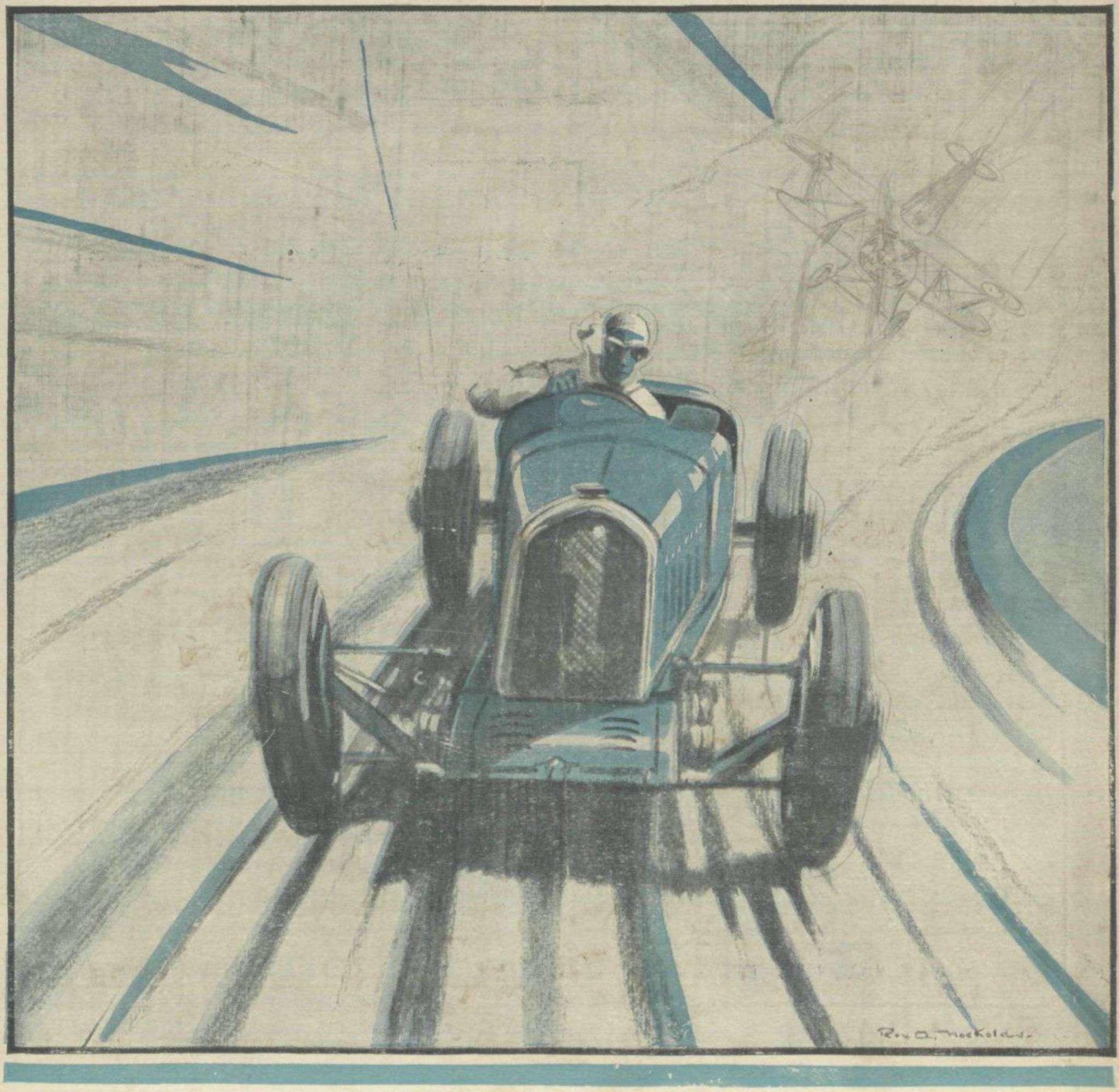
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MOTOR SPORT

INCORPORATING

Speed

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MONTHLY



A SELECTION OF MOTOR SPORT ROAD TESTS

THAT HAVE APPEARED IN PAST ISSUES

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

Make of Car	Issue
A.B.C. 11 h.p. 2-cyl., 2-seater	Feb. 1926
A.C. 2-litre, short-chassis, 15.7 h.p. 2-seater	July 1936
A.C. 2-litre, 16.40 h.p., 3-seater	Oct. 1927
A.C. 2-litre, 16.66 h.p., 2-seater	March 1926
A.C. 2-litre, 16.66 h.p., 4-seater	June 1934
A.C. "Ace" 16/80 h.p.	July 1937
Alfa-Romeo, 1½-litre supercharged 6-cyl. Charles 2-seater (1929)	March 1934
Alfa-Romeo 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 4½-litre Vanden Plas coupe	Aug. 1938
Bentley 8-litre sports 2-seater	April 1938
Bugatti 3.3-litre 8-cyl., Type 57 saloon	May 1934
Bugatti 2.3-litre 8-cyl., Type 55, supercharged, 2-seater	July 1932
Bugatti 2.3-litre, 8-cyl., Type 43, supercharged 4-seater (1930)	Dec. 1932
Bugatti 2 3-litre 8-cyl., Type 43, supercharged 4-seater	May 1930
Bugatti 3-litre, 8-cyl., Type 44, saloon	July 1928
CITROEN, Twelve f.w.d. saloon	July 1938
Crossley 20/70 h.p., 4-cyl., s.v. 4-str.	Nov. 1925
Crossley Ten. 1½-litre "Regis" saloon	Jan. 1936
Crossley Ten, 1,122 c.c. 4-seater	April 1932
Crouch Anzani 12.30 h.p., 2-seater	Aug. 1924
DARRACQ 12.32 h.p., Weymann saloon	Sept. 1924
Delage 14 h.p., 2-litre, 2-3-seater	June 1927
Delage 8-cyl., sports saloon	April 1930
Delage D.8 120, drophead coupe	May 1938
Delahaye 3.5-litre "Coupe des Alps" drophead coupe	Aug. 1936
Delahaye 3½-litre drophead coupe	Dec. 1937
D.K.W. "Special" saloon	Feb. 1938
ESSEX Terraplane 8-cyl. 4-seater	Sept. 1935
Excelsior 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
Wolseley Hornet Swallow 2-seater (1933)	April 1934
Wolseley Hornet (12.08 h.p.) saloon	Sept. 1930

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THE RACING SEASON OPENS

WAR or no war, the 1940 Racing Season has commenced—in Italy. On April 28th, the new 1,000 Mile Sports-Car Brescia Grand Prix, which replaces the Mille Miglia, was due to be contested and, at the time of writing, there seemed every prospect of a strong international element. The new German B.M.W. team had been tried out on the circuit, lapping, it was rumoured, at around 100 m.p.h. These cars are 2-litres with new engines and streamlining that, while not revolutionary, is an improvement over the Type 328. The drivers were nominated as Lurani and Cortesse, Briem and Richter, Wencher and Scholz, and Pietsch and Roese. Italian opposition should have been supplied by hosts of small Fiats, the new 1½-litre Lancias, and Alfa-Romeos, with probably a modified 3-litre Lancia Astura, 2.8 Fiat and the sensational new 1½-litre Ferrari Siata Type 815 as well. The last-named has a straight-eight engine evolved from two modified 1,100 c.c. Fiat Balilla cylinder-blocks, in light alloy, linered to give a dimension of 63 mm. × 60 mm. Two downdraught Weber carburetters are used. This new, unblown sports fifteen-hundred is claimed to develop 72 b.h.p. at 5,500 r.p.m. and to weigh about 13 cwt., giving a speed of 105 m.p.h., and a fuel consumption of 20 m.p.g. in ultra-streamlined sports two-seater form. France was expected to be represented by the Walter Watney Delage stable, and as French drivers were not permitted to take part under martial law, the Italians Brivio, Maggi Rosa and Morandi were nominated to handle these two 3-litre cars. The official Alfa-Romeo team was to have been Farina, Trossi, Pintacuda and Biondetti, with the new 2.5-litre, and the 2.9-litre unblown six-cylinder cars. The circuit had a lap-distance of 103¾ miles with turning points at Brescia, Cremona and Mantova. A report of the race must wait until next month.

This excitement will be followed by the Tripoli Grand Prix for 1½-litre racing-cars on May 12th, the International Emergency permitting. It seems that Alfa-Romeo will run the famous and improved straight-eights, and not the new Flat-Twelve, though an initial try-out of this car is expected over the Tripoli Mellaha course any time now. Maserati will meet the Alfa-Romeo opposition with the four-cylinder, sixteen-valve cars, and the 1½-litre Mercédès-Benz is still expected to run—the first time a country seriously at war will have continued to race its cars—but there is now little hope of the rumoured appearance of the 1½-litre Auto-Union. A little later, on May 30th, the annual American classic, the 500 Mile Track Race at Indianapolis, will be contested. The race is expected to lie between Wilbur Shaw with Boyle's 3-litre, straight-eight Maserati, a combination which won last year at 115 m.p.h., and the 3-litre, straight-eight Alfa-Romeo with which Sommer finished fourth at Pau, fifth at Rheims and won the Angoulême Race last year, and which is entered by Thomas W. Dewart and Richard Wharton, two wealthy young Americans. Joe Thorn is said, however, to be running a Thorn-Special based largely on the Maserati, and Offenhauser, who designed the Miller engines which were in the winning cars in 1935, 1936, 1937 and 1938, is likely to have his engines in fourteen of the entry for this year's race, and, with a newly-modified design having a longer stroke and lower crankcase pressure, is rumoured to be very confident. Certainly the presence of two late-type European Formula G.P. cars will greatly increase the intrigue of the 1940 Indianapolis. The Boyle

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MORGAN MUSINGS

[*Many enthusiasts are interested in the Morgan three-wheeler, and especially so now that we have to contend with the heavy h.p. tax and strict rationing of fuel. The Morgan can be taxed for £5 per annum, against £10-£15 for a small sports-car, while possessing extreme performance and a fuel consumption around 40 m.p.g. Consequently, these remarks, by that well-known motoring sportsman, Martin Soames, will be of considerable value to prospective owners, as well as of great satisfaction to present Morgan "fans." M. S. Soames is better known as a skilful trials and rally competitor with special Ford V8 and Allard-Special cars, and for his Brooklands successes with Harmer's old Type 37 Bugatti. However, he has owned three Morgans, and while apprenticed to Leyland Motors Ltd., where he was closely in touch with the Arab car as well as with Leyland vehicles, he modified his 1931 8/55 J.A.P.-engined Morgan for racing. In this article he contributes his experiences of this Morgan in particular and comments on this fascinating animal in general.—Ed.*]

A WISH to learn about the ways of fast motor cars and insufficient money to gratify it provided my introduction to Morgans. My regard for them increased with ownership and, although in part the appeal was to the pioneer spirit, which rejoices in difficulties overcome *en route*, one could not but respect their businesslike appearance, lively performance and original, accessible design.

The 1931 Morgan to which the following remarks chiefly apply was my third of this make and one of the few which left the works with an 8/55 J.A.P. engine. The only one, I think, with this motor and the then new "M" chassis. The engine was air-cooled, of 996 c.c. (80 × 99 mm.), and basically similar to those in the late E. C. Fernihough's World's Record Brough-Superior [incidentally, Fernihough started his career with a one-cylinder racing Morgan—Ed.] and Mrs. Stewart's Morgan which did 115.6 m.p.h. over the mile and 101.5 miles in the hour in 1929. These engines are generally considered to be the best racing twins ever made by J. A. Prestwich & Co. The "M" chassis had an entirely new "rear end" with an improved bevel box, forged girder-section forks, underslung springs, an 8 inch internal expanding brake (instead of a contracting band), and a knock-out spindle which permitted the back wheel to be removed in five minutes. The wheelbase was 6 ft. and the front track about 4 ft. 4 ins. Power was transmitted by cone clutch and two-speed gear (chains, countershaft and dogs) as always on the "works" racing machines.

I bought it from the original owner early in 1933. He had used it a little on the road and had competed at some B.M.C.R.C. meetings. When seeking first-hand racing knowledge from this gentleman, I remember being awestruck by his lurid account of the difficulties and dangers of speed on the Brooklands outer circuit. His contention that the chains became red-hot in a few laps particularly appalled me.

For two years this vehicle gave me many miles of most enjoyable road motoring. Speeds were around eighty in top, and forty-five in bottom. The acceleration excelled that of the average sports 500 c.c. motor-cycle. Performance figures were never taken, as the speedometer was unreliable. Petrol consumption was over 30 m.p.g. although the engine was not in good tune at this time. The brakes, or rather lack of them, were an exciting feature and acute or bumpy corners merited respect. When the limit was reached on the former a front wheel would leave the ground. This source of embarrassment was later removed by lowering the back of the chassis by 1½ ins. I did feel, however, that the poor brakes and lack of margin for errors in cornering were helpful in developing judgment. Road-holding on straights was good considering the short wheelbase, and the three-track layout with which the back wheel encounters its own set of road inequalities.

An ambition was to cover in six hours the 260 miles between the Lancashire works where I was apprenticed and my home on the South Coast. This was never realised, for, although successful in reaching the half-way mark from each end in under three hours, the necessity of stopping for an adjustment or to tie something on would invariably intervene. Those who have driven through Wigan and Warrington will sympathise with me in these efforts. During this period, I had no major mechanical troubles, but certain small parts needed frequent renewal and attention. Once the cockpit had to be hurriedly evacuated in deference to a rush of flames round the pedals and petrol tank, when a ride on the tail at 60 m.p.h. with the hand brake on followed. On another occasion, when push-starting in the middle of Portsmouth, I was unable to knock the gear lever into neutral when the engine fired, and I held on (because of a third party insurance policy), with the throttle wide open in bottom gear. A brace of cyclists were unhorsed and a brick wall demolished, but fortunately, as in the incident above, no blood was spilt.

By the end of 1934 I was able to contemplate a very limited racing programme. I had been watching the achievements, at Lewes, of G. E. W. Oliver's Super-Sports Morgan with 10/40 watercooled J.A.P. engine. At one meeting in 1934 it won the 1,100 c.c. and 1,500 c.c. Super Sports classes in 25.8 secs.—a very good performance at that time. The Lewes speed trials were one of the few remaining events open to both cars and three-wheelers. They were held on an interesting course, invariably attracting an excellent entry. My Morgan seemed to stand a chance here, so I decided to run in all the 1935 events and started to prepare for the opening meeting.

I knew enough about vee twin engines to leave this part to an expert, and decided on E. C. E. Baragwanath. One of the greatest authorities and holder of the Brooklands sidecar lap record, he was always very helpful and encouraging. His work included the fitting of a big end bearing of his own design (the Achilles heel of all J.A.P. twins), special connecting rods, and Martlet pistons with larger gudgeon pins. The compression ratio was thus raised to just under 12 to 1, that of the wet, or off side cylinder being the higher. A double Best & Lloyd oil pump was added to an improved oiling system. He used his own cams, with special followers, push rods, rockers and valve timing. The inside flywheels were lightened by four pounds and the balance weights modified. I machined a new outside flywheel in nickel-chrome steel. This tapered in all directions and weighed eight pounds as against sixteen of the original cast iron component. We "bumped up" the 11 in. diameter blank for this from a 5 in. bar, the biggest available, on a gigantic steam hammer. The bronze clutch cone which engaged with the flywheel was balanced statically, several ounces being removed in the process.

Continuing with the transmission system (the machine by now being reduced to its component parts), the propeller shaft was the next problem. This had a bad vibration period at about 4,000 r.p.m. I had a special one designed and made for me by R. R. Jackson. He has forgotten more about Morgans than I ever knew, and used to race them successfully [including a 500 c.c. vee-twin job.—Ed.]. It was the Blackburne engine developed by him for his machine which was afterwards used in the Freikaiserwagen (and subsequently blown) with such terrific effect. Even this new shaft did not quite cure the trouble—an indication of the need for a central steady-bearing as used on the "works" racing chassis. The bronze bevel box was hand scraped and the top cover, filler cap, inspection plate and new drain plate underneath made in Electron. The box was originally intended for grease lubrication, but the seals were improved and a vegetable engine oil used. I machined a new countershaft of very tough steel, leaving large radii at changes of section. This overcame the twisting tendencies of the standard type. The selector-forks had been a source of rapid wear so some were cast in phosphor-bronze and proved far more durable.

The rear wheel spindle and adjacent highly stressed parts were replaced in alloy steel. Bronze bushes were fitted to shackles and spring eyes and the sprockets were drilled with d'oyley-like designs. The arm of a specially-adapted double Hartford shock-absorber was attached to a "hoop" over the back wheel, which it satisfactorily damped and stabilised in the vertical plane. This wheel was rebuilt and fitted with a fat 140/40 Michelin "Real Low Pressure" tyre.

Dunlops built me some light front wheels to take their 3.25″ × 19″ ribbed tyres. These were dished severely

MORGAN MUSINGS—continued

inwards, bringing the centre point of tyre contact with the ground some 1½ ins. nearer the steering pivot line, or about 1 in. from it. This materially reduced wheel-flap and loads on the front suspension and steering arrangements generally. The front hubs were machined to take Timken taper roller bearings (in place of the unsatisfactory cup and cone type), and new stub axles were made to suit, with Electron distance pieces and hub caps. Special telescopic Newton shock-absorbers controlled the front springs. A point to which Morgans are sensitive on corners is the angle of the steering arms. I got the best results when the lines through the steering pivots and track rod ends, if produced backwards, met in the rear wheel spindle (with the wheels straight). For this purpose the steering arms should be bent at red heat. The strip steel drag-link with yoke and pin ends was replaced by a rod with spring-loaded ball joints and an adjustable track rod was made up. The above ministrations, and attention to a number of smaller points, resulted in general handling comparable with that of an average sports-car, and the Morgan would then slide round dry corners in normal style.

I used the latest type of Morgan front brake drums, which were now flanged at the open end and as rigid as, though much lighter than, some home-made cast iron, aluminium finned versions which I had tried. The shoes were relined with the correct grade of Duron. All three brake cables were connected to a cross shaft mounted, on cast aluminium bearings, across the lower chassis tubes. On the end of this was a long outside lever. The foot pedal operated the back cable through a slotted link. The leverages of the system were carefully worked out and the brakes proved to be surprisingly good from all speeds.

