

BOOKS FOR CHRISTMAS

AUTOSPORT

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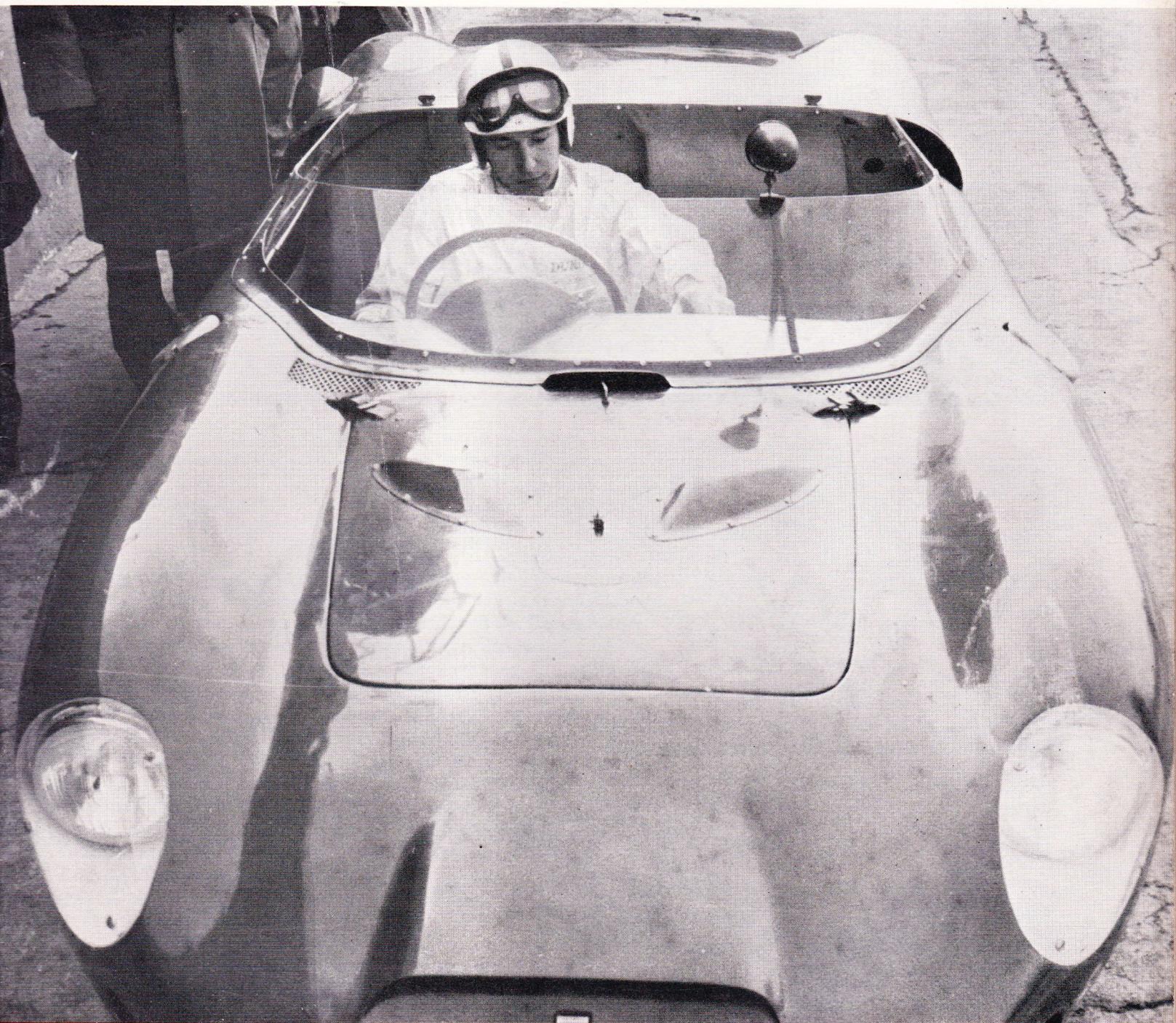
DECEMBER 7, 1962

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EVERY FRIDAY  
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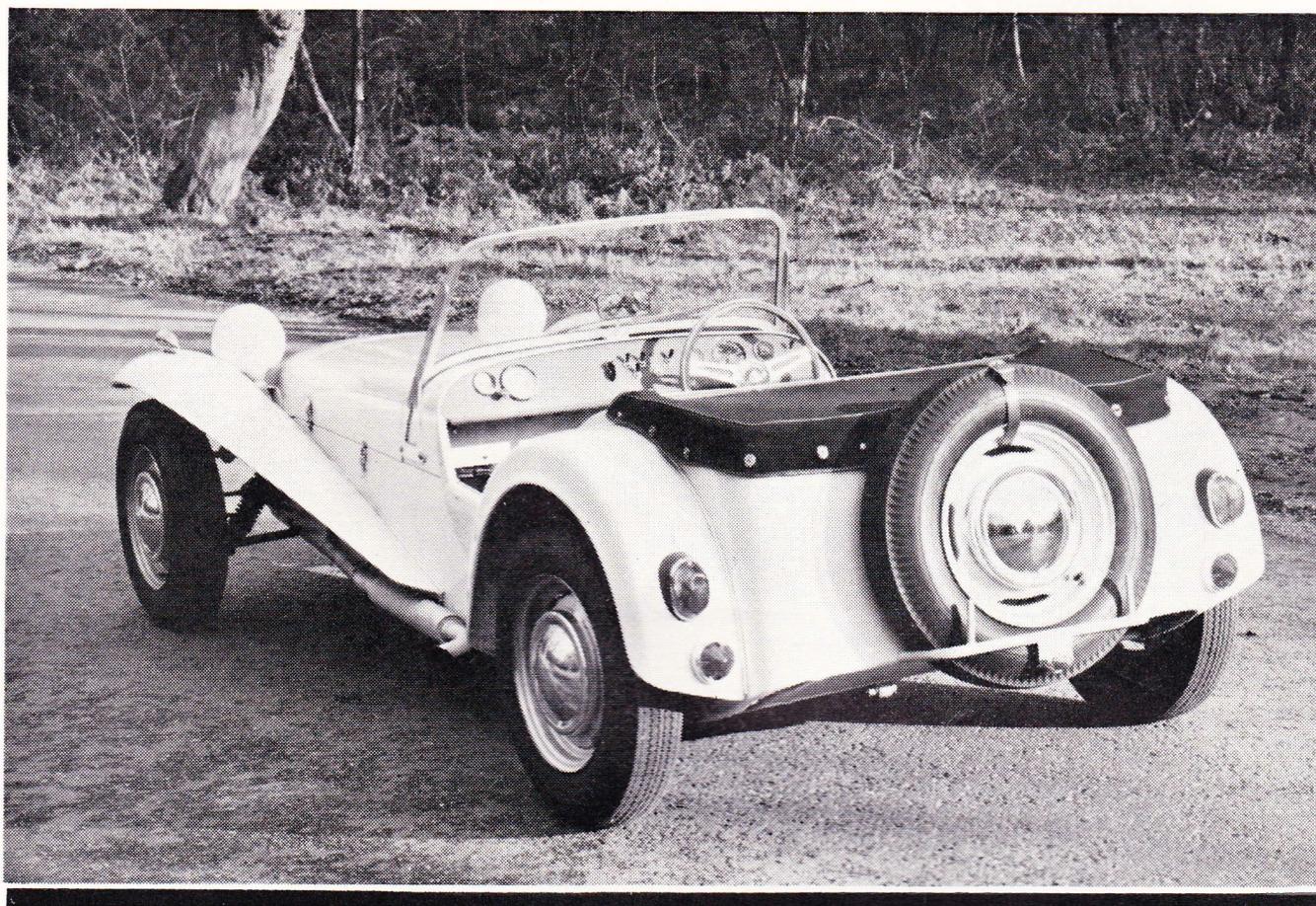
BRITAIN'S MOTOR SPORTING WEEKLY

Registered at the G.P.O. as a Newspaper



## IN THIS ISSUE

BORE/STROKE RATIOS—VETERAN, VINTAGE AND MODERN—BY JOHN BOLSTER  
ROAD TEST OF THE M.G.B. : FERRARI'S PLANS FOR 1963 SEASON



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**BRITAIN'S MOTOR SPORTING WEEKLY**

Registered at the G.P.O. as a Newspaper

Vol. 25 No. 23

December 7, 1962

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## EDITORIAL

### VINDICATION

THERE are many red faces in West Germany this week, and also in other countries. Allegations by journalist-driver Richard von Frankenberg that the Ford engines used in Lotus Formula Junior cars during certain races were over the 1,100 c.c. limit were effectively scotched by Peter Arundell, who covered 185.445 kilometres (115.2 miles) in under an hour at Monza, where on 24th June, 1962, he averaged 182.6 k.p.h. (113.5 m.p.h.) in his Lotus-Ford 22. The demonstration was the result of a £1,000 wager, offered by Colin Chapman, and accepted by von Frankenberg and his newspaper, to prove that a Lotus-Ford, carefully checked in front of official witnesses to have an engine capacity under the 1,100 c.c. limit, would reproduce the winning speed on any circuit named. Von Frankenberg himself selected Monza. In consequence, the Lotus concern not only receives the wager money, but will have a full apology published in von Frankenberg's publication. As AUTOSPORT pointed out when the allegations were first made public, they were utterly ridiculous and were founded on nothing more than rumours. Chapman had, of course, every right to institute court proceedings to clear the name of Team Lotus, but decided to take the courageous initiative of calling von Frankenberg's bluff. Not only did Arundell thoroughly disprove these allegations by emulating his early season performance, but managed to do this at a much higher speed. The author of the offending articles was perfectly satisfied that his accusations were without foundation.

### FERRARI SIGNS HIS DRIVERS

As expected, the British drivers John Surtees and Mike Parkes have signed up with Sefac Ferrari for 1963, together with Belgium's Willy Mairesse and, to the great satisfaction of their compatriots, the Italians Nino Vaccarella, Lodovico Scarfiotti and Lorenzo Bandini. Whilst sports-car and G.T. racing will be carried on as last year, Surtees will lead the "Prancing Horse" assault in Formula One, with much better equipment than was available to drivers in 1962. The new 24-valve engine is much more powerful than was any of its 1,500 c.c. predecessors, and it is Ferrari's intention to use only 1963 cars in World Championship events. The drivers named lend more authenticity to reports that another Italian concern has approached Phil Hill and Giancarlo Baghetti, who left Maranello last October, following the Commendatore's announcement that Ferrari had withdrawn from racing for the remainder of the 1962 season. As regards Porsche, it is expected that an official announcement will be made within the next week or so as to whether or not the "flat-eights" will continue to be developed.

### OUR COVER PICTURE

*ITALIAN MOUNT for John Surtees, who, it has been confirmed, will be leading the Ferrari team in 1963. Here he is shown in the cockpit of a new sports Ferrari, the Dino 250, as he starts the engine before going out on the Monza track for testing during last week. The confirmation that he had signed for the Maranello concern was made at a Press conference last Saturday.*

### LOTUS JUNIOR TEAM

WHAT must surely be one of the strongest teams ever to take part in Formula Junior racing, save perhaps when Grand Prix drivers occasionally took the wheel of Juniors in 1960, is the recently announced 1963 Lotus Formula Junior team.

Ron Harris, who is to run the team next year, announces that Peter Arundell, John Fenning and Mike Spence are to drive the latest monocoque Lotus Juniors, to be revealed at the Racing Car Show, in next year's Formula Junior and, whenever the occasion arises, Formula 2 events (several organizers have announced their intention of anticipating the 1964 Formula 2 next year by either running separate races for them or including a class in Formula Junior events).

