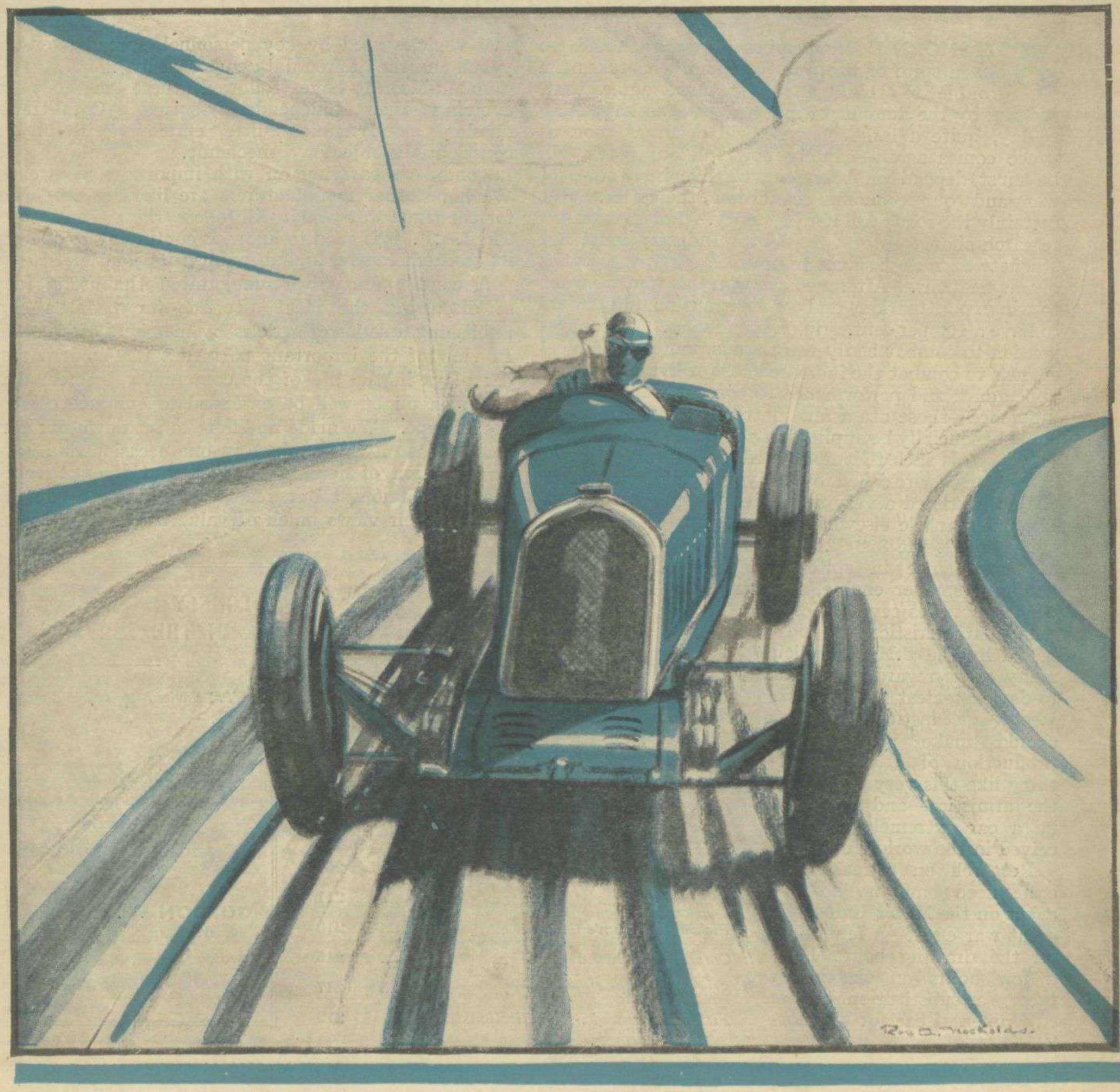
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LET RESEARCH PROCEED

AUTOMOBILE engineering research should go on, in spite of the war. Anyone who takes the trouble to think about it must agree that, judging by the amount of motoring that is happening to-day, quite a large increase will occur as soon as peace comes again—exactly how full our roads will be must depend on how long we live in a state of war and our economic condition thereafter. But certainly the roads will not be empty. For that reason research should go on ; the Motor Industry must not stagnate even as it slaves to produce our vast supplies of war weapons. After we have won this war, we want to win export markets and we want our manufacturers to have a 100 per cent. grip on home sales. Better suspension to combat badly worn roads, more economical engines to combat the increased cost of living, brighter appearance and performance to combat war-jaded indifference—those are a few matters to which research could beneficially be applied. If you believe that sports-car design is such that no immediate improvements or investigations are called for, ask yourself if Cecil Clutton has not outlined a very attractive design for a sports-car in his article elsewhere in this issue—a car which about equals the 328 B.M.W. in performance in spite of having a smaller engine, and which possesses several desirable characteristics not possessed by the B.M.W., which many of us regard as one of to-day's greatest fast motors. Research, instituted now, should make possible the production of a car something like this very soon after the armistice—and it would be a car extremely well received in the world's markets.

Research on a reasonable scale need have no adverse effect on the Motor Industry's great war effort—a few hours on the drawing board here, a few hours on the bench there, a substitution of the experimental car for the normal vehicles used by key personnel, spread over the years, and the desired data comes easily along.

Aston-Martin have followed these methods in evolving their independently-sprung, Cotal-transmission, aerodynamic 2-litre, employing usefully a conscientious-objector mechanic. Bentley and Lagonda are carrying on with important researches. We hope other manufacturers are likewise preparing for the trade war which will follow the present strife. The I.A.E., it is good to know, is continuing to operate its research centre, and to publish its journal.

A contemporary has inaugurated the useful idea of discussing the ideal after-the-war people's car, publishing a series of articles by members of its staff. In view of the important part that the modern fast car plays in the life of the community, we feel that this idea might well be extended to embrace cars of sports type. We made an effort to set down our personal ideas on this subject on one occasion and have no intention of doing so again. But if experienced motorists amongst our readers would endeavour to express their views much of value might result.

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MY CARS

By L/Cpl. CLIVE EDWARDS, Bart.

[Sir Clive Edwards, well known as the driver of an R-type M.G. in racing events, is now a Lance-Corporal in the R.A.S.C. He is running an H.R.G. and wrote the following article for us after night duty. The series "Cars I Have Owned" has proved so popular that we have no compunction about publishing virtually two such articles in one issue.—Ed.]

I CANNOT remember accurately when my motor enthusiasm commenced in the first place, but the very first of all the vehicles I owned was at the age of two or three years, in the shape of a pedal car! Perhaps, then, it was this which laid down the foundation for the future, added to an interesting collection of motors in the family at that time. For my fourteenth birthday I received, to my unbounded joy, a 16 h.p. Wolseley two-seater, of a vintage about 1923, which had been bought for £10 by a cousin from a local scrap yard, and of which he was unable to dispose. I had this car for about six months, and used it around fields and private roads. The car had an o.h.c. engine, about 8 inches steering play, and an open two-seater body. It was a bent selecting fork which finally put this vehicle out of action, and the remains were sold for 30/- to a dealer. Albeit various odd nuts and pieces are still in use to-day, and in fact my present button-stick is made from the plate on the valve cover. The old car had, however, taught me a great deal of "who's who and what's what" in the motoring line. Some time elapsed before the great day of "seventeen," when I would be legally permitted to drive in public. I had a few days on the family "hack" before taking a solo. This only served to whet the appetite, already awakened by a visit that year to Shelsley Walsh. The early meetings, with the orchard as the paddock, I have always considered the more enjoyable, if less efficient from the competitors' point of view. It was not surprising, therefore, that after these events a car really became essential, and hence like so many enthusiasts I became an M.G. owner. The "F" type "Magna" was an excellent car for the beginner, having all the dicing appeal, with a performance suitable to the apprentice. This particular car had a special Abbey four-seater body, of the usual green, and had been the property of a Canadian friend, having been, in fact, upon several occasions to Canada, where it had created considerable interest. As your readers will recall, the gear-change was centre gate, with a pull back for third, which made for snappy changes, once the unusual movement had been mastered. It was in this car that I first visited the track, to which I have always been attracted ever since. Brooklands has an atmosphere of its own. I kept this car for twelve months and learnt all I could about it; it was, at the beginning of the war, still running about locally. Without disturbing the proverbial hornet's nest, there was much to commend the small six. Next came a Mark II "Le Mans" Aston-Martin two-four-seater, a car unsurpassed for road-holding, though inclined to have its snags. This car I entered for the 1935 Welsh Rally and for the Southsea Speed Trials. That year the Rally was continuous, and owing to a misunderstanding, we were unable to have any sleep en route; I can recall that at one point I thought, whilst actually driving, I was sitting in an armchair discussing matters with my co-driver, whilst he later confessed that he was under the impression we were three in the car, and were having a long argument. In fact, neither of us had spoken a word. In spite of all this, the course of 1,000 miles was covered without loss of marks, though the final placings were never published. I had a new set of pistons fitted after this, and was unable in consequence to reach Southsea. One of the finest qualities of the Aston-Martin was the bodywork, which was beautifully made. My car, however, had one unfortunate fault. The valves were not fitted with cotters, but were screwed down by a lock-nut. (Some "Ulsters" had cotters as well, I believe.) These nuts had a habit of undoing themselves about every 5,000 miles, causing me on one occasion to hold up long queues of cars en route for 1937 Donington G.P. After putting the tappet clearance from "4" and "6," to "6" and "8," and only getting the same result on a higher mileage, I had a new set of valves made ⅛ inch longer than standard, which allowed more thread for the locking nuts, and cured the trouble for good. Incidentally, the tappet clearance could then be put back to "4" and "6" as on the old type of rocker plate, making for considerable quietness in running. Meanwhile I had decided to buy a separate car for competition work. At the time I had bought the Aston there was a dearth of medium-sized fast cars, and the Aston performance was inclined to lag behind the motors produced after this era. After much deliberation and forethought, I purchased an R-type M.G., from D. G. Briault, via the Bellevue Garage, with a view to sprint events.

The M.G. R-type had been converted to a twin camshait, along with five others, I believe, but this one was the only one that really worked, and I believe was the fastest of the bunch. They were not very suitable for long-distance work, and a little heavy for sprints. All the same, a very good motor-car. Incidentally, it was exceedingly hard to get any of the wheels to leave the ground, which says a good deal for the torsion-bar suspension. The car was taken down to the track for tuning, but the oil pump decided it was tired of life, and gave up the ghost. However, upon a later date I was able to try the car and have a demonstration by "Wilkie" of the Bellevue Garage. On the stop watch he performed lappery at 121 m.p.h., which is within a figure or two of the class record. I myself took the car round to get the feel of things, and I must confess felt somewhat at sea, it being my very first experience with a racing-car. The more so as the steering takes a little knowing, and the whole car leans over at corners, due to the suspension—but one soon gets used to this. The anchorage on this car is excellent, having been slightly altered from standard with regard to the cable layout. A lower axle ratio and small wheels were fitted for a better getaway, and the car was entered for Shelsley in the first event. I have not my programmes or details to hand, and cannot therefore give any useful figures, but my Lewes best times are around 21 secs. and Shelsley about 46 secs. I have always enjoyed Shelsley Walsh most of all. One has to be so careful there, because one corner spoilt will ruin the whole climb. I have had the M.G. for two seasons, and was just getting my hand in when things were put off for the duration, alas! Although I lay no claim to fame as a motoring ace, I had hoped for a larger programme last summer on a sports-car, which must now be delayed for the time being. But even so, I have always entered any event purely for the fun of the thing, rather than as a "pot hunter," but at the same time I have always endeavoured to make an efficient show.

By now I had decided to exchange the Aston, and was thinking of buying a new car; by no means an easy task. A visit to the Show was a disappointment, as the only suitably bodied car was a very attractive "20/90" British Salmson. I enquired after a blown four-cylinder, but only to have the reply that they possessed no car for demonstration purposes other than a racing-car, and would require six months to build a car—and, I thought, two years for a spare part! This was out of the question and something else must be found. In consequence I tried a firm making a 2-litre six-cylinder of promising design and performance, only to be told that the firm couldn't bring a car all the way to my home, unless I really was going to buy one! Very strange methods some firms have. However, I then tried the T.T. B.M.W., which was more or less what I was after; an open two-seater, with a high performance, not depending on revs. But for several reasons I did not feel it was exactly what I required. I have rather a dislike for low cars. As a last effort I had the Aston rebored and looked over, and ran it for a few miles more, when I came upon exactly what I was

MY CARS—continued

after, in the shape of an open two-seater 3½-litre Bentley, which Captain Eyston had recently exchanged for a new 4¼. I tried the car and bought it on the spot. Many people run the Rolls-Bentley down on the strength of lack of one thing or another, but I must disagree. Bentley motoring grows on you. My car had an effortless performance (95 m.p.h. on the speedo), a simply glorious gearbox and 101 per cent. reliability. The steering on the 3½ is not as good as the new model, but the engine is preferable to the original 4¼. As regards the running costs, i.e. petrol and oil. Oil consumption is almost nil, and on a long run 25 m.p.g. is easily obtained. This car carried me many happy miles, till returning home from the last Shelsley meeting prior to the war a dazzling sun caused me to motor over the hedge into a cornfield, with the net result that I did not see the car again till two days before the war, whereupon it was laid up alongside the M.G. In the meantime I had purchased a 1935 Austin Ten to tootle around till the Bentley came, but have been using this till recently. Although of no performance, the car was very reliable and had a jolly gearbox, making for snappy changes, and could be cruised at 45 m.p.h.

However, a strong desire for a fast sports-car presented itself again, with the result that I bought the ex-works 1½-litre H.R.G.; a new set of tyres were fitted, pistons altered to suit pool petrol and the car was mine. Save for some plug trouble and a pump going wrong, the car has given a good account of itself, and is possessed of a very potent performance and excellent anchorage. The only trouble being the number of times I have been asked what the initials H.R.G. stand for!

Well, that concludes the sum total of my motoring; I only wish that it could have been longer. There were, of course, many enjoyable runs with other cars. A demonstration with one of the first Phantom III Rolls-Royces. An excellent run in a 4¼-litre Bentley, leaving Boulogne at 3.30, with dinner at Troies, losing the way at Belfort, breakfast at Basle at 5.30, arriving at Zurich at 8 in the morning, some well-earned sleep, and then Davos by 6 o'clock that night. . . . . Or more recently still, a trip by air to Paris and Paris to the Cote d'Azure and back by car, where for some time the Cote was anything but Azure, and the outlook was definitely very "rouge." Various journeys, too, with Army vehicles, and memories of examining the innards of "Chitty Bang Bang," also some long runs in a 4½-litre Invicta and a "30/98" Vauxhall or two. And a very distressing and tiresome run from South Wales to London via Yorkshire in a 3-litre Bentley. May we resume these happy times in the not too distant future.

CAMBRIDGE UNIVERSITY AUTOMOBILE CLUB

Sir,

This Club is carrying on for the duration. We are holding informal meetings every week in members' rooms to "talk cars," refresh our memories and ourselves. All the motoring magazines are available in the secretary's rooms, where all members are welcome at any time.

A dinner is being held on Saturday, November 30th, in the Red Lion Hotel, Cambridge. Tickets are obtainable from the secretary at 8/6, and 10/- for non-members. All those interested in motoring and motor-cycling sport, including members of H.M. Forces temporarily in Cambridge, are welcome.

Owing to printing and paper difficulties, a general circular is not being sent to veteran members, but the secretary will be glad to see anyone who is in Cambridge at any time, and it is hoped that all who can will come to the dinner.

I am, Yours etc.,

J. B. JESTY,

Hon. Secretary.

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THE HISTORY OF THE E.R.A. "ROMULUS"

By PRINCE CHULA OF THAILAND

MANY histories of racing-cars have been written, but mostly they were about makes and types of cars, not individual vehicles, and even "Blue Bird" was a succession of different machines which sometimes even took to the water. There is one individual racing-car, however, which deserves a biography—the E.R.A. "Romulus."

My cousin "B. Bira" had started racing in March, 1935, with a Riley "Imp" after which he graduated to an M.G. Magnette. It was for his twenty-first birthday—July 15th, 1935—that I gave "Bira" the E.R.A. as a present. The car was delivered within three weeks of the order being placed. It arrived resplendent in its new coat of blue paint at a dance and was put alongside a table on which other presents were displayed. The E.R.A., then nameless, was of 1,500 c.c. capacity, but had a small blower designed for an 1,100 c.c. engine, geared up.

It was taken to Dieppe and ran its first race on July 20th. The light car race was run over a period of two hours, and had twenty starters, and was the first real road race in which "Bira" took part. The blue E.R.A. had a great duel with the Delage of Lord Howe, and secured second place after nine laps. Then a plug oiled up on a corner and, being inexperienced, "Bira" could not clear it. The car lost 2 mins. at the pit while a plug was changed, sending it down to seventh place. After that it ran perfectly, and climbed back to third place. Then it had a struggle with Veyron's works Bugatti, and wrested back second place with 6 mins. to go, finishing 52 secs. behind Fairfield's white 1,100 c.c. E.R.A., the winner.

On its return to England it was put in the care of Messrs. Thomson & Taylor, its own mechanic being Wilson. "Bira" drove in a Mountain Race and the newly formed Siam Trophy Race at Brooklands on August 5th, and finished third in both, in the latter event being close to Raymond Mays all through the race, thereby inaugurating a series of duels which were to become famous.

Then the car went to Berne in the black T. & T. van, and distinguished itself in practice by equalling Mays's record time at 85 m.p.h. It ran faultlessly in the race and finished second to Seaman's black E.R.A., being beaten by 54 secs.

On September 10th, without any special preparation, "Bira" used the car to break successfully the 1,500 c.c. Mountain Lap Record which had stood for thirteen months. The record was shattered again subsequently by other cars, but the blue E.R.A. did not seem to have any further interest.

On October 5th it went in for the first Donington Grand Prix, being the only 1½-litre car to do so. It ran faultlessly for 306 miles, and, but for "Bira" skidding and stopping for 6 mins., might have finished higher than fifth, and it was the only British car to complete the course. This race and the Mountain Championship which followed on October 19th, were won by R. O. Shuttleworth, and in the latter case the blue E.R.A. was third. Thus it closed the first season by having run seven races with but *one* pit stop, at Dieppe, which was not its fault.

In 1936 I bought another E.R.A., so the first car was given the name "Romulus" by "Bira," so as to be a twin of "Remus," the new car. I now had my own garage in the charge of G. W. Wuyts and a blue van to transport the cars. Although "Bira's" eyes were injured when driving "Remus" in the Empire Trophy, he nevertheless went down to Monte Carlo to drive "Romulus" in the first and last 1,500 c.c. race there. Running well without missing a beat, and being steered clear of an early melée by "Bira," it finally defeated both E.R.A. and Maserati works teams and gave "Bira" his first victory. Three weeks later, on May 2nd, without any further attention, "Romulus" ran beautifully through 260 miles of the International Trophy. "Bira's" duel with Mays in the last lap is memorable and he gained another victory.