Nearly all the standard nuts and bolts had Whitworth threads and these were replaced by the lighter and stronger B.S.F. type. Assisted by first-class machining facilities and a wide selection of high duty materials, I was able to lighten practically every part of the machine. The dry weight in road trim was 7 cwt. 2 qrs., and 5 cwt. 1 qr. 14 lbs. when ready for Lewes. This saving of 2 cwt. 14 lbs., or just over 28 per cent., seemed satisfactory in a machine already built down to a taxation "formula" of 8 cwt. maximum. Of this saving nearly 40 lbs. was unsprung weight.

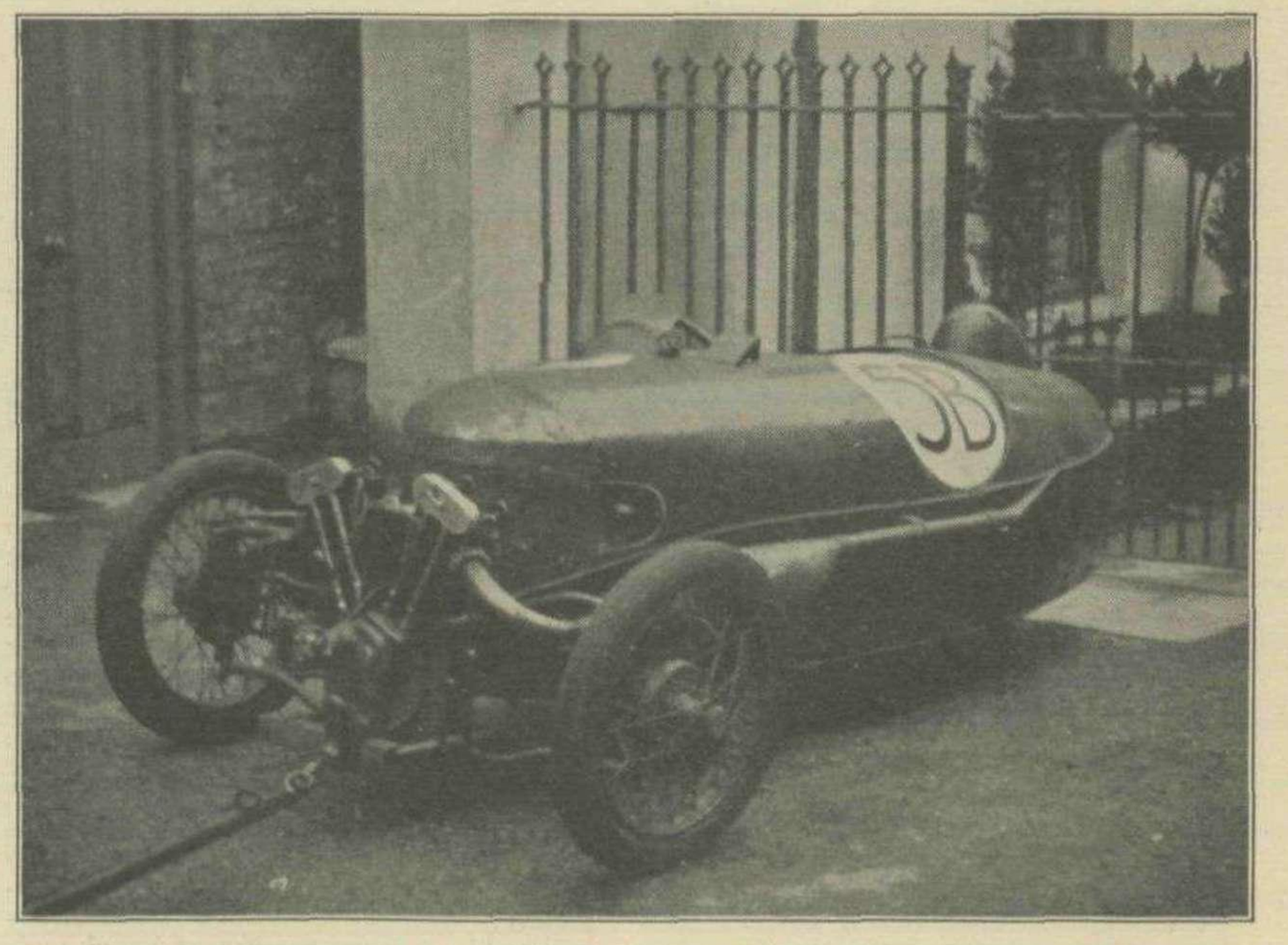
The blow fell when I applied for an entry form. I was told that, because three-wheelers were controlled by the A.C.U. they could not, in future, compete in events run with an R.A.C. Permit. This was crushing news as much fairly honest sweat had gone into the preparation. I had even (funny though it now seems) obtained a contour plan of Race Hill, Lewes, from the local surveyor. With this and b.h.p. and torque curves a slide-rule-pushing friend deduced the "optimum" gear ratio values. Oliver's Morgan weighed just under 8 cwt. and gave not more than 45 b.h.p. at 4,500 r.p.m. Figures for mine were 5¼ cwt. and 60 b.h.p. at 5,500 r.p.m. with better rear wheel adhesion, and greatly reduced flywheel and road wheel inertia. Although data of this kind is usually deceptive, it was sufficiently encouraging to make us curse the fate which denied us the consummation of months of toil.

On recovery it was decided to convert the Morgan into a token four-wheeler with rear track of 19¾ ins., which would bring it under R.A.C. jurisdiction. I got out some drawings, proposing to use the existing springs, forks, and two-speed gear, with some extra top linkage for rigidity. (This system was only intended for Lewes and had to be readily re-convertible. The easier "standard" method of conversion, with G.N.—or Frazer-Nash—countershaft, radius rods, springs and axle, as exemplified by Woodall's "Chatterbox," Lones's "Tiger Cat," and Breyer's "Salome," appears to provide good all round controllability.) The axle forgings for this had just been machined when I ran into J. H. T. Smith, who suggested that we make up a team for the forthcoming L.C.C. Relay Race, then in its prime. Smith had just bought the K3 M.G. in which Gardner and Benjafield had finished third in the previous "500"; his warmish road Aston-Martin was to complete the trio. Here was a chance to compete in a more important event on level terms with cars. I decided in favour of it and started to replace the back wheel, increase the tankage, alter gear ratios and tyres, improve the streamlining and make various other necessary changes, with none too much time to spare. Meanwhile friends prophesied, with gloomy relish, that suspension parts which I had lightened for Lewes would fail me on the outer circuit.

The week-end before the race, which was on a Saturday, I worked two nights without sleep and left Lancashire for London on Monday morning. The Morgan was on a sort of trailer, hired from a farm and previously used for manure, behind a 10/23 Talbot. This had ignition trouble on the way down which I was too tired to deal with and left to a garage while I fed. They failed to cure it but replaced an ignition control rod in such a way that it fell into the clutch and knocked off all but two of the clutch springs. On these and about two cylinders I pressed on, finally to acknowledge defeat near Coventry in the small hours of Tuesday morning. I awoke at about 6.30 a.m. from some sleep on the grass beside the Talbot, and, after stopping a number of lorries, found an angel (disguised as the driver of an old Leyland with an overload of boiler plate) who towed the whole outfit right to Marble Arch.

The days before the race passed quickly in the usual rush and excitement which was heightened when we saw the programme and found that we were expected to be the fifth fastest team. The Morgan lapped at 90 m.p.h. quite easily though we never timed a flat-out lap. The speed seemed prodigious at the time, and the bumps unbelievable, but the only thing to give way was my air cushion. I soon learned how to avoid the worst bumps, but was unable occasionally to prevent my foot being jolted off the throttle pedal. Owing to the sensitivity of a twin to lubrication and mixture adjustments this occurrence always oiled or wetted up one of the plugs, which could never be induced to clear itself. This trouble, which was later partially rectified, was apparently not peculiar to my machine. Lones was rumoured to drive on his hand throttle, which he opened flat-out and retained in that position by a rubber-band! I used a 3.9 to 1 top, with 4.50" × 19" back tyre. My engine had one carburetter

Continued on page 77



Martin Soames's 8/55 h.p. J.A.P.-engined Morgan stripped for action

Club News

VINTAGE S.C.C.

The Club's aim to hold a war-time sports-car race seems likely to be defeated by the R.A.C. No-Permit Ruling. No other restriction stands in the way, a quite favourable reply having now come to hand from the Department of Mines. We understand that plans have not yet been abandoned, so we can only hope that the Vintage S.C.C. will be able to make the R.A.C. reconsider its verdict, and get Harry Edwards's consent to use the Crystal Palace circuit. Failing this, can we have a social gathering for owners of the many real motor cars still taxed and running?

750 CLUB

A social was held on April 6th at a pleasant room over the bar of the "Sunderland" in Sackville Street. Quite a good gathering of members turned up, one right up from Pevensey (per rail), but the MOTOR SPORT representative had to leave early to go on duty at his Ambulance Station. An officer of the R.A.F.V.R., who daily uses an "Ulster" Austin Seven for official duties, an Army officer, and a private of the R.A., mingled with civilian members, and some even came in cars, notably Secretary Hunter, in his new-tuned Arrow Austin Seven four-seater, while there was also a special present, in the form of an old ex-Army Austin Seven with well-preserved Chummy body. Members also were able to examine a fine open 3½-litre S.S. 100 and a smart Frazer-Nash-B.M.W. cabriolet bearing a Belgian registration, though these had nothing to do with the Club. It was decided to hold an indoor social every seven weeks, together with outdoor meetings, the first of which is scheduled for May 5th, at the Ashdown Park Hotel, Coulsdon—there are some nice hills nearby. The R.A.C. has neatly squashed plans for a small trial. The excellent plot of finding spare seats in club vehicles for non-car-running members continues; the wish has been heard that more fairies would join up . . .

MIDLAND A.C.

A dance is to be held at the Botanical Gardens, Edgbaston, in aid of the British Red Cross Society, on May 2nd, from 8 p.m. to 1 a.m. Tickets from Leslie Wilson, 75, Silhill Hall Road, Solihull, at 7/- each.

B.O.C.

The Bugatti Owners' Club held another successful social, in the form of the A.G.M. and the usual dinner and film show, at the R.A.C. on April 10th. We hope soon to hear of a roadside gathering, for observation reveals that not all Bugattis are stored away in glass cases.

M.C.C.

The M.C.C. commenced its war-time socials with a dance at Pagani's on April 27th and others are to follow.

HOW LONG?

In the April issue, in his article "This Rally Business," "Cayenne" suggested that the R.A.C. Rally, with its breaks for a night's sleep, has become too easy. While we personally agree, the thought arises that the event is intended to cater for all motoring competitors, not all of whom have the outlook of the 100 per cent. enthusiast. Amateur tennis-players would be aghast at commencing play at 8 a.m. and continuing until evening without any interval, and amateur swimmers neither wish to swim the Channel, nor could they do so if they tried. To drive non-stop for long distances calls for a high degree of physical fitness, and unlike other sports, driving decreases, instead of improving this quality. We believe the R.A.C. had something like this in mind when introducing lengthy rest periods into its once fairly strenuous rally.

THE FUTURE

Now that the British Navy is getting very much to grips with Germany, Peace does not seem so far away. When sanity returns, let us have plenty of sprint events at which amateurs can compete without too great an expenditure, and lots of those excellent Donington clubmen's race meetings, which are such an excellent fill-up between the lesser speed trials and expensive, classic hill-climbs like Shelsley and Prescott. The Vintage S.C.C., in particular, deserve every credit, in conjunction with Fred Craner, for enabling many enthusiasts to do some real racing for a really small outlay, at such meetings. The lamented Relay Race of the Light Car Club is another event we would like to see revived when peace breaks out.

GENERAL NOTES

What a thing it will be to go long runs again! Early plans for pooling "Pool" within a syndicate, thus making possible runs of 200 miles a week-end, having come to naught, we have preferred to spread our ration over a number of short journeys rather than blue it all at once and be compelled to wait a month for the next dose. Consequently, going 15 or 20 miles out, to hike in daylight or to grip a tankard and a handful of darts in some country pub if night has fallen, seems quite a hefty journey, and that we used, once upon a time, to put in something like 200 miles, as often as not, between early tea and a sort of dawn-of-day-supper, with no real objective, is now something almost unbelievable. Even getting to Brooklands and back with the Georges-Irat seemed a reasonable day's motoring, so that we overlooked the torrential rain along the Kingston By-Pass and took with great good humour every incident of the dice. Of course, this spreading of the precious ration over a number of short runs does lend variety to the going and enables more of one's friends to participate in what is now a luxury-pastime, it being most desirable, however, that they shall find even war-restricted motoring, and in a glass-box at that, a trifle more pleasing than visiting a cinema or dance-hall, while if the charm-factor is high, so much the better. Under such conditions, motoring adventure is at a low ebb, though a kind and very excited pedestrian did act heroically in the black-out in telling us to "stay where we were and remain calm, because we were about to drive into a river," whereas that is just what we had intended to do, braking to a standstill to spare the distributor a wetting and not from any momentary revision of suicidal tendencies . . . And one evening we used quickly a quarter of a gallon of Pool for no better reason than that we got behind a beautifully turned out "12/50" Alvis, *circa* 1927, occupied by three obvious sportsmen, the dickey seat passenger professionally eyeing a slightly smoking rear brake drum at each traffic hold-up. We followed the Alvis as far as we could, and it so happened that the Austin was then able to tail home an obviously-tuned M.G. Midget, with bonnet strap and trials size rear tyres.

It is instructive how much you can learn of your home countryside when you have to motor with a watchful eye on the fuel gauge. It so happened that before the war we had a favourite short run out to a certain R.A.F. aerodrome, which we often used to do on spring and summer afternoons when we were too lazy to work. Although quite close to tram-infested roads, this hideaway was approached by a narrow, long and winding climb of an alleged 1 in 5, useful for checking the tune of your car, and the adjustment of brakes on the return run. Often we would go there, to watch aircraft from the road beyond a notice which warns carters and others to remain seated on their vehicles in case low-flying machines should unwittingly dislodge them—reminder of an accident of this sort which once happened there. Or we would walk a little on the surrounding common, until the advent of small schoolchildren reminded us of tea, when less than half an hour's run would see you home. Naturally, on account of these excursions, and because we knew this spot many years before (in those days the landing ground was entirely unfenced, so that an excited small boy, approaching from the rear, thought quite justifiably that the "Gamecock" before

CLUB NEWS—continued

him had force-landed!) we thought we knew it all pretty thoroughly. Yet recent explorations on foot have revealed much that is new, including some excellent venues for car-photography and certain trials going—and even more might have come to light if we could overcome a temptation to follow most of the guide-book hiking-route in the car itself! However, these near-London explorations have been confined to Surrey, and with luck, we expect this summer may reveal similar surprises in Sussex, Kent and Bucks—or will we soon be walking on entirely new ground? With decreased scope it has been possible to occupy one's leisure in lazy appreciation of appealing scenery and enjoyment of fresh air and sunshine, where once one would have been restless to get off to some motoring event, or to prepare the car for the next long run. Wimbledon Common and Richmond Park, those big open spaces within such easy access to S.W. London, have proved a Godsend when fuel has been very low, whereas in the past they were visited only for a preoccupied, hurried walk or because some bothersome person wanted to see them—incidentally, what a disappointment the "Test Hill" in the Park is, at any rate to all but owners of the smaller Edwardians. We have found peace, too, along the tow-path near Richmond, and these walks have aroused an interest in amateur motor-boating, and ambitions in this direction, though whether they will ever be realised is quite another matter. While it seems likely that you could compete quite successfully in outboard racing events for an expenditure very much less than that entailed in constructing a satisfactory sprint racing car, there is the feeling that something would be lacking unless one knew as much of this sport as one does of motor-racing, and, while more sober boating would cost no more than the acquisition of a good road-motor, somehow there seems something less desirable about arising in the early a.m. to play with a slow boat than thus breaking open the bedclothes to start a journey in a funny motor-car—why, we confess we cannot quite explain. However, we have become interested enough to go to the local library about it and, are, in consequence, greatly enjoying C. S. Forester's tours of France and Germany which he made rather more than ten years ago in "Annie Marble," an Evinrude-outboarded (later Elto) 15 ft. punt-built dinghy, so you never know. Albeit, friends say that we are sufficiently covetous of this world's Good Things not to flirt with a boat until we have an entertaining road motor and a racing car to put on the trailer first, which perhaps is the truth. Anyway, such plans are out of the question at present, and the immediate future looms large with a proposed run right out to Box Hill, to inspect the Goat Track, for we have previously wrongly regarded the path up between the Box Hill road as this one-time trials hill, and now desire to have a look at the real thing. That alone shows how times have changed, and we believe we have even committed ourselves to a whole Sunday using the Austin as transport at a wedding, for which there would certainly never have been time to spare eight months ago . . . Coming back from one of our brief runs we recently came upon a really fine 3-litre Bentley outside a house at Wimbledon, and, what is more, had ample time for worship. We have more than a suspicion that it may be old "No. 7," though perhaps by mentioning it we are only exposing our ignorance of that famous car's real whereabouts? Amusing as these collective short runs are, already there is a desire to motor further afield, and maybe, if the special we have in mind should come into successful being, it will be possible to baptise it at Nailsworth, taking in a certain road in Gloucestershire we have always vowed to return to, on the way, while when the sun gets too unbearable in London, doubtless the sea will call, irresistibly. In between all this, of course, there is A.R.P. duty. The first exciting rush of last September, when you "stood-by" all night in a new tin battle-bowler and spent the day, dazed for want of sleep, rushing wildly around on the business of evacuation, is but a memory. Albeit, it is very satisfying to recall how a certain elderly lady was so concerned with personal evacuation of self and property that she gladly rode in the trials Chummy Austin Seven, brakeless, noisy, comic-looking, and dirty as to both interior and exterior as that little car was! And, using it when the "Ruby" saloon wasn't available, at this most solemn period with the future quite unpredictable, helped quite a bit in keeping our spirits up. Later, A.R.P. became a drudge and now resembles going to business in the ordinary way (but at extraordinary hours and with more loss of sleep than the troops suffer), with every opportunity to perfect one's dart and table-tennis play, the idea of real action seemingly quite remote. Mostly you drive Yanks, but some interest attached to taking out the depot's Sunbeam Sixteen fabric saloon. Motor traders to whom it was offered for sale laughed it to scorn; you would expect them to. Yet the gearbox, in spite of a loose gate, is sheer delight; the change down from top to third, necessitating a considerable movement of the rigid right-hand lever, especially pleasing. Always the engine started instantly, and idled impeccably. The minor controls are reminiscent of those of a modern Bentley, the steering is accurate in the old-school, springy style, the brakes rather poor, but with very positive hand brake. The doors shut beautifully, the windows slide easily, the wheelbase is immense and the interior extremely spacious, and all the instruments work, the oil gauge showing a most healthy pressure, varying with engine speed. The clutch winds-up somewhat in taking the drive, the gears howl noticeably, and the chassis flexion, undisguised by the fabric body, is most pronounced on rough going. Yet the body fabric is only just going round the scuttle and the leather upholstery is like new. Acceleration is not at all bad, and you can corner her until the tyres squeal and she comes round clean. The engine layout is delightful and you find filters in all the fillers. This Sunbeam must be at least a dozen years old, worth perhaps a couple of pounds as scrap, yet she is a delightful motor-car still, though I believe heavy on fuel. So if at times we fill much paper—and paper is valuable now—discoursing on vintage motors, perhaps there is reasonable excuse for so doing contained in brief acquaintance with this old saloon Sunbeam.