All three drivers have gained their reputation through Formula Junior racing. Peter Arundell, of course, first drew attention to himself by his rapid driving of first an M.G. TC and then a Lotus 11. His first drive in a Formula Junior car resulted in a victory (Boxing Day Brands Hatch in 1959, driving an Elva-DKW). He joined the works Lotus Junior team in April 1960, scored his first big International win in September of that year at Snetterton and has since gone from strength to strength. Next year, he is also to conduct a Formula 1 works Lotus on occasions.

John Fenning, after racing first a Cooper 500 and then his Venom-Austin Junior, basically his Cooper "Juniorized", was spotted by Ron Harris in 1961 after many good drives in a Lotus 18 against more modern opposition. As a result of this he drove Harris's Lotus and Lola cars this past season and scored numerous wins.

Mike Spence, after a spot of club racing with a Turner, an A.C.-Bristol and a very old Cooper F2 belonging to a friend (namely Peter Westbury, who fitted a Daimler engine to it this year and rushed up mountains with it with enormous success), raced a Cooper Junior in 1960, an Emeryson in 1961 and a Lotus 22 of the Ian Walker team this year. He won the Rheims Junior race.

In all, a very strong team! Opposition is expected from the Tyrrell Coopers of, most probably, Peter Procter, Denis Hulme and, perhaps, John Love.



### CHAMPION ASTON MARTIN FOR BEAULIEU

DAVID BROWN has presented the famous DBR1/300, which clinched the 1959 World's Sports Car Championship, to Lord Montagu of Beaulieu, who will give the green car a place of honour in his museum. Aston Martin is the only British concern to have won this championship. The car for the museum is the actual machine with which Roy Salvadori and Carroll Shelby won the 1959 Le Mans 24-Hour Race (above).

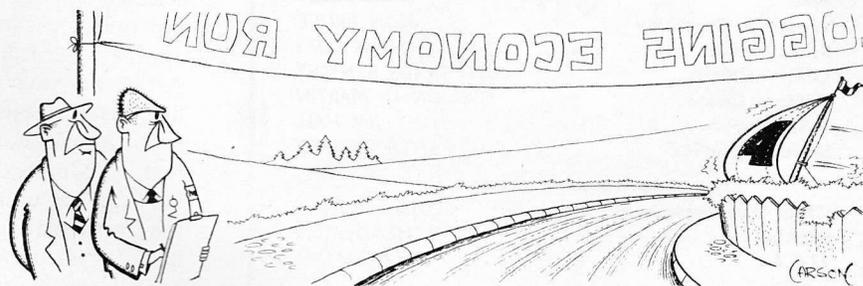
THE Coupe de la Ville de Luanda, held in Angola last weekend, was won by Alvaro Lopez (Ferrari). Second was Daniel Magalhees (Jaguar) and South African Ian Frazer-Jones (Porsche) was third. Belgian driver Robert Darville crashed his Ferrari, and the Portuguese driver Antonio Namora (M.G. Midget) also left the track.

IN the Tour of Nigeria, also known as the Lagos-Kano-Lagos Rally, two Morris 1100s finished first and second in their class, and were second and fourth in the general classification. A Citroen ID was first and a Saab third.

ERIC BROADLEY is to exhibit a Lola G.T. car at the Racing Car Show.

IT is rumoured that Coventry Climax will design engines for the 1-litre, four-cylinder Formula 2 of 1964.

## PIT & PADDOCK



OUR South African spy reports that, although the circuits out there appear to suit Lotus down to the ground, Christmas in South Africa can be very wet, and this would suit the B.R.M. admirably. Given dry conditions, 100 m.p.h. laps are expected at East London, the present record being Jim Clark's 94.18 m.p.h. in a four-cylinder Lotus-Climax 21.

JOHN FENNING will drive a Ron Harris Racing Division Lola Junior at the Boxing Day Brands Hatch meeting to make sure of the 1962 John Davy Championship.

### AUSTRALIAN NEWS

A RACE meeting was held at Calder Motor Raceway, a circuit about 15 miles from Melbourne, on 25th November. The circuit is one mile in length.

The feature event was the Touring Car race over six laps, with entries from Bob Jane (Jaguar 3.8 bored out to 4.2 litres), Norm Beechy (Chevrolet Impala) and Lex Davison (Ford Galaxie). The remainder of the field ranged from a Chrysler Valiant of 3.9 litres to a Morris 850. On the previous occasion the cars clashed, at Sandown Park on 4th November, Beechy took the honours, with Lex Davison second, after Jane had retired with a broken oil cooler. As a result of the times recorded in practice, Bob Jane, who will be remembered for his driving of the John Coombs Jaguar at Aintree last July, secured pole position on the grid, but was unable to take advantage of it, as the sheer power of the Impala enabled Beechy to take an early lead. Lex Davison was a non-starter—he appeared in practice—which was very disappointing for the large crowd. However, the sight of the Jaguar endeavouring to pass the big Chevrolet during the early stages still gave them value for money.

Jane hounded the 6.7-litre Impala, at

### BOWMAKER PLANS

STARTING on 15th December, the Bowmaker Racing Team will indulge in some pretty extensive winter racing in South Africa, New Zealand and Australia. John Surtees drives a Formula 1 Lola in the Rand Grand Prix on 15th December and is partnered by Roy Salvadori in a similar car for the South African Grand Prix on 29th December.

On 5th January, only a week after the S.A. G.P., John Surtees and a new recruit to the team, Tony Maggs, are to drive 2.7-litre Coventry Climax-engined Lolas in the New Zealand Grand Prix. On successive week-ends, these drivers are to compete in the Levin, Lady Wigram Trophy and Invercargill New Zealand races. On 10th February they rush off to Australia for the Warwick Farm meeting, and a week later Surtees and Maggs are to conduct the Lolas at the Lakeside meeting, also in Australia. The "down-under" tour is completed when John Surtees is to drive a single Lola in the Longford, Tasmania, race meeting on 4th March.

H. O. QUINN LTD.'s popular "Modern Motoring Diary" has been revised for next year. New features include motorway maps and lists of National Trust properties, ancient monuments and historic buildings.

THE Rene Bonnet "Missile" has been homologated as a Grand Touring car and it is expected that several examples will be seen on the Monte Carlo Rally.

IN the list of manufacturers' teams finishing the R.A.C. Rally complete, published in last week's "Truly International" article, the Allardette team was inadvertently omitted.

times driving only inches from its back bumper, and was not to be denied, as he passed Beechy on the third lap, after some fast and at times furious motoring. After taking the lead, Jane proceeded to demonstrate the Jaguar's superior roadholding to the spectators, it being better suited to the short, twisty circuit than the "tank-like" American vehicle. Ern Abbott in the Valiant was having a lonely race in third spot, being too slow to keep up with the leaders, yet too fast for the remainder of the field. The final result was Jane first, Beechy second and Abbott third.

These Coventry-versus-Detroit battles are certainly adding interest to the Australian motor racing scene, and no one seems to be interested whether the "Big Yanks" have been homologated—after all, this might spoil the spectacle.

Other news of great interest here at the moment is that Jon Leighton, founder of the Scuderia Birchwood and noted for his "low flying" at Brands Hatch in 1961, is shortly to start a racing drivers' school; in fact, it is hoped that Frank Gardner will be chief instructor in the initial stages. The cars to be used will be three Formula Juniors (Lotuses) and a sports car (probably a Lotus 23). Subsequently, it is hoped to enter pupils in races.

A. C. A. MACGREGOR.

# SPORTS NEWS

AMERICAN driver Roger Penske (Ferrari) won the Nassau Tourist Trophy last Sunday at an average speed of 88.25 m.p.h. Lorenzo Bandini (Ferrari) and Innes Ireland (Ferrari) followed.

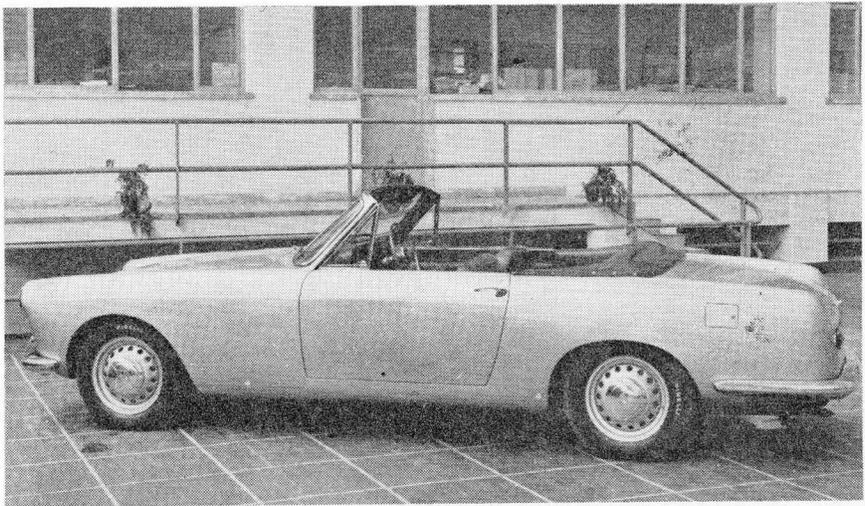
## LE MANS, 1963

THE regulations for next year's Le Mans 24-Hours race on 15th-16th June have been published. The race will count towards the International Marques Championship, the International Trophies for Prototypes up to 3,000 c.c. and unlimited, the World Challenge for Speed and Endurance and the French G.T. Drivers' Championship. The existing classifications and categories for distance covered, performance index, thermal efficiency index and by classes have been retained in the same form as before, but a new formula for the performance index will not favour cars of small engine capacities. Last year, this formula was  $4,000 \frac{C-125}{C+150}$  but for 1963 it has been modified to  $4,000 \frac{C-90}{C+150}$ , which makes the task of the small-capacity cars very severe. In practice, this calls for higher speeds and greater distances for all cars, but the differential is less for those of large capacity.

For example, in 1962, a Chevrolet Corvette of 5,359 c.c. was required to cover 3,800 km. at an average speed of 158 k.p.h.; in 1963 this will be increased to 3,825 km. at an average speed of 159 k.p.h. A Ferrari of 2,953 c.c. was required, in 1962, to cover 3,645 km. at a minimum average of 151 k.p.h.; in 1963 such a car will have to cover 3,690 km. at a minimum average of 153 k.p.h. For a 1,216 c.c. Lotus Elite the increase is from 3,206 km. at 126 k.p.h. to 3,297 km. at 137 k.p.h., while for a Panhard of 700 c.c. the increase is from 2,707 km. at 112 k.p.h. to 2,870 km. at 119 k.p.h.

Windscreens, too, rear their ugly heads again. These must be of laminated glass, easily replaceable and with a minimum height of 20 cm. for open cars, and 25 cm. for closed cars.

The weight of prototypes must be at least 90 per cent. of the minimum weight of the lightest car homologated in the class.



A BEAUTIFUL Viotti drophead coupe, built on a 5.2-litre Bristol 407 chassis, which was exhibited during the second week of the recent Turin Show. The car will be displayed by Anthony Crook, of Hersham, Surrey and Kensington, W.8, the sole concessionaires for Viotti.

## MAGNETIC SIGNALS

THE latest and most modern method of pit signalling equipment is now being marketed by LawrenceTune Engines, Ltd., 69A Avenue Road, London, W.3. The equipment is unique in that magnetic effect is used to avoid the normal difficulties of fixing numbers quickly and securely to a signal board. It comprises a large black signal board, divided appropriately, and separate numbers which are engraved in white on black Traffolyte plastic. Each number has a rubber backing which contains the special magnetic compound. This equipment was developed by Peter Marten, well-known Morgan and Deep Sanderson driver.

The basic set consists of a board 18 ins. by 20 ins. with three lines for position, time and laps completed, plus two sets of numbers 0-9, size 5 ins. by 4 ins., plus and minus signs and an arrow. Extra numbers can be supplied if required. The basic set costs £20 (less trade discount).