"Romulus" now crossed the sea to the Isle of Man where it had a great struggle with the Delage, which was now black and belonged to Seaman. "Romulus" covered the 200 miles comfortably and finished second, 1 min. 17 secs. behind Seaman, and would have been much closer if it had not lost 1 min. refuelling, whereas the Delage went through non-stop.

On its return to England "Romulus" was invited to open the Shelsley Walsh Hill Climb in honour of the Monaco win, but was too busy to accept, and "Bira" had to use a touring Bentley. On June 14th "Romulus" performed in Germany at the Eifelrennen, and, "Bira" driving it carefully, finished third, behind two Maseratis, being the highest placed British car. A week later the car was fitted with the blower of "Remus" and had a glorious revenge on the Delage and Maserati by beating them both, and winning the Grand Prix de Picardie after a tremendous duel with Fairfield's E.R.A. Thus, up till then, "Romulus" had run in twelve races, with three firsts, three seconds, five thirds, and never a retirement. This glorious record was marred at Pescara in its thirteenth race, in August, when an oil feed pipe broke, causing a piston to break and "Bira" to retire halfway through the race when he was in second place. "Romulus" ran at Berne with "Remus's" engine and was equally unsuccessful.

During the winter of 1936-37 the White Mouse Garage was busy transforming the Delage which had been acquired, and little attention was paid to "Romulus," apart from the fitting of a new cylinder head and De Ram shock-absorbers. "Romulus" began the 1937 season with second and third places in Mountain Circuit handicaps.

The Delage being unready, we took "Romulus" to Italy instead. It took the lead in the Turin Race after being persistently blocked by Bianco's Maserati, only to retire through a slight defect. At Naples, however, "Romulus" finished second to Trossi, beating a host of other Maseratis. Trossi was faster than "Bira," who also drove carefully.

On June 3rd, at the Isle of Man, "Romulus" was given a great triumph by "Bira," who led the race from the beginning to end in a downpour of rain, beating the Zoller works E.R.A.s and many others, this being probably "Bira's" greatest race.

The second trip to Italy immediately after, in place of the Delage, which proved too heavy, was, however, too much for "Romulus." The car retired at Florence through worn-out brakes, and at Milan with a tired engine.

Wuyts resigned that June, and "Romulus" passed to the care of Raymond England. After being overhauled, it made its first appearance at the Crystal Palace in the London Grand Prix and won. The block was now linered and this caused piston troubles in practice at Berne, and the block cracked. With this patched up, partly with a plate and partly with chewing gum, "Bira" led the race in the rain and finally finished third behind the two works E.R.A.s, the crippled "Romulus" showing a clean pair of heels to all the latest Maseratis and other E.R.A.s.

A new cylinder block was now fitted, but piston troubles persisted, so at Brno, on September 26th, "Romulus" could not finish higher than fourth. The car, however, fully rehabilitated itself by winning the Imperial Trophy at the Crystal Palace against the strongest opposition including Trossi from Italy. The close duel with Arthur Dobson's white E.R.A. was the first of many to come.

"Romulus" now took a long sea voyage to Thailand and was put on show in Bangkok where 30,000 people went to see it. When "Bira" gave a demonstration run 50,000 people turned out to watch.

From 1938 onwards "Romulus" passed into the charge of Stanley Holgate, and the season was well inaugurated with a victory in the Coronation Trophy at the Crystal Palace. After "Bira" had damaged his new E.R.A. "Hanuman" during practice, "Romulus" was called up to Donington and ran perfectly, finishing second to the little Austin driven by Dodson, in the Empire Trophy.

"Romulus" returned to the Crystal Palace for two events in May and June. It finished second in the Sydenham Trophy when "Bira" was worried by

Continued on page 202

A ONE-MAKE ENTHUSIAST

THE six-cylinder 23.8 h.p. Straker-Squire is worthy of the closest study on the part of vintage enthusiasts, but it is a car which many people will have forgotten. During the 1914-18 war, the Straker-Squire Company of Edmonton built quantities of Rolls-Royce "Falcon" aero engines and the car which they produced after the close of hostilities owed something to this activity. No less a person that H. Kensington-Moir, whose uncle was at Straker-Squire's, was given the job of developing this 4-litre o.h.c. touring car into something really fast, and, before he started racing Aston-Martin and Bentley cars, he persuaded the black-and-white striped two-seater Straker-Squire, which he ran at B.A.R.C. meetings from 1920-22, to lap Brooklands at 104 m.p.h. The Straker-Squire had an engine of very advanced design, with six separate cylinders, exposed o.h.c. valve gear and two inclined valves per cylinder. A Brixton motor engineer is still regularly using one of these cars, beautifully kept, and frequently used to average 45 m.p.h. between London and Cornwall at night, before the war. The maximum of this particular example is about 90 m.p.h. and fuel consumption averages 20 m.p.g. Twin carburetters were used until recently. This car has front brakes and retains the old high pressure tyres. Mr. G. F. Lomas, of Dundee, is another great advocate of this marque, and has owned seven Straker-Squires in all, including one of the 23.8 h.p. cars; his comments follow.

My introduction to Straker-Squires was in 1914, when the father of a boyhood friend bought a 15/20 h.p. cabriolet, but it was not until 1924 that I owned my first of this make, when two of us bought and learned to drive on a 1910 (?) model. This was a grey two-seater with its four cylinders in two pairs, detachable rims on non-detachable wooden wheels, and two little glazed portholes in the dash. After that came a 1912 tourer which had been the property of a doctor and was well kept. The Bosch impulse starter and perfect tickover rendered a starter, as we now know it, unnecessary. This model had Riley detachable wheels.

Our next venture was a 1915 tourer in good condition, complete with electric lighting, sloping scuttle, rear screen, etc. Its maximum was 48 m.p.h.

Then I had a 1913 19 h.p. primrose two-seater with about 150,000 miles to its credit, and it proved to be one of the nicest cars I have ever owned. It had been fitted with huge Michelin balloons and disc wheels, and gave many years trouble-free service after I parted with it.

I then bought a 1914 two-seater, which had a plated Show chassis, from a very good friend of mine and used this for business for a year or two. It would just touch 60 m.p.h., but was never as smooth as the 1913 model.

In 1930 I purchased a 1924 tourer which, though very good externally, required a thorough engine overhaul. It must have had a head-on biff at some time as the crankshaft was slightly bent at the first journal. This car had a maximum of 62 m.p.h., and did a day's journey of 456 miles from London to Perthshire with ease.

I had, however, been waiting for a suitable 23.8 h.p. o.h.c. six-cylinder to come into the market, and though several were inspected, it was not until 1932 that I was able to procure what I wanted, a two-seater.

This was picked up in a London mews in poor condition, but with the kindly assistance of the Beckenham Motor Co. was turned into a very fine car. It had appeared at the 1922 Show. By writing to its original owner, Mr. John Lloyd of West Kirby, it was found that the car had been chauffeur-kept for nine years and had a pretty good record, including 97 m.p.h. when sand-racing. Fuel consumption was 19-20 m.p.g., not bad for a 23.8 h.p. high-performance 4-litre machine. The agents in Birkenhead who had always serviced it very kindly gave me the best valve and ignition timings, etc. Unfortunately, it had spent a year in the hands of a naval officer—whose name I shall forbear to mention. However, when new pistons, big ends, main bearings, valve guides, Terry springs, and radiator core had been fitted, and dynamo windings and wire wheels repaired, it soon became evident that the car was worth a coat of paint over its aluminium exterior, so it was sprayed Le Mans green with black wheels and headlamps. The car was always a joy to drive, being comfortable and faster than anything one normally met in a day's run—including 3-litre Bentleys and big Chryslers. I never removed the compression plates from under the cylinders, all cast separately, but performance was all one could ordinarily use or desire, maximum being about 85 m.p.h. Sixty m.p.h. was possible in third, acceleration and hill climbing were very vivid. Kirkstone old road from Ambleside was ascended in second. When touring on main roads milestones slipped by at the rate of one per 55 secs. Mechanical features included: thermostatically controlled radiator shutters, keeping water at 78° C.; hollow big ends with oil escape hole on centre radius, thus acting as centrifugal sludge traps; three-toothed starting handle; geared up vertical bevel drive for the o.h.c. with odd numbers of teeth; spring universal joints and micrometer mesh adjustments, making for silent operation; bus type dynamo 12v. 20 amps. and starter; cantilever rear springs; torque tube, and powerful rear brakes. Whitehead f.w.b. had been fitted, but were not much use until the cams and leverages were altered. Front and rear brakes were then coupled, the fork at the bottom of the hand lever being slotted, which system gave excellent results. This car was sold in January, 1936, and on its final run gave an M.G. Magnette something to think about on the Barnet By-Pass. It is a great pity that the makers of a car of such advanced and promising design should have gone out of production, and it will always be a matter of pride to have owned cars of this make, particularly the last one.

THE HISTORY OF THE E.R.A. "ROMULUS"—continued from page **201**

oil dropped on the road, but comfortably repeated its victory in the London Grand Prix.

Before the B.R.D.C. Road Race, "Romulus" was crashed and damaged during practice by "Bira," but was repaired in time by borrowing "Hanuman's" back axle. In the race it so outdistanced all the other 1,500 c.c. cars that the event became a match between "Romulus" and the works 2-litre E.R.A. driven by Mays, who only gained 2 secs. a lap. The struggle proved too much for the 2-litre car, which cracked in the last lap, "Romulus" passing to win, finishing two laps ahead of any other 1½-litre cars.

A match between "Romulus" and Dobson's white car at the Crystal Palace was ruined by "Romulus" retiring with a punctured tyre after leading for two out of five laps. In the Imperial Trophy which followed, "Romulus" finished second to Abecassis's Alta, that being the only time it was beaten by a 1,500 c.c. car in the British Isles.

It started the 1939 season with hardly any new parts, but was now painted blue and yellow, the new established colours of Thailand. It won the Sydenham Trophy at the Crystal Palace, beating Ruesch's 3.8-litre Alfa-Romeo. The following July it joined the exclusive band of cars which went round the Crystal Palace circuit at over 60 m.p.h., the others being Mays's 2-litre E.R.A. and Wakefield's 1939 Maserati. It gave the 2-litre E.R.A. and the Austin (which had 7 secs. a lap handicap) a mighty chase in the Crystal Palace Cup and finished third, only 3 secs. behind Mays, and a bonnet behind the Austin.

"Bira" having crashed "Hanuman" in practice at Rheims, "Romulus" was taken to Albi in France. Driven by "Bira," who was far from well, it finished third, behind Wakefield's and Tongue's 1939 Maseratis. Thus "Romulus," in a five years' career, ran in thirty-six races, and gained ten firsts, nine seconds, and eight thirds, with only five retirements. In other words, victory in one out of 3.6 races was enjoyed, and a place in 1 out of 1.3 races. "Romulus" is now enjoying a rest in a little garage somewhere in Cornwall. [After showing the world what this country can do when it comes to 1½ litre racing-cars. —Ed.]

Club News

The commencement of large scale air raids on London on September 7th put paid to a number of club meetings. The 750 Club and the E.R.A. Club have cancelled their meetings in town, and a proposed future gathering of the M.G. Car Club has had to be abandoned. The 750 Club has been particularly hard hit, for a bomb unluckily fired the offices of P. H. Hunter, the secretary, and although very fortunately he was out at the time, all the club records and some recent correspondence were lost. This is especially hard lines on a very go-ahead organization and members and prospective members will greatly assist by sending their addresses, and re-writing any unanswered letters they may have sent, to Mr. Hunter, at 39, Warland Road, Plumstead, S.E.18. The copy for the October "Bulletin" was entirely destroyed, but it was hoped to replace it fairly soon, though so far our issue has not come to hand. We hope that some more meetings of members will shortly be possible, for this ambitious club held the only war-time car gatherings before the start of the real *blitzkrieg*—and such meetings should still be possible in daylight on Sundays. Certain other club news is to hand, in spite of that dirty old man . . . .

C.S.M.A.

A.G.M.s are the order of the day, and are scheduled for the following dates:—Birmingham: November 16th; Manchester: November 12th; South Wales: November 4th; Bristol: November 7th; Newcastle: November 5th; London: some time in December.

RILEY M.C.

Current subscriptions will still be thankfully received.

MIDDLESBROUGH & D.M.C.

Former organizers of the Saltburn sand races and the Scott Trophy Trial, this club recently put in some more yeoman work and raised £5,250 for the local "Spitfire" fund.

IRISH M.R.C.

The Irish Motor Racing Club's speed hill-climb at Ballinascorney Gap, Co. Dublin, saw J. A. Thompson put up fastest time of the day with his T.R.S. He clocked 50.44 secs., 1.5 secs. slower than the record set up by a blown M.G. Magnette in 1939. His speed works out at 53.53 m.p.h. S. B. Martin's 2-litre G.P. Bugatti was second at 52.25 m p.h. P. D. Gill's 847 c.c. M.G. was runner-up to Thompson in the under-1,100 c.c. handicap class, and D. O'B. Gill's 847 c.c. M.G. was third. A lady won the over-1,100 c.c. handicap with a Morgan 4/4, Kerwood's Morgan being second, Besson's Morgan 4/4 and the Bugatti third (a tie), and Besson took the unlimited handicap class from the lady Morgan exponent and Hill's "90" Talbot. The institution of handicaps in this class of event is of considerable interest. This club and the Dublin University Club plan a winter trials' programme.

DUBLIN MIDGET RACING CAR CLUB

This terrible interpretation of the sport has got to Dublin, although perhaps we should be glad of any activity these days. The cars used are mostly cut-about Austin Sevens, raced on a course at Clondalkin.

WE HEAR . . .

We hear that Forrest Lycett has been exercising his famous 8-litre Bentley recently, preparatory to giving it a long rest, we hope, and Mr. Lycett believes, safe from Jerry's presents. R. G. V. Venables, who takes a great interest in motor-cycle events and runs an immaculate long-chassis 1½-litre Aston-Martin, has gone to live at Capel-y-Ffin. He reports that an old Eric-Campbell two-seater lurks nearby; also says that taking a mountain pony flat out up Cusop is bettered only by the descent!

Arthur Baron is in the Army somewhere Warminster way, enjoying it, and motoring about in a Singer. Congratulations to D. Hampshire on the arrival of a son and heir. Gordon Brettell is training with a fighter squadron, somewhere in Cheshire, and has reached the Miles "Master" stage. Joan Richmond is hard at work in a London canteen and she still runs her Eighth series Lancia "Lambda." Sam Clutton will probably tax his "3.3" Bugatti quite soon; it had a narrow air raid escape last month. Miss Shilling, who used to ride very rapid motor-cycles at B.M.C.R.C. meetings, is now engaged in engine research at the R.A.E. and motors in a very smart Morgan 4/4. Interesting cars seen near this establishment include an old Salmson; a Big Six Bentley coupé; a 3-litre 100 m.p.h. chassis 3-litre Bentley with a McKenzie drop-head body, that had seen service in Africa and still kept quite cool; a very Continental, sleeve-valve Voisin coupé de ville, and a vintage Lea-Francis. John Cooper had several 'phone calls after the publication of his recent article, and is as keen as ever, although his transport facilities seem to fluctuate between bicycles and a borrowed S.S.

WHY NOT A WAR-TIME "SCUDERIAS"?

This war is becoming just a trifle wearing to those of us who gain relaxation almost entirely through the medium of sporting motoring. We must not grumble, it is true, but we are entitled to reasonable relaxation. So would it not be a sound scheme to try to form local "Scuderias" in various parts of the country, to operate in the same spirit as the "Scuderia Impecuniosa" which John Cooper described for us in the September issue? In peace-time, such organizations were, understandably, purely private link-ups, but in time of war the idea could well be extended. People are scattered far from their friends and sports-car owners, impecunious and otherwise, are in many cases hard-pressed for the loan of tools, a helpful tow, garage space in little-bombed areas, etc. Moreover, it is a crime to motor a fast car with empty seats or unappreciative passengers these rationed days, and a mutual exchange of transport greatly extends the motoring available. So, without forming a club or organizing too seriously, could not those who still enthuse over and run real motor-cars attempt to get together occasionally, within the limitations of petrol rationing, now that club life is virtually dead? Apart from assisting one another in the running of their cars, it might be possible to recapture something of the spirit of peace-time runs, when sportsmen and sportsgirls motored for the sake of motoring, afterwards meeting in pleasant surroundings to talk of cars, cars, cars—incidentally, where are all those picturesque sportsgirls? The A.T.S. and W.A.A.F. should be full of them, but are they? MOTOR SPORT suggested such gatherings when the war started and we are still willing to do everything possible to link up enthusiasts.

GENERAL NOTES

The car has proved a boon since the real air raids on London began, not only from the point of view of convenient business travel, but for getting away from the war for a brief respite during the daylight hours of Sunday, when some worthwhile trips into the country have been possible, every inch of space in the Austin occupied, for these have been happy occasions for meeting and spending a little time with valued friends. On one such occasion the little orange T.T. Austin was visited in its place of war-time retirement, and that alone vividly recalled far happier days. Then, the writer being exiled on "work of national importance" to a country town, he craved some means of escape to London when leave permitted, in spite of it.. barrage and its bombs. This was taken as a fitting opportunity for putting certain vintage theories to the test, and, accordingly, one Sunday afternoon amidst sundry air raid alarms, a 1924 four-seater Gwynne Eight was put once again

CLUB NEWS—continued

into roadworthy condition. The Gwynne Eight will be recalled as a rather snappy small car made by the pump manufacturers who were also responsible for the Albert, and who apparently had a very decided love of the long-stroke engine, for the R.A.C. rating is 7.5 h.p., and the capacity over 1-litre. It was, in its day, about the first small car to exceed 60 m.p.h., and it used to appear in trials, while Eaton ran a Gwynne-engined G.N. at Brooklands, where Peacock's well-streamlined car of this marque was burned out in the 1928 "200." We found our example in quite good order, once the various water-pipes had been brazed and the lighting wires sorted out—the ignition leads come away with the very easily detachable radiator, and everything is most accessible. We had always imagined the design to be quite ordinary, so it was exciting to find a very vintage engine beneath the bonnet, rather reminiscent of "12/50" Alvis practice. It has a three-bearing crankshaft and push-rod o.h. valves, the push-rods concealed behind a plate on the near side of the block and the rocker-gear hidden beneath a square valve cover held by two studs, from which the oil regulator alone protrudes.