MORGAN MUSINGS—continued from page 75

and magneto. With two of each the lap speed would certainly have been over the 100 m.p.h. mark. Fuel was R.D. 1 at 6/- a gallon, for which I had to pay. The M.G. Magnette was lapping at about 110 m.p.h., although Smith was a stranger to the "Outer," and the Aston was making a creditable 88 m.p.h.

On the afternoon before the race we all qualified early and prospects seemed bright. Then appeared that bane of amateur motor racing, the superfluous spare driver. Where he came in I never could discover, but he expressed a desire to "qualify" and proceeded to lap flat out on the Aston-Martin until a timing wheel broke. This was (but shouldn't have been) of fibre, which permeated the oiling system and made it impossible to put it right in the time. As this was our "C" car, which had to cross the finishing line, team No. 5 was out of the race. We were the only non-starters, and were thus not able to avail ourselves of the rule whereby depleted teams could make up their number from others similarly placed. Next day, with a whole machine and mixed feelings, I watched the new 1,100 c.c. Singers pull off a well-deserved win.

And so ends this pathetic tale of frustration. I was too late with my Morgan. Prejudice, or some other factor, had gradually ousted them from all forms of racing. Their racing heyday was from about 1924 (when they even competed in the J.C.C. 200 Mile Race) to 1931 or '32. In this period the owner of a fast Morgan could, and did, enjoy a full season of varied events with large fields of three and four-wheeled competitors. At that time Morgans were, generally speaking, faster than cars of equivalent capacity. (In connection with this, I believe that Lones did a Brooklands lap at over 100 m.p.h. with an unblown 750 c.c. two-seater Morgan. I cannot recollect any unblown 750 c.c. car having done this.)

I hope that the Morgan Motor Co. will excuse such criticisms as have been made about an obsolete model. Mr. H. F. S. Morgan's feat in producing a tubular "backbone" chassis with Lancia-type front suspension in 1910 (well before the great Commendatore himself) has never received sufficient appreciation.

THINGS IN GENERAL

AS I write this, the latest scare is the rumour that the Budget will include an increase of 5/- on the road tax, and that we shall soon have the dubious joy of paying 30/- per h.p. for the privilege of going as far in a month as can be done by the average donkey cart.

However, I should not be surprised to find that the story is of the sort called by the French *tendancieux*, meaning that it is a straw deliberately thrown out to see which way the wind of public opinion blows. It doesn't seem possible that Sir John Simon, even though no economist, deludes himself with the notion that an increase in taxation beyond a certain point will bring in more revenue; if he does, he might think about the whisky tax imposed during the last war, and still in force.

* * *

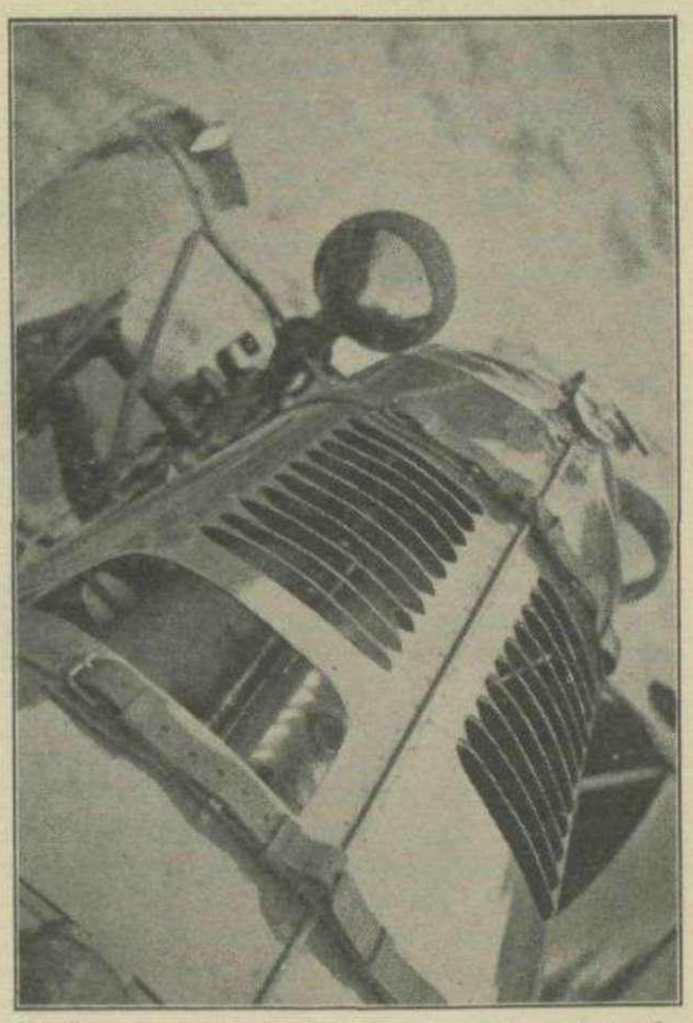
Those who can't remember as long ago as that might care to know that whisky used to be 3/6 a bottle, and that it rose to 12/6, the result being that the whisky decanter, which used to be as much an indispensable piece of furniture as the aspidistra, now holds the wife's tulips, if it hasn't been sold to the old-iron man. Suppose the car should disappear from the average small home in the same way! Unthinkable, isn't it? But so many of us have stretched all the elasticity out of our incomes already! Still, it is always possible that the rumour is a cunning scheme to scare waverers into licensing their cars while there is yet time, without waiting for better weather, as quite a number of us seem to be doing. It will be interesting to see whether car licences went up in numbers during the earlier weeks of April; quite amusing things might be deduced from the figures, if they appear before we have forgotten all about it.

* * *

Equality of sacrifice is the slogan of the moment; it may be that somebody will remind the Chancellor of it, and that his rod may fall upon other backs than ours this time. Untaxed golfers still play as merrily as is possible with a rather depressing and Calvinistic sort of Scottish game; untaxed cyclists gaily ignore whatever mild laws have been made for their governance; untaxed footballers propel the muddied sphere, as Kipling calls it, and the noise of the innumerable juveniles on untaxed roller skates is deafening in the land. But the depressing thought *will* obtrude itself that the French, who have known about Equality for quite a time, usually refer to their national motto as *une reve entre deux mensonges*.

* * *

This is, unfortunately, not the first war of which I have had experience, and it is true to type in that mysteries flourish in it "like the green bay horse," as the hunting parson is reported to have said. One of the most unfathomable mysteries is the methods under which extra supplies of petrol are granted to the favourites of the gods. One case I know is that of a man holding an indoor public appointment, he lives close to a station from which there is a frequent service, and he works quite close to the terminus at the other end. What petrol he gets is known only to himself and (perhaps) his wife; anyway, he does quite a lot of driving, and also did something approaching the thousand miles on the generous Easter holiday these public officials get. Another case is that of a young lady employed close to her home; she does not use her car for business purposes, but she confessed to receiving 20 gallons a month. Asked how she wangled it, she became charmingly coy, but could not see why she shouldn't have it, as one of her fellow clerks living under two miles from the office got 18 gallons for an Austin Seven. Perhaps you could cap these true stories, though you will still find it hard to beat the wangling record of the lady who, so the papers say, wangled a ration card for her pet dog. [Certainly more than we asked for, and get, for the Editorial Austin Seven.—Ed.]



"Thoroughbred"—from an unusual angle.

* * *

As there isn't any sport to talk about, and the R.A.C. have decided to issue no Permits for the duration, we might continue to meditate about petrol.

As you know, I am no scientist, and claim to be no expert of any kind, but I do want to know why no alternative fuel has been produced. Steam seems to have something in it, if you could get over prejudice; gas is undoubtedly too clumsy and too unpractical; but what's wrong with alcohol? All we who are racing men—which means supporters and marshals as well as drivers—know that racing dope is mainly alcohol, and we all know that a petrol-alcohol spirit was marketed successfully before the war. If I can believe the encyclopedia at our local free library, you can make alcohol out of most things, and particularly cheap things; will anyone tell me why we don't have it mixed with Pool spirit, and also why we don't produce some dope with an alcohol basis which would supersede petrol? It would be invaluable if we could do so, for unfortunately, as everybody knows, oil lives a long way from this country, and if we could do without it, we should cut off the risks to tankers and the other risks to our exchange at one fell swoop. No doubt the learned men will inundate the Editor with abstruse disquisitions upon the various reasons why nothing can be done, but so many impossible things have become possible in my time that I don't despair of having home-produced juice in my car yet.

* * *

Prescott has earned for itself such a place in the affections of sporting motorists that it could hardly be allowed to fade out from the effect of war conditions. I hear that the Bugatti Owners' Club is faced with the necessity of finding about £350 a year in addition to its subscription income in order to pay outgoings on the property near Cheltenham, for, in spite of rumours to the contrary, no Government department has yet spotted this perfectly ideal funk-hole. Members of the Club have already promised quite a substantial portion of the sum required, but wouldn't this be a grand opportunity for some motor magnate to step in? The trouble is, that those gentlemen think in millions; a few hundreds seems beneath their consideration, no doubt.

J. D. A.

WAR SERVICE

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PROFESSIONAL FAST DRIVERS

NOW that the war has interrupted the career of racing drivers, both amateur and so-called professional, in this country, attention is drawn to other spheres in which men are paid to handle fast cars. They are the drivers of fire-engines, ambulances and police cars, the two first named augmented by A.R.P. services. Although drivers of such vehicles are required to drive fast and skilfully on occasion, they yet do not employ anything resembling the tactics of the competition driver, as a general rule. After due consideration, the writer believes that it is not so much a question of inferior skill, as their need to always have in mind the vital importance of arriving at the objective without untoward incident. Although they have a definite right of way, fire-engines, ambulances, and police cars must proceed without endangering other road users, and to thread smoothly through traffic is more important than clipping seconds off the journey time by hectic progression. Even although the public expects to see these vehicles going rapidly about their business, nevertheless it also expects such hustle to be accompanied by a certain dignity of handling, so that the professional fast drivers in charge develop a technique different from that of the competition driver. So little does the ordinary road and pavement user know of speed, and the abilities of the modern car, that something of an outcry might arise if fire-engines and ambulances were handled in city streets at their maximum limit of performance. Consequently, these vehicles may seem to be soberly handled to the racing enthusiast, when in actual fact, they are being skilfully driven—not forgetting the restraint of A.R.P. official speed restrictions and the comfort of patients in loaded ambulances. Maybe experienced sports-car drivers could improve on the journey-time on every occasion if put in charge of these vehicles, but we doubt if they could do so unless they resorted to fierce driving tactics, which, while undeniably not dangerous, would be greatly to the distaste of the rate-paying spectators. Experience of A.R.P. turn-outs has taught us that a rather special approach is necessary when speed is essential, in a vehicle so noticeable to the world at large that it must be driven unobtrusively and occupied by personnel whose lack of motoring enthusiasm prevents them from taking a lighthearted view of a fast ride and its morbid improbabilities. So, while fire-engine and ambulance drivers have little in common with the competition driver, they do excellent work and it is interesting to remember that they are paid to drive fast. Getting quickly through thick traffic, when momentary fierce handling must not be used to compensate for hesitancy at other points, calls for good driving of a specialised kind, especially as a bell-warning is not much guarantee that other road users, uneducated as they are to the difficulties of fast travel, will give a clear passage. A possible exception to the foregoing is the police car in pursuit of law-breakers, and police-car drivers undergo extensive training and are usually more on a par with the competition driver—only recently we observed a truly skilful piece of reversing by a police Hillman, in this case merely to apprehend some urchins who had to be scared out of tailboard-swinging. And a police car in full flight after a car load of criminals is reserved almost exclusively for the silver screen, at any rate in this country.

The London County Council is, very sagely, sending members of the London Auxiliary Ambulance Service to its Accident Stations for short spells, so that personnel have a chance to go out in the ambulances and see how real casualties are handled. Some interesting facts can be learned from such visits. The ambulances used by the L.C.C. are mostly Talbots, those we inspected being "75s," with self-changing gearboxes and, we were told, special reduction gearing to cope with the weight of the bodies. The engine, with its neat valve cover and polished copper and steel-tube plumbing, etc., is maintained in speckless condition, which is facilitated by the cleanness of the layout of this Anglo-French design. Even the sparking plug terminals are sparklingly clean. No major overhauls are undertaken at the ambulance stations, though tappet adjusting and similar maintenance is attended to by the drivers. Although an air of typical British indifference and leisure seems to pervade these stations, ambulances are away within two minutes of an emergency call. At one local station some 300 accident calls, and about the same number of general service calls, come in on an average per month, or ten calls per ambulance in every 24 hour shift. It was very noticeable that in discussing humorous or particularly horrid cases, the station personnel nearly always referred to railway accidents. When we remarked that we seldom saw any reference to them in the papers, they smiled sardonically and said that only road accidents, however insignificant, got into the newspapers every time. If the "toll of the road" is depressing you, talk to the personnel of your local ambulance station . . .

The L.C.C. is now replacing women drivers with men, and converted vans with special ambulances, in its A.R.P. Volunteer Auxiliary Service. At one typical depot the vehicles consist of two Ford vans, a Commer "Invader" van and a Hudson box-ambulance, and two Terraplane ambulances, augmented by a fleet of cars numbering several of the biggest American saloons. The new box-ambulances are believed to cost between £50 and £70 each and are mostly quickly-overhauled American chassis, of excellent performance, if very supple suspension—in one case we came across Telecontrol, which mystified everyone, but, wound up to its full extent at the rear (100 lbs. per square inch), had some stabilising effect. Fairly modern big American saloons are popular as *communication cars for both Fire and Ambulance* auxiliary services, but such makes as Sunbeam, Delage, Daimler and Rolls-Royce Twenty are also seen.

Drivers on both the ordinary and auxiliary ambulance services work alternate morning, afternoon and night shifts of approximately eight hours duration, with a day off between changed shifts, and draw £3 per week. Incidentally, H. L. Biggs, who is contributing a most interesting series of articles to MOTOR SPORT, is now closely associated with the purchase and repair of cars for the L.C.C.

PUBLIC SCHOOLBOYS TRAIN FOR COMMERCE

Eton, Haileybury, Harrow, Oundle, St. Paul's, Stonyhurst and Uppingham are among the schools to which seventeen Dunlop Scholarships have been awarded for the second course of instruction beginning on April 15th. The scholarships give a free commercial training under expert supervision to young men between the ages of 17½ and 19, with maintenance grants at the rate of £52 a year.

The seventeen scholarships have been awarded to G. Cadman, Emanuel and Battersea Polytechnic; F. Dorrien Smith, Eton; F. Ellis, Gravesend County School; D. Dowden, Sutton Valence and Lewes County School; P. Golding, Bedford; D. Gordon, Gravesend County School; D. G. Fear Hill, Stonyhurst; M. Hipkins, King Edward VII School, Sheffield; D. Vaughan Jones, Cathays and University of Wales; D. T. P. King, Felsted; J. Lennard, Uppingham; P. D. O. Liddell, Harrow and North Gloucestershire Technical School; J. May, Chatham House County School; R. B. Olliver, St. Paul's and Berlin University; R. H. Ridler, Haileybury; G. Stewart, Felsted; and G. Heaven, Oundle.

Eton and Harrow on Same Course as County Schools

Blundell's, Christ's Hospital, City of London, Shrewsbury and Stowe are among the winners of the first eighteen scholarships for which the course of instruction has now begun.

THE REMINISCENCES OF H. L. BIGGS

No. 2.—CHAIN GANG DAYS

SERVICE in the "Chain Gang," to those uninitiates whose only knowledge of such would be that gained at the local cinema, would seem a most undesirable occupation. But in that other "Chain Gang," so well known to the motor sportsman, it can be much sought after.

My sentence started early in 1931, and during the following two seasons I should imagine the Frazer-Nash was more successful in general sporting events than any other make.

I am quite prepared to expect some irate statistician immediately to deny this, but I do not intend to delve into statistics, nor to describe the evolution and tuning of this, the fiercest of sports-cars; that has already been done in these columns by one more qualified than I.

My many memories of this period of "hard labour" are all of the most pleasant; it would be hard to find another firm where staff, employees, and owner-drivers were more whole-heartedly enthusiastic about the car. Even the humblest employee probably knew the past history of every vehicle that came in for service!

Individual cars stand out plainly in my recollections, and, incidentally, as each car was built to the purchaser's requirements, this is not difficult to understand.

The prototype "Interceptor" was an amazing car. Small, with a short two-seater black fabric body, green wings, and with the s.v. 1,496 c.c. Anzani unit, it appeared to be driven by all manner of pressmen and competition drivers, and always gave a good account of itself. Particularly did it make a phenomenal ascent of Fingle in the 1931 Exeter Trial, in the hands of Inderwick. Another potent piece of machinery was always referred to as "ex Bowes," naming a former owner who actually entered the car in the Monaco Grand Prix! It was s.v. Anzani engined, and had the three-seater rounded tail body popular in previous years, completely undershielded, finished in black and green, and altogether very desirable.