IT is rumoured abroad that Phil Hill will drive for an American Ford team in 1963. It is also being noised about that a 4.5-litre Ford is a likely runner for Le Mans next year.

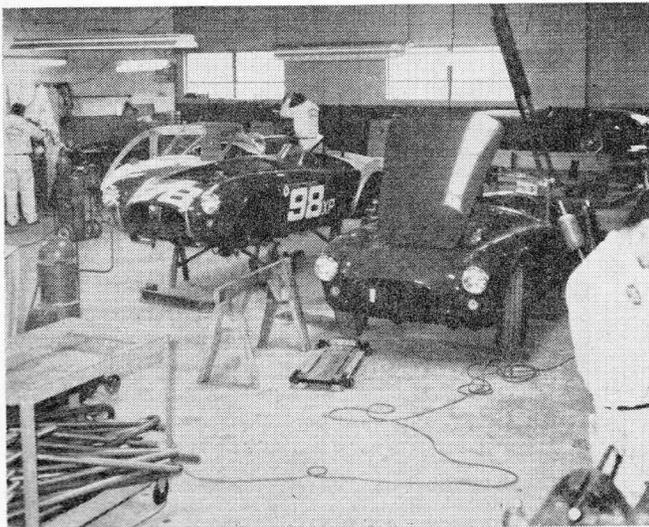
## TRIUMPH AND FORD TEAMS FOR "MONTE"

STANDARD-TRIUMPH have entered three Vitesse Six saloons for the Monte Carlo Rally. These will be driven by Vic Elford, Mike Sutcliffe and John Sprinzel, with co-drivers still to be chosen. A singleton TR4 will be handled by the Swiss pair J-J. Thuner/John Gretener.

Fords still have to choose co-drivers, but the factory entries will be Pat Moss (1,200 Anglia), Peter Riley (Zodiac 3), Gerry Burgess (Zodiac 3), Henry Taylor (Cortina)—all group 2—and David Seigle-Morris (1,000 c.c. Anglia, Group 3).

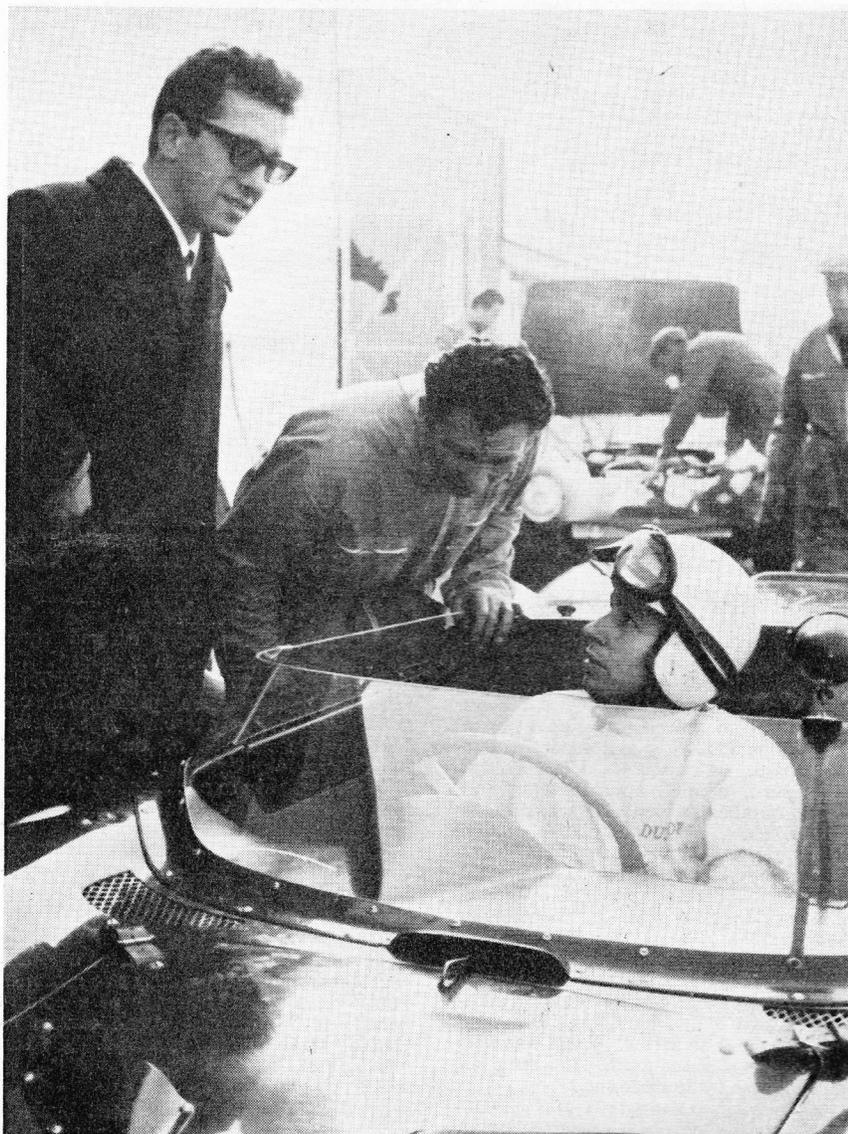
JOHN SPRINZEL is the test-driver who will determine in practice how far a 190SL Mercedes will run on exactly one gallon of petrol to decide the winner of a contest being run by Mercedes-Benz dealers as part of Mercedes 190 fortnight. The test will be R.A.C.-observed.

JAGUARS are amongst the latest business concerns to renounce the practice of sending out Christmas cards. Instead, the cost of the operation will be given as a donation to the Motor Trades Benevolent Fund.



PRODUCTION LINE (left) of the A.C.-Cobra shows two cars nearing completion. The present production rate of one car per day is to be increased. RIGHT: Engines for the Cobra. In standard form the 4,261 c.c. V8 Ford engine develops 260 b.h.p. at 5,800 r.p.m.





*JOHN SURTEES is confirmed as a Ferrari driver. Here he chats to technicians (left) and (below) tries out a sports car at Monza last week.*

Because of the importance of the European Mountain Championship, which was won this year by Scarfiotti in a Ferrari, it has been decided to construct a limited series of 2-litre, six-cylinder cars and to put these at the disposal of drivers who wish to purchase them.

The testing of the new Formula 1 car is well advanced, although a final choice has not yet been made of the three available engines which have been developed for it, these power units being of six, eight and 12 cylinders respectively.

Ferrari was unable to give details of his cars for the experimental prototype category, since the C.S.I. has not yet finalized the exact regulations for each class.

#### CHAPMAN WINS HIS BET

THE Lotus "test" at Monza on Sunday, when Peter Arundell covered 30 laps of the circuit to establish a similar average speed to that in the Lottery Grand Prix last June in answer to Richard von Frankenberg's claim that oversize engines were being used, resulted in success for the Lotus organization.

Fog restricted visibility of the circuit on Saturday, but on Sunday the weather was sunny though extremely cold. The circuit was in good condition except that, initially, a little ice remained in the first part of the Lesmo curve. Peter Arundell covered the 30 laps, the same distance as the Lottery Grand Prix, in 55 mins. 48.7 secs., an average speed of 115.161 m.p.h. His fastest lap, on the 28th tour, was completed in 1 min. 50.4 secs., 0.4 sec. better than in June. His total time and speed was also an improvement over his performance in the actual race, when his average speed was 113.397 m.p.h.

Arundell did even better after the 30 laps were completed: during the following three laps he got his time down to a remarkable 1 min. 49.8 secs., which, to say the least, rather "rubbed-in" the tremendous effectiveness of the Formula Junior Lotus.

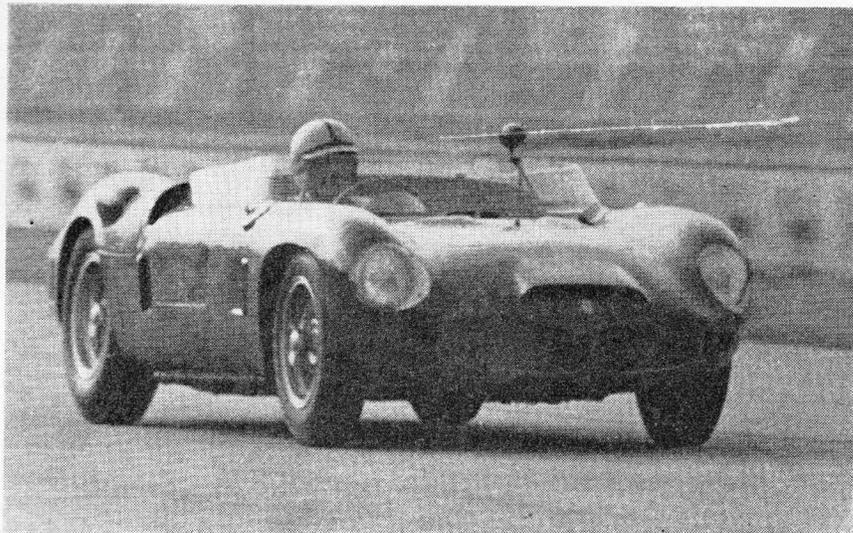
When he brought the car in off the circuit a technical inspection was carried out by Italian engineers in the presence of representatives of *Auto Italiana*. Von Frankenberg admitted defeat sportingly, and the car was immediately purchased by a spectator, one Motta de Novara.

## Ferrari for 1963

THERE will be no official Ferrari team as such for the 1963 season, it was announced at a press conference held in Modena on Saturday, when the Italian constructor's plans for next season were revealed.

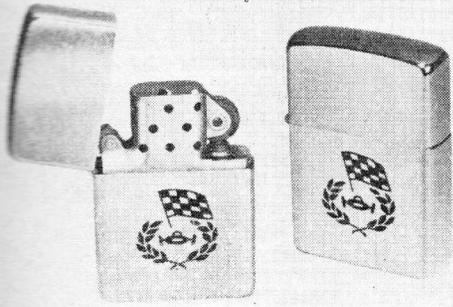
However, Ferrari confirmed that Formula 1 cars will be raced by two drivers who have been officially engaged as testers. These are John Surtees and Willy Mairesse. In addition, the racing department of Ferrari will be enriched by the appointment of Mike Parkes, who will be responsible for testing prototypes. Parkes has not abandoned his active part in racing, however, and is expected to appear from time to time in a Formula 1 car.

The intention of Ferrari is to participate in the most important races and to supplement his test drivers with the services of Lorenzo Bandini, Lodovico Scarfiotti, Nino Vaccarella and Carlo Abate, should these drivers be free to race his cars. No permanent engagement is being offered to them.



# Christmas Gift Suggestions

BY MICHAEL KETTLEWELL

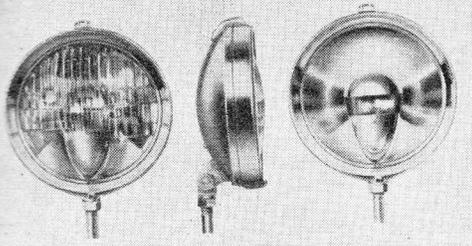


"ZIPPO" cigarette-lighters.

THE annual festive occasion will soon be with us, chaps, and no doubt the usual problems have arisen regarding Christmas presents for the motor racing maniacs that abound throughout the land. The trouble is that these days there are so many things for enthusiasts of all ages, from rubber Formula 1 Coopers for one-year-olds to "the genuine articles" for more mature enthusiasts. The snag about a Lotus 25 though, forgetting approximately £10,000 for the moment, is that although Colin Chapman makes 'em small, no matter how hard you try, you just cannot get one into the largest stocking—and those damn exhaust pipes will rip holes in them.

A man most hard to please this Christmas will be Les Leston. What can you give him in the motoring line—he has everything already! Les Leston's shop at 314 High Holborn, London, W.C.1, will solve all your problems, and the following items are just a few of the many stocked by him.