A Solex carburetter on the off side feeds via an external two-branch manifold, which has a diminutive water jacket, supplied by a pipe from the header tank and an off-take pipe going to the rear of the jacket. Fuel feed is by gravity from a cylindrical scuttle tank. Cooling is by thermo-syphon action and the radiator, which has a plated shell, possesses a very imposing header tank and a very convenient drain tap, while the hoses are very big indeed. The cylinder head is detachable and the vertical valves live in a pent-roof head with ports on opposite sides, the three-branch exhaust manifold living on the near side. The cylinder block is separate from the alloy crankcase, which is very deep to allow for the big crankshaft throws and which has divers copper oil pipes draped along it from the external oil pump at the front of the engine. There is a substantial dip-stick on the off side to the rear of the oil-filler, the cap of which demands a spanner for its removal. The plugs are inclined at 45° on the inlet side of the head, the h.t. leads passing round the front of the block through a guide tube attached to the water intake pipe. The magneto is driven by a vernier coupling on the near side and the dynamo is mounted on an adjustable housing in front of it and driven by a whittle belt. The drive passes via a leather cone-clutch with exposed withdrawal mechanism, to a separate three-speed and reverse gear-box having a top-gear ratio of 4.7 to 1. The driving position is extremely imposing, and makes the bonnet look quite long, the forwardly-inclined mascot seemingly far away and on a lower plane. The short central gear-lever works in a ball gate with external guides, and has a trigger-catch for reverse, bottom being on the *inside* of the gate. The cone clutch is excitingly fierce, and the throttle pedal is central. The long central hand brake is virtually a parking brake, but the foot pedal has quite good arresting properties, by cable actuation to tiny drums on the rear wheels. The metal-faced wooden facia carries a speedometer, an old-style clock, a Miller ammeter and lighting panel, a screw choke control, sundry switches, and a very clear oil gauge right before the driver. Long levers on the steering column control ignition and throttle settings, through nicely planned linkages, and the horn push in the wheel centre operates a real Bosch horn. The wheels are stud-attached wire carrying quite good Pirelli 4.50″×19″ covers on the rear and 4.40″×19″ Dunlops on the front. The comic body is very high, with rear seat well over the axle, the front seats folding right up to give access; the whole very narrow and intimate, and possessed of a fine two-pane safety glass screen, a hood, a tonneau cover and very wide, substantial running boards, the battery living on the near side one. Long half-elliptic springs with nicely accessible greasers look after suspension. Thus the Gwynne, as we bought it for £5, that sunny, war-time Sunday. In the few miles through London we had ample opportunity to get used to the leather cone clutch and steering which asked half a turn or thereabouts lock to lock, and that without any castor action whatsoever. We discovered, too, that the gear-change went through very nicely, given lots of revving up from top to second and a long pause going from second to top. Acceleration seemed to leave most moderns nicely behind, perhaps because we were trying and they were not, and the gear whine on second quite drowned the crisp exhaust note. The suspension was hard over bad going, though rather soft for fast cornering, but the car rode in quite the vintage manner and felt solid and alive at one end the same time. By the time dusk had fallen, and the unmasked headlamp had been lit momentarily in finding the side-lamps location on a stiff switch, we had gained ample confidence in the old car, and were cruising inspiringly at 45 m.p.h., and getting 35-40 in second, careful to remember the limitations of two-wheel braking. Steering was a matter of wrist work, with some kick-back, and was quite an art at times, though the fact that on this initial run a 4.50″×19″ tyre was on one front wheel, matched by a 4.40″×19″ on the other, was probably largely responsible! The journey of over thirty miles was accomplished quite rapidly without stopping the engine, and with no incidents save for slight overheating at a shut level-crossing.

The next Sunday, just as we were putting her away in a rather famous garage with aeronautical associations, a great enthusiast was met, whose 1922 aluminium-bodied "12/40" Alvis and 1924 3-litre cut-about Bentley are both in storage, and that resulted in a great run to a neighbouring town, for tea in a shop overlooking the steep high street, and a return run to a cinema in a military town, when she cruised inspiringly at a good 50 while two Canadian soldiers in the back had their first view of the Hog's Back. One of the films was all about road accidents, which cheered us immensely, and when we came out the Gwynne started quite readily, but was so cold that she misfired all the way back, in spite of having distributed most of her cooling water about the urban car park. In her new home she is regarded by everyone, garages included, as a rather stupid hack, but the writer thinks better of her, even if there *is* no real performance. Left in the aforementioned garage that night, someone had the impudence to park a much more modern Austin Seven bearing a Vintage S.C.C. badge right alongside, and, what is more, choose a patch over which roofing still existed, whereas we carelessly parked under a bomb-hole through which the moon showed clearly—it simply pelted with rain later that night . . . .

There have also been some meetings, when exiled in another strange town, with a great enthusiast who part-owns a 1924 (basically) trials Austin Seven and a modern Vincent-H.R.D. motor-cycle, and whose father is a well-known A.C. exponent—such keenness does this family exude for motoring that an E.N.V. gearbox from Straight's Maserati lives proudly in their dining-room, awaiting installation in the A.C. when hostilities cease. That visit led to the discovery of a Brescia Bugatti chassis which had been given to a local Frazer-Nash enthusiast and which may well be rebuilt some day, while, on a return visit, per the H.R.D., local breakers' yards revealed a huge pre-the-last-war Renault landaulette, a 14 h.p. Metallurgique and a 10 h.p. De Dion Bouton of like vintage, keeping company with a cut-about "Ulster" Austin Seven, amongst other things. The next week-end four of us escaped to London in the Gwynne and, following a fast run to Guildford to attend a motor-cycle scramble, in a friend's Riley Nine, the writer's personal papers were loaded, many issues of MOTOR SPORT amongst them, and this precious load conveyed to what is regarded as a place of comparative safety in the aforesaid sixteen-year-old small car.

UP FOR SALE

The war does not seem to be damping the enthusiasm of vintagents or builders of specials, so some of the cars seen for sale recently may be of more than passing interest. They include a sports Senechal for about £8, and a very clean, short-chassis, straight-eight Isotta-Fraschini coupé, in South London scrap yards. At the latter yard is also a crashed open Isotta, the remains of a 3-litre Bentley engine, an early O.E. "30/98" Vauxhall, and a complete o.h.c. V-twin G.N. racing engine with twin Solex carburetters, twin magnetos and chain-drive camshafts. We believe the rest of this G.N. is available in pieces, and the engine was priced at £5/10/-. An unblown 16 h.p., four-cylinder Mercédès two-seater, *circa* 1923 and in apparent good order, is reported in a breaker's yard by Bignall's Corner on A6, while from a reader comes news of an immaculate Hispano-Suiza limousine with five new Michelins.

Letters from Readers

Sir,

Congratulations to you for continuing MOTOR SPORT for the duration. I have been a constant reader for several years, and have always found it very interesting and instructive.

I notice in your October issue a letter from Mr. T. A. S. O. Mathieson, enquiring about the 2-litre Grand Prix Sunbeams. He is quite correct when he states that one of these cars won the Ulster Trophy in 1934.

The car he mentions is still here in Northern Ireland. As far as I can ascertain the car originally belonged to the late Sir Henry Segrave. It has never been used since it won the race mentioned above. It was owned by the late Mr. Trevor McCalla, who was unfortunately killed in action a few months ago. I have heard his wife has given the car to a friend and he is going to restore it to its original condition. I am afraid Mr. Mathieson is out of luck as far as this particular car is concerned.

Here in Northern Ireland there are still a few "good" cars to be seen. I saw a beautiful twelve-cylinder Delahaye drop-head coupé in town the other day. There are hosts of T-type M.G. Midgets and 4/4 Morgans still on the road. A young blood has procured a late type 2-litre Aston-Martin two-seater with streamlined body. It certainly *looks* good. We have a couple of Riley "Sprites" and a Riley "Imp" with a Triumph Dolomite radiator cowl fitted. This car is running on producer gas and can still "hit the high spots." A Lagonda Rapier supercharged two-seater which was originally built for Lord de Clifford; indeed, I could mention lots more which are still taxed and "pinking on pool."

As far as the sport goes we have had nothing up here in the car line, but we have had a few motor-cycle grass track and hill climb meetings all through the year which have kept us from getting absolutely stale.

Good luck to MOTOR SPORT.

I am, Yours etc.,
ARTHUR I. FEE.

Belfast.

* * *

Sir,

I have been a subscriber to your paper MOTOR SPORT for some years now, and it has always given me very great pleasure.

In the current number, under "Rumblings," a request is made *re* "Lonely Enthusiasts in the Services." Please put my name and address down at once because my wife and I will be very pleased indeed to entertain any such lonely ones in this district for a night or two, or an odd week-end, at any time, provided we are given twenty-four hours notice.

I may say that I learnt to drive on the old chain-drive Mercs and chain-drive Daimlers and Majas (Austro-Daimlers).

I have a large collection of cuttings from motor periodicals dating back to 1904, and albums of old photographs of old racing-cars, etc. Therefore, there should be plenty to talk about, and as this is a serious invitation I sincerely trust that advantage will be taken of it during the coming months.

I am, Yours etc.,
F. C. MERRALL, M.B.

28, Orchard Road,
St. Annes-on-Sea.

* * *

Sir,

May I add my name to those who have written to congratulate you on continuing publication during the present spot of bother.

Although motor-racing is to-day practically non-existent, I never pick up my copy of MOTOR SPORT without finding plenty of interesting reading matter.

Before the war I filmed a small amount of motor-racing—mainly at the Crystal Palace, where the slow corners especially favour cine work—and when I go home on leave I always run these films through. I am thus able to enjoy once again the sight of fast cars and famous drivers, and although it is only a shadow of the real thing, it helps to keep me going until actual racing returns once more.

Not being blessed with vast financial resources, my present vehicle is a B.S.A. four-cylinder three-wheeler, which had been rebored and fitted with new main bearings shortly before the previous owner was obliged to sell it. A new set of plugs has been fitted in place of the motley assortment that graced (or should I say disgraced?) the engine when I first took the car over, and although the performance may not be outstanding, it certainly is not sluggish. At first there was a tendency for the engine to stall when decelerating, but an adjustment of the carburetter seems to have cured this fault.

I continued to run the car during the early stages of the war, but owing to a long interval of waiting for leave the already aged battery gave up the ghost and the car is now enjoying a temporary retirement.

After the war, provided Adolf has not dropped a load of H.E. on the lock-up where it now resides, I have hopes of dismantling and rebuilding it as a four-wheeler.

I must apologise for writing in pencil, but in the R.A.F. ink seems even more rare than petrol is for private motoring.

I am, Yours etc.,
R. S. MARRIOTT.

Maidenhead.

* * *

Sir,

I have just bought a Balilla Fiat, one of the five which were imported in '36 (?), or so I believe.

She has the external exhaust and the Morelli coil ignition which seem to bear this out, also an Italian Solex carburetter.

At the moment I am still running her in, as she has had one cylinder rebored. But she has a very good top-gear ratio; 2,500 r.p.m. appears to equal about 48 m.p.h.

I hope to fit her with a Scintilla Vertex instead of the coil during the winter. Luckily one of my troop fitters was with Scintilla and he is an ardent helper.

I expect you probably could confirm whether she is one of the five, so here are her numbers:

Model 808; Engine No. 000317; Chassis No. 070900; on Block 108 GS.

It merely remains for me to thank you for keeping MOTOR SPORT going on as usual. The day it arrives is one of the best of the month and takes one back to the old days when one could wear civvy clothes.

I am, Yours etc.,
J. L. V. BROWN,
2nd Lieut. R.E.

1st Field Sqd. R.E.

[Can anyone check up on this Fiat for 2nd Lieut. Brown?—Ed.]

* * *

Sir,

My 1912 Lanchester recently did a run of some 70 miles, to Hindhead, Woking, etc., to mark the restoration of the car to a motorable condition.

A few notes on the car's specification and performance might be of interest: It is described in the catalogue as a "Sports Torpedo." The motor is a vertical four-cylinder, of 3,234 c.c. R.A.C. rating, 25.6 h.p. Four inch bore × 4 inch stroke, all bearings lubricated at 40 lbs. pressure, water cooled by thermo-syphon, inlet and exhaust valves operated by camshafts and leaf springs on either side of the engine, which is fitted with the Lanchester patent harmonic stabilisers. The carburetter is the Lanchester wick type fed by a belt-driven pump. The ignition is a dual system of high tension magneto and coil. The chassis is of pressed steel channel section. The transmission is through a metal-on-metal lubricated multiple disc clutch, three-speed epicyclic gearbox, and underslung worm back axle. The brakes—multiple disc transmission and internal expanding on rear wheels. Detachable wire wheels with 880 mm. ×120 mm. tyres. Wheel base 10 ft. 7 ins., track 4 ft. 8½ ins. Cantilever springs back and front. Tubular front axle, 32 volt self-starter and 8 volt lighting set. The car complete weighs 32 cwt.

The price was £725.

I have had very little opportunity of discovering what sort of performance the car has. But from observation on the above run the maximum in top appeared to be just over 60. But the engine was suffering from valve bounce in all gears. From this it would appear that either the valve springs have lost tension or the gear-ratio is too low.

LETTERS FROM READERS—continued

I rather suspect the latter as the car will climb almost anything in top, and one can spin the wheels accelerating in either first or second. We unfortunately had to run on "Pool" petrol, which does not agree with a wick carburetter. The car is very silent and gives one a delightful feeling of well-being.

I am, Yours etc.,
F. W. HUTTON-STOTT, Junr.

Puttenham,
Sussex.

[How many pre-1914 cars have now been out on "Pool" we wonder?—Ed.]

* * *

Sir,

Living in close proximity to "Pollsmoor" race track I have had the pleasure of seeing quite a few British and foreign drivers do some very fine driving, and I hope to see some more at the close of hostilities. When I say this, I mean foreign drivers as well, for there were some very fine men among them whose sympathies are not with those two "twirps"—Adolf and Bruno—may somebody over-rev. their innards for them soon!

Well, something about yourselves. I have only one grouse and that is, it is only a monthly publication.

At present I own a rebuilt Singer Ten, 1929 model, which has given me wonderful service and has been in a couple of reliability trials. The last one we had only consisted of 139 miles, in which were included some of the stiffest passes to be had anywhere in the Cape Province. On one section cars in lightweight class were allowed to keep to a 24 m.p.h. limit and heavy class (over 1,500 c.c.) to 27 m.p.h. I may mention that the course was nothing more than a goat track, with sudden drops of 6", then a hairpin bend and the occasional stretch of sand; real soft stuff which had you seen in daytime you would at least have approached at dead slow speed. These passes I refer to take one over 2,000 foot mountains, some of them macadam and others red hard gravel with plenty of hairpin bends; a true trials driver's paradise.

One driver of a Hudson Eight Special burnt out his lights en route and after a lot of trouble decided to proceed with the aid of the full moon which existed. Believe it or not, he put his foot flat down and arrived at the final control on time much to the detriment of his wife's nerves.

I had the misfortune to break my radiator bracket, thereby opening my manifold which let out considerable water. With the inevitable insulation tape I made a temporary joint which lasted me home. I retired from the trial, but we all had a good night's fun for a few bob.

Most of the lads are now on active service. The last track event we had was a handicap race of 45 miles, which saw a very old Bentley brought out into the sunshine. She had 170,000 miles to her credit. She was a six-cylinder saloon and lapped the course at approximately 55, going up the back straight at 80 m.p.h., at about 10 m.p.g. In touring trim she does 17-18 m.p.g.—really a superb car. She had lain dormant for two years, but all that was done to her was flush her oil out and clean the carburetter. There were two other Bentleys entered—a 3-litre and a 4½-litre, with a cut-down chassis and two-seater body. They were faster than the "Grand Old Lady." Other entries were a Squire 1½-litre and a Maserati, also several M.G.s, B.S.A.s, and some Yanks.

I would like some detailed information on the D.I.S. 14/40 Delage engine which I wish to mount in a Riley frame for trials work. What I wish to know mainly is what viscosity oil (needless to say, I am a firm adherent to Wakefield Castrol), peak r.p.m., tuning, valve clearances and oil pressure. The power unit I possess is in very fine condition. I wish to use 5"×19" wheels and 4.1 to 1 top gear from a Ford V8.

I am a fitter and turner by trade with a lathe and good equipment of tools, and building a special is my only hobby.

Here's best of luck to MOTOR SPORT and its continued success.

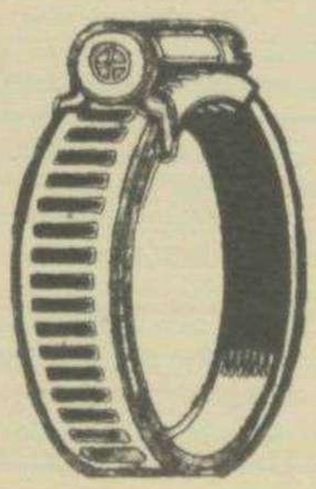
I am, Yours etc.,
JAMES W. M. MARTIN.

"Benalma,"
Pluto Road,
Plumstead, Cape,
South Africa.

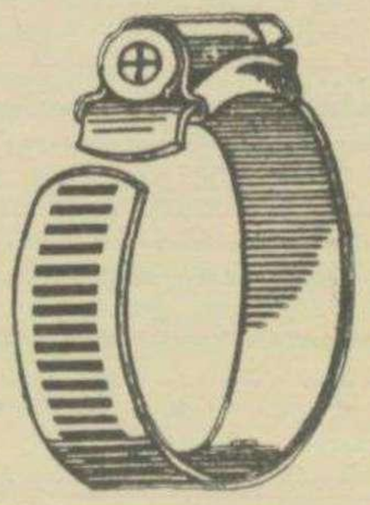
[Will British Delage exponents please write direct.—Ed.]

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THOSE WHO WORK AND THOSE WHO DON'T

By PRINCE CHULA OF THAILAND

[Prince Chula of Thailand, who is well known as the owner and entrant of the cars which "Bira" drove so successfully in all manner of races, chooses a controversial subject for this article. If we may enlarge a little on his theme, while a driver need not be a good mechanic to be successful, if by "an efficient driver" we mean one who can take the wheel of any car in any race with complete confidence, sound engineering qualifications are highly desirable, because in a long race, such as the Le Mans 24 Hours, vital work may have to be done on the car, and if the rules restrict the number of working mechanics, the driver must be able to do his full share. Capt. Frazer Nash, for one, certainly could, and did. Even if any number of mechanics is allowed out of the pit, if the driver is a capable engineer and mechanic, the personnel can be accordingly reduced, with a distinct saving in expense to the *equipe* concerned. In passing, a notable instance of an engineer who can effectively drive even the very difficult modern Formula G.P. car, is Herr Uhlenhaut, who used to go really well round the circuits when trying-out a Mercedes-Benz. Your observations on Prince Chula's very interesting article are welcome.—Ed.]

THERE are different types of racing drivers—those who are good in the wet, and those who are not so good; those who lose their heads when they are being hard pressed, and others who drive all the better when they find themselves in critical situations. There is, however, one big difference which, I believe, has not been noticed as much as it deserves. There are drivers who like to work on their cars and those who do not. Professional drivers of Continental Grand Prix teams, of course, cannot work on their cars, and the following remarks apply more to independent, and largely to British, drivers.