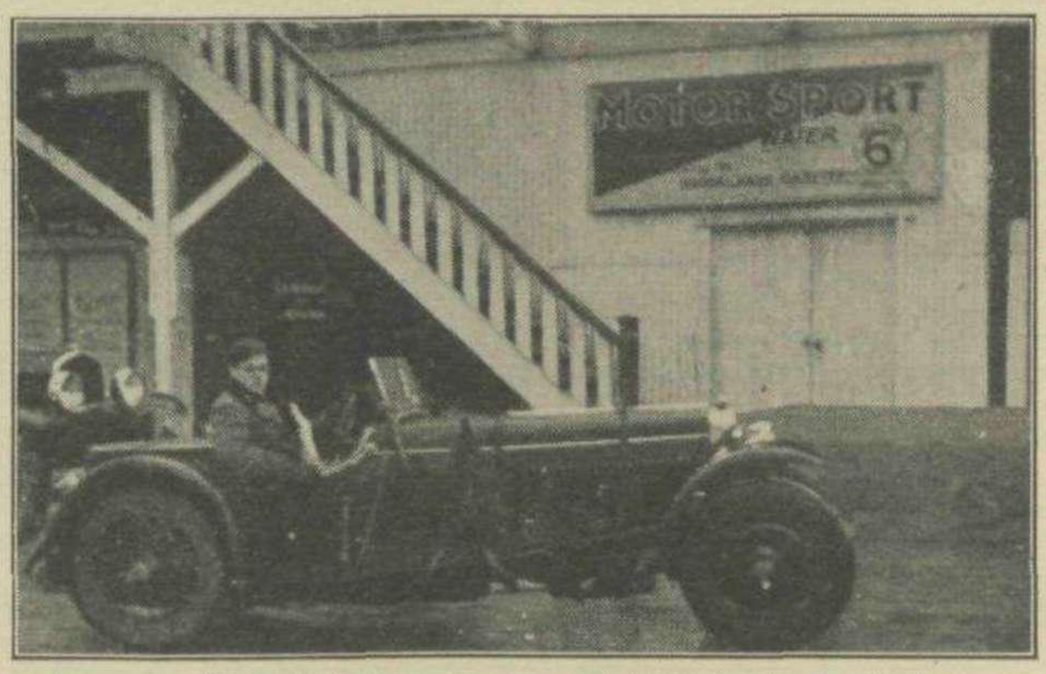
On reference to my notebook I find evidence of the versatility of this particular car. For instance, blown with a No. 9 Cozette, it ran at Wembley and Lea Bridge Dirt Tracks; it was prepared for the Colmore Trial early in February '32, again with No. 9 blower and 40 mm. Solex, but was ultimately run in the event unblown, shod with Dunlop straked Army-pattern tyres. After this event the blower went back, but using a Cozette carburetter, it was driven by Fane in the Inter-Varsity Speed Trials at Hexton on the 20th February, and at the O.U.A.C. event on the 27th February. Later it ran at the opening J.C.C. Meeting on the 12th March, when disruption of the clutch neatly severed the exhaust pipe. Such was its life! It would be impossible to note here the detail work which took place between these different events, but nothing fundamental was altered.

The three 1931 "Double-Twelve" cars, in whose construction I was privileged to assist, were also interesting to the enthusiast. In general, chassis and body construction they were the same, having short chassis with wide F.W.B. axle, aluminium undershields, 14 gallon fuel tanks, three-speed axle assemblies, flattened and wedged springs, and all the usual locking devices and flexible pipe lines necessary for this arduous event. Extremely light fabric two-seater bodies were constructed and fitted in an incredibly short time by Compton's. The car which was of the greatest interest to readers of MOTOR SPORT at the time was the blown Anzani, driven by Moore and Braidwood. Of the other two cars, one had a plain-bearing, and the other a roller-bearing, Meadows engine, both prepared in accordance with the current Meadows racing practice. The roller-bearing Meadows job was geared 4.1 and the others 3.8 to 1, and they were all three fitted with a simple type of chain oiling device.

Their performance in this race will be known to all followers of the sport, and each had considerable success in various events at later dates. I note particularly that the plain-bearing Meadows car won a Mountain Handicap in May '31 at 61.4, and in June an Outer Circuit Handicap at 88. More versatility!

The "Double-Twelve" cars were rebuilt for the Ulster Race in 1931, the Anzani model being unsupercharged. The chassis modifications were again the same for the three—heavier blades to the shock-absorbers (the fronts, of course, act as radius arms); special wing stays; bronze off side bevel shaft bearing housings, and the rear axle diameter increased by $\frac{1}{8}$" to $1\frac{5}{8}$"; 12" brakes; special rear axle radius plates; also steel double brake levers replaced the standard malleable. Outside exhaust manifolds were used and the roller-bearing Meadows converted to plain, with steel flywheels replacing the standard cast iron.

All three cars were fitted with a really scientific chain oiling system fed from a dash tank by hand pump through drillings at the base of the sprocket teeth. One of the Meadows engined cars was later fitted with a roller-bearing, pump cooled, dry sump 1,496 c.c. Anzani with No. 9 Cozette blower, and run in the 1931 Mountain Championship. In early 1932 it collected a first in the 1,500 c.c. Sports Class at the O.U.A.C. Speed Trials. In June that year we find it again fitted with a Meadows engine; this gives some idea of the interest attached to working on these cars.



A personal Chain Gang memory. A "T.T. Replica" Frazer-Nash outside the MOTOR SPORT *office at Brooklands on a very wet day*

In the L.C.C. Relay Race of 1931, an amateur team of Frazer-Nash cars was that comprised of Conan Doyle, Mummery and Bellamy. The first named drove the "Slug," that very special job built for Capt. Frazer-Nash himself in the early days, with o.h.c. inclined valve engine and blown by Cozette, outstanding features being an additional radius member from the bevel cross shaft inside the bevel box to the centre of the live axle, exceptionally strong axle radius plates, and the universal-less prop. shaft common also to the "Terror." The other two team cars were elderly "Boulogne" models, unblown, with Anzani engines and the peculiar high Bugatti-type body with a third seat (?) in the tail. They completed 66 laps!

In my humble opinion, the prettiest ever made, if such an adjective is

THE REMINISCENCES OF H. L. BIGGS—continued

applicable to sports-cars, was the original "Ulster" Frazer-Nash, a photograph of which appeared in MOTOR SPORT at the time, with a eulogistic paragraph. Extremely low and underslung, with flattened springs, the cross members went under the chassis section with the bevel box mounted on top. Twelve inch brakes with aluminium finned drums and a vee fronted radiator were used. The power unit was a No. 9 Cozette-blown, roller-bearing s.v. Anzani, and a beautifully built body, with rounded downswept tail, in scarlet and white, was constructed at the works itself, using a most ingenious fold-flat screen in which the centre pivots of the frame slid in arched guides to bring the screen down flat on the scuttle. In June '32 this car was prepared for the Nurburg Race in which it was driven by Eric Siday, the violinist of wireless fame. The current chain-oiled bevel box assembly was installed, with 1⅝" axle and the modifications thereby necessary; troubles occurred in the race which curtailed its performance. It was actually, I believe, the last time in which a blown Anzani was used for a longish event, due to the fact that the compactness of the water-cooling spaces precluded high power outputs being maintained over a long period; invariably cracks would develop across the bridge between the valve ports or between the valve ports and cylinder bore.

In addition to car details, odd jobs stand out clearly. The tremendous rush to change gear ratios on Hutchison's blue fabric four-seater one Friday afternoon before a J.C.C. High Speed Trial; the frantic conversion of Inderwick's lubrication system from dry sump to wet sump on a certain Saturday morning, which so suddenly became a Saturday afternoon. The crowded inside of a car on return from the coachbuilders when delivery was due almost immediately and everyone was trying to do their particular jobs at the same time, occasioning unusual contortions and language as one happened to drill through a body member into someone's anatomy!

To return to cars of interest, R. G. J. Nash's "Terror," at that time the most successful sprint motor in existence, appeared at the works for major chassis alterations, prior to the fitting of a new and more streamlined body. I note a fact regarding this car in passing, that, when testing at the Track, it turned a lap at 93, obviously on a low ratio and a very long way for the "Terror." Unusual, too, was the single-seater chassis with centrally disposed steering box in which one of the few twin-carburetted s.v. Anzanis from an early 200 Mile Race Horstman was fitted. This, with a long-tailed green fabric body by Abbotts, was raced as the Abbott-Nash.

Early in 1932, a special blown Meadows-engined chassis, the "Nurburg" model, was put in hand for Fane. General stiffening up of chassis, and all 1931 racing practice was embodied, double sprockets were used on third and top gears, and a multiplicity of details altered. The modifications to the Meadows engine necessitated by the increased performance and to enable a Powerplus blower to be driven from the forward end of the crank, were all designed at Falcon Works, as were the vital moving parts. It would be presumptuous for me to attempt to describe these details here, although I note that they occupy fully eight pages in my own data book. A sports body by Corsica with somewhat cubist lines graced this chassis, the car being finished in May and run out for trial. After further modifications it lapped at 108 and was entered for the Nurburg event. Unfortunately it was involved in a collision on the Continent as a consequence of which chassis trouble developed in the race itself, causing its retirement.

The two cars run in the Alpine Trial in 1932 were fine examples of preparation for a definite job. Both cars fundamentally embodied all the refinements learned from the previous season's competitive events and were equipped with two port Meadows engines, but, as additional cooling was sought after, water impellers with fans were belted from the camshaft pulley, and larger radiators with steam valves used.

Otherwise, apart from different heads and steel flywheels, the engines were more or less standard production units. H. J. A.'s car had autopulse and pressure fuel feed, A. G. Gripper's petrolift; the latter's car also used upper cylinder oil fed to the inlet ports and an extra air valve. Electrical equipment was by Bosch. Their performance in one of the most exacting tests of the year will long be remembered, and to show versatility yet again, H. J. A.'s car finished second in the 1,500 c.c. class at Ulster and also completed 31 laps in the M.C.C. One Hour High Speed Trial.

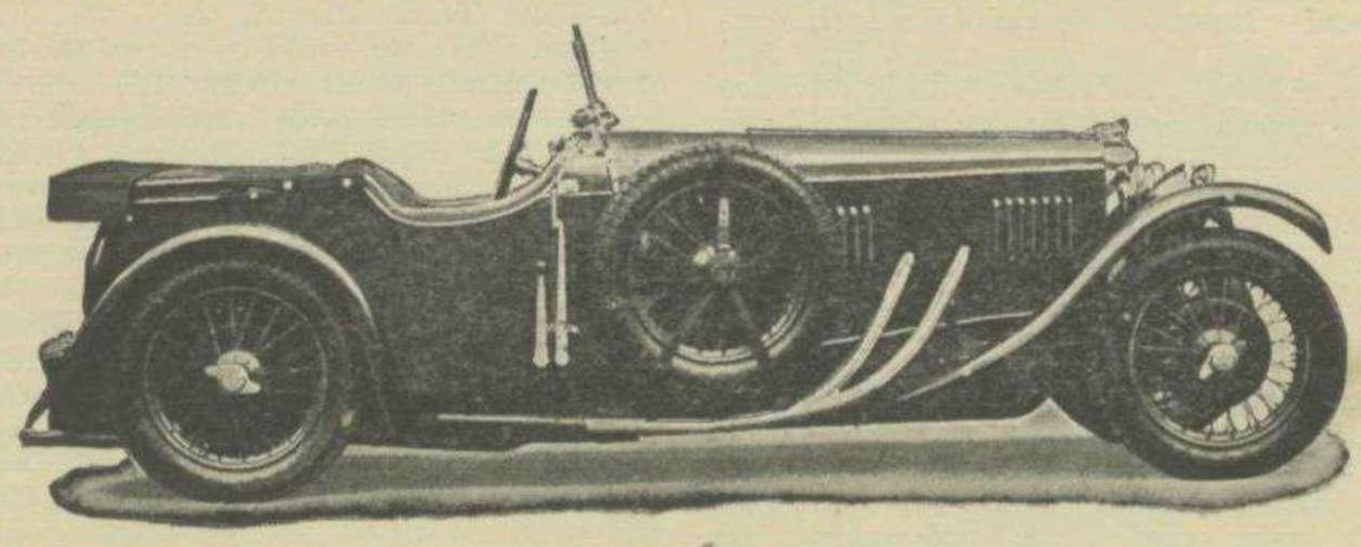
Many other interesting cars come to mind—Com. Grogan's beautiful black and chrome, short chassis car with racing Meadows engine, which once passed me on the open road as fast as I've ever seen a car travelling in this country (I believe it later had a special blown Meadows installed, with a truly terrific performance). Baines's fabric saloon, one of the only two closed Frazer-Nashes built; I remember thinking at the time it was sacrilege!

There was Hutchison's red "T.T. Replica" with roller-bearing Meadows; Caswell's "Replica," so successful at Southport and the early Donington meetings, and hosts of others!

The enthusiasm with which special modifications were made up and tried out, and engines changed from one car to another, was amazing, and certainly the marque always seemed successful in whatever type of event it competed. This short account only gives an infinitesimal portion of the highly interesting jobs that were in hand during my service in those years when interest in motor sport seemed at its height, and club events always had a full entry list, due possibly to the fact that manufacturers were anxious to give owners of their cars the performance they required. This was undeniably true of Messrs. A. F. N.

One fact which is as true to-day as it was then is that "No matter how old a Nash may be, it always goes like smoke!"

[The above article by H. L. Biggs is the second of what we hope is proving an interesting series. The next will deal with Biggs's Alfa-Romeo associations, notably when he accompanied Count Lurani to his first British speed event. In passing, we must congratulate Mr. and Mrs. Biggs on the recent arrival of a son and heir. Incidentally, similar happy events are recorded in the Charles Martin and John Bolster families. Biggs is now an inspector to the L.C.C. and runs a Nuvolari-red Fiat 500.—Ed.]



The "Colmore" Frazer-Nash

THE RACING SEASON OPENS

Continued from page 73

Maserati is said to have new Offenhauser con. rods for the coming struggle. Nuvolari has been mentioned as the driver of the Dewart-Wharton Alfa-Romeo, which is most unlikely; he has also been rumoured to be handling one of the Delage cars in the Brescia race, which is even more improbable.

Ireland also proposes to have some motor-racing this year, with an I.M.R.C. Sprint Meeting on May 4th, the Leinster Trophy on July 27th at Tallaght, Phœnix Park, on September 14th, and a Dublin U.A.C. Speed Hill Climb at Kilternan on September 28th. Short trials are now being run and, if held, these racing events will be on a suitably restricted scale. Over here the R.A.C. ban affects everything.

THE 2-LITRE GEORGES-IRAT

THE FIRST ROAD-TEST IMPRESSIONS OF AN INEXPENSIVE FRONT DRIVE, ALL INDEPENDENTLY SPRUNG FRENCH SPORTS-CAR, POSSESSING GOOD PERFORMANCE AND SOME UNIQUE FEATURES OF DESIGN

THIS war, although it has been so reluctant to get started, nevertheless has put paid to a lot of interesting ventures, amongst which was the introduction of the modern Georges-Irat to the British market. The scheme was to make this unique sports-car available over here at a price on a par with that of the Morgan 4/4 and TB M.G. Midget, after introducing the marque by entering it for the L.C.C. Three Hour Sports Car Race, with Peter Clark as driver. Although neither plan materialised, Guy Bochaton, who is the man behind the venture, is now running the car which Clark would have raced, and recently we were able to conduct a short road-test of this unusually interesting car. Most people, if they know anything of the Georges-Irat at all, remember them as the conventional 2-litre cars which finished 15th and 29th at Le Mans in 1923. The present Georges-Irat has no association with these cars, being built by Automobiles Georges-Irat, Godefroy et Levegh. MM. Godefroy and Levegh used to make the front-drive Tracta, which MOTOR SPORT road-tested in March, 1930, and which, in 1,100 c.c. form, qualified for the Rudge Cup at Le Mans in 1927, and finished third in the Final in 1928—the production version was notable for marked directional uncertainty. The marque continued to do well at Le Mans, being fifth and sixth in the 1929 Rudge Cup and third and fifth in 1930, in 985 c.c. form, and continued to run at Le Mans until 1934. The modern Georges-Irat uses a practically standard 1,911 c.c. six-cylinder Citroen engine and front-end—confirming the faith of Godefroy and Levegh in front-wheel drive—and the result is an inexpensive car of very good performance, for which spares and maintenance are easily procurable. Indeed, Citroen in England had agreed to give full servicing facilities to Georges-Irat owners. Apart from the front drive, the specification is unique by reason of rubber suspension, both front and rear wheels being controlled by thick strands of rubber-cord, and all of them suspended independently.

The Citroen front-drive layout is modified to take the new suspension, and the wheels are permitted a very big rise and fall. The chassis is a light pressed steel construction. One's first impression of the car is that of a typically modern Continental two-seater. From the frontal and three-quarter frontal aspects the streamline effect is excellent, but the flatness of the tail, which falls away behind the doors and accommodates the exposed spare wheel, somewhat spoils the rear aspect. This was especially noticeable when we compared the car with E. M. Thomas's 328 B.M.W., which it about equals in size. The welded, pressed steel body frame proved entirely free from rattles and we were ready to overlook the rather Continental casuality of finish—the French so often leave cars out in the open, day and night, anyway. The car tested is the only one in this country: an Australian Air-Force blue, left-hand drive, air flow two/three-seater. The seat readily accommodates three persons abreast, provided the driver keeps his left elbow outside the body, or flat against the side if the hood is up. Indeed, with two up, an arm-rest would be a great asset, and had Peter Clark driven the car in the Sports-Car Race he would have had to be strapped in to prevent loss of control while cornering. The washable white upholstery is very useful, but does not contribute to stability on the wide squab.

BRIEF SPECIFICATION

Engine : Six-cylinders, bore 78 mm., stroke 100 mm., capacity 1,911 c.c. R.A.C. rating 15 h.p. Tax £18 15s. Push-rod o.h.v. Single Solex downdraught carburetter. Coil ignition with hand control.

Gearbox : Three speeds and reverse. Synchromesh on second and top. Central, dashboard lever. Front drive.

Suspension : All independent, by rubber-strands. No shock-absorbers.

Brakes : Hydraulic on all four wheels.

Weight : 18 cwt.

Price : Three-seater: under £300.

Concessionaires : Bochaton Motors, 111, Notting Hill Gate, London, W.11.