"Rallymaster" long range driving lamp and flat beam fog lamps are sold as a matched pair, measure 6 ins. in diameter and are only 2 ins. deep. They take stan-



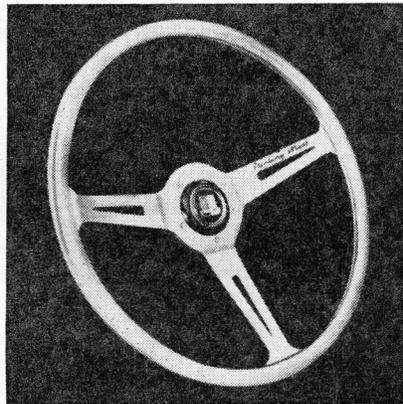
"RALLYMASTER" driving and fog lamps.

dard pre-focus bulbs and are available for 6 or 12-volt systems. Price: £2 15s. each, or £4 17s. 6d. the pair. The American "Zippo" lighters feature a full colour enamel motor racing motif showing a racing car, a laurel wreath and a chequered flag. "Zippo" lighters are guaranteed for life and cost £2 3s. 6d. each.

Graham Hill, Jim Clark, Innes Ireland, Phil Hill, Richie Ginther and many other famous racing drivers wear Les Leston Grand Prix Driving Gloves—so why don't you? They are made from Pittard's guaranteed washable leather and have net air vent backs and tipped fingers. The colour is light tan and they come in all women's sizes, priced at £1 7s. 6d. per pair.

Of course, if you want these gloves, then you will require the best in steering wheels and what better than the "Stirling Moss" laminated wood-rim steering wheel? This fine wheel, designed by someone called Stirling Moss (now, that name rings a bell . . .) has a mahogany wood-rim bonded to an aluminium frame of great strength. The flattened spokes allow maximum instrument vision and all metal edges are fully rounded, while the woodwork has finger grip serrations on the underside. Models are available for all popular makes of British and Continental cars and, complete with centre boss that takes all standard horn, light and traffic switch fittings, cost £7 9s. 6d. (flat, 15 ins.); £7 14s. 6d. (flat, 16 ins.); or £7 19s. 6d. (dished, 15½ ins.).

Ladies, if your man intends to take up rallying he will need a "Rallymaster" jacket. It has neither buttons nor zips, yet accommodates all the equipment

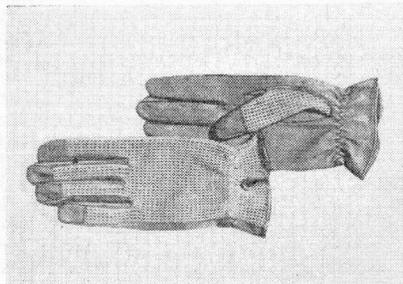


"STIRLING MOSS" steering wheel.

needed for rallying in its pockets. Price: £9 7s. 6d. in dark blue. If he is going racing next summer, buy him a Motor Racing Umbrella. This is a full-size device featuring international racing flags and costs £2 12s. 6d. He will use it to keep the cockpit dry while awaiting the start of his race! You will need one that has a reinforced aluminium shaft and a folding seat—this costs £4 17s. 6d.

Less expensive items available from Les Leston are motor racing cuff links, tie clips, key chains, pin brooches, key fobs, key chains, and ties.

Many accessory firms are selling their products in attractive boxes this Christmas. Lucas, for example, have their "Christmas Packs for 1962": reverse lamps, wind-



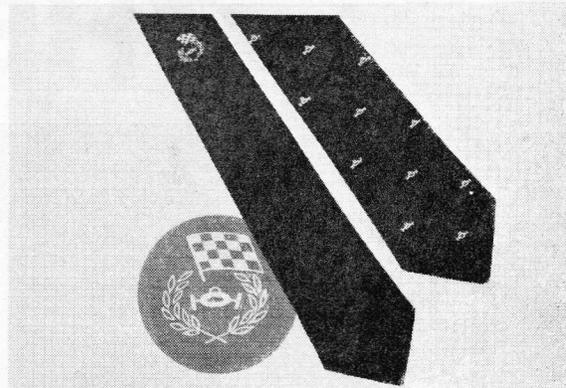
"LES LESTON" driving gloves.



LUCAS Christmas Packs.

screen washers, parking lamps, etc., are all attractively presented.

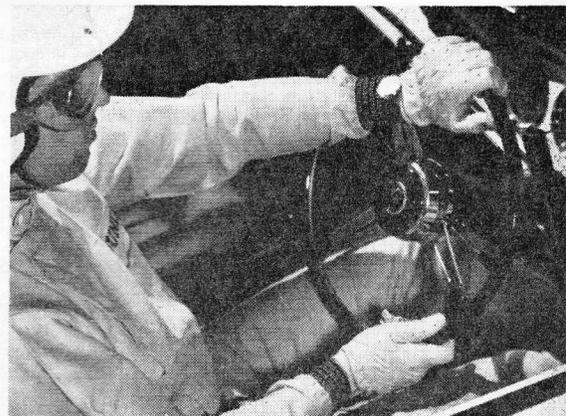
Richard Shepherd-Barron is also in the driving gloves market. His are very good too—as AUTOSPORT'S Assistant Editor Martyn Watkins can tell you; he has done everything but gone to bed with them on for well over a year and they are still as good



TIES from Les Leston.

as new! These "Chris Lawrence" gloves cost £1 18s. and further details are obtainable from Richard Shepherd-Barron at Barracane, Waterloo Road, Crowthorne, Berkshire.

Books are a worthwhile present at any time, and reviews of many of the latest releases will be found on other pages in this issue.



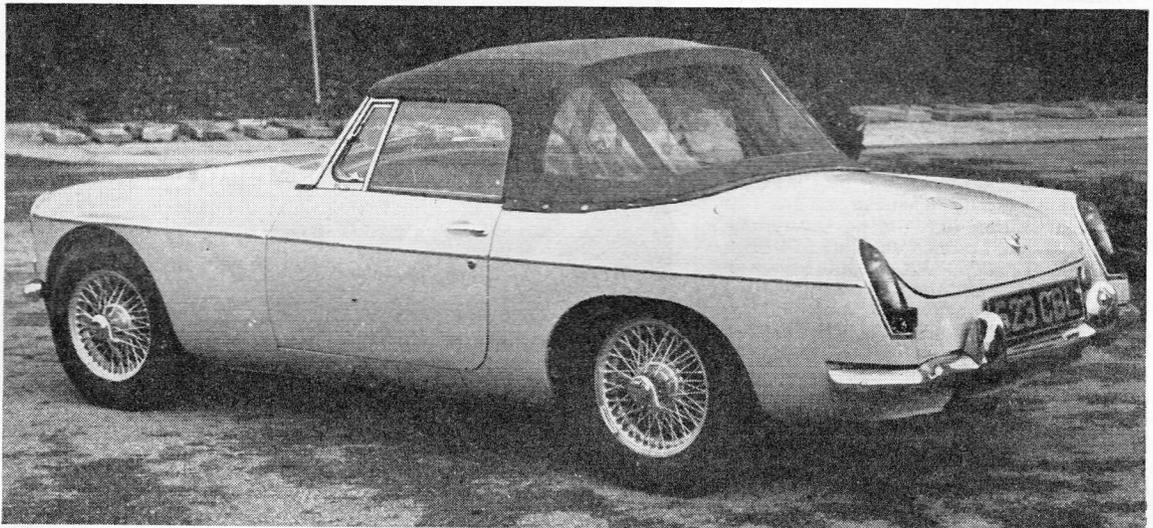
"CHRIS LAWRENCE" driving gloves.

Of course, there are many other things, things that would make AUTOSPORT a sort of *Jim's Inn* of the motor racing world, but suffice it to say that one can buy all sorts of accessories, equipment, models, clothes and games without much difficulty.



JOHN BOLSTER TESTS

# THE M.G.B



THE world of the sports car is changing fast. We used to admire the type of two-seater that was all engine and performance, and precious little else. Most people still imagine that they would enjoy this sort of machine, but when it comes to signing a cheque they always go for something less spartan. A sports car must still have superior performance and handling qualities but it is now expected to have all the creature comforts of a luxurious saloon, which means that noise, vibration, and hard suspension are out.

Such a car is the M.G.B. It starts off by being outstandingly good looking and it goes on by being practical and comfortable. It is faster, more flexible, and much quieter than the M.G.A, which it replaces, but although it seems "softer" than its predecessor, it can do everything just a little better than that car could.

The biggest difference between the two cars is the deletion of the separate chassis frame, which was a hefty, box-section structure. A lot of weight has been saved which has enabled such important things as winding windows to be incorporated,

the much better equipped new model being only a few pounds heavier than its forbear. The wheelbase is 3 ins. shorter, but a great deal of extra luggage space has been found, largely by moving the seats forward about 6 ins.

The new construction has enabled more room to be provided for the pedals, and indeed the shorter car supplies the driver and passenger with as much space as they could possibly need. The M.G.A luggage boot was always rather a joke, and while the M.G.B cannot transport a cabin trunk, it is more sensibly endowed with baggage accommodation. There are locks for the glove box, both doors, and the boot.

Mechanically, the design is very similar, though appreciably softer suspension has been adopted. In front, the wishbones have the lever-type dampers incorporated with the top pivots and the steering is by rack and pinion. Behind, the hypoid axle is on underslung semi-elliptic springs and lever-type dampers. An open two-seater, especially one with large doors, is a most difficult body form to translate into a rigid structure. The scuttle and instrument

panel are too often the weak points, so the bulkhead is shaped to constitute an extremely strong girder which, with the centre of the instrument panel, is united with the transmission tunnel. This central member, which is vital to the stiffness of the body-cum-chassis, is used both as a duct for the built-in heating system and to carry the radio speaker.

The engine is a further development of the B-series B.M.C. unit, but it is more than that. The original unit was of 1,489 c.c., which was increased to 1,622 c.c., when it became somewhat rough. Accordingly, the existing cylinder head has been given a new "bottom end". A 1,798 c.c. cylinder block has larger main bearings to accommodate crankshaft journals of  $\frac{1}{8}$  in. greater diameter. The crankshaft webs are a little thicker at the expense of slightly narrower journals. The resulting crank is much sturdier and makes the engine far smoother in operation; although the stroke is the same as before, the larger bore of 80.26 mm., coupled with this new crankshaft, gives a better torque curve throughout the range.

The 1,800 c.c. engine develops 94 b.h.p.

at 5,500 r.p.m. It is coupled by an 8 ins. diaphragm-spring Borg and Beck clutch to a four-speed gearbox with synchromesh on the upper three ratios, and no remote control extension is necessary with the forward seating position. The hypoid axle now has a 3.9 to 1 ratio to allow for the smaller diameter of the 5.60-14 ins. tyres. Lockheed disc port brakes are used in conjunction with drums at the rear.

As I have said, the new M.G. has a most attractive appearance. The doors are easy to enter and the very low floor level allows the feet to sink to a natural position in relation to the seat. There is enough seat adjustment for a veritable giant. With the hood raised, the roof at first seems a little "beetle-browed", but in fact the view all round is good, greatly aided by the transparent panels in the hood. A most ingenious framework keeps the hood fabric taut and it does not flap at 100 m.p.h. speeds. The folding operation is straight-forward but not especially rapid, the top being neatly concealed when flured.

The gear lever is ideally placed and very light in action. The brakes demand appreciable pedal pressure but they do not fade and are constant in response. The steering is light and "quick", and if it feels a little "spongy" at first, the sensation is soon forgotten.

On the road, the M.G.B at once impresses by its smooth, quiet running and flexibility. It accelerates strongly from less than 20 m.p.h. in top gear and there is none of the "thump" that one associates with a big four-cylinder engine. On the gears, there is a marked reduction in the level of mechanical noise as the rev counter approaches 6,000 r.p.m. There is one small vibration period at 4,500 r.p.m.