Let us first take those who like to work. I think pride of place must be given to "Sammy" Davis. He likes to work on the car so much that I almost feel he prefers preparation to the race, and he positively revels in troubles. Did he not say in his book "Motor Racing" (page 82), "Once the machine is there and there is plenty of work, despondency has no place." Again I read in Sammy's book words which seemed really joyful (page 146): "there was the usual running in, with tests of everything possible, in fact, we lived on that car for weeks before the race." That Sammy preferred to work on his car is indicated in the remarks (page 279): "for the second time in my life I found myself driving a machine with the preparation of which I had had very little to do."

As a motoring writer and observer Sammy was always most keen and appreciative of good preparation, clean appearance of a car at the beginning of a race, and well-organised pit work. Such achievements would earn from him as much praise and attention as fast cornering or some really fine passing.

George Eyston is another fine driver who liked to prepare his car himself whenever possible. As Sir Henry Birkin said of him in "Full Throttle," (page 245): "he is a skilled mechanic as well as a driver, and cannot take enough pains over the preparation of his car." [Engineer would have been a better word than mechanic.—Ed.]

Sir Henry Birkin, or as he is still more affectionately called "Tim," was very keen to follow every detail of the preparation of his car. He wrote in "Full Throttle" (page 49): "I must know from the outset every single joint, nut, screw and bolt in it, otherwise I am ill at ease. Many very fine drivers rely on perfect preparation by their mechanics, and only touch the machine when they finally get into it, without any knowledge short of the essentials. Very often they win, but for my part, even if certain of invariable defeat, I could not bear to be on terms of such nodding acquaintance with my car."

The most famous driver-mechanic of recent years is undoubtedly Freddie Dixon. His exploits are too recent and too well known for me to have to chronicle. I do not think it is an exaggeration to say that during the last ten years at least, Freddie Dixon has been easily the best known of English racing motorists. This is, at any rate, my own experience. I have talked to many people in different walks of life who were not actually motor-racing enthusiasts, and if they had only heard of one driver, he was invariably the one and only Freddie. He prepared all his cars himself and the speed he could get out of an unblown Riley was nothing short of magical. To have twice won such utterly different types of races as the Ulster Tourist Trophy and the B.R.D.C. "500" within a few years is to my mind a record which will not be equalled or surpassed for a long while.

Percy Maclure, the "corner artist," as he is so often called, is another who is just as well known as a mechanic as he is as a driver, and he has been responsible for the preparation of his car in all the races which have made him famous. Then there was the genial and efficient H. G. Dobbs whose multi-carburettered white Riley used to sweep the board in the short races at Donington. He too did all the work on his car himself and with great success.

Amongst famous drivers there is one who is little known as being a good mechanic. This is Arthur Dobson. First because he drove his white E.R.A., which was practically standard, or else "works" machines, it is little realised that next to racing Arthur adored working on a car. After his own car had done excellently in practice, and there was nothing else really to do but wait with confidence for the race, Dobson would often spend hours and hours working on somebody else's car, with not much more hope than that it could be made ready to start in time.

In contrast to those drivers I have mentioned, there have, on the other hand, been successful drivers who never did any work whatsoever on their cars. The most famous amongst them is probably Rudolf Caracciola. Even in the early days when he did not have the tremendous heavy backing of a full team of Mercédès-Benz, he took no interest in the preparation of the cars he drove. Birkin spoke of him in "Full Throttle" (page 93) as "relying entirely on his mechanics for the preparation of his car, and knowing little of its inside himself."

Raymond Mays, though he might have known all about the inside of his cars, has never been seen dirty, lying underneath them, doing any actual work. Who can imagine his blue overalls being anything but immaculately clean? Dick Seaman organised the preparation of his cars before he joined Mercédès-Benz, but nevertheless relied almost entirely on Giulio Ramponi. "Bira," who won twenty out of sixty-eight long-distance races in which he ran, never as much as tightened a nut or a bolt on the E.R.A. "Romulus." The same, I feel sure, applies to Lord Howe, who has probably had more experience of different types of cars and various circuits all over Europe than any other British driver.

Should the question be, "Must a good driver necessarily be a good mechanic"? I think Sir Malcolm Campbell in "The Romance of Motor Racing" (page 67) has given a good enough answer. "There are some men who combine real engineering ability with driving skill, but they are few. After all, an engineer or a designer of motor-cars must have an aptitude for these things if he is to be successful. That demands very close attention and much mental application. The man who has a flair for high-speed driving is not naturally fitted for such work; he has a different kind of mentality. There is nothing to prevent a man with a weak heart and an undeveloped physique studying at a drawing-board and producing a super-fast racing model, building it out of the knowledge that he has gained, and perhaps spending many months over his plans. It is not reasonable to expect the average race driver to do anything like this; his whole mind and all his interests are different, and the probability is that he has never had any worthwhile technical training."

In short, it is not necessary to be a good mechanic to be a good driver, provided one is backed up by good mechanics. It is, however, of far greater advantage to an enthusiast with not enormous financial resources, who wishes to race, if he can prepare his own car. If he is unsuccessful in his race, which he is more likely to be than otherwise, he has at least the consolation that he has enjoyed the work of getting the car ready, and probably he will get some tremendous thrill from the fact that the car will actually cover a few laps at high speed.

ON SELLING SPORTS-CARS

THE war is on, and the production of new motor-cars has ceased entirely, so this is just the time to devote a little thought to the none too simple subject of selling sports-cars. Lots of important people who were in the Motor Industry—the third largest pre-war industry in this country—before the war, will return to it when peace breaks out. So, however busy they are just now and no matter how occupied with other things they expect to be for quite a while yet, they will be wise to devote some of their spare time considering what sort of cars they will manufacture when this wretched war is won. If fate, circumstance, or the Powers that Be elected that you should be a manufacturer of automobiles you would have a very wide scope as to the sort of product you would turn out and the market you would seek to serve. You could control from your private yacht (aircraft-millionaires have them and so why shouldn't automobile manufacturers?) a huge factory equipped with wonderful and very costly machine tools and miraculous equipment, at which thousands of operatives work all round the clock producing tens of thousands of almost-exactly similar glass-windowed boxes to provide good, reliable transport for John Citizen and his lady, towards the middle of the highway, all over the world. Incidentally, if you make a reasonably good glass-box your factory operatives will fill your factory car-park with hordes of old models of the breed. Instead of a factory boasting busy lines of conveyors, you may prefer to make quality cars for gentlemen in old school ties, in any size works, from the sort where cars are assembled in rows by masses of busy work-folk, to the models sort where only half a dozen or so cars stand around in varying degrees of nakedness, moving towards completion. Or, again, you may make specialised sports-cars (I shall be expected to say for young bloods and their girl friends in slacks) almost with your own fair hands. The latter market is naturally the one of most interest to us and invariably the most difficult to capture successfully—which universal expression in this case conjures up delightful visions of Cecil Kimber and "Aldy" snooping round with big fishing nets in pursuit of orders. The division of the different markets really isn't so easy as all this, because they can still be subdivided. The M.G. Car Company Ltd. of Abingdon-on-Thames is a concern devoted solely to the manufacture of sports-cars—incidentally it is the largest sports-car manufacturing works in this country—yet it supplies to a different market from that which the little works assembling hand-made sports-cars of specialised design seeks to reach. This is particularly true since the introduction of the 1½ and 2-litre and 2.6-litre cars, yet Mr. Cecil Kimber has to do with a market different again from that administered to by firms producing high-quality cars of individual character which yet are not entirely sports-cars, of which Alvis, Rover, Riley and Armstrong-Siddeley are such good examples. Even the big mass-producers of glasshouses cannot afford to cater for one market only, and you find Morris offering up to 25 h.p. and Austin including a range of near-luxury cars—and Ford the great V8, all of which cost a deal more to run than an "Eight." On the same basis you have big amalgamations like Humber-Hillman-Commer and the Nuffield Group and the S.S.-Standard combine that embrace cars of cheap mass-production type and more expensive quality cars almost in the sports-car category, under one and the same control—indeed, the entirely sports-car M.G. Car Company Ltd. aforementioned is under Nuffield control along with the quality Wolseleys and many-sized Morrises, so you can see how complex any attempt at classification of markets is. Remembering that each company strives to sell its products not only at home but in competition with other car-producing countries in all parts of the world, there should be special jobs going for "market-accessors to the Motor Industry," after the war. Having written "after the war" here let me say that all the foregoing and some of what follows only make sense if read in the past tense, but I imagine most readers of MOTOR SPORT have picked up the paper in order to relax from duty with H.M. Forces or other callings of national importance and so will want to temporarily forget the war and will consequently prefer the use of the present tense . . . .

Confine yourself entirely to the sports-car market and you still find that it can be catered for, fostered and otherwise humoured, in quite a variety of ways. Cecil Kimber started off by building himself a trials car out of current Morris bits at his Oxford garage some fifteeen years ago and taking the bold step of offering replicas to the sporting youth and beauty of Britain—no doubt, he saw in the undergraduates and undergraduettes of his native city a potential market for a smart, quick car which could be repaired, if it needed repairing, simply and inexpensively from Morris spares stores. When Morris introduced the little o.h.c "Minor" utility car, someone cleverly saw the possibility of fitting it out with a different radiator and a light, pointed-tail body, and of making the whole outfit cling properly to the road, and so the first M-type M.G. Midget was born; forerunner of the most successful and universally popular small sports-car yet produced. To meet the year-to-year desire for a progressive performance increase, necessary to compete against rival marques, some of which originated from the start as specially designed sports-cars, the new cylinder head with inlet ports on one side and exhaust ports on the other, was introduced for the J2 series and a centre crankshaft bearing and more horses for the P-type and a bigger engine for the PB. That range of M.G. Midgets introduced more persons to sporting motoring, including competition work, and appealed to a bigger market of sports-car users than almost any other car. It was not until years after the advent of the first M-type M.G. that M.G. cars were again based on Morris and Wolseley productions, which happened when the PB was superseded by the push-rod T-type. The range now includes the luxurious and dignified 1½-litre and 2-litre and 2.6-litre closed and open models, but because Cecil Kimber has sold real sports-cars for so long, the M.G. still appeals primarily to the lads and lasses who are sports-car users and to their parents, who are naturally sports-car minded. And because of that, "Kim" has to know the sports-car market and has to incorporate in his cars those performance and handling refinements demanded by sports-car folk, to a greater extent than is essential in cars which are high-quality cars of brisk performance but without such direct sports-car associations. The M.G. Car Company Ltd. is the biggest factory in this country devoted to the manufacture of sports-cars, so Cecil Kimber, backed by Lord Nuffield, has obviously made a success of selling sports-cars. No doubt a very large part of the success of the well-planned factory has been due to the adoption of a quite extensive racing programme, which, eventually abandoned, was in operation at the time when the Midgets and Magnas and Magnettes were achieving their most substantial sales successes. The performance of the M.G. Midget team in the "Double Twelve" races and the sending of the Magnettes of Lord Howe, Sir Henry Birkin and Count Lurani to the Mille Miglia, stand out as proud landmarks in British racing history. Although very few people could hope to buy the specialised racing versions of the M.G., their exploits on road and track did materially increase M.G. prestige all over the world. Although M.G.s found they could not continue with a racing programme, quite recently they were in the news, for Major A. T. G. Gardner is remembered not nearly so much on account of his return to uniform, or his recent marriage, as because he was the first man to exceed 200 m.p.h. in both the 1,100 c.c. and 1,500 c.c. classes, with an M.G. motor-car—following up earlier historic M.G. records established by Capt. George Eyston and the "Magic Midget" and the "Magic Magnette." Another reason for M.G. success is the extreme courtesy and efficiency that prevails in the correspondence department at Abingdon. M.G.s always went to a great deal of trouble to reply fully to all the queries they received, whether from owners or non-owners, and without thought of whether or not a reply would culminate in a sale. They still look after this side of things very well, in spite of the upheaval that war-production must inevitably cause, and I am certain it is well worth all the clerical and editorial and typing effort involved. Young enthusiasts like to learn a lot about their cars and in that way long allegiance to the favoured marque is secured. It is because the M.G. has always been a good car, and one able to do its stuff, and because it has been demonstrated to the world that that is so, and because Abingdon meets enthusiasm with enthusiasm, that Cecil Kimber sells so many sports-cars and is managing director of a factory

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which is quite big enough to suggest utility car production. That is one way of tackling the sports-car market.

Quite another line is taken by the Aldington Brothers. They saw the G.N. grow up from a spidery cyclecar into a four-cylinder sports-car and culminate in the Frazer-Nash. H. J. Aldington raced an early aluminium-bodied Frazer-Nash at Southport fully fifteen years ago, as we emphasised pictorially in this paper at the time. He and Bill Aldington decided that here was a car for real dyed-in-the-wool enthusiasts and that they would make a real business of selling them. And they built up a really astonishing link with their clients. The Frazer-Nash was never a cheap car, and to the bitter end it has retained the famous chain-and-dog transmission—it also went like a scalded cat and held the road like a leech. That chain transmission was laughed at a great deal, but the Aldingtons never ceased to believe that its low weight, rapid change, and easily variable ratios were what a lot of critical sportsmen wanted. They even argued that it was a costly thing to produce, in fact, as expensive as a Wilson pre-selector gearbox. Anyhow, the Frazer-Nash got over amongst the more wealthy enthusiast who could really drive. Proprietary engines—Anzani, Meadows, and Blackburn—were used, developed at the works as required, and they also produced their own single o.h.c. four-cylinder engine for the twin-supercharged "Shelsley" model, the fastest Frazer-Nash of the lot and, I should say, about the fastest production 1½-litre car of all time. As I have remarked, the link between the works and the owners was something terrific. Frazer-Nash owners became known as the "Chain Gang" and H. J. Aldington was respectfully known as the High Priest. By running cars in events like the Alpine Trial on the same basis as, and along with, private owners, the Aldingtons managed to command an immense respect from their clients. I have known a Nash owner become really concerned when he was demonstrating his car to me on Brooklands and the top gear chain broke. It was an entirely unofficial demonstration, but he was most concerned about "What will Aldy say?" and he went off at once, on the lower ratios, to Isleworth to confess his sins—hence the idea of Aldington being the Priest of the whole show. It was the Aldingtons' proud claim that as each Frazer-Nash was hand-built, you could have any modification and arrangement of layout and equipment you liked to specify, if you waited and paid for it. Nevertheless, a new model always seemed to be issuing from the Falcon works. Tom Moore and W. S. Braidwood, who were then running MOTOR SPORT, were so keen on the Frazer-Nash that they each had one out on test in turn, so that at the time, about ten years ago, we were in danger of being dubbed "The Chain Gang Gazette." So the Aldingtons sold very specialised and not at all cheap sports-cars and made a success of it. The Frazer-Nash only waned because they encountered the German B.M.W. while on the Alpine Trials and, with a business acumen one does not usually find in the sportsman, they arranged to import B.M.W.s to this country. This was a car which advertised itself, and the performance of "H. J.'s" Type 55, which I drove in a Night Trial not long after it came over, was just as outstanding then as is that of the Type 328 B.M.W. to-day. That the source of supply of this wonderful car is the country with which we are at war is very bad luck on the Aldingtons' part, although they are, I believe, quite busy on the service side and were selling 328s at more than list price after the war had started. "H. J.," Don and Bill Aldington owe their success in the sports-car market as much to their own personalities as to that of their cars. But it may be pointed out that they always had the good sense to make extensive use of the Motor Press to advertise their cars, and they believed in using all the space they bought, which does not mean filling it up with pictures of young women more appropriate to a beach-fashions supplement than to the business section of a motoring journal. They ran happy Continental tours and they formed the Frazer-Nash and Frazer-Nash-B.M.W. Car Club. In fairness it must be said that business had no place in the running of this excellent institution, which shared with the Vintage S.C.C. that ambitious Stanley Cup club meeting at the Crystal Palace circuit. Incidentally, Bill Aldington is, I believe, no mean pilot and was responsible for the B.F.W. "Taifun" aeroplane which was another German product the Brothers put on the British market.

Geoffrey Taylor is another who came upon a design which he thought ought to appeal to sportsmen and proceeded to sell it. In this case he built the original car himself and ran it in competitions by way of convincing himself that it was good enough to go on the market. He formerly ran a Riley Nine, and a close friend of mine is certain the Alta is based on the Riley, but Geoffrey Taylor is equally emphatic that it is not, so I remain neutral as to its origin. But while it ranks as a very specialised production sold in very small numbers, Taylor has made a business proposition of it, and that is a thing very few persons have pulled off with cars of this class. The Squire (which was an ultra-fast 1½-litre by reason of using a Marshall-Roots blown twin o.h.c. Anzani engine), the Moveo (which was a specialised 3-litre) and the Reynard (which was a sort of chivvied-about Frazer-Nash without chains) come to mind as cars optimistically marketed within the last five years or so to sell amongst enthusiastic idealists, which quickly faded away, either because they were too ideal or because they were never properly launched—we all know of countless others. But the Alta is a success, and so Taylor deserves especial credit, although, as a purely personal observation, I would sometimes find it easier to accord him this credit if his immense enthusiasm did not lead him to pass so quickly from his present achievements to rather fantastic plans for the future. But certainly the Alta deserves to live long and prosperously. Additionally, Taylor has made a business of manufacturing real racing cars, which no one, bar E.R.A., had previously managed to do in this country, although A.C. tried as long ago as 1924. Atalanta worked on the same plan of small output of decidedly individual motors, and was making a useful niche for itself, albeit it did seem at times as if all the cars in the works were the personal property of Miss Wilby—which does not by any means imply that there were only a few of them! Incidentally, she enlivens a certain ambulance station in London with one nowadays. Then Godfrey, in partnership with Curtis, Robins, and Halford, waved the wand at Tolworth three years ago just as he did at Hendon before the other war, and the H.R.G., really fast and having a stark, vintage appeal, was an instant success, though its enemies like to point out that the engine used (until they went over to three-bearing 1½-litre Singer units) first happened in the Dark Ages, that the front suspension is Nash or G.N., and that the transmission is proprietary. In spite of which you always saw a nice lot of H.R.G.s in the works, which cannot be said of many other really small-output concerns, and they ambitiously experimented with the Cross rotary-valve engine while sensibly keeping the production jobs quite conventional.

