Remy distributor. Sub-Lieut. Staddon, H.M.M.L. 221, c/o G.P.O., London.

FOR SALE

1929 AUSTIN Seven long-tailed sports, running order, wants battery, £10. E. F. T., 82, Dewsnap Lane, Dukinfield.

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

A LETTER FROM NEW SOUTH WALES

[The following news-letter is from R. A. D. Hood, of the Royal Australian Air Force, and is so well endowed with enthusiasm that we present it as a short article.—Ed.]

I HAVE been meaning to write to you for about a year and have only just found the time. I wish to add my congratulations to those of many other readers for keeping MOTOR SPORT going, and I hope that this small contribution may be of use.

My motoring started at the age of eight, when my father taught me to drive an aged Dodge Four around the family sheep station. At the age of 14 I bought a 1914 Triumph motor-cycle, with belt drive, one speed and no clutch. This gave me several years' amusement and was followed by an Indian that cost 15/-. I still have this, although it is used very little now.

Unfortunately, the war was under way before I left school, so my motoring has been restricted by war-time conditions.

While at the Melbourne University in 1940 I bought an old Lancia, but this was *very* worn and I sold it almost straight away.

Then a school friend of mine, Nigel Pugh, bought one of the supercharged 750-c.c. Austins that was raced at Brooklands in 1930. Nigel wrote to S. C. H. Davis, of *The Autocar*, about this car, as the engine is the one from the car that won the 500-Mile Race in 1930, with Davis driving.

After winning the 1930 500-Mile Race at Brooklands and gaining several records there, the car was brought to Australia. It won the Australian Grand Prix in 1931. After this it was sold and the new owner succeeded in crashing it. The wreck was bought by a man named Greene. Pugh bought the car from him and we have since had immense fun with it. Unfortunately, the crankshaft parted company the day I joined the Air Force and so the Austin has been stored for the duration.

When we got the Austin we formed a "Scuderia," by raking in the Williams family—two brothers, Peter and Ian. The former owned a perfect "12/50" Alvis, with aluminium body, in absolutely original condition, while Ian has a beautiful T.T. Frazer-Nash, *circa* 1937.

Also in the "Scuderia" is the Duckett "Special," a 1½-litre G.P. Bugatti chassis with a twin o.h.c. Anzani engine, as fitted to the Squire. The body is Duckett's own design and the car as a whole is a delight to any enthusiast.

Then there is Bruce Shanks's "Red Label" 3-litre Bentley.

Finally, we have my Stoewer, bought for £20 (very cheap for Australia) about two months after we acquired the Austin. While it is rather outclassed by the other cars in the "Scuderia" it is definitely vintage and quite sporting. It has a polished aluminium body, with boat tail and disappearing hood, wire wheels with knock-on caps, an outside exhaust and right-hand external brake and gear levers. The engine is a fixed-head, side-valve affair of 18 h.p., with a huge aluminium sump. The electrical equipment is Bosch and the finish of the whole machine is first class. The gearbox has four speeds, but only third and top are really close. Unfortunately, the car is definitely too low geared (about 4.7 to 1 in top). However, the maximum speed is about 70 m.p.h. and the acceleration is quite good. Steering is not at all bad, but the lock is poor. Road-holding is quite good, but would be improved by a set of Hartfords at the back. The brakes are poor—foot on the transmission and hand on the rear wheels.

I would be glad to hear from anyone who knows of the make, as I had never heard of a Stoewer till I bought this one. It was made in about 1925 at Stettin in Germany. [Please address any letters to my home address: Merrang, Hexham, Victoria, Australia.]

Motoring has virtually ceased since the Japanese came into the war and the Stoewer is now carefully stored.

I enclose some photographs of the Austin, Stoewer, Frazer-Nash and Alvis. [One of which we reproduce here.—Ed.] The Alvis has just been replaced by a 1926 "30/98" Vauxhall. The "30/98" has only done about 40,000 miles since new and is perfect throughout.

I forgot to mention that Pugh and I made a "Midget" at school, with motor-cycle wheels and a 7.9-h.p. V-twin engine. It was rather a crude affair, but great sport.

The Austin was fitted with an "Ulster" body after the crash; the lamps are merely to satisfy the Law! Also, the member on the tail is *not* "just for show." . . .

So much for our "Scuderia."