The left-hand spring-spoke steering wheel is almost vertical, in an ideal position, and the seat is comfortable. The "umbrella-handle" Citroen gear lever comes through the dash within easy reach of the right hand and there is a protruding switch below the wheel, easily reached by the left hand, with a rotary motion for the lamps and press-action for the horn. From left to right the facia contains:—oil gauge reading to 6 kg.; fuel gauge below; indicator control; advance and retard control below; ignition key; 100 m.p.h. 6 inch speedometer with trip; ammeter; choke and starter controls below; clock; hand-grip for passengers; big cubby hole below; and spot-light switch. The direction indicators are of coloured light type, illegal in this country, and the mounting of the tubular rear bumper, on angle-iron extensions, is rather terrible. The pedals are well-placed, and a heel-and-toe action should be possible, given less lost movement on the brake pedal. The hood was not too easy to erect and is rather low, but, in conjunction with glass windows in the doors, gives real coupé-snugness when erect. Behind the seat is space for an occasional passenger or any amount of luggage. The low screen winds open and possesses a Marchal wiper. The lighting is 6 volt, constant voltage, and the Ducellier headlamps are said to be very effective, but were, of course, masked for driving in war-time Britain during our test. On the outward journey to Brooklands we had the car weighed and it came out at 18 cwt. exactly—rather a disappointment. Doubtless, much increased performance could be obtained by using a lightweight body. As it is, the long bonnet displays not a ripple over bad going and facia and frontworks display the exact antithesis of an old-school Bentley. As the Georges-Irat has a rigid base, these good qualities would probably remain, were an aluminium-panel body fitted. It is interesting that in spite of front drive, not more than 10 cwt. is carried by the front wheels, and this roughly 50/50 weight distribution gives extremely good riding, as subsequent remarks will show. Having taken aboard a third passenger, armed with Leica and stop-watch, we achieved the Kingston By-Pass, less crowded than it once was, and, being a twin-track road, where we could appreciate the advantages of left-hand steering without encountering the loss of overtaking-visibility that results with this drive on English roads. Actually, both wings are visible, but precise gutter-hugging is simplified by sitting on the near side.

As the hydraulic brakes were calling for considerable pedal-pumping before providing a decisive stop, we paid a visit to the "Acorn Service Station" to make certain nothing serious was amiss. Incidentally, George Fitt, who made the excusable but nevertheless humorous remark that the Georges-Irat engine "is almost like a Citroen," told us that his Centric-blown Hudson is stored along with his ex-Norton "Jabberwock" Ford V8—so the correspondent who said last month that the Hudson is seen daily in Maidenhead has mistaken Strang's Hudson for Fitt's.

The run to Brooklands showed the Georges-Irat to cruise easily and smoothly with a nicely Continental, unobtrusive exhaust note. Having obtained a special War-Time Track Permit, we went out to glean what we could over two-thirds of Brookland's outer circuit, the course being "no man's land," round part of the Byfleet and the portions round about the Fork. Already the excellence of the suspension had been noted and hanging a car on rubber bands seemed to be a good thing to do. However, although the wheels are located by certain radius arms, there is no damping of any kind. Consequently, we were extremely pleased to discover that the rough surface of the Track (now, by the way, littered and weed-infested) only served to accentuate the excellent riding, rather pronounced fore and aft pitching being the only reaction. The very undulating section leaving the Members' banking on the inside of the Track could be negotiated "hands-off," and at over 60 m.p.h. the riding got better than ever, while driving at lower speeds over grass mounds beside Sahara straight worried the car not at all.

Cornering qualities are of a truly high standard, and not at all reminiscent of the Tracta. As one expects with f.w.d., application of power stifles any tendency to tail-slides, and, experimenting along part of the Campbell road circuit, it was possible to come out on to the Members' banking accelerating hard in second gear, with the front wheels screaming in protest,

THE 2-LITRE GEORGES-IRAT—continued

and yet retain full control, when so many rear-drive cars would slide up the banking and dive for that telegraph post which still bears evidence of S. C. H. Davis's contretemps, when he skidded from the opposite direction. The technique is to brake before a corner and go round on the drive. The steering kicked viciously from full lock while cornering under power and could only be controlled properly by striking a balance between letting it castor-action through the fingers, and gripping it to one position. It is light, positive and the castor action is considerable. The lock is definitely taxi-like and two turns are needed lock-to-lock—high gearing, for the actual ratio cannot properly be determined by this figure, in view of the lock-variation of different cars. It is worth mentioning that when MOTOR SPORT tested a Citroen Twelve in July 1938, we said: " . . . under load the steering certainly became stiffer than on the over-run . . . but it remained, even on the drive, smooth in action . . . "

So it seems that the pronounced and unpleasant kick-back on the Georges-Irat may be due to a particular cause. The five stud pressed-steel wheels, for instance, carry 130×40 French Dunlop super balloon covers, which we think hardly capable of the weight and speed of the car. One of them had a nasty sidewall gash, but by judicious changing round, a tyre mileage of some 20,000 seems probable, or 10,000 miles from the front tyres.

The dash-protruding gear lever for the three-speed gearbox has a gate with bottom and reverse on the outside. There is synchromesh on second and top, and without practice the writer found he could do a good double-declutch change from top to second before a critical audience, the action being very pleasant. The gears go in decisively, and the action of the lever was good, though as free as that on the Citroen we tested was stiff, so that a keen owner could probably, with a little adjustment, devise a very pleasing action indeed. The clutch took up smoothly and is very light, if a little slow to engage and disengage. The brakes appeared to have a defect in the master cylinder and required much pedal-pumping to produce a good pull-up, and under such trying conditions applications are apt to be fierce. However, the car stopped all square on wet surfaces, and there is every reason to imagine that normally the brakes are up to the Lockheed standard. The umbrella left-hand lever is of light construction, but quite suitable as a parking brake.

We have, up to now, been advancing the 2-litre Georges-Irat as an up-to-the-minute sports job possessed of admirable handling and general qualities. Lots of cars sell well which handle nicely, but are of sober performance, and likewise many are successful because they have abnormal urge for their size even though less desirable in other respects. To the enthusiast both aspects are of importance, and we were interested to try the abilities of the Georges-Irat, bearing in mind its good qualities and that it was to have been marketed at under £300. Under adverse conditions, given only a brief run, with three up and screen erect, we negotiated the flying quarter-mile at 75 m.p.h. Doubtless, given a little attention, and under decent conditions, well over 80 m.p.h. could be realised. As it was, No. 4 plug gave up as we concluded the tests. We left the Track, and, while seeking a source of supply, espied a badge-bearing Wolseley saloon which contained Tony Curtis. He kindly led us to the H.R.G. works and found us a new 14 mm. plug—incidentally, no cars have been made at H.R.G.'s since war began, and entry seemed to be rather barred to journalists, even to those of motoring ilk. H.R.G. service and enthusiastic exchange of opinions still goes on. The Georges-Irat seemed to be much fitter after this change of bottle, so doubtless the fault had adversely affected the figures. The engine had not been serviced for 7,000 miles and seemed to have a very loose distributor while the mixture appeared rich, the downdraught Solex visibly pouring fuel into the works, perhaps in this instance a bit too enthusiastically. Carburation was " fruity " in the usual Continental manner, but the urge was there in plenty, the front wheels spinning *after* the get-away. Under the circumstances the acceleration figure should be capable of material improvement. Three up, the standing quarter-mile took 22.0 secs. Other readings were not taken as the speedometer was definitely inaccurate, cheerfully recording 110 m.p.h. at the end of the flying quarter-mile. Reverting to plug trouble, we are of the opinion that it was caused by a blow, and not overheating, as the engine is humoured by the high top gear ratio and never unduly hurried. Oil pressure varies with speed, from 2 to 4 kgs. per square inch. Fuel consumption, including the Track work and thirty miles in London, was 21 m.p.g., and some 25 m.p.g. could be expected at more ordinary rates of progression.

The under-bonnet details are pleasing. The push-rod o.h.v. six-cylinder Citroen engine, with coil ignition, is nicely finished and the starter is easily accessible, but the battery gets unduly warm. It should not be difficult to convert to right hand drive. The bonnet clips worked very well, and the rigidity of the long bonnet has already been praised. There is a useful under-bonnet locker into which a decent tool-box could be built. We have been unable to ascertain the gear-ratios, but believe top to be in the region of 3 to 1. Transmission is, of course, Citroen, than which no front-drive lay-out is better proven, and the wheels are hung from the frame on independent linkages, damped by rubber strands.

Altogether, the Georges-Irat is a most interesting car, of modern and in many ways unique appeal, and possessed of a good performance in relation to the proposed price. We imagine that it should be possible to install the four-cylinder Citroen Twelve engine, if greater economy allied to a maximum of about 65 m.p.h. were desired, or, perhaps, to achieve greater performance by using the later 2½-litre Citroen sports engine. Either way, spares and maintenance would present no problem. The Georges-Irat was to have been handled in this country by Bochaton Motors, 111, Notting Hill Gate, W.11, and doubtless Mr. Guy Bochaton will gladly supply further information to those likely to be interested in this unique car when the war is over.

A BOOK ABOUT INDIANAPOLIS

JOE COPPS, of Indianapolis Speedway, has forwarded to us an interesting book entitled " Why I Became a Race Driver." The author is Wilbur Shaw, who won the Indianapolis " 500 " in 1937 with a Gilmore-Special, at 113.58 m.p.h. and in 1939 with Mike Boyle's 2.9-litre Maserati, at 115.035 m.p.h. He was second in 1938 with a Shaw Special at 115.58 m.p.h., and has finished second on two other occasions, fourth and seventh, since 1933, in this classic American race. The book is nicely produced on art paper and contains a foreword by Capt. Eddie Rickenbacker, President of Indianapolis, Shaw's article and an article showing how racing developed four-wheel brakes, rear-view mirrors, safety-glass, alloy pistons, high-compression engines, reliable sparking plugs, streamlining and good suspension—a nice answer to one of our R.A.C.'s silly arguments against war-time racing. There are also twenty-one coloured head and shoulder pictures of famous American drivers, an interview with Wilbur Shaw by the Voice of Firestone, and some notes on Firestone tyres in racing. The Maserati is credited with 165 m.p.h. along the straights, at 6,800 r.p.m., at 190° F. water temperature. The success of Indianapolis—crowds of 150,000 spectators—is largely due to good pre-race publicity, and Rickenbacker's foreword in this book is typical. He briefly and very graphically describes this great race, terming it the greatest sports event in America, but reminding us that Indianapolis is also the " Great Outdoor Laboratory of the Automotive Industry." Imagine our great Dunlop Rubber Co., Ltd. issuing a similar book some weeks before the Donington G.P. with such a foreword by Humphrey Cook and articles by Arthur Dobson . . . The photographs are beautifully reproduced and include some rare ones of the winning 1911 Marmon (with rear-view mirror), 1919 Peugeot, 1925 Duesenberg (with balloon tyres), 1920 Monroe and Dario Resta's 1916 Peugeot. It is interesting that Shaw's Maserati, which won last year, and which, as a foreign victor, adds much interest to this year's race, clearly has " Boyle Special " painted on its scuttle. The reference to Shaw holding the " four-cylinder straightaway speed record at over 148 m.p.h. at Daytona in 1928 " is a bit confused and Segrave's name is wrongly spelt (he gave Shaw his first crash hat), but otherwise this little book is really good, and there is only one crash picture. We shall treasure it along with a fascinating model tyre—both gifts from the Firestone Tyre and Rubber Co.

THE ARNOTT "DEPINKER"

IT has long been known that, in theory, the admixture of a small amount of water to the charge defeats "pinking." Water will not pass through the jets of a normal petrol carburetter, so alternative means must be found of blending it with the petrol-air mixture after the petrol has left the jet. At various times, devices have appeared on the market which, taking their supply from the radiator or from a separate tank, have supplied water or steam to the induction system.

So far as we know, once they were turned on, they all maintained a supply at a more or less constant, or at best manually controlled, rate. This led to an excess of water being supplied when the engine was not in a position to dispose of it, and to water remaining in the combustion spaces after the engine was switched off. The result was the generation of carbonic acid, which leads to rapid corrosion (and wear) of the bores.

Now it so happens that the conditions which lead to pinking are precisely those which enable an engine to dispose of any water which may be present in the charge. As the engine only needs water when it is in the "pink-producing" condition, it follows that, if the water can be so controlled as only to arrive at those moments, the corrosion snag should be overcome.

That is what the new Arnott device sets out to do. Water is fed to a float-chamber of normal design, and thence, via a control valve which governs the maximum flow, to a submerged jet. Controlling the outlet is a suction-operated valve which is the crux of the whole affair. When the engine is idling or on the over-run, there is maximum induction-depression, the valve shuts, and no water flows. Stamp on the accelerator and you produce the most complete breakdown of induction-depression: the valve opens fully and the full flow of water takes place. Intermediate throttle openings, and maximum revs. at the wider openings, produce a less complete breakdown of depression, and the flow of water is correspondingly less. There is a second pre-set control beneath the suction valve which governs the degree of opening for a given suction, in exactly the same way as the hexagon nut beneath an S.U. carburetter controls mixture.

On the test car, the 1 gallon water tank is over the driver's feet, feeding by gravity to the "Depinker" situated between the two S.U. carburetters. The consumption, incidentally, is approximately 1 gallon of water to 10 of petrol.

On this particular car it was an easy matter to make up a little bracket to attach the "Depinker" to the square-sectioned aluminium balance pipe between the two carburetters.

On other cars, a little ingenuity may be needed to devise a suitable mounting. The aforementioned mounting is convenient because it enables a very short pipeline to pick up induction-depression from the balance pipe. From the front of the "Depinker" a forked pipe leads water to a small nipple tapped (2 B.A.) into the carburetters between the piston and the throttle butterfly. On "fixed choke" carburetters, this tapping would be made at the point of greatest constriction, i.e., where the airstream would be moving quickest.

Now for the "Depinker" in use. Actually, on the car in question, it does not entirely stop pinking, but it does reduce it by at least 80 per cent. We should add that this car has a compression ratio in the region of 9 to 1, and having done nearly 8,000 miles since it was last taken down, was in a desperate state of "pinkage" when water was applied.

Pinking was immediately reduced from the intolerable to a degree comparable with that of the same car with a clean engine running on Discol. No alteration in petrol consumption has been noticed, but it must be remembered that the vastly improved tractability enables the car to be driven much harder. Also, finality of mixture setting under the new conditions has not yet been achieved.

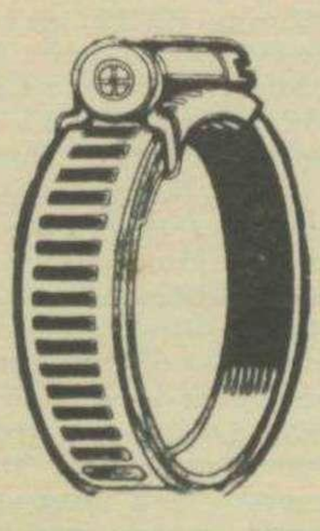
After about 300 miles, the car showed a tendency to oil its plugs, and we began to wonder, remembering the claim that this water-treatment puts an end to coke formation, whether it might have washed away the precious layer on the piston crowns! Actually, we suppose that the factors which cure pinking may also call for a softer plug: at any rate, a softer grade now gives results which are excellent.

Whether or not the principles governing the Arnott "Depinker" do successfully get over the bore-wear snag altogether, we cannot say. It will be up to Arnott's to conduct a test with two identical cars, one with and the other without the "Depinker," and measure their bore-wear after a given mileage. Meanwhile, we feel that, to anyone whose car suffers really badly from cesspool pinking, this "Depinker" may be a Godsend.

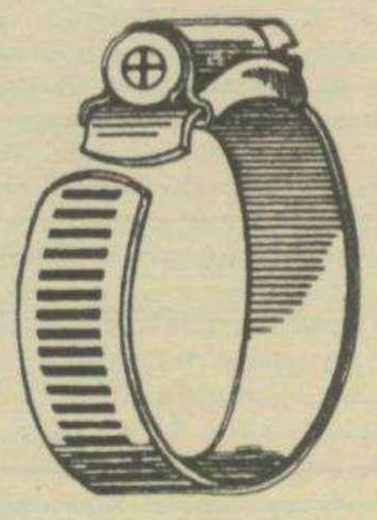
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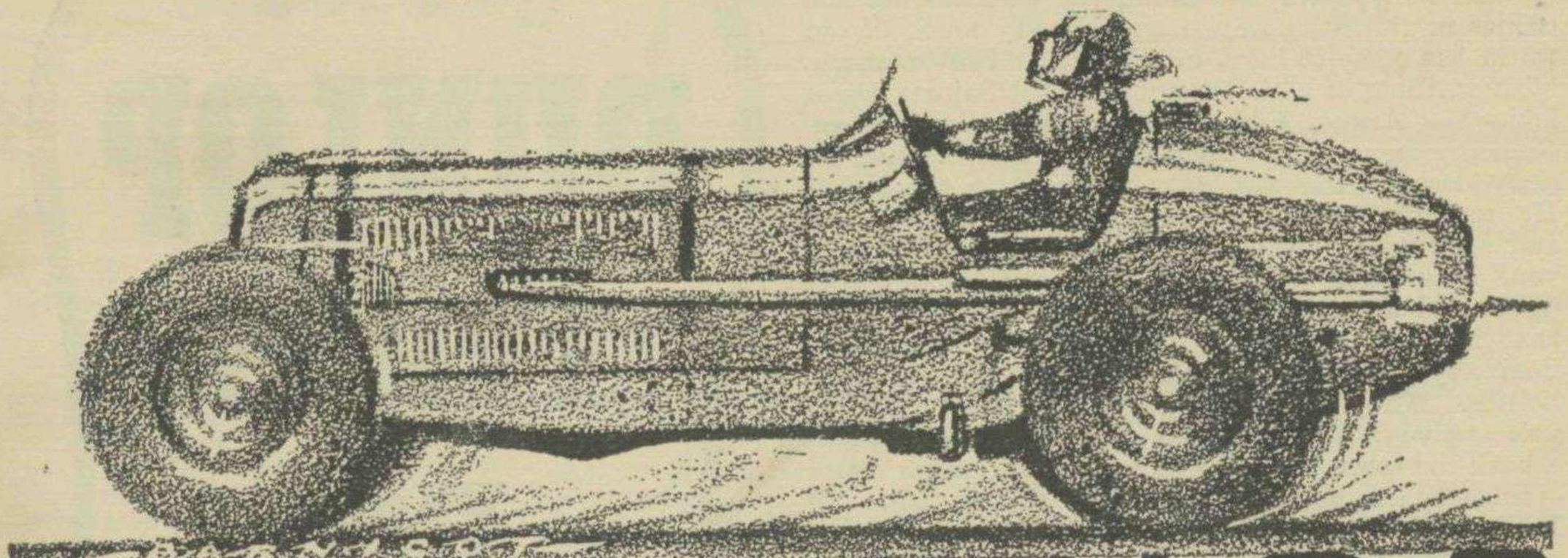
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RUMBLINGS

Heavy Metal Echoes

A RECENT article in "The Aeroplane" by Major Clement Hirtzel, O.B.E., who was in charge of aero-engine repair during the 1914-18 War, recalls those rather fantastic days at Brooklands when aero-engined cars were the chief attraction at B.A.R.C. meetings. For instance, you will probably remember the eight-cylinder 11¾-litre Wolseley-Viper, which Kaye Don used to race. It was a Capt. Miller creation, when he was head of the Wolseley Competition Department that later evolved the 200 Mile Race "Moths." The chassis was an old shaft-drive Napier and the motor a Wolseley-built Hispano. This particular engine, Major Hirtzel recalls, was the best engine we had for our S.E. 5a, until the advent of the Coatalen-designed Sunbeam "Arab," modified later by George Lanchester. Even so, the French edition had an average life before complete overhaul of only twenty hours, and if the oil-pressure fell below 100 lbs. per square inch, the centre bearing, which was loaded to 90 lbs. per square inch at 2,000 r.p.m., promptly failed. The oil-pump was located in the alloy crankcase and if the engine was run-up too enthusiastically from cold, a pressure of 250-300 lbs. per square inch would build up, resulting in distortion of the crankcase wall and, when the oil warmed up, loss of that centre bearing. Wolseley engineers largely redesigned and modified this Hispano unit and turned it into a splendid job.