Yet another line of approach to an entry into the sports-car market is that of deliberately designing a sporting car, knowing that the wherewithal exists to get it established on the market. In this case the project can only fail if the *design* is a wash-out, whereas many sound cars planned for production on a humble scale have faded out because their backing was more humble still. The immortal 3-litre Bentley was planned carefully by W. O. when he came out of the Service after the last war; a real engineer with lots of aero-engine experience at his finger-tips. The first experimental car was laid out in about 1919, yet at the Show of 1920 I believe only the drawings were shown. But when it was finally in full production it remained the best-seller in its class for seven years, and was the direct means of producing the 4½-litre and the Big Sixes which succeeded it. To-day those who respect W. O.'s Bentley respect it as much as ever. The great Vauxhall Company, which was amongst the soundest of British car manufacturing concerns when we went to war with Germany in 1914, did not exactly plan the "30/98" to capture a given market, but when the first one happened at the request of Higginson, Laurence Pomeroy, who conceived it—the monocled Laurence Pomeroy who makes "The Motor" such a weekly tonic to-day is, of course, his son—realised that the "little extra which others hadn't got" was saleable, and the E. and O.E. models had a combined commercially-successful career extending over a full nine years or more. Lagonda did the same thing when, tiring of making quality small cars with the chassis and body as one, they produced the twin o.h.c. 2-litre, which soon

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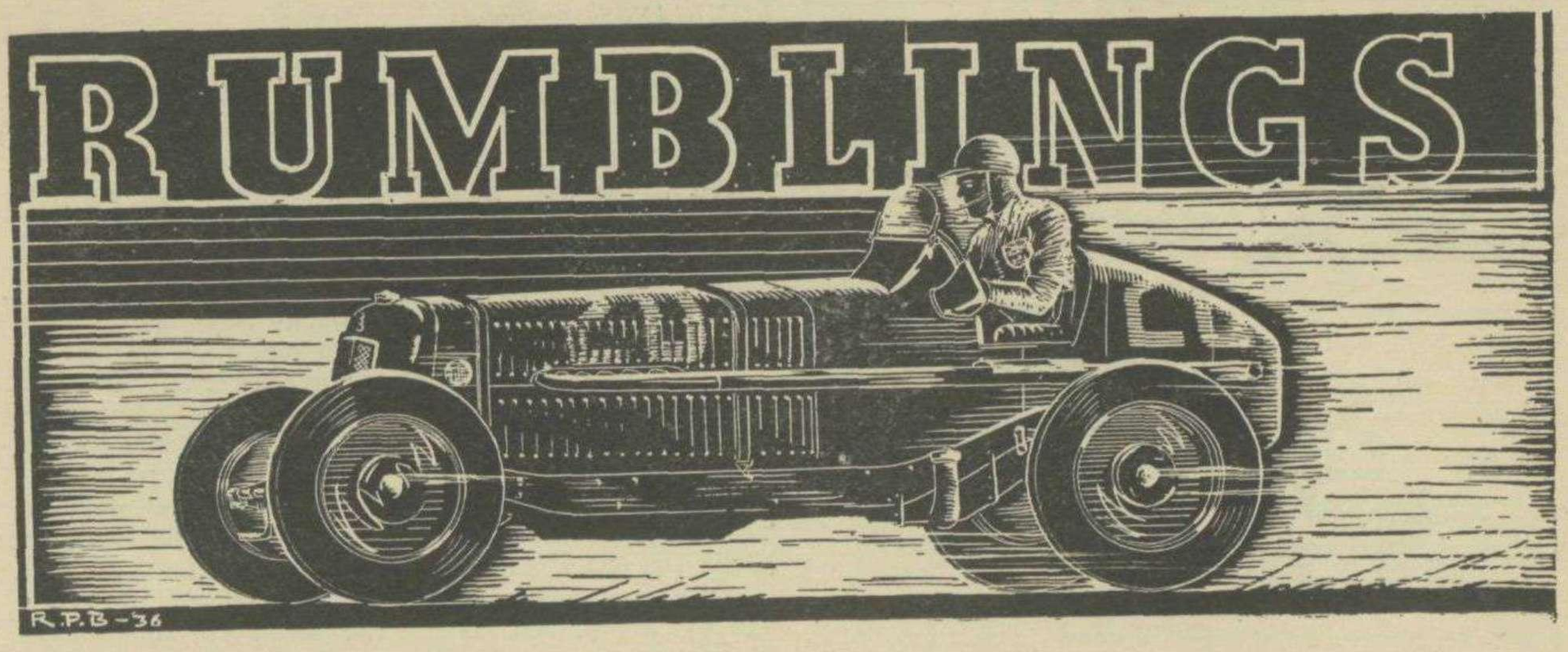
appeared with a blower. It was especially amenable to forced-induction because its creator had taken a leaf out of the commercial vehicle book and used a comic position for the o.h. camshafts, which resulted in rather twisty induction passages—nowadays, of course, in the blinding light of better understanding we decide that good porting is essential to successful supercharging. Possibly deciding that this 2-litre was rather too full of tricks for the ordinary user, Lagondas then produced the "16/60" six-cylinder and this developed into the famous 4½-litre car which has become very refined and is now sprung independently at the front end. The engines used are, I believe, Meadows, that in the "16/60" being the same unit as was used for the excellent, if little known, 3-litre Crossley. There is a lot of nonsense about trying to disguise the fact that a proprietary engine is used, even when it is a sound job, although I am not especially accusing Lagondas of shyness in this matter. But there has been one quite successful Anglo-American car which very obviously used the entirely excellent Ford V8 motor in its earlier form, yet the makers not only got quite cross with us for referring to their product as a "naturalised Yank," but would not let even the big weekly motoring journals say what motor they used, although under-bonnet photographs made it abundantly clear. So that criticism shall not fall on the wrong shoulders, let me say that Sydney Allard has never hidden the fact that Ford and Lincoln motors are used in those great goers, the Allard-Specials. More recently, Lagonda Ltd. had the bright idea of offering a real luxury car of sporting conception; the outcome was the great V12. This fine car did not have such a very long period in which to establish itself before war broke out, but it showed its worth at Le Mans, and by lapping Brooklands at 130 m.p.h., and during some very high-speed journeys undertaken by Laurence Pomeroy Junr. and Gordon Wilkins along roads over which our R.A.F. bombers now fly nightly. It is still selling to appreciative Americans, and after the war should achieve a sales success in this country in keeping with its position as one of the greatest cars of our time—that is, if anyone has any money left. We see this plan of designing a car specially for the sportsman and of laying out a works in which to assemble it very clearly in the case of the Aston-Martin. Lionel Martin thought up a British 1½-litre to whack the Brescia Bugatti and starting in 1921 Bamford and Martin built them very carefully and beautifully in small quantities. When the s.v. Aston faded out a new firm came to the pleasant Hanworth Air Park and produced a car, designed by Bertelli who had just left Enfield-Alldays. Thus reasonably big production commenced of a very sound British small sports-car, on which is based the current 2-litre Aston-Martin. Bertelli was never a very demonstrative person, but the worth of the Aston-Martin was well established at Le Mans and in the T.T., and Astons never had anything to hide. When they did well in sports-car races they very sensibly said that if the competing cars were not quite the same as the catalogue models, at all events you could buy a replica if you wished and could satisfy yourself that the increase in performance had not had an adverse effect on reliability, tractability and general convenience of operation. That is so much more sensible than pretending that the successful competition car is entirely standard, when in fact everyone knows that the production model will not approach within 10 m.p.h. of it, or of modifying a car within the rules of the race in such a way that it becomes an impractical proposition for everyday fast motoring, when no one will crave a replica nor wish the modifications to gradually find their way into subsequent production models.

This plan of designing a sports-car to appeal to the enthusiast and offering it for sale unsupported by other, more sober models, is a very different thing from introducing a sports model into a range of ordinary models comprising the bulk of the factory output, as S.S. did, for example, albeit we have got some of our greatest sports-cars in that way. When the late S. F. Edge presided over the A.C. Company—which he did when he wasn't writing letters to the motoring Press—the A.C. was essentially a refined, beautifully made, small six-cylinder touring car, of which sports editions were also built. It was not until new managers took over at Thames Ditton that the A.C. became an entirely sporting car, albeit offered in drop-head coupé and closed form as well as in open guise. Even now, three different degrees of urge are available from this long-established 2-litre engine. In rather the same way, I like to think that dear old H. F. S. Morgan planned a purely economy car with his Morgan tri-car and that it was only because any cyclecar must have sporting characteristics that it developed into a sports-car and was raced in the French Cyclecar Grand Prix by W. M. Thomas—"H. F. S." must have grown to like the sort of clients he largely catered for, because the modern Morgan 4/4 is essentially a sports-car. And there is the case of the S.S., which began when Mr. Lyons found that there was a market for shapely and well-made sidecars and equally shapely and well-made bodies for cars like Austin Sevens and Wolseley Hornets and Standards—isn't the airship-tailed Swallow body about the only two-seater you still see on elderly Austin Sevens; all the others having fallen to pieces? The first long-bonneted S.S.1 coupé wasn't at all a lovely job, but it started Lyons thinking, and to-day the S.S. 100 is about as rapid as anything on the road and certainly the most inexpensive car of which that can be said—in the new-car market, of course. And I am told that they are made of materials which wear very well.

So we have all these different ways of approaching this business of selling sports-cars—some folk, of course, do not even bother about making cars before selling them, as I realised the other day when Rowland Smith sent me their war-time catalogue of used cars, numbering quite a lot of sports-cars amongst them. I sometimes think gentlemen like Mr. R. S. are right, for the sports-car market is no mean gamble. In effect, what you are trying to do is to make a commercial success of a vehicle which falls somewhere between the prohibitively-expensive, temperamental, built-just-to-last-the-race racing-car on the one hand, and the reliable, woolly glass-house, whose owner is quite happy controlling his conveyance with 5 to 1 steering at 32 m.p.h. on the crown of the road on the other. Exactly where your production falls depends on your idea of what constitutes a reasonable gamble—it may be close to the racing-car, like the cars which poor Mr. Squires, who was recently killed in a raid, tried to sell, or it may be closer to the family barouche, like the five cars Mr. Kimber sells, one of which I noticed only a short while ago, in a field, awaiting an owner who was at work in a war-canteen. Either way, you are entering on a gamble. Just as Jerry is, going over me now, with the London Ack Ack just up the road. You are selling performance to good folk who are skilled drivers, who are often hard up, yet who are seeking good cars, invariably, as qualified engineers, knowing exactly what they seek. They interpret "performance" as good road-holding, accurate steering, fair suspension, lots of cruising speed, a high maximum, loads of acceleration, powerful, safe braking and general characteristics in keeping. They wanted all that in the nineteen-twenties and now they want silence, smoothness, really fine lines, high-grade bodywork, 100 per cent. dependability and ease of maintenance as well, not forgetting all those dinky fittings the sable-cloaked blonde looks for and showrooms like those that Car Mart and University Motors run—to show that there is really nothing vulgar about selling automobiles. You will have to sink quite a lot of your capital in experimenting along these lines and probably a lot more in racing or running in trials to get your theories established, before you can offer your car to a public with precious little money to spare. Which will not prevent them from condemning the whole bag of nails if a rival's car goes 0-70 a few split seconds before yours, or gets a few m.p.h. more in the gears before the rattles begin.

So I feel that selling sports-cars is a game for toughs, unless, like Mr. Kimber and Mr. Lyons and Mr. Bentley, your ideas are so sound that big money decides to back you. Which is why I have so much respect, and you should have, too, for the persons who in the last twenty years of peace have put sporting cars on the market—and got away with it. They have usually succeeded by introducing a car that has been just not too ordinary and yet just not too sensational, that has been controlled in a strictly commercial manner, and which has had some definite characteristics of its own to offer, over and above sheer performance. Couple this line of attack with courtesy to the client, and success is at least in sight. Incidentally, some

Continued on page 219

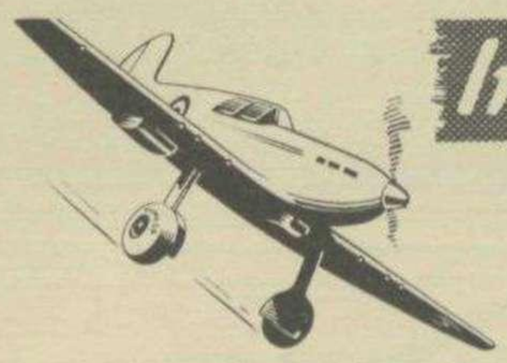


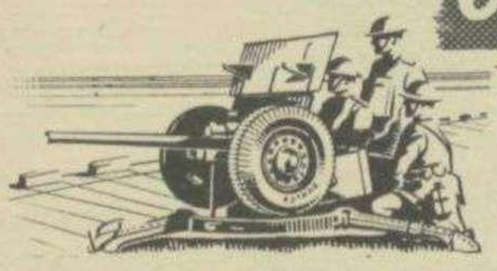
Bearings in a Bentley

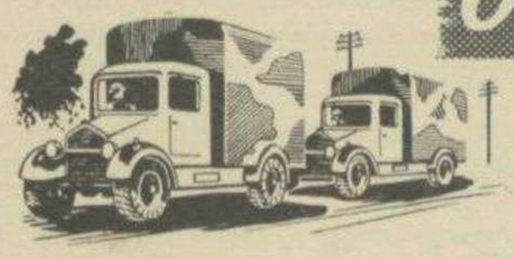
IN certain quarters stories have circulated to the effect that that fine car, the 4¼-litre Bentley, is liable to bearing maladies if driven fast for prolonged periods, a matter referred to by Cecil Clutton in his highly controversial article published in MOTOR SPORT last August, so it is worth harking back to our experience of this car when we road-tested it in August, 1938. We took out a Vanden Plas drop-head foursome coupé and averaged 50 m.p.h. with it from London to John o'Groats. To do this the car was driven hard for the whole 700 miles, with only one break of any length, and the makers said nothing whatsoever about keeping the r.p.m. or road speed down. Eighty m.p.h. was held wherever it could be in safety, and the engine was run up to its maximum in third gear after fast corners. In all, over 1,500 miles were covered in this manner and speeds of more than 90 m.p.h. were reached on more than one occasion. No trouble of any sort was experienced, certainly no bearing trouble, and as this run was as stiff a test as any private owner could well impose, we have never suspected the Bentley of suffering from weak big-ends. The big-end bearings in use when we tried the car were die-cast in A.C. 9 aluminium tin and they ran for 48,176 miles in this car, of which 24,980 were those fast Continental miles, after which the engine was taken down and the condition of the bearings was found to be far superior to that of white-metal and lead-bronze linings subjected to identical tests. The shells were almost unmarked, particularly those from Nos. 1, 2, 4 and 5 connecting rods. Various lubricants were used, purchased in the ordinary way, with by-pass filtration. This bearing metal followed Rolls-Royce's R.R. 56 alloy, and is composed of 5.5–7.0 per cent. tin, 1.5–1.8 per cent. nickel, 0.6–0.9 per cent. copper, 0.7–1.0 per cent. manganese, 0.15–0.3 per cent. silicon, 0.2–0.45 per cent. iron and 88.5–91.3 per cent. aluminium. The specific gravity is about 2.95–3.0 and the coefficient of expansion 0°–150° C., 0.0000225. The heat conductivity is about 36 c.g.s. units, or approximately three times that of steel and five times that of babbit. A.C. 9 has excellent anti-corrosive qualities, and resists oil corrosion, in contrast to cadmium and lead-bronze. It gives a brinell hardness figure of from 45 to 50, and after heat treatment for twelve hours at 180° C., this figure rises to between 60 and 75.

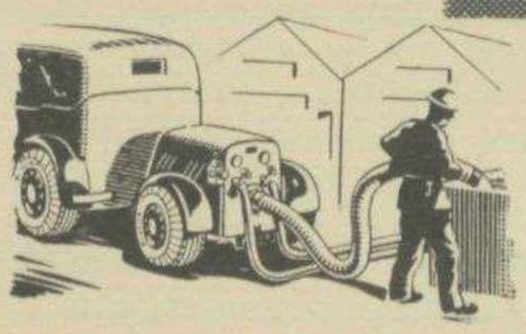
A Solution to a Problem ?

One of the big worries that faced the supercharger people when forced induction began to be considered not unreasonable for ordinary cars, was to obtain a boost sufficient to give a useful increase in acceleration at low engine speeds, while not so excessive as to blow the engine up when it really got going. Boost pressures could be controlled by the size of the blower and its speed relationship to that of the crankshaft, but a little blower had to run excessively fast to produce any worthwhile blow low down, and a bigger blower, geared to avoid excessive pressures, ran too slowly to be much good low down the speed range. What was wanted was a variable speed device between engine and blower so that the blower speed changed in inverse proportion, or thereabouts, to that of the engine, and that was a thing outside the realms of practical engineering. Mercédès-Benz had early decided to use their famous clutch operation, which only permitted the boost to come in at big throttle openings, and therefore for short periods only under ordinary conditions, though still enabling the supercharge to be employed to improve either acceleration or maximum speed, at will. On the same principle Stutz and Atalanta have used hand-controlled clutches for the supercharger drive. McEvoy and Pomeroy used other tactics, believing in partially meeting the problem by using vane-compressors, which, giving their maximum boost at lower speed than the Roots blower, could be higher geared to prevent excessive pressures at the upper end of the engine speed range. Even so, they experimented with the McEvoy-Pomeroy piston boost control, reminiscent of the simple by-pass used in a few of the very early supercharged engines, and just before he forsook the spanner for the pen, Pomeroy re-attacked the problem with his Velox variable-vane











DUNLOP
TYRES
do their Duty!

RUMBLINGS—continued

compressor. Nowadays, the increased efficiency of blowers and compressors provides a partial solution of the difficulty, because improved output at low speeds enables the ratio between engine and supercharger speed to be kept small. Nevertheless, the problem is far from solved, and the commercial flop of supercharging for ordinary cars can largely be laid at its door, for the early troubles associated with the supercharger as a component have been overcome and only its detrimental effect on the engine, weighed against the amount of useful performance increase offered in return for its cost of £25–£65, stands against it. Apparently any form of diaphragm control of induction pressure via an oil servo acting on the carburetter throttle, is impractical for car engines. But it seems possible that the supercharger drive of the Daimler-Benz DB 601A aero-motor, as examined in shot-down Messerschmitt ME 109 and certain Heinkel He 111 K enemy aeroplanes, holds the key. In this engine the supercharge is driven through an hydraulic coupling on the lines of the Daimler fluid flywheel. The coupling has oil-filled rotors and a degree of slip can be introduced by varying the oil-flow to the coupling. An altitude capsule controls the flow from the delivery pump and the drive does not become solid until the rated height of 6,000 m. (19,685 ft.) is reached, but the amount of " slip " is progressively decreased as this height is approached. In an air-battle an unlucky shot resulting in an oil leak would mean a serious loss of boost, but for car supercharged installations the system would seem to be of considerable interest, the method being reversed, so that the coupling drove the blower at full speed at low engine speeds, the oil flow being diminished automatically as engine speed rose, by a centrifugal governor or similar means, so that an excessive supercharge would never be reached.

Xmas

In the old sane days, Christmas was a time when lots of happy, long-distance, rather hurried journeys were necessary to enable family reunions to happen, and the sports-car and the skilled driver were in their element. Those persons who have known many such runs will be content to make the best of things this coming Christmas, perhaps even to spend the holidays working in the national interest, if a long run home is out of the question. But they will not grudge the younger generation the pleasure that good motoring with a purpose, under the wintry conditions of the good " old-fashioned " Christmas, can provide, in cases where this is possible. No doubt, by combining November basic rations with those for December, and even January if need be, quite a lot of young sportsmen and sportsgirls will contrive to motor big mileages at this exciting time of the year. In case the next issue of MOTOR SPORT gets held up through unforeseen circumstances, we take this opportunity of wishing them good motoring during the festive week—may every seat be occupied by a cheerful enthusiast; and may the run enable them to forget temporarily that we can no longer argue whether the world was a better place in Dickens's time than it is to-day with any sincerity . . . .