The acceleration of this car is very lovely up to 90 m.p.h., which is a good cruising speed. A genuine 100 m.p.h. is always available, with a bit more to come on the longer straights. The gears are very easy to handle, except for an occasional reluctance to engage first speed at rest. The ratios are sufficiently close to allow 30, 50, and 80 m.p.h. to be achieved on the three indirect gears, to the considerable benefit of the acceleration times on the data panel.

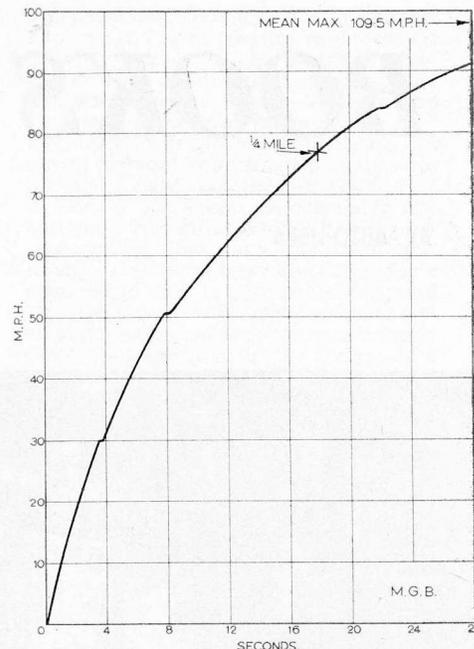
Though the ride is soft for a British sports car it is still appreciably firmer than that of a typical saloon. There is some roll during hard cornering but this is not excessive, and does not obtrude during normal road driving. There is an almost total absence of axle tramp during wheelspin, which is rare, and though one can feel the axle bouncing on very bumpy corners the general impression is that the roadholding has not been allowed to suffer in obtaining a flat and comfortable ride. Deserving of the highest praise is the remarkable stability in gusty side-winds, which proves that the new body shape has other attributes than mere beauty of line.

This stability also proves that the inherent handling characteristic is just on the understeering side of neutral. Any energetic driving methods, however, will translate this to oversteer with an ultimate rear-end breakaway. This is the type of response at which most British sports car designers aim, and so there is nothing new to learn for the man who first takes over an M.G.B.

An oil radiator is mounted ahead of the water radiator. This keeps the oil temperature within bounds at all times, which is just as well, for the smooth, quiet engine encourages one to use full power whenever possible. In an entirely different context, the large space behind the seats is ideal for the carriage of parcels when her ladyship is at the wheel. With the hood raised, there is plenty of room for a child to travel on quite long journeys.

It will be noticed that all the performance figures are considerably better than those of the M.G.A. Weather conditions were far from ideal throughout my tests, and I am sure that I could have beaten the maximum speed and the acceleration times on a still summer's day. However, these are the unavoidable penalties of winter testing. Nevertheless, the virtues of this car cannot be read in the performance graph. With its winding windows, efficient heating and ventilation, complete equipment, and quiet running, it is a thoroughly practical machine by any standards. Indeed, it would be fair to say that many people who are tired of the rougher type of sports car, or even those who have previously only considered a saloon, would be very happy indeed as owners of the new M.G.B.

These cold and practical virtues will not be the deciding factor in some cases. Wherever I parked the car, I heard the most flattering comments on its appearance, and the interior appointments and instrument panel layout complement the attractive exterior. As a popsy-catcher, I award the M.G.B ten marks out of ten, which may not interest you at all but is certainly no disadvantage.

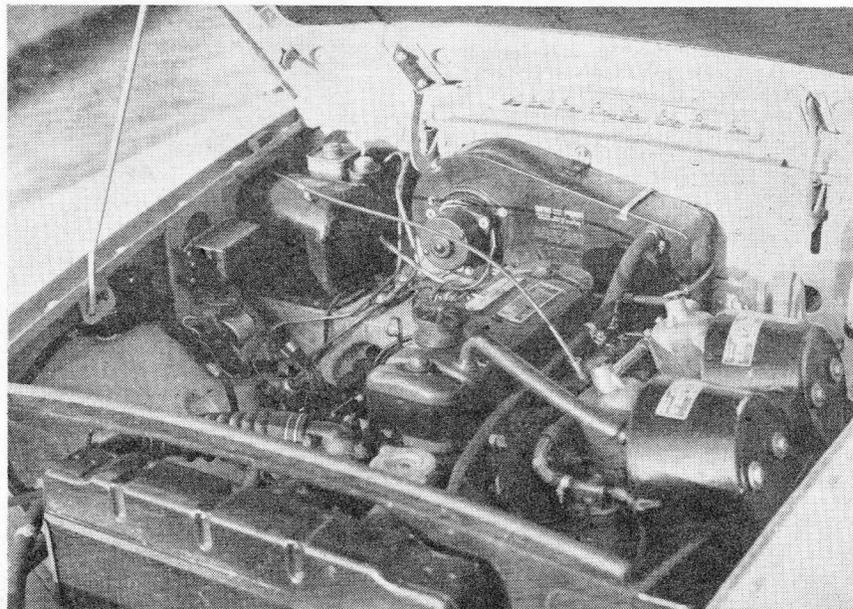


ACCELERATION GRAPH

**SPECIFICATION AND PERFORMANCE DATA**

Car Tested: M.G.B sports two-seater, price £834 6s. including P.T. Extras on test car: Oil radiator, radio, heater, wire wheels.  
 Engine: Four-cylinders 80.26 mm. x 89 mm. (1,798 c.c.). Push-rod-operated overhead valves. Compression ratio 8.8 to 1. 94 b.h.p. at 5,500 r.p.m. Twin SU carburetters. Lucas coil and distributor.  
 Transmission: 8 ins. Borg and Beck diaphragm-spring clutch. Four-speed gearbox with synchromesh on upper three gears and short central lever, ratio 3.91, 5.37, 8.65, and 14.21 to 1. Open propeller shaft. Hypoid rear axle.  
 Chassis: Combined body and chassis. Independent front suspension by wishbones and helical springs. Rack and pinion steering. Rear axle on semi-elliptic springs. Lever-type dampers all round. Knock-on wire wheels (extra) fitted 5.60 x 14 ins. tyres. Lockheed hydraulic brakes with 10 1/2 ins. discs in front and 10 ins. x 1 1/2 ins. drums behind.  
 Equipment: 12-volt lighting and starting. Speedometer. Rev counter. Oil pressure, water temperature, and fuel gauges. Flashing indicators. Extra: Heater and radio.  
 Dimensions: Wheelbase 7 ft. 7 ins. Track (front) 4 ft. 1 in.; (rear) 4 ft. 1 1/2 ins. Overall length 12 ft. 9 1/2 ins. Width 4 ft. 11 1/2 ins. Turning circle 32 ft. Weight 18 cwt. 1 qtr.  
 Performance: Maximum speed 109.5 m.p.h. Speeds in gears: 3rd, 86 m.p.h.; 2nd, 51 m.p.h.; 1st, 30 m.p.h. Standing quarter-mile 18 secs. Acceleration 0-30 m.p.h., 3.6 secs.; 0-50 m.p.h., 7.6 secs.; 0-60 m.p.h., 11.4 secs.; 0-80 m.p.h., 19.4 secs.  
 Fuel Consumption: Driven hard, 25 m.p.g.

**NEAT AND TIDY (below):** The four-cylinder push-rod engine of 1.8 litres fits snugly into the under-bonnet space, and the dip-stick can be seen to be readily accessible for once! **LEFT:** An attractively laid-out cockpit has always been an M.G. feature, and the M.G.B "office" is functionally arranged.



# BOOKS FOR

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# CHRISTMAS



THE library of motoring literature continues to increase, and during the past few months many titles have been added to publishers' lists. Motoring sport, technical matters, travel accounts, pictorial records, handbooks, anthologies—there appears to be no end to the outpourings of the printing machines. I am quite sure that, during the last decade, far more books on motoring subjects have been produced than were published in the preceding 30 or so years.

Happily the books do supply an answer to the problem of Christmas presents, and the ubiquitous book-token makes it easy to provide the recipient with a recently-published volume, without the necessity of choosing it oneself. However, in the giving of books as presents, I much prefer to make a personal choice, attempting to make a guess at the type of work that would make the best appeal. Perhaps these notes on a selection of recent publications may assist readers in making up their minds, and also how much to spend. Although book costs have risen tremendously in the past few years, they still offer excellent value for money. Again, the popularity of private motoring libraries has brought many new names in the publishing world to add motoring subjects to their lists. Naturally it is difficult not to be repetitive, especially on the subjects of racing or sports cars, but here and there one finds a really exceptional volume, which is a must for any collector.

I should say that *Grand Prix—World Championship 1961*, by Louis Stanley, published at \$8.50 by A. S. Barnes of New York, and at 55s. by Thomas Yoseloff, Ltd., London, comes into the category of a must. This is Louis Stanley's third similar annual,



LOUIS STANLEY —  
*Grand Prix—World Championship 1961*

and is a decided improvement on its fore-runners, although one feels that in the effort to pack its 208 pages with pictorial subjects, a number have been included which are not exactly first-rate examples of the photographer's art. Modern photography and the use of long-focus telescopic lenses tend to give a certain amount of artificiality to

racing cars in action. Where the author really scores is in his personalities sidelights, with some delightfully candid shots, accompanied by very shrewd remarks. For example I quote: de Beaufort, "... drives into the pits like a landing craft breasting the swell." Reg Parnell: "... tubby character with the exterior of a Giant Panda." George Phillips: "... wanders round the circuits like an itinerant tinker, bedecked with cameras, gadgets ..." Raymond Baxter: "... reminds me of a gannet with a full crop."

There are a few slips and errors. I would have thought that the author could spell Ginther's first name properly, and give Denis Druitt a double "t." It looks a very odd vintage Bugatti to me, on page 67, and it is strange to learn that Mr. Stanley has never seen any photographs taken by Maxwell Boyd, who not so long ago had an exhibition all to himself at Ilford House, London, and whose work was seen regularly in *AUTOSPORT* a few years ago, and now in the *Sunday Times*. Yet, these are mere quibbles, and one does appreciate Louis Stanley's refreshing approach to Grand Prix racing, and for a book which contains so much of interest that it can always be picked up, and perused again. It contains no less than 415 half-tone illustrations, eight circuit maps, and descriptions of all 1961 Championship races.

*Ecurie Ecosse*, by David Murray (Stanley Paul, 21s.), is the long-awaited account of one of the most successful private racing stables of all time. To win the 24 Hours Race of Le Mans, twice in successive years, was an achievement that will go down in history. In 1956, the Scottish stable entered a singleton D-type Jaguar, for Sanderson and Flockhart. Murray admits that this was more of an attempt to qualify for the 1957 race, than for an outright win. Owing to F.I.A. regulations for that year, Le Mans did not count as a Championship event. Nevertheless official Jaguar, Aston Martin, Maserati and Ferrari teams were present. The *Ecurie Ecosse* car won at an average speed of 104.3 m.p.h., after a tremendous struggle with the Moss/Collins Aston Martin. The author admits that his biggest thrill besides the victory was to see *AUTOSPORT* emerge with a blue cover. D.M. elsewhere, gives the Editor of the magazine much of the credit for creating the name "Ecurie Ecosse". David's breezy narrative traces the beginning of the stable, with the racing of privately-owned XK120 Jaguars by Sir James Scott-Douglas, Ian Stewart and Bill Dobson. Behind the preparation of all "EE" cars, was the famous Wilkie Wilkinson. The book is full of intriguing stories and anecdotes, with some Ninian Sanderson incidents of quite Marx Brothers ingenuity. It is interesting to recall that for the first 10 years of its existence, *Ecurie Ecosse* had 40 drivers at various times. These included such familiar names as Jack Brabham, Jim Clark, Jack Fairman,

Innes Ireland, Masten Gregory, Roberto Mieres, Bruce Halford, Roy Salvadori, Tony Rolt, Desmond Titterton and the late Archie Scott-Brown and Ivor Bueb. In addition to Scott-Brown and Clark, the Scots comprised Scott-Douglas, Dobson, Ian and Jimmy Stewart, Tom Dickson, Jock Lawrence, Lord Louth, Bill Mackay, Sanderson, Leslie Thorne and the late Ron Flockhart.