The 400 h.p. twelve-cylinder Ford-built Liberty motor caused much excitement early in 1918 and was very "hush-hush" as introduced into our Service. Actually, the Germans had had complete specifications some months before, and a full description, with drawings, had appeared in the Journal of the S.A.E., including details of Henry Ford's method of cutting off a drawn tube at an angle and pulling out the ears, to form valve-pockets and guides above the cylinder. It was one of these motors which Zborowski, tiring of his "Chittys," put into a chain-drive chassis in 1923, to create the Higham-Special. The 27-litre motor ran too hot and the frame flexed, but a lap-speed of just over 116 m.p.h. was realised. It was left to Parry Thomas to get a lap speed of nearly 126 m.p.h. from it, and, known as "Babs," it was this car with which he set the Land Speed Record to 171.09 m.p.h. at Pendine in 1926, before his fatal accident at this very spot. The big engine did about 1,200 r.p.m. at 100 m.p.h., which is not unexpected, but what is surprising is that the weight, in Higham-Special form, was quoted as only 33 cwt., and it was disposed almost 50/50, with an excess of a mere 8 lbs. on the rear axle. During the last war, Lanchesters made R.A.F. 1a and Sunbeam "Arab" motors, Clement-Talbot repaired Rolls-Royce motors under R.R. experts, Allen's of Bedford built Monosoupape rotary engines, Humber and Ransomes, Sims and Jefferies the Clerget rotary, Renault repaired the tricky French Hispanos, while Gordon Watney's famous racing-car stables at Weybridge repaired R.A.F. 1a, R.A.F. 4a, Beardmore and other engines. Crossley later built six-cylinder Beardmore motors, one of our best light bomber units in 1915, and Sunbeam and Wolseley did their own repairs. Incidentally, Leonard Williams, now of Packards, was one of Major Hirtzel's able assistants. We may well congratulate ourselves that modern aero engines have a life nearing three times that of the best 1917 motors, in spite of much raised outputs. Certainly we should congratulate Rolls-Royce Ltd. on the new 1,250 h.p. rating of the "Merlin" running on 100-octane fuel, which gives our Supermarine "Spitfire II" fighter a maximum speed of around 387 m.p.h. at 18,500 feet.

RUMBLINGS—continued

News of Dicers

Some more news concerning the whereabouts and doings of folk who were formerly very much of our world has come to hand during recent conversations. Most startling of all is the rumour that Sammy Davis is in the Army; Eddie Wrigley, the popular Lea-Francis exponent, has been with the B.E.F. since the early days of the war, as a corporal in the R.E.s. He recently came upon a French breaker's yard, and such places being irresistible no matter where your enthusiast may be, he went within and duly discovered an authentic G.N. H. R. Godfrey says that between 1919 and 1921 the French Salmson Company produced several thousand G.N.s under licence. The V-twin tourers had cast-iron heads and i.o.e. valve positioning, but Salmson's brought out a push-rod o.h.v. job with bronze heads, hairpin valve springs and a body having a boat-shaped tail. If Eddie has discovered one of the latter, let's get it over here somehow!

Then Jack Fry's house has been burned to the ground, so it will come as a relief to mention that his stable is intact. His 4½-litre truck-tailed Bentley was pushed clear just in time and the rest of the cars were a safe distance away. They comprise the 1908 T.T. Hutton, which is owned by a syndicate of 50/- shareholders, John Lander's "Double-Twelve" 4½-litre Bentley, Peter Clark's 3-litre Red Label-with-mods. trials Bentley, John Gamble's ex-Evans M.G. Magnette, a 1906 or thereabout De Dion, a 1924 Targa Alfa-Romeo, a Lancia "Lambda," two Fiat 500s and a hack Morris Eight. Lander is in the R.E.s and Gamble in Tanks, while Marcus Chambers, who shares this establishment with Fry, is doing coastal patrol with the R.N.V.R., and Jack daily awaits his commission in the R.A.S.C. Roddie Seys is in the Service and ran a J2 M.G. Midget and a 4½-litre T.T. Bentley until recently, though expecting to go overseas any moment. Down at Frazer-Nash's several well-known motoring personalities are Instructors in Automobile Engineering to the R.A.O.C., including picture-catcher Klemantaski, who runs an N.S.U. Fiat 1,100 cabriolet, Tett, Bourne of "The Motor Cycle," and Lush, while amongst their pupils is Stuart-Wilton, who still contrives to motor in a variety of cars, including a fine 3-litre Bentley. Gordon Wilkins, "The Motor" journalist, was there as an Instructor for a time, but is now with the Experimental Dept. of the Bristol Aeroplane Co. Boddy, deciding that stretcher-party depots are too much like concentration camps, is now in the London Auxiliary Ambulance Service. ■

Odd Spots

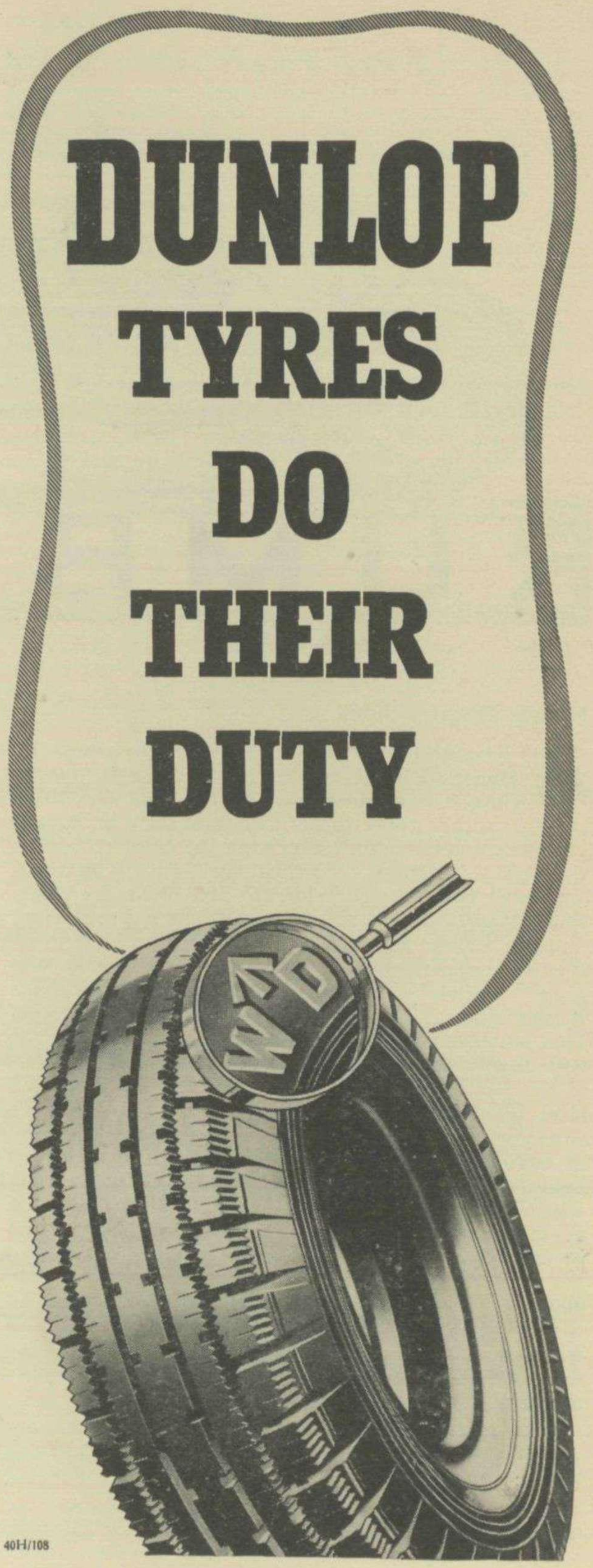
Prince Chula is working on a biography of the late Richard Seaman.

* * *

Congratulations to Reggie Tongue on his recent engagement to Mrs. Erica Seaman.

* * *

Fitt's twin Centric-blown Hudson is laid up until the Armistice.



Letters from Readers

Sir,

Allow me, please, to take umbrage at some of Mr. Clutton's remarks in your March issue, wherein he dares to compare the incomparable "30/98" Vauxhall unfavourably with the 3-litre Bentley. Hyperion to a Satyr!

I had a lot of experience with both these cars, but the difference in performance was so colossal that I never thought of them as being in the same class. The top-gear acceleration of a good "30/98" is so effortless that one can drive fast on crowded roads without drawing attention to oneself, whereas, in order to produce any acceleration at all from the 3-litre Bentley, one has to play at boy-racers with the gearshift, the resulting crescendo of exhaust and gear noise causing heavy sneers from the Pedestrians Association. If I object to the vibration periods of the 3-litre's engine, Mr. Clutton will no doubt call me a sissy, but I think he will agree that, through some almost supernatural phenomenon, a "30/98" will run 100,000 miles without any engine replacements, whereas after 40,000 miles the bearings of the 3-litre will be getting a bit spent. Furthermore, which engine would Mr. Clutton prefer to decarbonise? I admit that Mr. Bentley would sell you some brakes with his car, whereas Mr. Vauxhall expected you to make your own.

The majority of "30/98s" were originally supplied with very low compression pistons and an enormously heavy flywheel, a state of tune roughly equivalent to the "Blue Label" Bentley. One had only to put longer "corks" in one's cylinder, turn most of the flywheel off, and fit decent exhaust valves, and one could beat up almost anything, till quite recent years. It was only the very early O.E.s that had the type of con.-rod which was subject to rapid fatigue, the later ones being quite blameless.

It's so long since the "30/98" was made that most of them now have covered astronomical mileages, so that their speed and reliability have at last been lost, but in their day they gave a splendid combination of performance and reliability, and running costs were incredibly low.

I am, Yours etc.,

JOHN V. BOLSTER.

Wrotham,
Kent.

[On with the battle!—Ed.]

* * *

Sir,

I would like to add my car to your census. It is a type 55 Frazer-Nash-B.M.W., built late 1935. It is licensed for the year, and I get a small extra of pool, in order to toddle around and look for steel and machinery, and to make apologies. This car appeared very ingloriously at the United Hospitals Donington fling last June or July. She tottered round in a hell of a mess, but she did complete her mileage. Trouble started when the rear universal, which had probably been cracked in a trial the previous Sunday, exploded a couple of days before the event. And I just could not get hold of one. Scoured round several second-hand B.M.W.s and the shafts were all different. Finally, Hardy Spicers were very decent, and offered to rush me through a special shaft and two universals if I could make adaptor flanges. They made this in two hours.

This was all complicated by the car being under the none too good guarantee of an almost bankrupt "Sports Car Specialist" of this goddam town. I finished making the adaptors about 8 p.m. on Friday night at our works, and the car was running at about 10. Then I had tea-supper, and a very much deserved meal.

Set off to Donington hoping to have time to tune her up Saturday morning. Halfway there, the Klingerite gasket blew. There is a garage on the way, with an interesting Silver Alvis, so stopped there on spec. and tore the head off with their help, and fitted an ordinary Copper Asbestos. It was getting on for 12, so arrived at Donington, feeling dirty, hot, and bothered.

On the track at last, moving away nicely down to Melbourne. Then hell got loose. Relief at thinking all was over, but pulled in at pits and found rocker shaft had come adrift. Slammed it back, set tappets just to have enough clearance to turn push rods, and tootled round a few laps.

Troubled in the first race by rain, which did not appear to worry others. The pump had come adrift, last plugs cooked to bits. And so the poor old B.M.W. finally found herself straining round miserably from scratch in the last race, and finally, being passed by nearly everyone there.

Forgive all this scrawled reminiscence, but rather cut off from usual enthusiast friends. Would willingly stand you drinks in exchange for conversation if in the city. O.K. with you? [Too busy A.R.P.-ing.—Ed.]

Am building up an old Frazer-Nash, with an A.C. engine, which I hope will venture out for a month this summer. Last venture was a journey to Cambridge last summer, which began with running out of road when a front tyre burst, and the track rod slid apart. And finished with a most glorious blaze, which brought out a fire engine, and burnt up the wiring, the carbs, and a few gallons of petrol. I got her home in a highly flammable state, with three old Morris S.U.s.

But she is rejuvenated, and painted to look like the fire engine which saved her.

God bless you all for MOTOR SPORT.

I am, Yours etc.,

BILL MASON.

Birmingham, 15.

* * *

Sir,

As you are conducting a census of sports-cars in use to-day, may I take up a corner of your correspondence columns to enquire as to the present whereabouts of the following machines:—

B.S.A. three-wheeler	GK 7575
Morgan ,,	UY 100
M.G. F-Magna	GX 717
Alvis 12/50	YT 2202

I should be very glad to hear from the present owners of any of the above.

I should also like to hear from the owner of a Meadows-engined 'Nash who is anxious to find a good home for his faithful steed.

I am, Yours etc.,

PETER CLARK.

London, W.2.

* * *

Sir,

Continuing your interesting and useful series on tuning and modifications, could we not have an authoritative article on the 30/98 Vauxhall, beloved of vintage car owners?

In referring to this grand old motor, one always hears dark references to its "lack of deceleration." Has any enthusiast experimented with Dewandre vacuum servo operation in connection with this chassis?

I remember that the original Vauxhall Villiers in 1929 used two enormous Clayton-Dewandre vacuum servos mounted on the outside of the chassis, and that in its later form this projectile used four vacuum servo cylinders, one for each wheel, controlled by a single master valve.

To point the fact that this system of operation does improve braking beyond all recognition, *without* any alteration to drums, linings, cam levers and linkages, I would tell you that recently I had occasion to replace an elderly Austin 16 saloon, a marque never famed for its braking, by a car of similar type and age, but fitted with a Dewandre servo; the difference in braking of these two cars was positively amazing, and to prove that this was solely due to the method of operation, the servo was removed for test, when the braking reverted to the indefinite character of its predecessor.

I am, Yours etc.,

H. L. BIGGS.

Enfield.

[See Cecil Clutton's article in our March issue.—Ed.]

LETTERS FROM READERS—continued

Sir,

I found the article by Mr. Cooper and the letter from Mr. May very interesting, especially as I am trying to make up my mind whether or not to purchase an Alvis that has been offered to me for something under £10. This particular car appears to be a special one, but I am unable to find out anything of its past history, and I wondered if any of your readers knew anything about the car.

It is an aluminium two-seater with a rear tank (pressure feed), and was first registered in October 1932, registered letters P.J. and looks something like an Allard from the back. A large oil tank is slung in front of the dumb-irons and lubrication is on the dry sump principle. The gear lever is outside and works in a large gate inside the body, the hand-brake being inside as well. There is an external Brooklands exhaust system on the off side, large six inch rev. counter and speedometer, and separate aero-type rocking switches for each lamp. Triple Hartfords look after the damping all round and the wheels are the open hub type fitted with 5.25″×18″ tyres. The headlamps are Marchal. Engine and chassis numbers are 3783 and 89201 respectively, the bore being 68 mm., and the capacity 1,496 c.c. The whole car is in very good condition and has obviously been the apple of someone's eye. Provided I can find somewhere to keep it (my own garage is only big enough to house my Centric-blown P.A. M.G. Midget which I am still running), I think I shall buy it as a very good example of a fine car.

I am, Yours etc.,
A. E. H. ANTELL.

42, Ritherdon Road,
London, S.W.17.

* * *

Sir,

Congratulations on your recent "bob-fulls," it is good to read that kindred souls are investing in the only "Motor Sport" possible now, whatever the cost. The omission of the "Letters from Readers" page in the February issue worried me not a little. In these restricted times it is good to read how others are managing, to say nothing of the visions aroused by past adventures.

Your contributor who completes the chapter "Club News" has a feverish follower in the writer. There is nothing I enjoy so much as his lively penmanship, and his evident appreciation on all matters motoring.

For my part, by far the most enjoyable portion of motoring life has been spent in the saddle of a solo 350 c.c. motor-cycle, manufactured by a leading firm. There is nothing like it for a sense of well-being, freedom, and go-anywhere sensation.

Two years ago my home town mustered a round dozen or more lads riding an assortment of fast bikes all of whom competed at many of the fairly local grass-tracks, did some small-circuit racing, and managed an occasional blow-out at Donington.

Experience was gained by early rising on Sunday mornings throughout the summer, a swift ride into nearby Wales where the bikes were stripped, straight-throughs fitted, hot plugs slipped in, and for three hours or so the jobs would "hog it," across a well-known, and at that early hour, completely deserted stretch of moorland.

Many were the adventures; speeds of quite an exciting order were achieved frequently and some splendid riding was witnessed.

During the morning a fifty minute interlude for the solo-riders was usual whilst a sidecar of some repute, and about 600 c.c., was wheeled on to the road and we would be treated to riding and skill of the highest order—in fact, this combination of men and machine finally broke the Donington lap record and won a race in record time.

Later, breakfast would be enjoyed in a little country café, always prepared for our Sunday morning arrival, whilst the pros and cons of gear ratios, compressions, types of cylinder heads and many another item of bike construction were discussed in true motor-cycle vernacular.