PICKING UP SAM'S GAUNTLET

[IN THE AUGUST ISSUE CECIL CLUTTON PERPETRATED HIS CONTROVERSIAL ARTICLE "VINTAGE-MODERN AXIS." HERE IS A REPLY, FROM AN EXPERIENCED MOTORIST, AND, LET US WHISPER, ONE WHO OWNS A "30/98" VAUXHALL AND A FRAZER-NASH.—ED.]

IT is with roughly the feelings that might be experienced by a 5 ft. tall bibliophile if condemned, in some fanciful dream, to ten three-minute rounds with Tommy Farr, that the writer pens the following comments on the article published in the August issue of MOTOR SPORT, under the heading of "Vintage-Modern Axis."

Mr. Clutton's experience is such as to equip him as a candidate for dictatorship of either age, and the writer offers as an excuse for venturing this criticism the fact that he has owned and consequently driven for many thousands of miles the finest examples of vintage cars of the 1920-1930 era, as well as a representative selection of modern types. Without experience of both sides of the picture accurate criticism is impossible.

Mr. Clutton's article ranges from Bentley to Austin Seven, and covers on its way a selection of Continental cars of all types. It is essentially a comparison: a comparison between cars—not exclusively "sports-cars" in the strict or vintage sense of the word—made in the two periods 1920-1930 and 1930-1940. This comparison is fundamentally unsound. It presupposes that the modern era offers types which may be compared. With the exception of the Bugatti and H.R.G. it does not. This is no fault of the designers or manufacturers; the blame, if blame it be, lies with the people who buy the cars. They pay the piper and, traditionally, they call the tune.

No longer is there a market for a machine of indifferent comfort, lamentably lacking in weather protection and needing a strong arm to start and steer it, and the assistance of an even stronger leg to stop it. Now are wanted roomy, draught-free bodies, voluptuous comfort for conductor and companion, and irreproachable reliability. Add, when considering Transatlantic examples, coachwork with curves as seductive as a Cochran Chorus, and you have a picture of the wares of the dealer of to-day.

And who shall say that in thus deifying these sybaritic attributes the modern buyer is more in error than he who in previous years worshipped at the shrine of Power?

The vintage type car is not wanted to-day—from Mr Clutton's own pen we have proof. The type 57 and 57C Bugattis are, to use his own words, "the apotheosis of Vintage design." Now there is a saying which runs roughly: "If a man . . . . make a better mousetrap than his neighbour, though he build his house in a wood, the world will make a beaten track to his door."

So if the modern motoring enthusiast wanted the vintage tradition in modern form, logically the "Maid of Kent" should be packed with pilgrims to Molsheim every time she leaves the shores of Dover. But she is (or was) not, even though with a chassis price of under £700 the Type 57 Bugatti is probably the finest value in "good" cars that is to be had. Yet the roads to Cowley and Coventry grow more congested every day. The "Jew-boy's Bentley" has captivated all creeds.

It is patent even without the evidence of the Bugatti that the past ten years have given sufficient enlightenment to builders to make a car to vintage design that would be an all-round advance on its prototype. The "30/98" Vauxhall was an amazing car, but its most ardent admirers must agree that its brakes, be they "string" or "water" type, would suffer by comparison with the modern "mechanical" or "hydraulic" equivalent. With modern metals and knowledge a magnificent "New-Vintage 30/98" could be produced. And who would buy it?

It will be argued that our taxation system has resulted in the death of such cars as the "30/98" Vauxhall, the bigger Bentleys and the "38/250" Mercédès-Benz, and the resurrection, Phœnix-like from their ashes, of a race of undersized fledglings—M.G.s, Singers, B.S.A.s, and Morgans. All these command ready sales, but the one true vintage type, the H.R.G., is far less favoured. The H.R.G. is as simple almost as the G.N. to which H. R. Godfrey gave his initial years ago: of low horse-power, it goes nearly as fast as the average "30/98," twice as far on a gallon of petrol, and it stops and steers admirably. And how many are to be seen on the road?

With the modern Bentley Mr. Clutton is scathing: the V12 Lagonda may be all right in a year or so, and he deigns even to mention a class yclept (by MOTOR SPORT) the Anglo-American Sports Bastard.

Perhaps here a story may be related. The writer was driving a "30/98" Vauxhall one day, fast, down A5. Into the driving mirror came the image of a car still well behind, but catching up. Instinctively, it is feared, the "30/98" increased speed and the chase was up. It culminated 20 miles further on—at one of those all too frequent places where strong men dig a big hole in the highway and post a revolving disc with, seemingly, one word—"Stop"—written on it, in charge of an expectorating ancient. During the enforced wait the driver of the modern Bentley—for such was the make of the pursuing car—proposed a large one at the nearest, over which incidents of the chase might be discussed. Bluntly, the Bentley (that conglomeration of all that is horrid—vide C.C.) had, in spite of its comfortable saloon body, held a really good "30/98." The maxima were almost identical and in the matter of brakes it is the sincere hope of the writer that the Bentley driver's nervous system was not stressed as was his own. In short, the car so much maligned by Mr. Clutton did all that the much vaunted "30/98" could do, in greater safety, greater comfort, greater silence, and, oh, so much less strain on the driver.

It would be idle to argue that the American sports or semi-sports cars could have lived in that chase, but by virtue of their large engines and light bodies they offer acceleration figures which make up for the fact that corners must be taken slowly unless one wants to run completely out of road at inconvenient moments. Their comfort is that of a club armchair, their price amazing, and if something goes wrong, the next garage round the corner will install a new engine complete for about the price of putting a big-end in one of the more expensive English makes.

There echoes from every vintage stronghold—"Ah, but the modern car won't last—where will it be in ten years, in five years time?" Perhaps somebody one day will explain why a car should last. It is no more logical to demand at least ten years life than it is to suggest that your girl friend should wear this year's hat for the next three seasons. [Or that you should keep the same girl-friend for three seasons.—Ed.] Each succeeding year brings improvements, so why not have them every year? There is not one motorist in five thousand to-day who cares twopence whether his car has independent front suspension (except to boast about to his friends), so long as he does not get jolted over that rough bit of road on the way to the golf club. Or who minds whether his steering is Bugatti or V8 Ford so long as he can get round that awkward corner by the cinema car park. Price, and the size and shape of the body, sell cars to-day.

Mr. Clutton having for two powerful pages damned the British efforts, turns towards the end of the article to an eloquent eulogy of the smaller Continental cars. He mentions the 1,100 c.c. "Balilla" Fiats as "having been raced with great distinction, especially in the hands of Gordini . . . ." Have not M.G.s in a variety of sizes been raced with far greater distinction in the hands of drivers in many instances less capable and experienced than Gordini? The origin of this legend that Continental cars are better than our own has ever been elusive.

A well-known member of the V.S.C.C., compelled by present circumstances to journey in a modern 9 h.p. saloon, gave a demonstration drive to other Vintage enthusiasts not very long ago. Things that happened on corners and during the

PICKING UP SAM'S GAUNTLET—continued

brake test would have made Dunlop shareholders rub their hands in anticipation of next year's improved sales, and a somewhat breathless party was decanted at the saloon bar entrance. From behind a pot a voice, timid as though it knew that "walls have ears," said, "You know, if that car had its speedometer marked in kilometres and had been built in Bergamo or Berlin we'd hail it as a masterpiece of automobile design."

Perhaps it's just the British tradition that nothing good comes from Britain until it is history. Perhaps it is because British layout and bodywork are conventional that the unusual in the Lancia and Fiat 500 must be revered. The Rover Fourteen may be compared with the Lancia or (Mr. Clutton's word again) the "admirable" Citroen. The Rover is better finished and lacks the smell and drumming of the Lancia and the weighty steering of the Citroen, and the bill is less. The Fiat 500 became a popular pet and sold largely on its adequate accommodation for a very small tax. The Austin, less picturesque, has quite as much room, is infinitely more reliable and does not rely on an engine that screams to high heaven to get performance. The Austin has tradition behind it, and the public, realizing this, refuses to be seduced from its sanity by the temporary appeal of an untested termite from Turin.

The British small car Mr. Clutton dismisses as inferior to the French Peugeots and Citroens. He offers no explanation. Is it not surprising, if this were true, that the name M.G. appears in so many sports-car competition results, both at home and abroad? Do the names of Peugeot or Citroen?

An effort has been made to show that even if modern cars are breaking away from the traditions dear to the Vintage enthusiasts' hearts, all is not lost. Mr. Jones the tinker, Mr. Smith the tailor, Mr. Brown the candlestick maker, rich or poor, can take their families to the seaside on Sunday (plus a perambulator, four deck chairs and a picnic basket) in their 8 h.p. British baby and return with hands, however sticky with Margate rock, unsoiled by handling the tool kit, and knuckles not bared by winding the handle. Trials hills can be climbed that failed everyone a decade ago. From the minor speed event to the world's record, times have come down and speeds gone up. All this during ten decadent years? Ask the next man you see putting 1/11½d. worth of cooking petrol into the tank of his 1939 motor-car, and he will tell you that all is right in the world of cars.

[Any more to be said, on either side?—Ed.]

FAST CARS OF THE FUTURE

Laurence Pomeroy had an extremely good article in "The Motor" of October 23rd, which all our readers should study. It compared streamlined with box-like cars and showed, as clearly as we have ever seen it shown, the advantages of high average speed to the ordinary car user. Pomeroy mentioned that he used to rise early on a summer's morn while working in Derby, have breakfast on the Beaulieu River and be back in time to put in a full afternoon's work, thanks to possession of a car with ability to average 50 m.p.h. He emphasises that a car able to average 50 m.p.h. with safety gives added living space equal to an area greater than that of the whole of Cambridgeshire, to those who wish to live within an hour's journey of their place of toil, as opposed to a car only able to average 30 m.p.h. Pomeroy believes that streamlining is the key to such motoring, with economy, in the future, and suggests that the distinction between *touring car and sports-car may, in future, become extinct*, being replaced by demarcation in terms of the box-like, slow-speed, short-distance car, and the high-speed, long-distance, invariably streamlined car. It is a pity that this country has been slow to produce practical streamlined road cars, so that Pomeroy has had to base his reasoning and figures on the streamline "Balilla" Fiat saloon, which so impressed him when he had it out on test, and which we last recollect seeing in action at Backwell hill climb, just before the war, and to illustrate his article with pictures of foreign cars. We hope this state of affairs will change before we have to go all out for export markets, and we look forward to a separate article from Pomeroy's pen on the subject of those 50 m.p.h. average advantages not apparent to ordinary motorists.

Obituary

THE LATE THOMAS ESSERY ROSE-RICHARDS

We regret to have to record that "Tim" Rose-Richards, R.N.V.R., has been killed flying on active service. Rose-Richards was a wealthy stockbroker who achieved considerable prominence in racing, at the wheel of Bugatti, Talbot, Aston-Martin and Alfa-Romeo cars. He competed in B.A.R.C. meetings ten years ago and later did some serious racing, his successes numbering third place at Le Mans with Sanders-Davis in 1931, third again at Le Mans with the Hon. Brian Lewis in 1932, in both instances with a Talbot, and the same showing yet again in 1933. He was second in the 1933 Mannin Moar in a "2.3" Bugatti and third in the T.T. of that year with an Alfa-Romeo. He drove Bugatti, Talbot and Alfa-Romeo cars in many classic events in 1934, and in 1935 was third at the Eifel meeting with an E.R.A. He also partnered John Cobb in the Napier-Railton, both when it won the 500 Mile Race at 121.38 m.p.h. and when it took records at Bonneville Flats. "Tim" Rose-Richards raced in a big way for the fun of the thing, and anyone who will do that merits our warm respect.

THE LATE LUIS FONTES

We regret to announce that Luis Fontes has been killed while flying on active service with Air Transport Auxiliary. He had an opportunity in 1935 which is of the sort about which enthusiasts dream—that of handling the ex-Brian Lewis "2.3" Alfa-Romeo in the International Trophy Race, when his own M.G. was not ready in time. He carried No. 13 and showed his great driving ability by winning the race with this difficult car. He was third in the I.O.M. Mannin Moar and second at Phœnix Park in 1935 with this car, and also won the Limerick Race. He drove a 4½-litre Lagonda to victory with Hindmarsh at Le Mans. He then disappeared from racing and later flew a Comper Swift in a number of air races.

CARS I HAVE OWNED

[ANOTHER ARTICLE IN THIS POPULAR SERIES, THIS TIME BY JOHN OGLE, WHO IS USUALLY ASSOCIATED WITH HIS APPEARANCES IN SPRINT EVENTS WITH A BRESCIA BUGATTI. HE HAS OWNED OTHER INTERESTING CARS, AS HIS REMINISCENCES SHOW. HE IS NOW ENGAGED ON AERO-ENGINE RESEARCH WORK AT THE ROYAL AIRCRAFT ESTABLISHMENT.—ED.]

IN 1932 I forsook the rigours of two wheels and became the proud owner of a new three-speed super-sports Morgan (PJ 4051). We had one most spectacular blow-up, when one of the pots blew off going up Reigate Hill. A piston and gudgeon pin shot past my head and I was drenched with scalding water. The trouble was found to be due to a faulty cylinder casting and the engine was promptly replaced free of charge by J.A.P.

After this one lapse from grace many thousands of trouble-free miles were covered. The maximum speed was 78 m.p.h. and 0-60 m.p.h. took 17 secs. without any special tuning. Having by now been well bitten by the speed bug I entered for my first speed trial, the Sunbeam M.C.C. Gatwick speed trials, where we won the class.

The Morgan was next entered for the same club's Yeovil night trial. My chief recollections are the appalling weather and the disappointment of my passenger—who slept until the breakfast stop—at not seeing the dawn rise. Apparently this had been his life's ambition! A somewhat disconcerting episode occurred on one particularly nasty hill. We were going flat out in bottom and on coming to a sharp bend saw everyone scurrying for shelter. On rounding the corner in a slither of mud and flying stones we were confronted by a stone ledge about a foot high. It was much too late to slow down and take it in the approved style, so I yelled to my passenger to hang on and waited for the bump; and what a bump it was! It seemed a hell of a long time till we landed! When we did, the car came down so heavily that both silencers were knocked off and we proceeded to the top of the hill making a noise like a real racer.

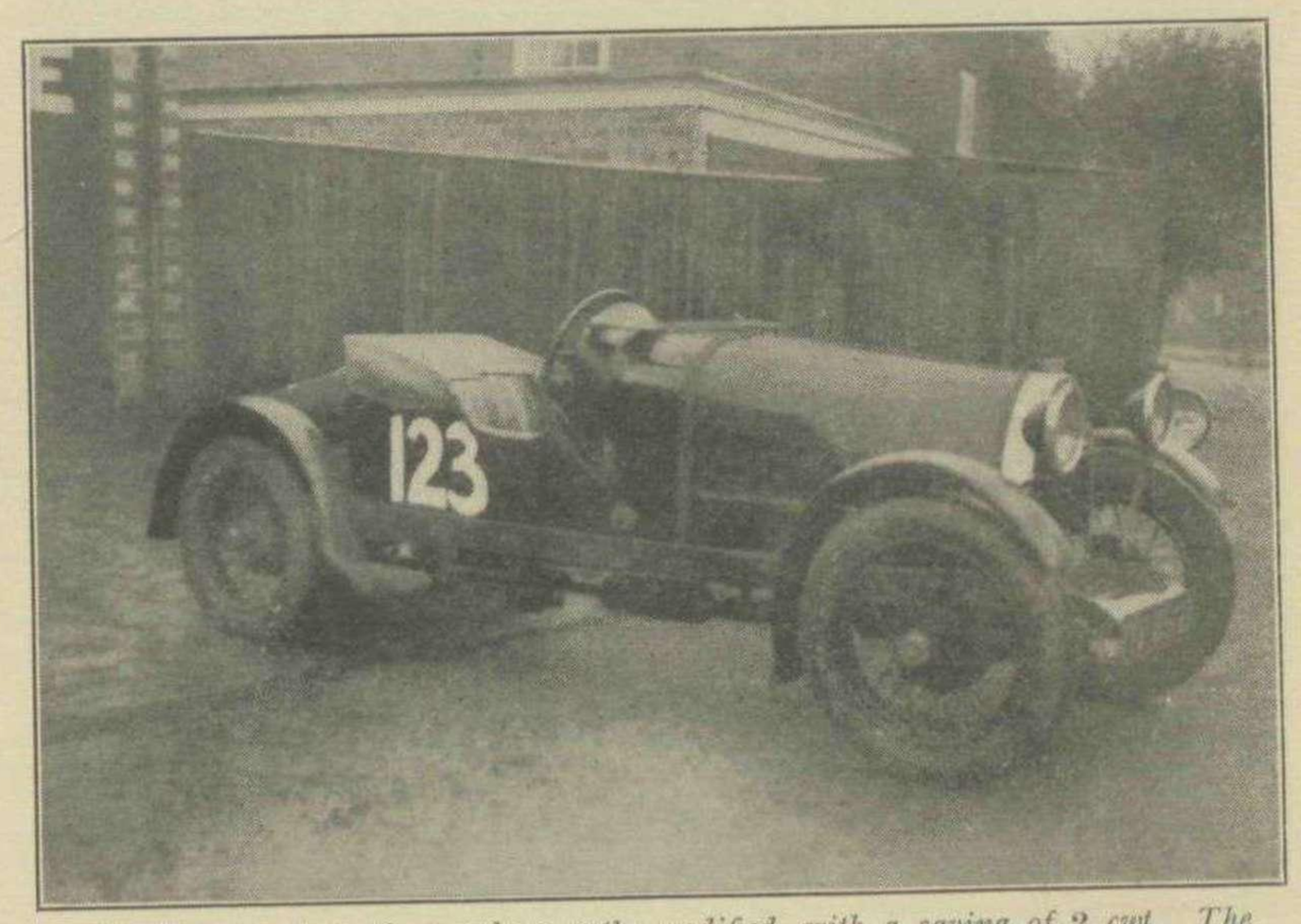
Soon I had that inevitable urge to change my mount, so the Morgan was traded in for my first car, a Frazer-Nash (PH 3870), albeit a Frazer-Nash with a difference, for it boasted an ultra streamlined saloon body *a la* certain record breakers of the period. I believe that only two such cars were built. Mine purported to be a 1928 model and had the famous s.v. Anzani engine. One interesting point was a special radiator shaped to blend with the bodywork. The car ran very well, the maximum speed being about 75 m.p.h. The one great snag was the reverberating noise of the chains, the body acting as a good soundbox.