*World Sports Car Championship*, by Cyril Posthumus (Macgibbon and Kee, 21s.) is the story of the series of International races between 1953 and 1960. Written with the accuracy expected of Posthumus, the narrative starts with the very first Championship race, held at Sebring, Florida, and won by Cunningham/Walters in the CR4 Cunningham, from the Abecassis/Parnell Aston Martin. In that year, Ferrari won the title, three points ahead of Jaguar, whose efforts were bolstered by Ecurie Ecosse. The following year, Ferrari won again, with Lancia runners-up, 12 points behind, but in 1955, the "Prancing Horse" played second fiddle to Mercedes-Benz, although there were only a couple of points in it. Back to Maranello went the title in 1956, with Maserati second. The same result held for 1957, and Ferrari did it again in 1958, with Porsche in second place. In the following year, Aston Martin took the honours from Ferrari, the only British success in the series. In 1960, Ferrari ran away with the Championship, winning four of the five races, together with a second place to the Camoradi Maserati at Nürburgring. The author always makes his race commentaries interesting, and has obviously gone to considerable trouble to sort out from various reports, those which were likely to be the most accurate. The

book is well illustrated, and after reading it, one wonders if, apart from Aston Martin, British contenders really took the Championship seriously enough to consider winning it. In the eight contests, Ferrari won six, which is proof enough of the supremacy enjoyed by Maranello in this form of racing, and still maintained to this day.



CYRIL POSTHUMUS—  
*World Sports Car Championship*

In the paper-backed series issued by Batsford at 5s., *Starting Grid to Chequered Flag*, by Paul Frere, is a continuation of the journalist-driver's *On the Starting Grid*, taking his story up to 1960. This is ably translated by Louis Klementaski, and the personal accounts of the author's races are absorbing. It is revealing that for the 1959 Targa Florio, Frere did not want to be partnered by Willy Mairesse, feeling that his compatriot was inclined to be a trifle

over-exuberant, and might not finish in the Ferrari. To Frere's chagrin, he himself was left out of the team, following the wreck of the P. Hill/Allison car in practice, and Mairesse came fourth with Scarfiotti. So Paul never drove at all in the Sicilian race. He insists throughout that during his career, he raced as an amateur, and claims his second place in the Belgian Grand Prix of 1956, to be a success not bettered by any amateur driver in modern G.P. racing. A very prolific and busy journalist, this reviewer wonders how on earth Frere managed to race in so many events, and yet have time to write many splendid and accurate race reports. One can scarcely carry a tape-recorder in the cockpit of a racing or sports-racing machine, so one can well imagine that plenty of midnight oil was burned.

In *500 Miles To Go* (Muller, 30s.), Al Bloemker provides an invaluable history of the Indianapolis races, which began when Ray Harroum's Marmon won the 1911 event at 74.59 m.p.h. The track itself was opened two years earlier, with a disastrous programme which resulted in several fatalities, but was paved for the following year. Speeds rose each year, and in 1913 came the Peugeot victory, which started a series of wins by European-built cars which lasted till 1919. These were Thomas (Delage), 1914; de Palma (Mercedes), 1915; da Resta (Sunbeam), 1916, and Wilcox (Peugeot), 1919. It was not until 1939 that American cars were defeated by Wilbur Shaw's Maserati, which also won in 1940. The stories of behind the scenes give a graphic picture of American Speedway racing. The refusal of first Indy president, Carl Fisher, to pay any starting money whatsoever to Ralph de Palma in 1916, has

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been maintained to this day, when prize money has increased from the original \$27,550 to well over \$400,000. The dreadful 17-car crash of 1958, which resulted in the loss of Pat O'Connor, is described as a major starting procedure error. The author has obviously put in a great deal of research, but in many accounts, it is difficult to sort out exactly which driver is piloting a particular car. Many of the illustrations are of exceptional historic interest. It should be noted that Indianapolis drivers believe that it is unlucky to drive a green car, or anything green. Pat Flaherty rather destroyed that superstition by having a green shamrock on his helmet, when he won the 1956 race. The difference between American professional track-racing and European road-racing is never more fully clarified than in this very interesting volume.

*Motor Racing Year 1961*, by John Blunsden and Alan Brinton (Knightsbridge Publications, 12s. 6d.), reviews the events of 1961 in a readable manner, accompanied by several good illustrations. However, the book breaks no new ground, and one has the impression of having read it all before, not only in contemporary race reports, but in many summaries published at the end of each year. Most interesting is Jack Brabham's "Bash at the Brickyard", telling of his experiences at Indianapolis with the Cooper-Climax, an entry which has certainly caused people seriously to think about racing car design across the Atlantic.

Richard Bensted-Smith's *Racing Cars* (Batsford, 12s. 6d.) features colour photographs of 24 outstanding, post-war machines, accompanied by concise notes, and is an attractive publication. True, one or two of the colour plates do not give full justice to the subjects, but others are really first-rate. I would pick out the best as being the dust-jacket (Ferraris at Monaco), Moss in the 250F Maserati and the W196 Mercedes-Benz and Hawthorn in a Ferrari. I would suggest, however, that reproduction would have been vastly improved had the publishers adopted the dust-jacket paper, in place of the matt-surface quality adopted for the plates.

At last the story of B.R.M. has been told, and in *B.R.M.*, by Raymond Mays and Peter Roberts (Cassell, 30s.), the reader will find all possible information concerning the most-criticized racing marque of our time. Mays, of course, was the moving spirit behind the project which he commenced in 1947, and which was unveiled to the waiting world on 15th December, 1949, at Folkingham airfield. Some 350 firms had been cajoled and persuaded by the indefatigable Raymond Mays to finance and build the B.R.M.

On its first appearance the press hailed the car as a "world-beater", but within a year or two it was to be the subject of jeers and catcalls, and was reckoned to be just as unreliable as was the E-type E.R.A., with which both Mays and Peter Berthon had also been associated. Year after year, the B.R.M. flattered only to deceive. At times it was quite patently the most powerful and fastest 1½-litre car the world had ever seen, but again and again the spectre of unreliability robbed it of major successes. All in all, the 16-cylinder B.R.M. was a wonderfully conceived piece of machinery, and it was indeed a pity that when it reached full development stage, it was just two years too late.

When the Trust was dissolved, and Alfred Owen acquired the assets, the 2½-litre formula was about to be introduced. With the four-cylinder cars, it was the same story. Extremely rapid, and always potential

winners, they somehow or other met with the direct misfortune in all but minor races. It was not until 1959, that Jo Bonnier brought a B.R.M. over the line at Zandvoort, for the marque to register its very first victory in a World Championship race. Fortunes thereafter continued to fluctuate, and with the introduction of the 1,500 c.c. formula Bourne were without a suitable engine, and highly developed but obsolescent 2½-litre cars. In 1960 Coventry Climax engines were used, but the record of successes was anything but inspiring. However, towards the end of the year, the new V8 appeared and it is with this engine that Graham Hill has brought the name B.R.M. to the forefront of modern Grand Prix automobile construction.

It cannot be denied that Mays' account is mostly of failures and tribulations, but one cannot possibly do anything other than admire the unquenchable spirit of the man, and the intense loyalty of the mechanics, even during the darkest days. "R.M." is perfectly candid concerning the attacks in the Press, and also discloses that he and Tony Vandervell never could see eye to eye. It was not surprising to Mays that Vandervell eventually left the B.R.M. set-up, and decided to race his own machines. In fact, the B.R.M.-Vanwall rivalry continued for several years, and Mays recalls that Tony Vandervell flatly refused to loan B.R.M. the services of the late Stuart Lewis-Evans, when the Vanwalls were not engaged for a particular race.



RAYMOND MAYS—B.R.M.

This reviewer does feel that Mays offers just too many excuses for the continual misfortunes experienced, and that the organization at times was inclined to be somewhat chaotic. This undoubtedly caused the departure of the hard-headed Mr. Vandervell, who could not see why it was always necessary to be rushing to beat the clock, resulting in cars that were often ill-prepared despite day and night efforts from mechanics, worked simply to a standstill.

It is interesting to note that, according to the authors' statistics, from 26th August, 1950, to 16th September, 1962, B.R.M. took part in 144 races, of which 29 resulted in victories. We would have liked to know exactly why Bertie Bradnack left after such a short period as team manager, and also why Wilkie Wilkinson is more or less ignored after a brief reference to his appointment as team manager for 1961. Also, one feels that the failure of the single-disc rear brake could have been admitted, instead of many references to failure of that system.

Incidentally the authors might note that Chris Bristow was not involved with Gendebien when he had his fatal accident at Spa, but Mairesse, and that the ex-Ferrari racing manager spells his name Tavoni,

and not Tovani. Quibbles apart, this is a most interesting and fascinating volume, contributing much to post-war motor-racing history.

Austen May has written several books in the past, mainly on trials and on speed-events. In *Speed Hill-Climb* (Foulis, 21s.) he has recorded vividly British events since 1945, in which he himself has been a regular competitor. The fascination of short-distance sprinting and hill-climbing attracts many drivers, with the annual R.A.C. Championship as the Blue Riband of the speed hill-climb section, embracing such venues as Shelsley Walsh, Prescott, Bouley Bay, Craignantlet, Rest-and-be-Thankful, Bo'ness, Stapleford, Westbrook Hay and Great Auclum. Since this competition was established the winners have been: 1948, Raymond Mays (E.R.A.); 1949, Sydney Allard (Allard); 1950, Dennis Poore (Alfa Romeo); 1951 and 1952, Ken Wharton (Cooper-J.A.P.); 1953 and 1954, Ken Wharton (Cooper-J.A.P. and E.R.A.); 1955, 1956, 1957, Tony Marsh (Cooper-J.A.P.); 1958, 1959, 1960, David Boshier-Jones (Cooper-J.A.P.); 1961, David Good (Cooper-J.A.P.); 1962, Arthur Owen (Cooper-Climax). This list emphasizes the remarkable suitability of the marque Cooper for this type of event. Since 1955 the twin-cylinder Cooper-J.A.P. remained supreme, but this year Jerseyman Arthur Owen broke the sequence with his ex-Formula One, 2.5-litre Cooper-Climax. I note that May always refers to F.T.D., or Fastest Time of the Day. Purists will maintain that time cannot be fast nor slow, so the term by rights ought to be Best Time of the Day. Some of the chapters are most nostalgic, and one recalls the rivalry in the 500 c.c. class between Colin Strang and Clive Lones, Bolster's unforgettable "Bloody Mary", Instone's Djinn, Jack Moore's Wasp, Lloyd-Jones's 21-litre Triangle Flying Saucer, Joe Fry's Freikaiserwagen, Allard's Steyr-Allard, Poore's 3.8 Alfa Romeo, the supercharged Maseratis and E.R.A.s and dozens of others.