Without doubt these early morning "do's" profited the lads not a little, since those with motors capable of the knots did quite well apart from the success mentioned above. One 350 c.c. exponent returned from Ireland with the Ulster Grand Prix Governor's Trophy Prize (incidentally, a trophy of truly wonderful proportions, and inscribed with a nice choice of previous names), the same rider winning a heat at Donington in the rain.

Another of the lads succeeded in his heat in the 500 c.c. class on a none too modern motor, and had the experience also of leading a group of well-known competitors by a distance of most satisfactory measurements till in the third lap the plug lead flew off to the extreme disappointment of our particular party of spectators.

The writer also managed a 350 c.c. win at Donington, collecting the lap record en route to his own amazement—though truth to tell the bike went like a bomb, the rev. counter reaching 7,500 r.p.m. in every gear, *including top*, despite a suggestive yellow line drawn across the rev. dial at 7,000 by the manufacturers.

Alas! As the elderly are prone to say, "Those were the days!" Transport is now brightened by ownership of a secondhand Morgan 4/4—a truly wonderful little car with a particular flair for road-islands, and sufficiently exclusive for recognition signals to occur in passing between drivers of this marque.

As it is some time now since you reported a bike meeting, much of the foregoing may not be of interest. It is, however, a brief account of how a small band of enthusiasts made much happiness out of little bags of gold and a deal of personal effort and comradeship.

I am, Yours etc.,
K. DIXON.

Liverpool, 9.

Sir,

I have been an ardent reader of MOTOR SPORT for the past four years, and there is therefore no need for me to tell you how glad I am that you are carrying on in these hard times, and allow me to wish you every success in the future.

The article in the March issue called "The Appeal of the Vintage Sports Car" was of particular interest to me, as quite a lot was said about my own type of car, a 1931 Anzani-engined Frazer-Nash.

The Nash represents my sole pride and joy, and is now in the first stages of running in after a thorough overhaul and rebore, and by way of interest for your census, I am taxing the car till the end of the year. I should very much like to meet a fellow enthusiast who has, or is running a Frazer-Nash now, as a few hints on maintenance, particularly with regard to the chains, would be invaluable to me.

I am, Yours etc.,
GORDON WOODS.

"The Rhallt,"
Burgh Heath Road,
Epsom, Surrey.

* * *

Sir,

I can't really understand how Mr. Cecil Clutton in his very interesting article "The Appeal of the Vintage Sports Car," managed to leave out that most fascinating vintage barrow, namely, the side-valve Aston-Martin of around about '24, '25, and '26. I was very disappointed that he did not even mention these old thoroughbreds, as at the moment I am running one of the 1924 short chassis models. I believe that Mr. Clutton has actually seen and ridden in this car himself, when my elder brother was running it.

Personally, I would very much like to read something of the history of these old Astons, written by such an eminent vintage specialist.

I am, Yours etc.,
IAN A. FORBES.

London, S.W.3.

[Space is limited in war-time, and Sam Clutton had to leave out much he would otherwise have put in. Surely we dealt fully enough with the s.v. Aston-Martin in the issue of April 1938?—Ed.]

* * *

Sir,

I should be interested to know whether any of your readers when designing or constructing "specials" have given thought to the possibility of using commercial vehicle motor-coach engines? Given a suitable rear axle ratio I would suggest that some remarkable performances could be obtained, especially if the engines were "hotted up."

Engines that I had in mind in this connection were the 4⅛ bore Leyland (120 b.h.p.), large bore Maudslay (145 b.h.p.), large bore S.M.G. (Sunbeam) (145 b.h.p.), Morris Imperial (120 b.h.p.), and Albion (110 b.h.p.).

LETTERS FROM READERS—continued

The Maudslay especially is of interesting design as it has an aluminium block with wet liners and hemispherical combustion chambers with inclined overhead valves, which latter feature is also possessed by the Sunbeam and partly by the Morris and Albion.

Any comments or results of experiments by your readers would be appreciated.

I am, Yours etc.,
J. W. POWELL.

London, W.12.

[The snag is the large size, making for excessive taxation at 25/- per R.A.C. horse-power.—Ed.]

* * *

Sir,

I am writing you in hopes that you may be in a position to contact someone who has some 1½-litre motors for sale.

Owing to present conditions, there should be quite a number of race cars for sale at reasonable prices.

I am building some midget cars, and I need these 1½-litre motors to complete my work.

If you can help me in this matter I would greatly appreciate it.

I am, Yours etc.,
LEMUEL LADD.

Oak Hill Garage, Inc.,
1106, Commonwealth Avenue,
Boston, Mass.,
U.S.A.

[The Oak Hill Garage, Inc. claims to service Mercédès-Benz, Hispano-Suiza, Rolls-Royce, Alfa-Romeo, M.G., Duesenberg, Bentley, Bugatti, Lancia, and Cord cars and to have a fully-equipped machine shop for "overhauling foreign and domestic cars, aeroplane and marine motors." So it would seem to be exceptional for an American garage and someone over here might well do a good business deal with it.—Ed.]

* * *

Sir,

A hearty sigh of relief from afar with the assurance that you are "carrying on." A few glimpses of "The Sport" down under, or more exactly in Victoria, might be of interest. Trials, hill-climbs and road races are enthusiastically contested, and the entries reflect the popularity of specials, the motive power generally supplied by V8 engines of the Ford type.

A recent hill-climb at Christmas Hills (Victoria) produced the usual crop of these specials. Fastest time of the day (30.28 secs.) was made by a monoposto racing Frazer-Nash with a Ford V8 engine, gearbox, and the usual F.N. final chain drive. The original engine from this car, complete with blower, powered what looked to be a much-modified Lancia chassis, with all four wheels independently sprung. Making its first appearance, this hybrid looked quite impressive as, *sans* body and with blower whining, it sought to conquer inevitable teething troubles. Possibilities, too, were shown by a Riley chassis, its 12 h.p. engine replaced by the 30 horses of a V8. Honours of the day went to the stout effort by a 1913 Delage, which won the 1914 Indianapolis Race with four-cylinder engine, of at least 5 litres capacity.

The half mile (approximately) Christmas Hills course has been called the Shelsley Walsh of Australia. From the start, the cars tackle a deceptive rise (about 1 in 10) for about 150 yards, a right turn to a "wind up" dip, over the spillway of a dam (about 200 yards) to a short (50 yards) 1 in 3 rise at the top, of which a long bend straightens out for the finish (about 1 in 6). The climb is, incidentally, bitumen surfaced and about 12 feet wide.

The record for the hill stands to the credit of the Kleinig Special (29.72), which, named after its owner, has a Hudson eight-cylinder engine in an M.G. Magna chassis, and dashingly driven, is particularly fast, as may be gauged by the fact that the present time is a split second faster than the record established by Peter Whitehead in his E.R.A. Although the latter car may be an old model to many Old Country enthusiasts, its appearance here was an eye-opener to many. Incidentally, speaking as onlookers (unfortunately), a note of congratulation to its driver for what might be termed his unassuming efficiency.

Road-racing in Victoria has been carried on mainly on a 3¾ mile macadamised course at Cowes, on Phillip Island, and it would be possible to write for hours on cars and drivers that have won and "also ran"—an old Morris, underslung and considerably hotted-up, but retaining the distinctive bull-nose radiator and Sankey wheels, outwitting the handicappers, and romping home in a 100 mile Grand Prix at an average of over 58 m.p.h.—a blown Austin (raced at Brooklands in the past by Hall) successfully warding off a strong Terraplane challenge over the last laps to cross the line on three cylinders in front by the narrowest of margins—a hot 1938 10 h.p. Standard tourer, whose driver's clever cornering was revolutionary, and whose mechanic's performance eclipsed the acrobatics of side-car passengers in motor-cycle outfit races—the aforementioned Frazer-Nash (in its original form) the high first gear of which necessitated the assistance of pushers off to get it under way—the repeated consistency of M.G.s, one "P" type in particular—the exceptional enthusiasm of a trio of brothers whose courageous efforts with old type Bugattis have been long dogged with misfortune—another special, a Monza Bug. chassis with the inevitable V8 engine, the speed and acceleration of which far outstripped its safety—the present holder of the lap record, a K3 Magnette (ex "Bira," ex Lord Waleran), driven by the late C. A. Dunne is in our opinion the finest car that we have seen on this track. (Whitehead's E.R.A., by the way, did not compete at Cowes.) Tragically enough, in the role of spectator at the motor-cycle races on this track, Dunne lost his life in a road collision. We would pay homage to one of the keenest and cleanest followers of The Sport.

We have here what must surely be the trials director's dream, as courses galore up to 200 miles, embracing either rough stuff (much publicised Colonial conditions) "pansy" varieties or simple petrol tests may be planned with the route never exceeding 30 miles distant from the central starting point (Melbourne). Our Country Roads Board would take exception to this remark as they have done a very fine job, but these Colonial conditions are there if one looks for them. Limited (again unfortunately) participation in these trials has only whetted our appetite for more. First attempt about two years ago was made in a 14 h.p. Hillman, vintage 1928, whose solidity subdued its agility. A note of appreciation, however, to the makers of this stout old job which is still in daily use despite the vicissitudes which are its constant lot. Last attempt was in a 1926 (?) model Frazer-Nash, the high reverse gear of which lured the skid demon and brought about disaster. This car, however, carries its years lightly, and in acceleration, road-holding, etc., can still hold its battered bonnet ahead of the majority of the fancy Yankee grilles, and it is a constant source of amazement to the uninitiated.

Up to the time of writing, Australian motorists have not suffered the iniquities of rationing, or black-out lighting, although petrol has risen in price and first grades (containing ethyl) will soon be unprocurable. Sport has been but slightly curtailed, and but for the distance separating us we would gladly offer safe (?) keeping for anybody's racing job for the duration.

Seriously, though, let us congratulate you on keeping the flag flying; a front wheel skid to Adolf, and may the Sport be again at full revs. before long.

We are, Yours etc.,
FRANK G. LIVINGSTON.
A. S. MCCOLL.

[We would thank these enthusiastic Australians for a very interesting letter. We have only cut those parts which are already covered by the Australian news item elsewhere in this issue.—Ed.]

* * *

Sir,

I was very interested in the article on the cars produced by Scale Models Ltd., in the February issue.

I should like to know if you are aware of any other racing people in the R.A.F. Volunteer Reserve.

I was called up at the beginning of war, and having stowed away the Austin for the duration, I have been posted here for Flying Training.

I came across R. Jarvis at my previous station, but have not met any other enthusiasts, and I thought you might know if anyone else is in this branch of the services.

With best wishes to MOTOR SPORT in its efforts to keep going despite the war.

I am, Yours etc.,
W. D. CASTELLO,
(Sgt. No. 745870).

R.A.F.

[We were enquiring for this Austin only a few days before Mr. Castello's letter came, when his garage on Kingston Hill did a little job for us, when trouble overtook our much more sober Austin.—Ed.]

THE NATIONAL AUTOMOBILE MUSEUM AT TURIN

OF all the towns in Europe in which to look for antique motor-cars, Turin must be one of the most promising. I was not surprised, therefore, when, a couple of years back, there were strong rumours of vintagery cached at the Fiat works, including the little twelve-cylinder 1½-litre jobs which won the Rome G.P. in 1924 and were the last "big-time" racers that the Fiat people turned out.

With this rumour in mind, and hopes of a pre-war "giant" in my heart, I set out for Turin early in 1939, using a Fiat Balilla as a stalking-horse, and presented myself *chez* Fiat. Alas, the rumour was no longer true. All the old cars which had been in a corner of the works had recently been broken up, to provide *lebensraum* for "manufactures of national importance." One hope remained, however, said Lord Fiat's representative; somewhere in the town was a collection of old motors, assembled by the Conte Biscaretti, whose father helped to found the Fiat firm, and who, himself, after doing some Victorian motor-racing on a de Dion tricycle, had been publicity man for Itala and then for Lancia.

Lelio Pelligrini, of Fiat's, who used to race Alfa-Romeo cars just before the Monoposto epoch, kindly introduced me to Count Biscaretti, a charming person, and what America might call an "Ace Enthusiast." After admiring the beautiful models of cars which he makes, we drove to the museum while he explained its origin and aims. It appears that the City Fathers had suggested the idea of a National Car Museum to the Duce on one of his visits to the town and found him thoroughly enthusiastic. Looking around for a site, they hit upon the perfect one. The new Stadio Mussolini was just finished, and the great circular gallery which runs around beneath the tiers of seats is ideal—spacious, well-lighted, modern, and all on one level.

In a very few years Count Biscaretti, who was entrusted with finding exhibits, has got together a marvellous collection of cars and chassis. This time a year ago there were already more than eighty on show, and each had been thoroughly dismantled and checked over before being brought back to practically showroom condition. Walking through the Museo Nazionale is more like being in a West End motor showroom than a museum. And as if that were not enough, downstairs in the workshops are more than a hundred other old cars waiting to be dealt with.

Italy must be a paradise for the old-car hunter, for up till now there is only one buyer in the market: the Museo, in the person of Biscaretti, its curator, and his finds make one's mouth water.

While not so strong on the really old carriages as the French museum at Compiegne, there are several of the early de Dions, including the tricycle (described on its ticket as "Agile e nervoso") and the famous four-wheeler with modern grand prix back axle. A beautiful 1899 Panhard with "coup de poing" lubrication has the gearbox cover replaced by glass to show the construction of the first "barbarous" gear-shift devised.

Opposite the entrance stands the immense steam Landau, one of five constructed by Prince Bordino in 1854, quite dwarfing, as it is meant to, the Fiat 500 set under its lee. Nearby are two little gems. The first, an early comic, is a sort of steam-driven bathchair, in which the driver sat behind the boiler—which, like the chimney, was covered with wooden laths—and steered the small front wheel with a long tiller, peering the while through the smoke cloud. The other gem is a notable contrast. A Fernardi motor tricycle, made in 1895, which has overhead valves and a detachable cylinder head.

The Edwardian rooms are richly endowed, and give a good idea of the development of the motor car before the war. The cars are mostly Fiat and Itala, in a full range of models, from a 1902 Fiat which gave the King of Italy one of his first rides, to the Itala limousine of 1908 which used to belong to Queen Margarite.

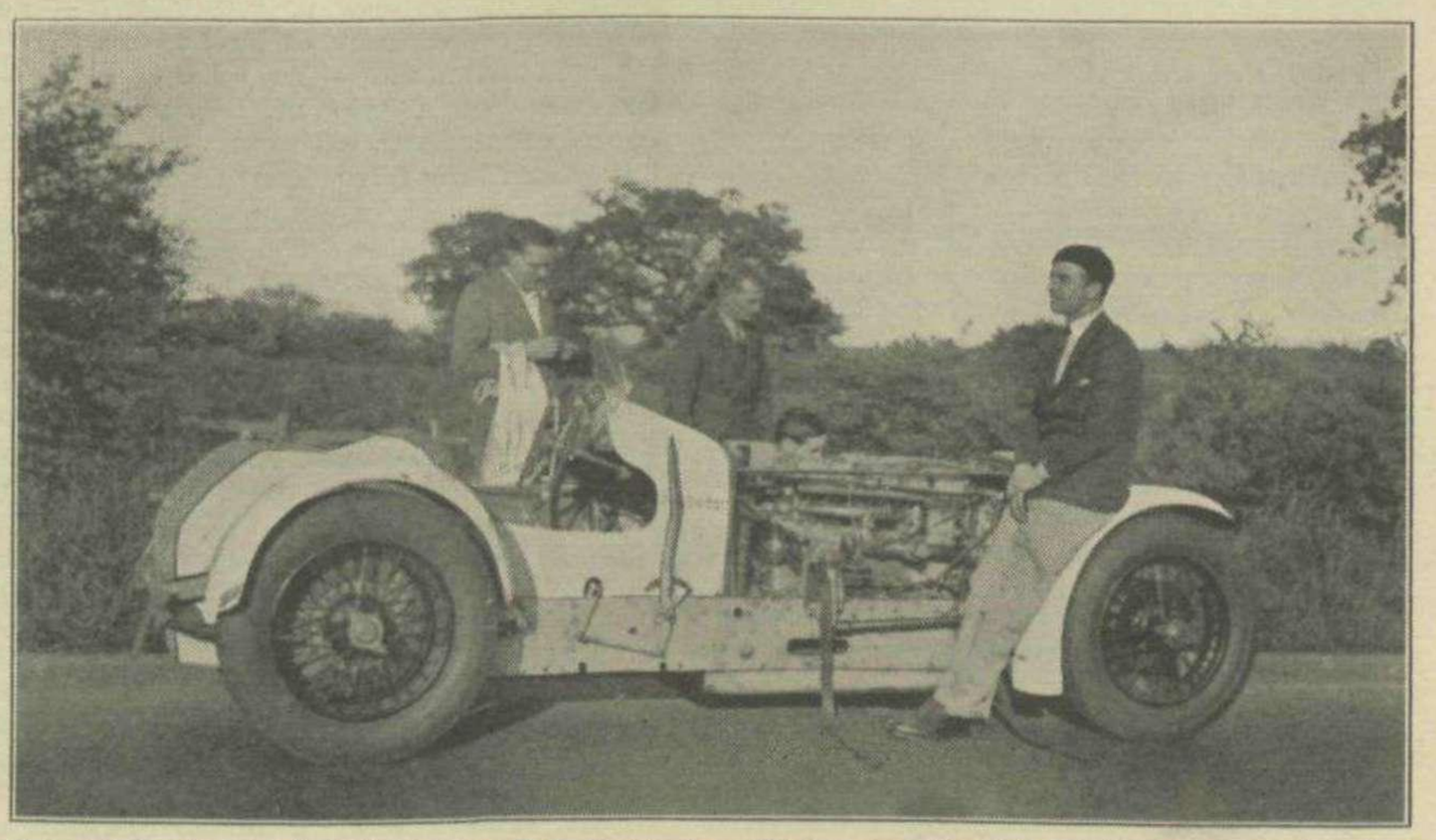
The racing enthusiast has his hopes raised for a moment by a red six-cylinder Fiat, but it turns out to be merely a mock-up, used in a recent film. However, there is the genuine article next door, the 40 h.p. Itala which won the great race from Pekin to Paris in 1907. By driving 16,000 kilometres in forty-nine days its pilot, Prince Borghese, and his two friends set up a record that is not likely to be beaten, for they won the race by a margin of two *months* from the small car which came in second. The car is a quite ordinary four-cylinder, with orthodox chassis and springs, and she must have been immensely strong. However, despite the strength and despite the makeshift wheel which was knocked together by a moudjik at short notice in central Russia, she still touched 65 m.p.h. after the race was over.