It was now the spring of 1933 and an open car seemed to be indicated. The Frazer-Nash was swapped for what appeared to me a very desirable motor car—a 750 c.c. supercharged Ratier (GP 7847), which Samuelson drove in the 200 Mile Race of about 1927. This was definitely one of the mistakes of my life. It originally saw the light of day in 1927 in Paris and was made by the firm of variable-pitch airscrew fame. The engine was of clean design with overhead camshaft, fixed head, roller-bearing crankshaft, tubular con-rods and dual coil ignition. The blower was a No. 6 Cozette. The chassis and body were incredibly large and heavy for such a small engine. The rear suspension was unusual, reversed quarter-elliptic springs being used and arranged at an angle of about 60° to the rear axle, the rear ends of the springs being held in a single triangular casting. In spite of its good looks and interesting design, the performance was melancholic. The car was quite the noisiest it has ever been my misfortune to hear. One was always certain to attract every cop for miles around on the rare occasions on which it could be persuaded to leave the garage. Another endearing habit was its love of catching fire. This always happened on starting, but one soon became used to leaping out and doing one's stuff with the Pyrene.

Becoming somewhat exasperated at my complete lack of success in making the Ratier motor in a reasonable way, I decided to get in touch with its previous owners, who might know the answers. After some intensive searching I managed to find some of the unlucky gentlemen who had had it during the previous two years, but my worst fears were realised when I discovered that the aforesaid owners between them had barely covered 500 miles. Being too bad a salesman to unload it on some other poor mutt, I decided to end its career there and then. The body, chassis and blower were sold separately and the engine was scrapped as the block was warped and the crank shaft needed re-rollering.

As all this was a serious financial setback, I was without a car until the spring of 1934, when I purchased a really beautiful 1926 modified Brescia Bugatti (YP 8506) from the late L. G. Bachelier. The car had been completely rebuilt and fitted with a new body finished in Nile blue, with the dashboard of polished mahogany and, as the catalogues put it, all bright parts were chromium plated. In fact, one might say that the car had that typically "Bach" finish. The engine was standard except that a Full Brescia block with the two plugs per cylinder was fitted. In point of fact only one set of plugs was used, as no extra performance could be obtained by using both. An old B.T.H. aero magneto was fitted on the scuttle, this and the dynamo being driven by chain and belt, respectively, from the rear of the camshaft. The "gas works" consisted of a triple diffuser twin Zenith, having the remarkable feature of adjustable main jets.

Warned by friends that I was letting myself in for a packet of trouble, it was with some misgivings that I drove the Bugatti away from Wimbledon. However, before many miles had been covered I was completely captivated; never had I got such a kick out of driving. The gear change was a joy and could be made just as fast as one could move the lever. The rather clattering noise of the sixteen valves at low speeds merged with the whine of the gearbox into one glorious

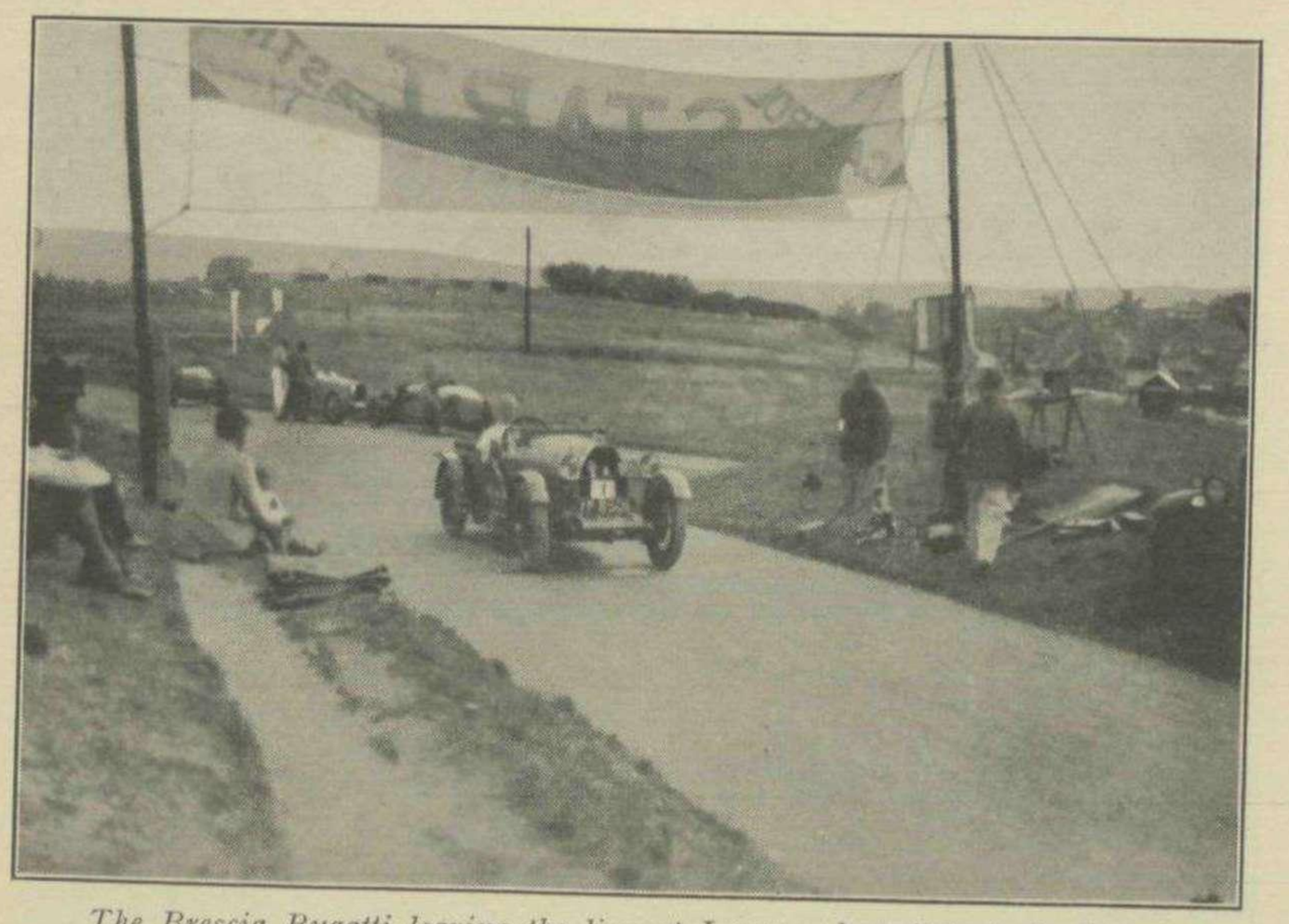


The Brescia Bugatti as subsequently modified, with a saving of 2 cwt. The number refers to the Brighton speed trials and is not there for effect

CARS I HAVE OWNED—continued

shriek as the throttle pedal touched the floor. The performance, although good, was not exceptional, the maximum speed being 78 m.p.h., while the standing quarter mile took 22 secs. and the standing half mile 36 secs. The car was used for a daily journey from Reigate to London and was found to be very reliable—Brescia owners please note that no trouble was experienced with plugs oiling up, the plugs being Champion No. 17. The petrol consumption, measured over 3,000 miles, was 20 m.p.g.

However, one cannot allow a Bugatti to suffer the indignities of pure hack work for very long so I entered it for the B.O.C. speed trials at Lewes. The original carburetter was very tricky to tune so a standard single Zenith was fitted, complete with water-jacketed induction pipe. This improved matters somewhat, although there was rather a bad flat spot if the throttle was snapped open. The car decided to behave very well on the day and won the 1½-litre touring class and the Brescia Challenge Cup, in the rather leisurely time of 32 secs.



The Brescia Bugatti leaving the line at Lewes, where it took the Brescia Challenge Cup four times in succession

I was now feeling rather on top of the world and decided to enter for the Brighton Speed Trials. Here my pride received rather a nasty jolt. The cars were run in pairs and my companion turned out to be Casswell on a T.T. Frazer-Nash. The Frazer-Nash left me at the start, and in my anxiety to catch up I completely bungled the change from bottom to second, much to the commentator's amusement.

About this time I met Arthur Baron, who was then experimenting with a blown Brescia engine in a G.P. Bugatti chassis. Ways and means were discussed of making my car a bit more potent for 1935. On stripping down the engine, it was found that the cylinder bores had worn about 8 thous. at the top. The block was therefore rebored and some special pistons were obtained from Martlett's, having an increased height of 7 mm. above the gudgeon pin, thus raising the compression ratio from 6 to 1 to 8.5 to 1. The big end bearings were found to be cracked and were replaced, using Hoyt racing metal.

The carburation had never really been satisfactory with either the single or dual Zeniths, so two 35 mm. type MOH–D Solex carburetters were bought second-hand and fitted to two new induction pipes welded from sheet steel. The most satisfactory choke and jet sizes were: choke No. 26, main jet 130 with 44 correction and 65 pilot jet. Trouble had been experienced with the drive for the magneto and dynamo shearing, so the magneto was removed and replaced by a Bosch type ZF. 4, fitted in the standard position and driven from the front of the crankshaft. The dynamo was also removed from the scuttle to a position alongside the propeller shaft, from which it was driven by a Vee belt. This completed the modifications to produce, as Mr. Cummings would say, "horses with hairier legs."

On assembly the pistons were found to be much too tight, the engine pulling up when warm. Martlett's immediately replaced the set without charge for one with larger clearances, there now being 20 thous. at the top of the piston, 14 thous. at the first ring, 8 thous. at the middle and 6 thous. at the skirt. This set proved to be extremely satisfactory. After running in, the car was taken out to the Dorking By-pass to see what she would do. I frightened both myself and Baron, as we reached 92 m.p.h. on the downhill section to the roundabout at the south end of the By-pass and, the brakes being decidedly vintage, we nearly ran out of road. After another 500 miles the engine was stripped and reassembled with three 1 mm. compression plates under the block, reducing the compression ratio to 7 to 1, making the car more suitable for use on pump fuel. The acceleration was unaffected by this change, although the maximum speed was slightly reduced.

The first event to be entered was the Kent and Sussex Lewes speed trials. We had some trouble in getting off the mark due to a fierce clutch, but this was improved by liberally dosing it with oil and paraffin. The results were very disappointing since, in spite of the work done on the engine, we failed to improve on the time recorded the previous year, although on that occasion no passenger was carried. It was obvious that the car was too heavy to get off the mark quickly on its high bottom gear of 10 to 1, and that some drastic lightening was called for. However, the next event, the B.O.C. Chalfont Hill Climb, being only a week ahead allowed no time for alterations. This was an exciting course, loose gravel surface and sharp bends rather favouring the Bugatti, which easily won its class.

During the next few weeks the car underwent a most drastic slimming process. The body was regretfully removed and a light two-seater was made up from 22 gauge aluminium. In no place did the body overlap the frame, thus necessitating staggering the seats about six inches. It finished abruptly in front of the back axle and the spare wheel was carried almost horizontally over the axle. A Morris rear windshield was converted for use as a windscreen. The old scuttle was cut off low down and was replaced by an aluminium scuttle and dashboard taken from Houldsworth's crashed G.P. Bugatti. The radiator was lowered about three inches giving a very rakish appearance. The car now weighed 13 cwt. fully equipped, a saving of 2 cwt.

Unfortunately it was not possible to finish the body completely in time for the next Lewes Speed Trials with the result that it was transferred to the racing class. However, it was some compensation to record a time of 27 secs., an improvement of 5 secs. over the previous best time and a good augury for the future. The finishing line was crossed at about 70 m.p.h. in third, about 10 m.p.h. faster than the year before.

The next event was the B.O.C. hill climb at Joel Park, Northwood, and was chiefly remembered for the sweltering heat and the lack of liquid refreshment. The course, which was laid out on a building estate, had three sharp and rather slippery corners. There was one agonising moment when on approaching a corner my feet were suddenly covered with hot water, with the result that my right foot kept slipping off the brake pedal. We got round somehow, although at quite unpremeditated velocity. The water was found to be coming from the water jacket, which had cracked along the whole length of the block. The running of the car was in no way impaired, in fact, we went rather faster than intended and were second in the class, being beaten by Whitehead's blown Alta.

Since the car was now running so well, no further alterations were carried out.

Continued on page 219

LETTERS FROM READERS

Sir,

Whilst reading with much interest your informative article "On the Rise to Supremacy of Germany in Motor Racing," I would be tempted to place the commencement of this rise at a considerably earlier date. In other words, to the period which saw the arrival of the "36/220" and "38/250" Mercédès-Benz in the sports-car racing field. I believe I am right in saying that the first time these cars were seen in English sporting events was in 1928, when Thistlethwayte, the erstwhile Bentley and Thomas-Special driver, entered one in the T.T. Race and, despite difficulties, put up the fastest lap time. In May, 1929, he won the "Southport 100" in competition with a representative gathering of racing-cars, including the rejuvenated Vauxhall-Villiers Special.

In August, 1929, a team of Mercédès cars were entered in the T.T. and that driven by Caracciola was successful in winning. More astonishing still was their success in the Monza Grand Prix of that year, a race definitely for the Grand Prix type of car and including among the entrants the world-famous bull-nosed "P" type 2-litre Alfa-Romeos, Leon Duray's front-wheel drive 1½-litre Packard Cable Special, the 1½-litre eight-cylinder Talbots, and among other Maseratis that potent sixteen-cylinder job of Ernesto's.

Three Mercédès were entered, two of the six-cylinder sports-car type, and one old four-cylinder, fitted with a blower (perhaps Mr. Peter Clark could tell me if this was one of the old 1914 cars modernised, as I understand one was driven at Frieburg Hill Climb as late as 1927?) To the wrath and astonishment of the Italian crowd, one of the six-cylinder cars actually beat the sixteen-cylinder Maserati right on the finishing line in the first heat and was, in the final, driven by Momberger, third to Varzi on the 2-litre Alfa and Nuvolari on the 1½-litre Talbot.

Equally astonishing was Caracciola's second place in the Monaco Grand Prix that same year, driving a stripped sports-car-bodied, short chassis "38/250."

In 1930 Caracciola again won at Ulster and also at Phœnix Park against the Bentley team, owing to superior road-holding and acceleration, in addition, at Le Mans it took the combined team tactics of two blown 4½-litre Bentleys, backed up by three six-cylinder Bentleys to beat Caracciola's six-cylinder Mercédès, which retired during the night with dynamo trouble.

Followers of motor sport must have visualised in these early days what was likely to occur when Mercédès-Benz turned their attention to Grand Prix racing.

I trust no one will be foolish enough to read into this letter any glorification of Germany; it is purely the disinterested opinion of the writer.

I am, Yours etc.,
H. L. BIGGS.

Enfield,
Middlesex.

[There is a lot in what Mr. Biggs writes, but it must not be overlooked that Germany's real domination of world racing was made possible when the Reich decided to assist Mercédès-Benz and Auto-Union for political reasons. Incidentally, the article referred to will be continued as soon as we can get our sources of reference out of the bombed area—it is of historic interest to describe this period of racing and, as Mr. Biggs says, in no way glorifies Germany.—Ed.]

* * *

Sir,

I wish to obtain a fairly late model 1½-litre four-cylinder Frazer-Nash in really good order. I have tried various sources, but advertisements in the motoring Press are not very fruitful for this type of motor these days, yet they must be about somewhere.

I should be obliged if you could put me in touch with a likely seller or advise me where I might apply to pick one up.

I also know someone who is anxious to purchase a 1½-litre Aston-Martin (1935 vintage) and a really good 9 h.p. or 1½-litre Singer "Le Mans." Can you help?

While I am stationed in Plymouth, I shall be only too pleased to entertain any members of the Services also stationed here who can claim to be motoring enthusiasts.

I am, Yours etc.,
C. W. MOSS.

"Tudor House,"
Bainbridge Avenue,
Hartley,
Plymouth.

[Please write direct.—Ed.]

* * *

Sir,

I should very much like to take this opportunity of congratulating you once again on the fine manner in which you are carrying on in these hard times.

Your series of articles entitled "Veteran Types" is exceedingly interesting, and I would very much appreciate it if you could sometime include some of the early histories of such famous marques as Bentley, Aston-Martin, Frazer-Nash, etc.

I am a Frazer-Nash enthusiast myself, and I use my Meadows-engined T.T. replica to go to work and back in every day, and I would very much like to meet any of the old "Chain Gangsters."

I am, Yours etc.,
GORDON WOODS.

Epsom,
Surrey.

[Histories of all three marques mentioned by Mr. Woods appeared in MOTOR SPORT during 1927-28, in the series "Great Racing Marques," by E. K. H. Karslake.—Ed.]

SOME ECONOMY CAR DATA

The article dealing with economy motoring published last month has aroused considerable interest, but it did not profess to deal with all the cars of up to 8 h.p. R.A.C. rating that have, at one time or another, graced the British market in the period of peace. The following table, even if still incomplete, tells a fuller story and may be of value to those who are now compelled to seek economical motoring. Can you add any more cars to it? It goes back some years, as all motoring has now to be second-hand.

Make	R.A.C. Rating and Valves	Bore and Stroke in mm.	Capacity in c.c.	No. of Cyls.	Top Gear and Wheel Base	Nationality
Austin Seven ...	7.8 s.v.	56×76	747.5	4	5.25–6′ 9″	British
Austin Big Seven	7.99 s.v.	56×88.9	900	4	5.129–7′ 3½″	British
Austin Eight ...	7.99 s.v.	56×88.9	900	4	—	British
Citroen	7.5 s.v.	—	—	4	—	French
Constantinesco ...	5.6 —	67×70	494	2 (2-stroke)	8′ 6″	British
D.K.W.	6.7 —	74×68	584	2 (2-stroke)	6.1—8′ 7″	German
D.K.W.	7.16 —	76×76	684	2 (2-stroke)	6.1–8′ 7″	German
Fiat	8.05 o.h.c.	57×97	990	4	6.1–8′ 4½″	Italian
Fiat	6.7 s.v.	52×67	570	4	4.87–6′ 6¾″	Italian
Ford	7.96 s.v.	56.6×92.5	933	4	5.5–7′ 6″	British
G.W.K.	7.0 s.v.	78×78	749	2	5.0–7′ 3″	British
Gillett	8.0 —	56.8×100	1,020	4	4.44–8′ 4″	British
Gwynne	7.5 o.h.v.	55×100	950	4	4.83–7′ 3″	British
Gwynne	8.0 o.h.v.	57×100	1,020	4	5.1–8′ 0″	British
Jowett	7.04 s.v.	75.4×101.5	907.2	2	5.375–8′ 6″	British

Make	R.A.C. Rating and Valves	Bore and Stroke in mm.	Capacity in c.c.	No. of Cyls.	Top Gear and Wheel Base	Nationality
Jowett	7.35 s.v.	77×101.6	946	2	4.89–8′ 6″	British
Lafitte	7.3 —	62.5×80	736	3	— 7′ 6″	French
M.G.	8.05 o.h.c.	57×83	847	4	5.375–7′ 3½″	British
Morris Minor ...	8.05 o.h.c.	57×83	847	4	4.9–6′ 6″	British
Morris Minor ...	8.05 s.v.	57×83	847	4	5.87–7′ 7″	British
Morris Eight ...	8.05 s.v.	57×90	918	4	5.37–7′ 6″	British
Nomad	3.9 —	79×70	342	1 (2-stroke)	6.1–6′ 8	British
Peugeot	6.4 s.v.	51×88	719	4	5.0–7′ 5½″	French
Peugeot	7.0 s.v.	51×85	695	4	7.25–7′ 5″	French
Singer	7.78 o.h.c.	56×86	848	4	5.0–7′ 6″	British
Standard Eight ...	8.0 s.v.	—	1,008	4	—	British
Swift	7.78 s.v.	56×86	848	4	4.88–6′ 9″	British
Talbot	8.0 o.h.v.	—	—	4	—	British
Triumph	7.9 s.v.	56.5×83	832	4	5.75–6′ 9″	British
Vale	7.9 s.v.	56.5×83	832	4	5.25–7′ 0″	British
Waverley	7.0 s.v.	75×102	901	2	4.5–8′ 1½″	British

PISTON STROKE AND ITS IMPLICATIONS

[CECIL CLUTTON, WHO IS FAST BECOMING A MOTORING WRITER OF NOTE, HERE DISCOURSES ON LONG-STROKE AND SHORT-STROKE ENGINES. ALTHOUGH A VINTAGE CULTIST, HE SAYS MUCH IN FAVOUR OF MODERATE PISTON STROKE, AND GOES ON TO OUTLINE A MOST ATTRACTIVE AND SENSATIONAL CAR OF 1⅔-LITRES CAPACITY.—ED.]