Whenever *Automobile Year* appears, one must admire the superb production of what is regarded as the finest annual on motoring subjects in the world. Produced by Edita, Lausanne, it is available in this country from G. T. Foulis and Co., Ltd., at 50s. Edited by Ami Guichard, and in English by Gordon Wilkins, contributors include Johnny Lurani, W. Boddy, Brockbank, Jacques Ickx, M. May, C. Proche, M. Reichel, D. J. Gee, M. L. Dess and Wilkins. A great deal of space is given to the Sport, and in this 1961-1962 edition, there are full accounts of all World Championship races during 1961, together with excellent illustrations. Many of the colour photographs are absolutely first-rate, particularly Ginther's Ferrari in the Monte Carlo tunnel by Yves Debraine, and a double-page spread of the 2.4-litre Ferrari, by A. Bugler. Half-tones are well chosen, and stills of modern automobiles manage to avoid the usual hand-out pictures that other annuals feature. There is a most informative article on Ford—the Car that Changed the World, and a most intriguing study of the possibilities of the motor industry in the 1960s, culled from articles in the *Economist*. Two very interesting features are a Short ABC of Coachwork, and Dream Cars, Prototypes and Special Bodies. All we can say is that the 1962-63 edition will have to be very good indeed, if it is to be better than the current production.

Most refreshing is *The Fast Ones*, by Peter Miller (Stanley Paul, 21s.), which is not just another book on motor racing, but a well-written account of the author's

own experiences during the past decade. Beginning his competitions career in 1952 in the "Monte", with Alan Fraser's Sunbeam-Talbot, he was classified 76th out of 400 starters. The following year he joined the Competitions Department of Rootes, under Norman Garrad, and in that year's "Alpine" won a "Coupe des Alpes", co-driving with John Fitch in a Sunbeam Alpine. From 1954 onwards Miller was assistant to Reg Parnell in managing the Aston Martin team, and was associated with the David Brown equipe till 1958, when he rejoined Rootes in U.S.A.

The author recounts many behind-the-scenes anecdotes, which throw a new light on the organization of a sports-racing team. His eye-witness account of the Le Mans disaster is probably the most accurate so far recorded, and, as AUTOSPORT did in 1955, he absolves the late Mike Hawthorn from all possible blame. The curious explosions from the wrecked Mercedes-Benz are described, and a photograph also shows these actually taking place. It is alleged that Peter Miller devotes rather too much space to fatalities and drivers who



PETER MILLER—*The Fast Ones*

are no longer with us. I do not agree. Someone had to do it, and Miller has done a fine and exhaustive job of tracing fatal racing and rally accidents in the post-war years. His researches do prove one thing,—that full-scale Grand Prix racing is nothing like as dangerous as some would have us believe. Six drivers lost their lives racing in Formula One grandes epreuves from 1946 to 1962. These were Luigi Musso (Ferrari), Peter Collins (Ferrari), Wolfgang von Trips (Ferrari), Chris Bristow (Cooper-Climax), Alan Stacey (Lotus-Climax) and Christian Kautz (Maserati). Fagioli was killed at Monte Carlo, but in a G.T. Lancia.

The chapter "The Lucky Ones" records several miraculous escapes, but Miller is mostly concerned with the lighter side of motor-racing, and recalls many off-duty incidents involving famous personalities. This is one of the books that the reader cannot lay down until it is finished. One would like to comment that John Wyer deserves more attention than he is given in the narrative. The author is a valuable addition to the present-day writers on motor-racing subjects, and one looks forward to many more works from his typewriter. The illustrations are excellent, and there are 248 pages of reading matter.

Sports cars have inspired many authors, and there is an ever-increasing list of volumes dealing with this subject, many of them, I am sad to say, not only repetitive, but often extremely lacking in real information. This category does not include a *History of the World's Sports Cars*, by Richard Hough (Allen and Unwin, 42s. net)—a most comprehensive treatise written by a genuine enthusiast, and splendidly

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illustrated in line, half-tone and colour. Hough has put in a considerable amount of research, and has divided his book into two parts. The first section deals with the history and development of the sports car, concluding with specifications of 400 different models. Part 2 is devoted to sports-car racing, concentrating on the classic events.

It is interesting to note that in 1954, Mercedes-Benz produced a 1½-litre, rear-engined sports car, of which only five were constructed. This had a single-o.h.c., four-cylinder engine of 1,498 c.c. (72 mm. x 92 mm.), giving 45 b.h.p. at 4,000 r.p.m., with independent front suspension by double transverse leaf springs, and i.r.s. by helical springs. A maximum speed of 78 m.p.h. was claimed. I believe Mr. Hough is mistaken when he refers to the 2.8-litre 8V Fiat. This always appeared in 2-litre form, with a 1,996 c.c. engine developing 110 b.h.p., and was of that capacity in S.I.A.T.A. form.

It is a great pity that Ralph Stein's beautiful book, reviewed previously in AUTOSPORT under the title of *The Treasury of the Automobile*, contains so many blatant errors in the new edition, *The Automobile Book* (Paul Hamlyn, 50s.). Stirling Moss has written a foreword, but it is in an additional chapter, "The New Golden Race of Motor Racing", that the bloomers are to be found. For example, the colour photographs, which accompany the text, have some startling examples of caption-writing confusion. David Phillips in a Formula 1 Cooper at Monaco is Jim Clark (Lotus-Climax). Stirling Moss (Lotus) in Belgian G.P. is actually Roy Salvadori in a Yeoman Credit Cooper-Climax. Jim Clark's Cooper is a Lotus. Mairesse did not win the Belgian Grand Prix. The picture was taken at Brussels which he did win. The Briggs-Cunningham E-type Jaguar is the Lumsden-Sargent machine at Le Mans. The Harrington Alpine is the factory Alpine hard-top. Elsewhere we are puzzled by a new (apparently) Vauxhall, described as a XV/490. Notwithstanding these, the volume is still one of the best-produced books so far to appear. The Vintage and Veteran illustrations are superb, but before delivering further copies to booksellers the publishers will have to ensure that errata slips are included.

*The Motor Book*—an Anthology 1895-1914, edited by T. R. Nicholson (Methuen, 25s.), is an engrossing and nostalgic volume, covering every phase of motoring for pleasure during the 19 years it spans. Even from the first chapter the reader is gripped, in a splendid monograph on the twin-cylinder 6 h.p. Panhard-Levassor by S. F. Edge, followed by Sir David Salomon's description of the carriage built for him by M. Peugeot in 1895. I love the reference to reversing arrangements: "There is a handle beside the driver's seat for backing the carriage when necessary, and a foot lever is present for releasing the motor from the carriage, and for acting as a brake on the shaft that carries the gearing." This gem by the late Lord Northcliffe was published in 1904. "Few undertakings require more care and caution than the choice of a motor-car. Of the three or four hundred types and varieties now in existence, many are of no practical use, some are extremely complicated, not a few dangerous, and many more or less faulty in construction. The difficulty of the choice is increased by the fact that almost every enthusiast recommends the particular kind of carriage he himself possesses, and, in addition, every manufacturer claims, and possibly believes, that his is the only possible automobile." The

chapter on chauffeurs starts off with an anecdote: "Old Gentleman: But what sort of work are you fitted for? The Trump: Well, ye see, boss, I'm used ter being in jail, and I was thinkin' I wouldn't mind takin' a job as chauffeur." Francis Milton reckoned that chauffeur was the only suitable word to describe the driver of an automobile, and stated that motor-man was the quintessence of snobbery. However the name chauffeur came from bandits in 1795, who, disguised, entered lonely farms, and tortured their victims by burning the soles of their feet to extract information as to where their money or jewellery was hidden. Hence they were called chauffeurs, a name which frightened our grandfathers as much as the scorching chauffeur today (1907) frightens our grandchildren. Racing receives its fair share in the book, and Jarrot's vivid narrative of the Circuit du Nord of 1902 is enthralling. So too are the stories of old-time trials, rallies and record-breaking. Certainly a must for every enthusiast's bookshelves, even for a fine selection of photographs and *Punch* cartoons.

Of a different mould is *The Motorist's Bedside Book*, edited by Anthony Harding (Batsford, 30s.), a follow-up of the highly successful *The Motorist's Week-end Book*, by the same editor. The new volume is even more readable, with 28 well-known authors, and a new section by motor racing photographers. Readers may wonder why George Phillips is not represented, but it appears that the letter inviting him to contribute was overlooked by him, and when he read it, the book had closed for press. The literary contributors include R. Bensted-Smith, D. B. Tubbs, John Bolster, Sammy Davis, Cyril Posthumus, William Boddy, Rodney Walkerley, Gregor Grant, Wilson McComb, Peter Riviere, Denis Jenkinson, John Wyer, Laurence Pomeroy, David Scott-Moncrieff and Paul Frere. O'Hagan's "Pas sur votre Nellie" is a delightful piece, and Wyer writes tellingly of the Great Sports Car Racket, and everyone will enjoy Bensted-Smith's "Two Men went to Monte", and Bolster's "The Frenchman and his Car". Posthumus's article on the Maserati brothers is tremendously absorbing. In point of fact, this volume with its well-chosen illustrations and apt cartoons is a credit to British publishing, and it is to be hoped that Mr. Harding is already thinking in terms of yet a third volume, and will continue to include the amusing cut-offs that are a feature.

*Move Over*, by Russell Brockbank (Temple Press, Ltd., 10s. 6d.), is another collection of motoring drawings, by that incomparable humorous artist, whose works have enlivened the pages of *The Motor* and *Punch* for many years. This is a most up-to-date survey, with many clever quips at the modern mini-car craze. One of my favourites is a character sitting on the pavement with a board bearing the inscription: "Wife and London sports car insurance to Support." The motor-racing sketches are positively brilliant, and they included that classic of the Dunlop Bridge being punctured at Le Mans, and the U.D.T.-Laystall and Yeoman Credit teams displaying signals bearing 4 per cent. and 4½ per cent.

*Sports Cars*, by Laurie Cade, is one of the Foyles Handbooks produced at 4s. It is obviously aimed at the less-knowledgeable type of reader, and naturally the subject-matter breaks no new ground. However it is chatty written, and contains descriptions of the best-known, modern British-built machines.

In *The Motor Car*, Anthony Bond has produced an Anglicized version of the well-known work by the Italians Gianni Marin and Andrea Mattei, the text being translated by Rodney Walkerley and Lyon Benzimra. This is an illustrated history, with half-tone and colour photographs, many of them being extremely rare. At 4 gns. it is an expensive proposition, and its oblong shape makes it an awkward size for the library shelf. The quality of production is of a very high standard, but here and there irritating errors are to be found. Pictures of a Humber and of a Riley have the wrong captions, whilst the Facellia was introduced some time after the Facel-Vega had appeared, and not at the same time as the bigger car. The volume covers from 1770 to the present, commencing with the extraordinary Cugnot Steam Waggon, a model of which is to be found in the R.A.C. Many of the Italian veterans illustrated are to be found in the Turin museum, recently described in two articles in AUTOSPORT by John Bolster.

*Motor Cars To-day*, by E. T. Westbury (Arthur Barker, 15s.), is written in non-technical language, and is illustrated with photographs and line drawings. The author attempts to cover a very wide field within 124 pages, and consequently much of interest has had to be sacrificed in the interests of space.

The vogue of the Veteran car is evident in *Early Cars*, by Michael Sedgwick (Weidenfeld and Nicholson, 27s. 6d.). The author is curator of the Montagu Museum at Beaulieu, and naturally the exhibits in that superb collection provide the inspiration for many of the articles and pictures. The colour reproductions are first-rate, and the half-tones are also exceptionally good. Sedgwick's text is very readable, and most informative, and he has included sketches of motoring fashions, also from the Montagu collection, which are highly diverting.

Ernest Carter's *Veteran Car Owner's Manual* (Stanley Paul, 42s.), is the first attempt to bring out a book on the upkeep and maintenance of Veteran and Edwardian machines. Normally speaking, the owners of these cars, who do their own maintenance work, are a particularly knowledgeable set of characters, and one feels that Mr. Carter is trying to teach his grandma to suck eggs. However, if one is new to the game, I should imagine that this book would be of immense value, and it is also comprehensively illustrated. Proof-reading should have spotted the heading for the chapter on carburation, which is entitled "Carburetion and Carburettors". Also the instructions relating to Rudge-Whitworth wheels are somewhat superfluous, for the reader is warned not to run with a loose wheel—a practice which causes the driving dogs and screw-threads to wear badly.