The moudjik's wheel is also in the museum, and is a most creditable bit of work.

Unfortunately for the museum, as yet no examples of the great pre-war "giant racers" have come to light, though the writer would rather see them rumbling up Prescott than standing in a museum, anyway. However, Fiats did save one of the 1914 Grand Prix cars from destruction, and she stands at the end of the last gallery, complete with the front-wheel brakes fitted on the eve of the race to try to get even with the Peugeots. Motor trouble made them unnecessary. The engine is a four-cylinder overhead camshaft, and would make a pretty fellow to the Opel and Mrs. Peter Clark's Mercédès.

Standing wheel to wheel with the Fiat are a 1928 racing Maserati, the gift of the works, and the most successful Italian racer ever made, the 1932 Tipo B Monoposto Alfa-Romeo, adorned with a list of its battle-honours.

A visit to the Turin museum makes a marvellous side-trip for anyone on the Continent with a car, and as soon as this vexing war is over the writer intends to re-visit Turin, driving something aggressively pre-synchromesh. Pope did the trip from London in twenty-four hours on a rotary-valve Itala. Has anyone got one to sell?—D. B. T.



Raymond Mays (right), who has been travelling considerable distances recently in attending club socials, is seen here with a one-time mount, the 3-litre Vauxhall Villiers

NEWS FROM AUSTRALIA

A CORRESPONDENT—James Gullan, of Melbourne—sends us the following news of racing in Australia. In spite of the war, motoring enthusiasts over there have been enjoying a certain amount of competition. We envy them, for it seems that only neutral and enemy countries will see any racing in Europe this season. Our correspondent raced one of the 5-litre straight-eight Ballot cars last year until a broken rod and a hole in the crankcase eliminated him. The remains of the engine were sold to Heal who has the only existing sister car. Gullan has since fitted a Ford V8 engine in the chassis. He writes :

Owing to the war conditions out here (dammit), there was no race at Ballarol, but the races were again held at Lobethal, South Australia. Last November the 750 c.c. Car Club of Victoria held speed trials at Phillip Island, Victoria. They consisted of a standing quarter-mile and a section of the road marked out from one side of the island to the other; the event was run on a rough gravel road, part of the old road racing circuit at the island now used by motor-cycles only. In the quarter-mile acceleration test I was first in 18⅘ seconds, having wheelspin as can be imagined. The car was showing about 90 m.p.h. over the finishing line. Second was W. Whitechurch's S.S. Jaguar in 21 seconds, and A. Hay's V8 Special was third, in 22 seconds. In the speed trial, the Ballot was first, averaging 99.8 m.p.h. for the distance from a standing start, the S.S. Jaguar was second, clocking 96.5, and the V8 Special was third, at 89 m.p.h. About forty cars took part in the event, which was electrically timed by the most intricate apparatus I have ever seen. Except for a Singer Le Mans getting out of control and overturning, the event was run without mishap. The top speed of the Ballot was 108 m.p.h. on the rev. counter [very fast for a V8 Ford—Ed.]. The Ballot broke the previous year's records by quite a bit.

Getting back to the races at Lobethal, these were a 100 mile and 50 mile event, the 100 being the big race, and the 50 a "flat out" for the cars that were still in one piece. I will give you an idea of the cars in the races as you may be interested in some of them.

The races are handicap events owing to the difference in cars in Australia. The limit car was a 750 c.c. Austin, that weighs 7 cwt., and laps the circuit of thirty-nine corners in 8¾ miles at 72 m.p.h. average. Owing to the marvellous road surface I finished up taking all but seven corners flat. As Colin Dunne, who owns the K3 Magnette says—"drivers are rated by the number of blips taken to go through a corner," although this depends of course on the speed of the car. The Austin had 24 minutes start in the 100 mile race from the 2.3 Alfa-Romeo of Alf Barret, who did the fastest lap at 93 m.p.h. before his differential went. The Austin was followed by about nine M.G.s, T. & P types, and a Brooklands Riley was off next. After this bunch came V8 Fords and Terraplane Specials : these were off about the 12 minute mark. The Miller straight-eight that was used by Zborowski was in this bunch, but as the owner drives it to work every day, it should be pensioned off. Next was the V8 Special owned by J. Phillips. This is the most successful car in Australia, having won something like nine races. Next was a bunch of the cars that win most events out here (hill-climbs, etc.). C. Dunne with the blue K3 M.G. that was once owned by "Bira." Dunne is a very good driver : he is the idol of the young boys out here, owing to his spectacular driving and the scream of his car. It was much noisier than Peter Whitehead's E.R.A. when both cars were at Bathhurst last year. Top speed about 115 : lap speed 84½.

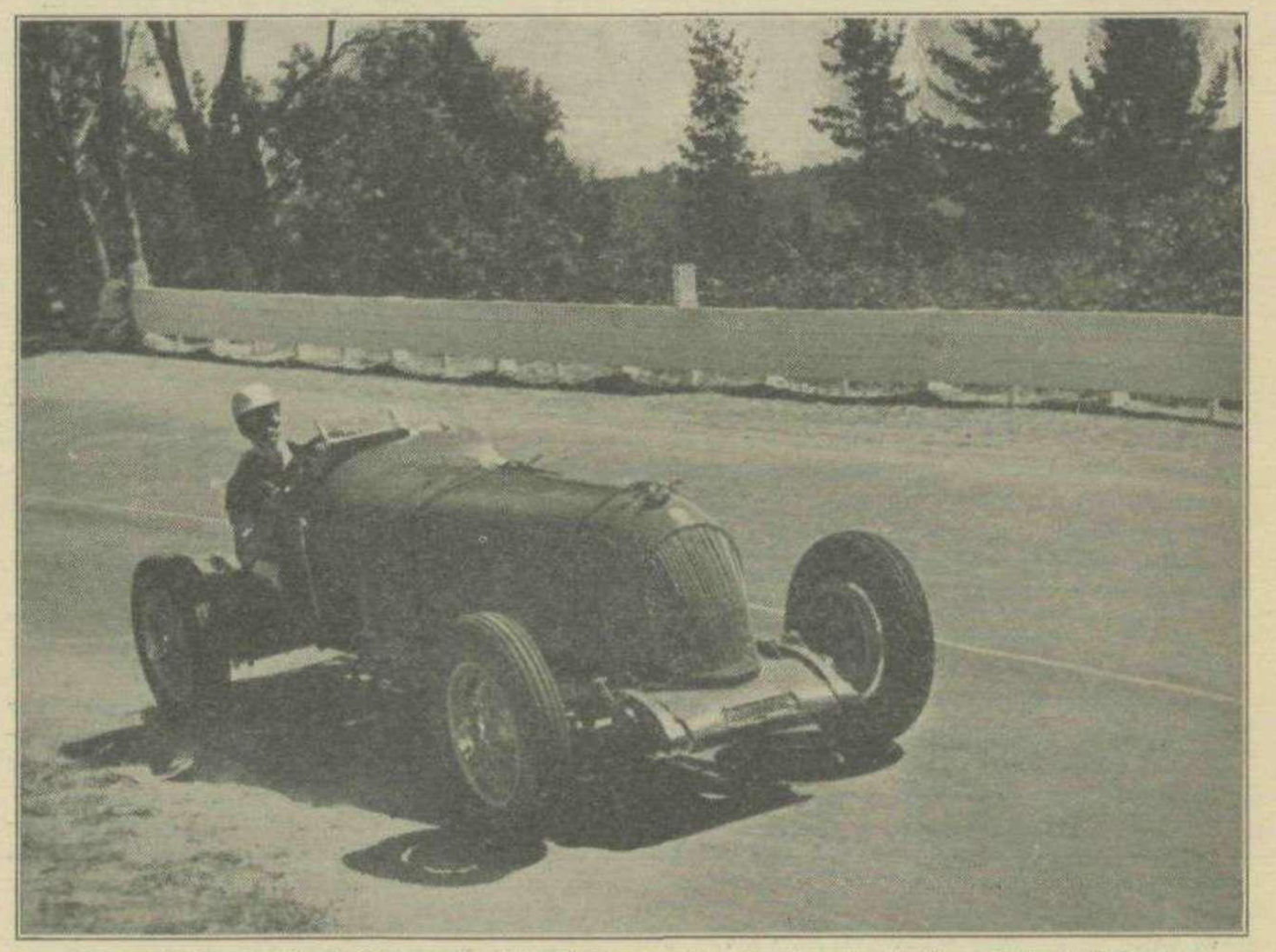
The next car is Alan Tomlinson's T-type M.G., which won the Grand Prix last year. It weighs 11½ cwt. and is supercharged. There is very little between these two cars, and Tomlinson laps at about 84.

Next was the 2-litre Ballot imported into this country by A. Cooper some years ago. It ran off the road at Phillip Island, killing the driver three years ago, and is now fitted with a V8 motor with two carburetters and Scintilla mag., and has been beautifully rebuilt as a single-seater. It did 108 in West Australia and laps at 84.

Then there was the Frazer-Nash of Tim Joshua ; this is also fitted with a V8 motor and did one lap at 87, but is very hard to drive. The Ballot of mine also started with these four cars. One minute behind us was Frank Klienig driving a Hudson Eight-engined M.G. K3 chassis. This is fitted with four carbs., and has a top speed of about 130. Klienig has earned the title of "Dirt Track Charlie," owing to his spectacular driving, and he has broken the records put up by Whitehead's E.R.A. Off scratch was the Alfa-Romeo.

The first lap of the "100" was terrific as far as these five cars were concerned. For the first five miles the cars were never more than 40 yards apart, every one as flat as could be. Alan Tomlinson got out of control, knocked down eight white posts at the side of the road, then went over the side of the hill. Alan had two ribs broken, one piercing his lung, and his condition was very serious, but he is improving. Then the V8 Ballot from West Australia blew up, wrecking the motor ; the Frazer-Nash went next, leaving only the M.G. K3 and myself. It was very hot, about 102°. The Ballot boiled after about six miles, so I only cruised around, finishing 10th after stopping at the pits for 5 minutes. Out of six V8s that started only two were going at the finish : most of them went out with cracked heads. The race was won by Phillips's V8 at an average of 81 m.p.h. The K3 had magneto trouble when in a winning position.

I drove the Ballot with my girl friend as passenger home from Adelaide to Melbourne in 10¾ hours, doing one bit of 23 miles in 16 minutes—the distance is about 500 miles, about 10 miles very rough, the rest good road.



James Gullan's Ford V8-engined Ballot cornering in the Australian Lobethal Race

PARIS - NICE

[R. de Yarburgh-Bateson has driven in the Classic Paris-Nice Trial on several occasions and in 1938 finished twentieth, with a Meadows-H.R.G., winning the 1½-litre class of the La Turbie Hill Climb. He now recalls the lighter side of an event in which so many British drivers have competed.—Ed.]

OFTEN memories of competitive events are of human incidents, which never found their way into the contemporary reports, but which will be remembered long after actual performances are forgotten.

Most long-distance trials are enlivened by such incidents, and the annual Paris-Nice Trial is no exception. One year, two drivers in a British team had spent a lot of money at the Works in the preparation of their cars, but were very disappointed by the way the cars behaved in the heat of France. So disgruntled did they become that they availed themselves of every opportunity to send telegrams to the managing director of the firm, who was perturbed to receive the following sort of message :

" Used a quart of oil in the last 100 miles," followed by

" Engine using more oil than petrol," or again,

" Spare wheel bracket broken, wheel fallen off."

In the same team were two gourmets, whose love for their stomachs was greater than their enthusiasm for clocking into controls on time. Their lengthy wayside meals necessitated flat-out driving between restaurants and nearly reduced their co-drivers to apoplexy.

The acquisition of " fans " is much easier on the Continent than in this country, where the general public show such apathy towards motor-racing. Even the least experienced and unknown driver will be unlucky if he does not find at least one spectator who singles him out for special favour. These cheerful enthusiasts do much to encourage the driver of an obviously slow car, who may be feeling discouraged by the collection of famous drivers with Works cars. No less than any other nation, the French love a man who is driving merely for the Sport with no prospect of reward and no thought of " pot-hunting."

French competitors are often exceedingly kind to English entrants and their behaviour is almost always very sporting. In 1937, I had a grand duel with M. Andreany and his Citroen, which he won. Next year, with a different car, I managed to reverse the victory. He was more than ever delighted and sought me out at the prize-giving to say : " Ah ! Monsieur, mes felicitations ! L'année derniere ma Citroen a gagnée contre votre A.C. Cette année, avec votre H.R.G. vous avez vaincu ma Citroen. Qui sait, l'année prochaine ? " Whereupon he shook my hand until it nearly fell off.

M. Savoye, whose exploits with a Singer Nine at Le Mans and elsewhere are not unknown in this country, gave another example of French sportsmanship. In 1938, having driven his car to the limit in an endeavour to beat Gordini's Simca-Fiat and the H.R.G., he had the bad luck to break a valve rocker in practice for the La Turbie Hill Climb right at the end of the Trial. When I sympathised with him upon his rotten luck, he treated the whole matter most philosophically and wished me the best of luck. Later, by way of compensation, we arranged a run in the H.R.G. and he drove it up La Turbie at a cracking pace, in spite of never having driven the car before and the presence of normal traffic on the hill.

At the top we paused at a café and the car, resplendent with its Paris-Nice numbers, was surrounded by an interested group of English tourists. When, in answer to their query, they learnt that the H.R.G. had won the 1½-litre class, they raised a lusty cheer, which greatly embarrassed poor Savoye and myself.

Throughout the Trial, C. W. Hampton amused us all by his never-failing good humour, whatever misfortune befell him. His car was a recently purchased Continental of impeccable breeding, but there had been too little time for preparation, and the car started with no effective shock-absorbers and with the ignition slightly out of adjustment. Under the circumstances his performances were extremely creditable, but the representative of the marque concerned thought otherwise and publicly treated Hampton to a violent harangue during the cocktail party, which Dunlops so thoughtfully provide at Nice. Throughout the lecture, Hampton maintained a masterly calm and occasionally muttered something about " Shock-absorbers " with a charming smile and then waited to see the effect.

Lord Waleran created quite a stir at La Turbie by greatly improving his time with the big twelve-cylinder Lagonda saloon, when driving in the racing class. His improvement of 11 seconds was largely explained when it was realised that Lagonda Director Alan Good was his passenger on the first occasion and passengers were not required for the racing classes. There was a naughty rumour that the Lagonda engine attained 6,000 r.p.m. on that run.

My own passenger had a discerning eye for female beauty, and even the long run through the night had not reduced his enthusiasm so that, upon his arrival at Nice, he was promptly struck by the exceeding beauty of a sunburnt brunette, dressed in a limited beach costume, composed of white shirt, very short shorts and sandals, a wide brimmed hat, and dark glasses. She was a very attractive girl and it was not until ten minutes later that he discovered that she was his own sister, whom he had not seen for some years and who had arrived unexpectedly from Holland !

Anthony Heal, who was covering the event for MOTOR SPORT, caused some amusement with his " 30/98 " Vauxhall. One of his passengers was, in business life, an expert stenographer. As he careered rapidly along the dusty French roads, he dictated his report of the event and his passenger took down his poetic outpourings as best she could. The dictation was something as follows : " It is . . . Mademoiselle Robert has just flashed past in her Talbot saloon at a good 90 m.p.h. . . . where was I ? oh yes, it is a lovely day with the blue sky above and the tall trees flanking the—blast that dog ! What is Wisdom doing with his S.S. ? . . . " And so on. Afterwards his " secretary " complained that she would be unable to translate her shaky shorthand unless driven at high speed over an exceedingly bumpy road !

At La Turbie, Rene Dreyfus was driving a Grand Prix twelve-cylinder Delahaye, which was rather thinly disguised as a sports-car by the addition of mudguards and lighting equipment. In practice, he carried out two climbs with an obviously misfiring engine. When asked why he did not rectify the matter, he replied that there was not time to change all twenty-four plugs within the time allotted for practice. After the actual climb, there was some difficulty in restarting the car, which had to be pushed. Dreyfus overheard an English spectator in the crowd making critical remarks about the racing character of the Delahaye. In excellent English and with a happy smile he shouted back : " You leave the old Delahaye alone ! "

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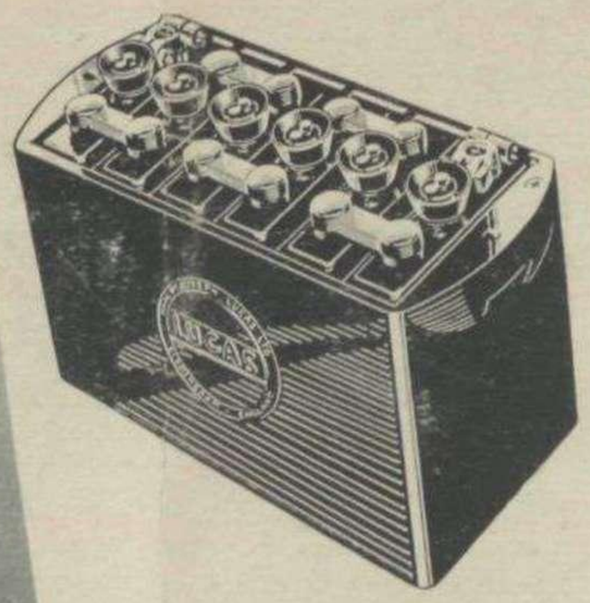
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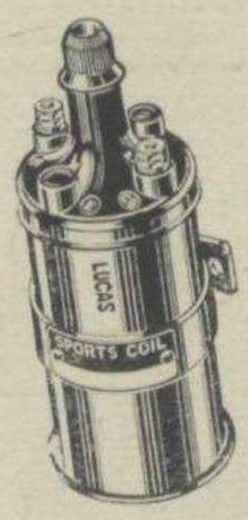
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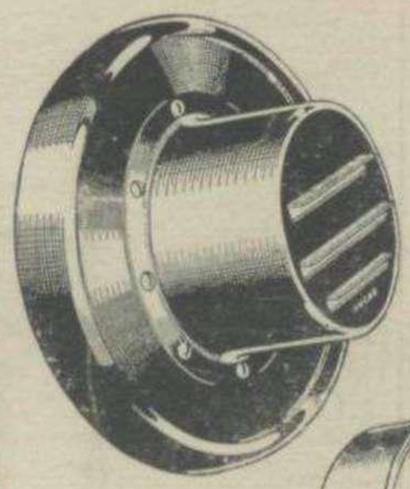
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