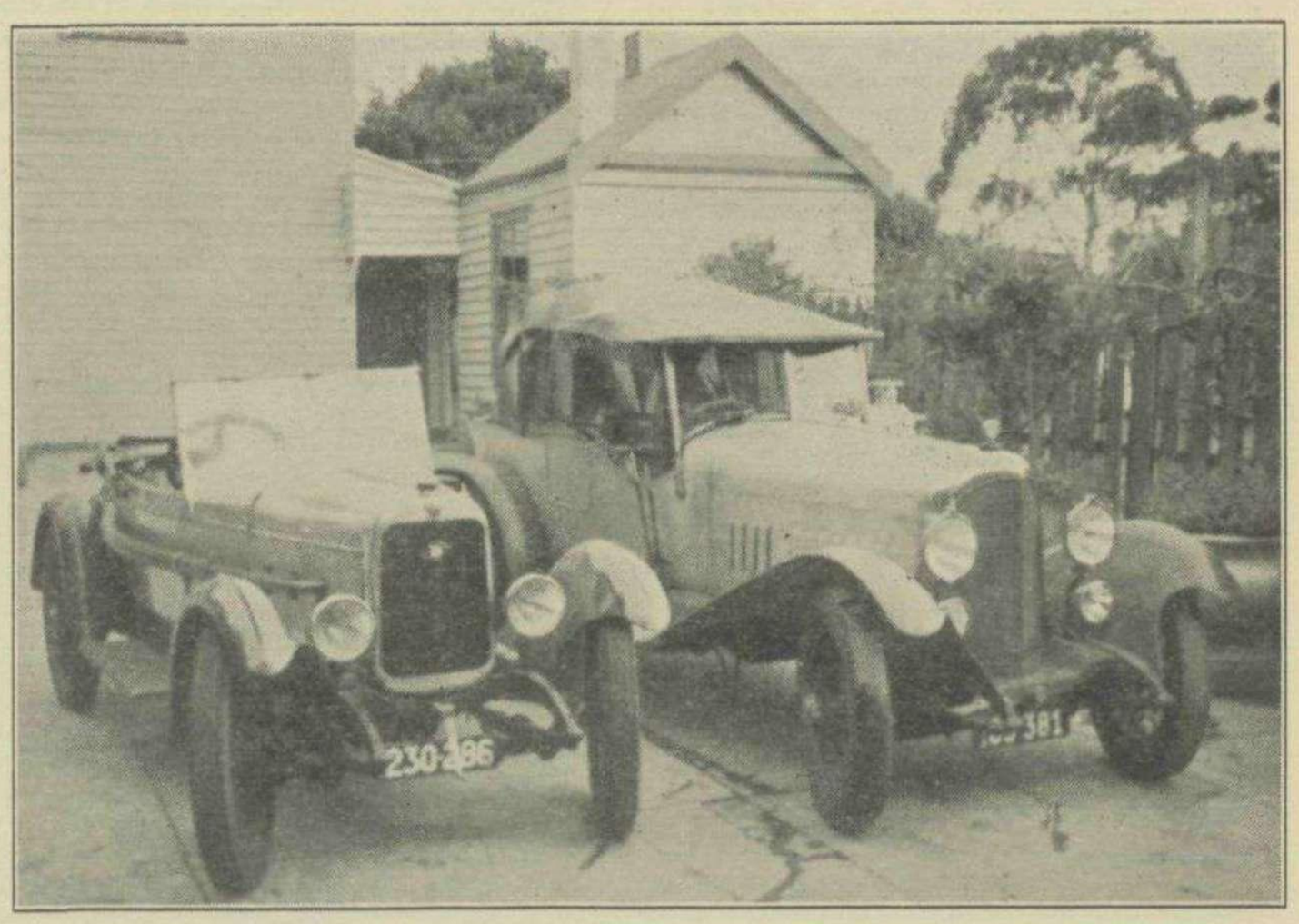
There are very few sports cars in Australia, and—horror of horrors—of these many contain Ford V8 engines. Of the few that I have come across in my brief experience perhaps the best known is Alf. Barrett's Alfa-Romeo. This once belonged to Hamilton in England. Alf is a cousin of my friend Pugh. His brother has a fascinating machine with a home-made box-section chassis. It has four-wheel independent springing—Lancia at the front. The brakes, gearbox and wheels (cut down) are all Lancia and the engine is a 1½-litre T.T. (supercharged) Frazer-Nash. The car has a beautiful streamlined 2-seater body and the performance is terrific—maximum speed being about 110 m.p.h., I believe.

The other day I came across David Hawker, a school friend, who has one of the 3-litre "Alpine" Talbots. I think only six were made. He had a sister car in England, while at Cambridge, and was having the engine fitted to an Atalanta chassis when war broke out and suspended operations. [Surely the car now owned by M E Nixon?—Ed.]

Well, like any enthusiast I could go on indefinitely, but I had better stop before this letter becomes any more disjointed.