THE choice of bore and stroke for any size of engine has become so hazed by the gloomy shadow of our Treasury rating that the true ethics of the matter have been lost sight of on many occasions. It is nevertheless true that the optimum stroke lies within fairly close limits.

It is popularly supposed that if two engines have the same bore but different strokes, the longer-stroke engine is necessarily the more powerful, because it has the greater capacity. In the days when valve design and bottom end lubrication limited crankshaft revolutions to a maximum of some 3,500 per minute this was certainly true, because if both engines had the same mean effective pressure and the same maximum r.p.m., the total B.H.P. would clearly be directly proportional to the respective strokes.

Nowadays, however, it seems that there is no practical limit to the amount of revs. that can be dealt with from the aspect of bearing lubrication, so that the designer is only limited by the number of times per minute that he can persuade the valves to bob up and down and yet refrain from melting—and also by the maximum safe piston speed. For normal touring cars the valve question seems to become difficult between 5,000 and 5,500 r.p.m., while the pistons are seldom asked to surpass a speed of 3,500 feet per minute.

There is, however, some objection to reaching as high a piston speed as this, since it is generally agreed that the cruising revs. of any engine coincide with a piston speed of 2,500 f.p.m. Therefore, if peak revs. represent a piston speed of 3,500 f.p.m. it is clear that cruising revs. will be only five-sevenths of the peak, so that the *sustained* power output will not be appreciably more than 70 per cent. of the maximum. On the other hand, if the stroke is so short that the maximum piston speed does not exceed some 3,200 f.p.m., the sustained revolutions and power output can be as much as 80 per cent. of the maximum; and since this is a far more important characteristic than a very large maximum output, such an engine has a great advantage.

To take an example, the 3-litre Bentley (80×148.6) has a peak of 3,500 r.p.m., but can only cruise at 2,500 r.p.m. The V12 Lagonda (75×84.5), on the other hand, has a maximum of 5,500 r.p.m. and can cruise as near this maximum as 4,500 r.p.m. with complete mechanical safety.

It must, however, be conceded that few, if any, other designers have succeeded in making a production engine safe at such speeds, but a cruising speed of 4,000 r.p.m. does not seem to call for particularly clever design. Such r.p.m., combined with a piston speed of about 2,500 f.p.m., implies a stroke of roughly 94 mm., and assuming that such an engine could run up to a peak of 5,200 r.p.m., the piston speed even then would not reach 3,300 f.p.m.

It therefore appears that the optimum length of stroke lies somewhere between 85 and 95 mm.

With cruising revs. of 4,000 per minute, as just envisaged, and even such a low m.e.p. as 95 (which implies a very smooth and flexible engine), the sustained b.h.p. per litre will be as high as 29, although at 5,200 r.p.m. it will not be as much as 38.

An undoubted attraction of the long-stroke engine, which probably accounts for its introduction in the 1912-14 G.P. machines, even before the days of Treasury rating taxation, lay in the high ratio between the swept volume and the capacity of the cylinder head, which facilitated high compression ratios without recourse to funny shaped pistons. So effective were these early G.P. cars in this respect that even on the petrol then available, m.e.p.s of as much as 110 were not unknown. As against this, it is difficult to obtain a high compression ratio in a short-stroke engine, which must normally rely on sheer crankshaft speed to churn out the power; the V12 Lagonda, for example, despite its peak of roughly 40 b.h.p. per litre, appears to operate on a m.e.p. of only about 90, and this undoubtedly accounts in large measure for its phenomenal smoothness at all engine speeds, despite a flat cylinder head.

To combine the additional advantage of high volumetric efficiency with a short-stroke engine, therefore, it is evidently necessary to use a supercharger, and with the aid of this device it is quite feasible to obtain a m.e.p. of as much as 130 in a touring engine; nor need this lead to harshness or inflexibility if the cylinder head is reasonably designed, and the cooling layout properly arranged (as witness the Type 57C Bugatti). Under such circumstances each litre of our 94 mm. bore engine will be capable of knocking back no less than fifty-two steeds on occasion, or forty as a regular thing.

The advantage of all this, of course, is that an exceedingly favourable weight to b.h.p. ratio can be obtained with quite a small car. To take an example: The types 320 and 327 B.M.W. make it clear that a comfortable and durable four-seater saloon can be brought inside a weight of one ton. To obtain reasonable acceleration on such a vehicle (say, 15 seconds from 0-60) a b.h.p. of about 80 is necessary. Again, to drag it in moderately streamlined form through the atmosphere at a sustained 80 m.p.h. (no unreasonable cruising speed these times) some 60 h.p. should suffice.

If we incorporate our 94 mm. stroke in a four-cylinder lightly supercharged engine of 75 mm. bore, giving a capacity of 1⅔ litres, working at an m.e.p. of 120, this is exactly what we shall get.

Such an engine would be sufficiently compact and light to be compatible with an overall weight of 20 cwt., whereas, in the old days, to obtain equivalent acceleration, cruising speed, reliability and comfort, nothing less than 5 or 6 litres would suffice. Large cars of this kind are, indeed, exceedingly attractive, but they are unhandy on country lanes or in thick traffic, and few these days have facilities for storing such monsters, nor for paying the absurd tax demanded from them. This ability to get high performance with a reasonably sized vehicle is, indeed, the only justification for high volumetric efficiency, and it is only within the last year or two that design has advanced to the point that high revs and volumetric efficiency have become available compatible with reliability and durability. Only recently, too, has suspension been improved to the point where first-rate road-holding can be combined with comfort in any but the largest of motor cars.

It is this advance that has outmoded the long-stroke engine—even from the viewpoint of tax-dodging expediency—but few designers, except W. O. Bentley with the twelve-cylinder Lagonda, have yet fully exploited the fact.

Going a step further, there is no reason why our 1⅔-litre engine should not be practically as flexible as the V12 Lagonda, but equally as with the Lagonda, free use must be made of the gears if the most is to be made of the power available. To facilitate this without tiring the driver, a finger-tip controlled gearbox, of the Cotal variety, is absolutely essential, and a return to much closer ratios than are now usual must be insisted upon. On our specimen car, for example, with 28″ wheels, nothing wider than 4, 5.2, 7 and 11 to 1 would suffice to make possible the best use of the engine, giving maxima of 40, 63 and 84 m.p.h. on the gears, a cruising speed of 80 m.p.h. at 4,000 r.p.m. in top, and a flat out maximum of up to 104 m.p.h., depending on the extent to which streamlining was employed. Incidentally, such an engine would be sufficiently compact to make it possible to take advantage of the joys of front wheel drive without unduly lengthening the wheelbase. Front wheel drive has other advantages beyond those of fast cornering and stability on wet roads, for it also makes it possible to reduce the overall height, thus both decreasing frontal area and lowering the centre of gravity, whereby soft suspension and stability may more easily be combined.

It is therefore interesting to consider how important a factor the choice of stroke has become in modern design, directly or indirectly affecting the layout and proportion of the entire vehicle.

CARS I HAVE OWNED—continued from page **216**

It was a good year with something doing most week-ends. The only trouble experienced was with clutch plates breaking, but this was successfully overcome. Events which stand out in my memory are the Wetherby speed trials, where I won the sports and handicap classes after an exhilarating run up from London, the B.O.C. Lewes speed trials, where I won the Brescia Cup again, and the Brighton speed trials, where I was third in my class after making a shocking start. Incidentally, when I was up in Yorkshire, I met an enthusiast who offered to buy the original body. Delivering it entailed an epic run in Baron's Lancia Lambda saloon with the body strapped securely to the roof!

At the end of the year I got married so the car was offered for sale. However, no one wanted to buy it, and as I still had it a year later, the dust sheets were removed and I drove it down to Lewes, where it won the sports class and once again the Brescia Cup. Three days later it was sold. This was not the end of an honourable career as later it came into the hands of Bob Pattenden and won the Brescia Cup for the fourth time!

Due to business and family ties, my motoring now took on a more sober flavour and for six months I ran a Morris Eight saloon. Next, in a wild moment, I fell for a "36/220" blown Mercédès (YX 8166) fitted with a coupé body. I had always looked upon the Mercédès as being among the élite of sports-cars, but I was rather disillusioned. True, there is a fascination in its very size and the fact that the engine is only turning over at about 2,000 r.p.m. at 70 m.p.h., but one rather felt that one was driving a superior kind of lorry. One of its more pleasing features was the really magnificent whine of the blower. I have often wondered if one would be instantly jailed in these days of sirens if one put in the blower! Running a car of this size called for frenzied financial calculations every time one thought of taking it out, so to prevent complete insolvency I swapped it for a 1932 3-litre Lagonda saloon, which I still have.

This is a very pleasant motor of its type. It has a maximum speed of 85 m.p.h., yet does 20 m.p.g. This model is fitted with a Maybach gearbox. A normal gear lever selects a high or a low set of ratios. Two levers on the steering column preselect the gear required according to their relative positions. The actual gear change is effected by releasing the throttle, thus operating a servo mechanism. One is therefore provided with a gearbox giving eight forward and four reverse speeds, but it takes a brave man to get into top on reverse! Due to the never-ending demands of the tax collector the Lagonda is now laid up and we must wait until Hitler and his gang are behind lock and bar before once again savouring the joys of the open road.

[Mr. Ogle quotes registration numbers in the hope that anyone who has come across his old cars will write to him—letters will be forwarded.—Ed.]

ON SELLING SPORTS-CARS—

continued from page **210**

utility car manufacturers can teach the sports-car people a whole lot about courtesy to their clients, notably Jowett Cars Ltd., who achieved their greatest success with a car that peaked at a mere 2,500 r.p.m.—and still inspired its followers. That so many sports-cars have fallen by the wayside is all the greater tribute to those who, each in their own way, have sold sports-cars successfully. The last twenty years of peace have seen British sports-cars able to hold their own with the products of every other country in the world. In this sphere of activity, Bentley, Pomeroy, Coatalen, Johns, Kimber, Weller, Bertelli, Frazer-Nash, Martin, Roesch, Tresillian and the rest, served the British Motor Industry well. Their successors will do equally well during the next period of peace, of that I am certain.

NO RETURNS

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THAT HAVE APPEARED IN PAST ISSUES

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

Make of Car	Issue
A.B.C. 11 h.p. 2-cyl., 2-seater	Feb. 1926
A.C. 2-litre, short-chassis, 15.7 h.p. 2-seater	July 1936
A.C. 2-litre, 16.40 h.p., 3-seater	Oct. 1927
A.C. 2-litre, 16.66 h.p., 2-seater	March 1926
A.C. 2-litre, 16.66 h.p., 4-seater	June 1934
A.C. "Ace" 16/80 h.p.	July 1937
Alfa-Romeo, 1½-litre supercharged 6-cyl. Charles 2-seater (1929)	March 1934
Alfa-Romeo 1¾-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 4¼-litre, 6-cyl., Park Ward saloon	June 1936
Bentley 6½-litre, 6-cyl., long-chassis saloon (1928)	Dec. 1936
Bentley 4¼-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 5¼-litre, 6-cyl., super-sports test chassis	Sept. 1927
FIAT 20.70 h.p., 6-cyl., 2-4-seater	April 1933
Fiat "Balilla" saloon	May 1934
Fiat "Ardita" 17 h.p., 4-cyl., saloon	Feb. 1934
Fiat "Balilla" 10 h.p., 2-seater	Jan. 1935
Fiat 6 h.p., Type 500, coupe	March 1937
Frazer-Nash 6-cyl., 1½-litre (Blackburn) 2-seater	July 1933
Frazer-Nash 4-cyl., 1½-litre T.T. Replica push-rod o.h.v. 2-3-str.	Nov. 1931
INVICTA 4½-litre low chassis, 4-str.	March 1931
Invicta 4½-litre Weymann saloon	June 1929
Invicta 4½-litre saloon	Dec. 1929
Isotta-Fraschini 45 h.p., 4-seater	Oct. 1926
LAGONDA 2-litre, 4-cyl., twin o.h.c. 4-seater	Jan.-Feb. 1928
Lagonda 2-litre, 4-cyl., twin o.h.c. supercharged 4-seater	Oct. 1930
Lagonda 4½-litre, 4-seater	May 1936
Lagonda 4½-litre Rapide 4-seater	May 1935
Lagonda 4½-litre, 4-seater	Jan. 1934
Lagonda Rapier 10 h.p., 4-seater	Sept. 1934
Lagonda 16.80 h.p., 6-cyl., 4-seater	Jan. 1933
Lagonda 3-litre, 6-cyl., 4-seater	March 1932
Lagonda 2-litre, 4-cyl., twin o.h.c., 4-seater (1928)	March 1931
Lancia Aprilia, Type 238, saloon	June 1938
Lea-Francis 1½-litre supercharged T.T. 2-seater (1929)	June 1934
Lea-Francis 1½-litre supercharged special T.T. 2-seater	Sept. 1933
Lea-Francis 1½-litre supercharged "Hyper" 4-seater	Aug. 1930
Lea-Francis, 14 h.p., 6-light saloon	Dec. 1938
Leyland Eight (1929), 2-seater	Feb. 1938
MERCEDES-BENZ Type 540K, 5.4-litre, 8-cyl., supercharged, 2-str.	April 1937
Mercedes-Benz Type 500, 5-litre, 8-cyl., supercharged, 2-seater	Nov. 1934
Mercedes-Benz 12.40 h.p., supercharged 2-seater	June 1925
Mercedes-Benz 36.220 h.p. supercharged, 2-4-seater	April 1928
Mercedes-Benz 33.180 h.p., supercharged, 4-seater	Aug. 1927
Mercedes-Benz 2.3-litre, saloon	April 1938
M.G., 6-cyl., Mark I, 4-seater	May 1931
M.G. Magna, "L" 2-seater	Nov. 1933
M.G. Midget "P" 2-seater	Aug. 1934
M.G. Midget "J3" supercharged, 2-seater	May 1933
M.G. Six Mark I, saloon	Aug. 1930
M.G. Midget Double-Twelve racing 2-seater	June 1930 & Aug. 1930
M.G. Midget "J1" 850 c.c. 2-str.	Sept. 1932
M.G. Magnette "N" 4-seater	Feb. 1935
M.G. Midget "PB" 2-seater	April 1936
M.G. 14/40 4-cyl., 3-speed, 4-seater	Oct. 1925
M.G. Midget "T" 2-seater	Jan. 1937
M.G. 14/40 h.p., 4-cyl., super-sports, 2-seater	May 1927
O.M. 6-cyl., 2-litre, 4-seater	Oct.-Nov. 1928
PACKARD V12-cyl. 57 h.p. coupe	Feb. 1934
Peugeot "201" 4-cyl., 1 122 c.c. saloon	Sept. 1931
RAILTON Terraplane 4-seater	Oct. 1934
Railton Light Sports tourer	Dec. 1935
Railton Cobham 28.8 h.p. saloon	Sept. 1938
Riley Nine "Monaco-Special," two-carb. saloon	March 1931
Riley Nine, 4-seater	June 1931
Riley 16 h.p., Big-four Kestrel saloon	June 1938
SINGER 1½-litre, 6-cyl., Le Mans 2-seater	March 1935
Singer Nine, 4-seater	March 1933
Squire 1½-litre, 4-cyl., 2-seater	Aug. 1935
S.S. I special-bodied 2-seater (1933)	Feb. 1934
S.S. I coupe	June 1933
Steyr Type XII, 14.35 h.p., Weymann saloon	Aug.-Sept. 1928
Stutz "Black Hawk" supercharged 4-seater	Jan. 1930
Stutz 5-litre, 8-cyl., 4-seater	Dec. 1927
Sunbeam 3-litre 6-cyl., (twin o.h.c.) fabric saloon	Nov. 1927
Sunbeam 6-cyl., 21 h.p., (push-rod) Speed Six saloon	Dec. 1933
TALBOT "90" Brooklands-bodied 2-4-seater	April 1931
Talbot "105" sports saloon	April 1934
Talbot 3½-litre saloon	March 1936
Talbot Ten "Rally" 4-str.	Oct.-Nov. 1936
Talbot "105" Vanden Plas 4-str.	Nov. 1932
Talbot "90" 4-seater	Nov. 1930
Talbot Ten sports coupe	June 1938
Tatra 4-cyl., 1,154 c.c., coupe	Dec. 1932
Terraplane, 8-cyl. 29 h.p., 4-str.	July 1935
Triumph 2-litre "Vitesse Six" saloon	April 1935
Triumph 10 h.p. "Gloria Southern Cross" 2-seater	June 1935
Triumph 10 h.p. "Gloria" saloon	Jan. 1934
Triumph Nine "Southern Cross" 4-seater	June 1932
Triumph Eight "Gnat" 2-seater	Aug. 1931
Triumph Eight, supercharged 2-str.	Dec. 1929
Triumph Dolomite 14/60 saloon	June 1937
VALE-SPECIAL 832 c.c. 2-seater	Aug. 1933
Vauxhall 30/98 O.E. 4-seater (1925)	Jan. 1936
Vauxhall 30/98 O.E. 4-seater (1924)	Dec. 1930
Vauxhall 20/60 h.p. "Hurlingham" 2-seater	Feb. 1930
Vauxhall 17 h.p., 6-cyl., "Cadet" saloon	Sept. 1931
Vauxhall 14 h.p. "Stratford" 4-str.	Sept. 1933
WINDSOR 4-cyl., 11 h.p., "Special" 2-3-seater	Nov. 1926
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