By the way, I have also contacted R. Beal-Pritchett, who has written to you occasionally, and I have been out to inspect his "Scuderia."

All the best wishes for 1942. . . .



The 12/50 *Alvis and Stoewer mentioned in this article by R. A. D. Hood of Australia*

LETTERS FROM READERS—continued from page 107

the correct address: Harrison and Chadwick, Reddish Lane, Gorton, Manchester.

I am, Yours etc.,
A. HOWARD BATESON.

Cambridge.

* * *

Sir,

May I first congratulate you on the brilliant idea of depicting various racing cars on your front cover. I do think this is a great idea, and trust you never run out of photographs.

I am a keen sports car enthusiast, having owned seven Rileys, including a four-carburetter "Brooklands" model, an Austin Seven "Swallow" sports and an Alvis, and have recently acquired a 2-litre sports Ballot, an o.h.c. model about which I would like any hints or tips from fellow enthusiasts who have a knowledge of these cars.

At present I am running the Austin Seven "Swallow," rebuilding the Alvis "Firefly" (including very extensive modifications to the bodywork) and I intend to use the Ballot as from May 1st next.

Other cars (owned by my father) included a 3-litre Bentley, a two-cylinder Phœnix, a 20-h.p. Saxon and a "20/60" Star saloon.

I am, Yours etc.,
NORMAN D. ROUTLEDGE.

7, Elmete Avenue,
Scholes, nr. Leeds,
Yorks.

CLUB NEWS—continued from page 105

attractive riverside Pangbourne (equally elusive) ere we chugged home *via* Reading and Camberley, with complete success. Some 70 miles motoring and the entire basic ration for April handed to an astonished garage man in the course of it. . . . .

However, this excellent and restful progression was to come to a halt, which it did on the way to the 750 Club gathering the very next day, after we had tried to bring the velocity of the Jowett down to that of a horse and trap which we encountered on what was once a main road teeming with motor traffic. The journey was precariously finished on the tail of the afore-mentioned Morgan, which got along at a steady 40 m.p.h. and was equally steady directionally, in spite of the abnormal load. The other member of the crew, braver than the writer, although in "civvies," came on by "rule-of-thumb," and after the meeting someone kindly gave us a lift into the Metropolis in a 1½-litre M.G. saloon, and the faithful, if overworked, four-speed Austin Seven 2-seater was got out and hurried westwards, to tow the Jowett in. A replacement coil was hung on and a few moments' running resulted, then all was silence. Dusk came down and she was pushed into her bay. But somehow, if a more modern coil will restore her to life, I do not think this remarkable small car will go off the road at any rate until the end of June—so seldom do you get something of an Edwardian's characteristics allied to such reliability(?), convenience and economy. Nice work, Bradford!

GEO. ROESCH ON POST-WAR DESIGN—continued from page 100

will use superchargers, remarking that, after all, a 12-h.p. engine will for a long time to come be cheaper and more reliable than a blown 8 h.p. [Certainly the Talbot in racing guise has been one of the most outstanding of unsupercharged cars of moderate capacity.—Ed.] Transmission systems were reviewed, with a good word for the friction-type clutch, and then, discussing suspension, the author shows a preference for a solid rear axle, even with f.w.d., and prefers parallel i.f.s. to the swing axle. A plea is put out for a two-spoke steering wheel—[as on the old Rover Eight.—Ed.]—and brakes needing no more pressure than the accelerator and adequate on the steepest hills with the gear lever in neutral, are called for. Disc brakes are a possible development. Altogether a most valuable paper, from which we are able to quote only very briefly.

NO RETURNS

Several letters have been received from readers complaining of their inability to procure "Motor Sport." Newsagents will not procure copies if they have not received a definite order from their customer.

If you are on National Service and are being moved about the country, kindly send in your subscription and your latest address, and the copy will then reach you wherever you are.

Tell enthusiasts that "Motor Sport" is still being published monthly and is the only paper in its class.

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FOR SALE

ALVIS "12/50" engine, dismantled, just rebored, £5; also 1931 Armstrong saloon, small mileage, engine completely reconditioned by Burtonwood 10,000 miles ago, £25. Box 107.

1928 ALVIS "12/50." Reconditioned and re-cellulosed 1940. Mag., etc. Record by B.T.H. Down-draught S.U. Electric pump, modern wheels, good tyres, 2-seater, T.H. Model. Nearest to £40. Birmingham, Box 105.

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.

WANTED

30/98 VAUXHALL O.E. Velox or Wensum, preferably balanced crank, hydraulic brakes, any condition; also E-type. State chassis, engine numbers. Box 106.

McKENZIE'S GARAGES LTD.

1, BRIDGE PLACE, S.W.1.

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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