*Sports Cars*, by Ronald Barker (Batsford, 12s. 6d.), is a useful addition to that publisher's list of colour books, containing as it does photographs of 24 modern sports-cars, with accurate and descriptive text by "Steady" Barker of *The Autocar*. It is printed in Denmark, but as in the case of Bensted-Smith's book, I feel that the quality of reproduction would be vastly improved were a less absorbent paper to be used. One has only to compare the dust-jacket with the facsimile reproduced in the book itself, to see what I mean.

Rallies have, till lately, not been productive of many books, but within the past few months, three new titles have been added, all by authors of considerable experience in this field. Most important is that of Marcus Chambers', *Seven Year Twitch* (Foulis,

30s.). This tells the story of Marcus's experiences as team manager for B.M.C., whose team he built up to a most successful organization, making several driver and navigator discoveries on the way. It was due to Chambers' foresight that such well-known partnerships as the Morley Brothers, Pat Moss/Ann Wisdom and Peter Riley/Tony Ambrose were instigated. The author gives John Gott, present Chief Constable of Northamptonshire, much of the credit for eventual successes, due to his enthusiasm and all-round usefulness as team captain. The whole story, and subsequent heart-breakings, of running a factory rally team, is told in detail, and what might have been a tedious recitation of facts and figures, is saved by Chambers' fund of anecdotes and reminiscences. Of Pat Moss he says: "Likes steak almost raw. 'Hold it near a candle'", she tells the waiter. For people who do not know which Morley is which, Marcus describes "Donald the Driver" as compact and wiry, whose slightly saturnine appearance has earned him the nickname of "The Little Devil", given by Pat Moss. So now you know, Erle is the taller one and a first-class driver-cum-navigator, whilst Donald is described by the author as probably Britain's best rally-driver. One of Marcus's forecasts obviously hasn't come true. Speaking of Ann Wisdom he states: "Has recently married Peter Riley, another B.M.C. driver, but I don't think this will break up Britain's best partnership". Obviously he hadn't bargained for logical biological reasons. Incidentally it would be interesting to know what the author



MARCUS CHAMBERS—*Seven Year Twitch*

thinks about the departure of Riley, Seigle-Morris and Pat Moss to Ford's. I should think that his comment would be, "Well, that's Stuart Turner's headache"—Turner being, of course, his successor at B.M.C. Folk who aspire to works drives should take this book to heart, and will readily understand why team managers are reluctant to hand cars over to comparative newcomers. Modern rallying is almost a full-time business, and in the more important events, preparation, recce work and familiarization with regs take up plenty of time. His references to the indomitable John Gott include his nicknames "Gauliteer" and "Cassandra". Chambers now works with a big North Country garage business, but during his seven years with the competitions department of B.M.C., he certainly left his mark. Possibly he annoyed a lot of people during his sojourn, but there is one thing certain, he will not readily be forgotten for the many instances of his kindness of disposition, and complete willingness to work day and night to get the best from his team.

In *Sleepless Knights* (Motor Racing Publications, 21s.), John Sprinzel tells of

rallies from the drivers' point of view, interspersed with many personal anecdotes of events which occurred during international rallies. Sprinzel gives many useful hints on rally-driving in general, and gives his personal opinion of the Monte Carlo, R.A.C., Liège-Rome-Liège, Alpine, Tulip, German, Polish and Scandinavian Championship rallies. One feels that Sprinzel could have come away with more back-



JOHN SPRINZEL—*Sleepless Knights*

ground tales, several of which are well worth recording, and although known pretty well to the rally circus, have not had much publicity outside that circle. Anyway it is a bright book altogether, and well worth reading.

Dick Bensted-Smith's *Rally Manual* (Motor Racing Publications, 21s.), is more of a text book on the subject, and also is inclined to cover much of the subject matter discussed in Sprinzel's volume. The

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author has a delightful style of writing, and manages to include facts and figures without departing from his narrative. To those intending to take up the sport, this work will be of immense assistance, giving as it does, full details of the costs involved, methods of marking and scoring, and every possible advice as to map-reading and route-finding, together with shrewd notes on preparation and equipment.

Although written by the Americans David Hebb and Art Peck, *Sports Car Rallies, Trials and Gymkhanas*, in its revised form (Channel Press, N.Y., \$2.95), contains a great amount of useful information which could equally apply to the European scene. The delightful cartoons by Anna Lou Edebohls, and skilful drawings by George Janes add to the attractions of this well-illustrated and knowledgeable publication.

One must mention the *Shell Country Book*, by Geoffrey Grigson (Phoenix House), as providing exceptional value at 21s., and containing beautiful colour plates of every subject dear to the heart of countryside lovers. In the "Road" series, published by Eyre and Spottiswoode in conjunction with BP at 21s., Christopher Dilke writes on the "Road to Dalmatia". Fawcett Books have brought out 5s. editions of *The How To Book of Hot-Rods*, by Wayne Thomas and Griff Borgeson, *Karting Ideas*, by Robert Lee Behme, and *Small Car Guide*, by Alben Philips. All published originally in the U.S.A., they throw interesting light on transatlantic affairs, although the last named is mainly concerned with European and Asian vehicles.

Second series of *Early Motor-Cars*, by George Oliver (Hugh Evelyn, 55s.), contains superb line-and-colour drawings of 1919 22 h.p. Chevrolet, 1922 6 h.p. Peugeot, 1924 11 h.p. Humber, 1926 18 h.p. Bugatti, 1926 3-litre Bentley, 1927 22 h.p. Rolls-Royce, 1928 30/98 Vauxhall, 1928 36/220S Mercedes-Benz, 1928 45 h.p. Hispano-Suiza, 1929 36 h.p. Stutz, 1930 Lancia Di Lambda, and 1930 17/95 Alfa Romeo. The prints are large-size, and only the fact that it is, in itself, a supremely attractive publication, prevents one from removing each drawing and having it framed. The text is informative, and one looks forward to many more of this series, which will undoubtedly be collectors' pieces in the future.

By injecting art into motoring publications, L. Scott Bailey has produced a real book for the connoisseur in the *Automobile Quarterly*, published in New York at \$5.95, and worth every cent. With numerous and utterly splendid colour plates, and extremely well-informed articles, Vol. 1, No. 1 whets the appetite to such an extent that this reviewer can scarcely wait until the arrival of another issue. Contributors include: Scott Bailey himself, Peter Helck, Ken Purdy, Denise McLuggage, Henry Austin Clark, Jr., Leslie Saalburg, Brooks Stevens, Dan Rubin, Tom Burnside, Warren Weith, Bill Nolan, Ralph Stein and Clarence Hornung. Some reproductions of early poster advertising are a delight to the eye, and I have nothing but praise for the high standard of presentation which is a feature of this latest contribution to high-quality motoring volumes.

Red Daniells scored a great hit with his *Drivers Wild*, but his *More Wild Drivers* (Scorpion Press, 7s. 6d.) is even better, and the accompanying sketches are uproariously funny. The author possesses an uncanny insight into the various types which make up the car-driving public. Here we find the

gimmick-mad merchant, the kerbside Romeo, the scooter maniac, the go-fast chequered strip characters, the driving school tycoon, the foreign car fanatic, the traffic warden, the badge collector and many more. The call is for more and more laughter these days, and Mr. Daniells certainly deserves a leg-up for supplying a good deal of it.

Handbooks can be dry, almost useless without an accompanying workshop manual, or just an expansion of established maintenance routines. However, I am glad to say that the latest batch to appear contains information and procedure vital to those who prefer to do their own maintenance. For example, the *Sunday Times* series, by Piet Olyslager at 6s., are worth every penny to the owners of the cars covered. Latest issues are the Wolsley Fifteen Hundred (from 1957); Austin A40 (from 1958); Ford Taunus 17M, P2 and P3 (from 1957); and Riley One-Point-Five (from 1957). At 7s. 6d. are Fiat 1100 and 1200 (all models from 1953); Fiat 600 and 600D (all models from 1955); and Mercedes-Benz 219, 220S and 22SE (1956-1960). At 12s. 6d. is the Austin-Healey Sprite, Marks I and II.

The *Odhams Owner-driver Handbooks* at 8s. 6d. include the Ford Consul, by Leonard Holmes, and the Vauxhall Victor, by Rolt Hammond. Even more detailed are the Stanley Paul productions in the *Companion* series, both by Kenneth Ullyett. These deal with the Porsche and Volkswagen (15s.), and the Triumph (18s.), both covering service for many models, and also historical facts concerning the manufacturers.

*Welding*, by S. M. Algar (Arcos, 15s.), is an invaluable work for those who would like to take up this branch of engineering, and describes the cheapest and best methods of setting about doing it. Jack Brabham has written a foreword to *Automobile Engine Tuning*, by P. E. Irving (Temple Press, 25s.). This book is for the man who knows something about his engine, but would like to increase the performance. It covers all types of power-units from motorcycle singles to automobile "eights", and is written by an acknowledged expert in this intriguing subject. As Brabham says, both groups, amateur and professional, will find this book of absorbing interest.

Travel books have, of late, become more interesting. Thoroughly recommended is *Drive Round the World*, by J.-C. Baudot and J. Seguela, who heroically covered over 100,000 kilometres in a 2CV Citroën, visiting no less than 50 countries, with 350 nights spent in the open air, and 2,247 hours at the wheel. The young Frenchmen met with incredible adventures, but their greatest hazards lay with the various customs formalities they experienced. Probably their most embarrassing period was when the Citroën was chained up on the orders of a Japanese laundryman in Brazil, who was determined that they would marry his two daughters, prompted by their five, wrestler-type brothers. Eventually they escaped by unbolting the chained bumper, and leaving it to the laundryman. The tales of bribery and corruption in official circles, in order to obtain *laissez-passer* documents, are corroborated by other world travellers. How the authors managed to escape firing squads, or at least long terms of imprisonment, passes comprehension. If you wish to seek adventure second-hand, you must read this book, which, in years to come, will be a classic of its kind.

Equally fascinating is *Coleman's Drive* (Faber and Faber, 21s.). In this, John Coleman recounts his adventures whilst

driving a very early Austin Seven (MO 6320) from Buenos Aires to New York, a journey which took eight months. The car is now in the Montagu Museum and is a 1925 "Chummy". Coleman took the route made famous by the horseman Tschiffely, who took some two years to do it. Deserts, unmade roads, dried-up river beds, canyons and so on were traversed by the sturdy little Austin, whilst Coleman had to cope with every possible type of weather, including Peruvian earthquakes.

Ernst Weise describes his 11,000 miles trip from Alaska in *From Alaska to Cape Horn* (Robert Hale, 18s.). He drove a Mercedes-Benz 190D, accompanied by Marianne, a young photographer. This is also an account of almost impossible travel conditions, average speed sometimes being as low as 1 m.p.h. per day. The accompanying photographs are interesting, and one thinks of Mr. Wiese as being a latter-day Stanley, in his zest for exploration.

Ward Lock, Ltd., have added *Bournemouth, New Forest and Southampton and The Channel Islands* to their excellent 7s. 6d. Red Guide series. Intending visitors to these areas will find the books of incalculable value, containing as they do well-drawn and informative maps and town-plans, and notes on every possible subject of interest in the localities. *Not Sixty Miles from London* (Percival Marshall, 3s. 6d.) is another Gordon Cooper work, giving some helpful information regarding routes and places in the Home Counties. A useful little volume to carry in the glove compartment.

Batsford have brought out *The Sports Car Pocketbook*, by William Boddy, at 8s. 6d. This is what it suggests, a comprehensive guide to sports cars past and present, with numerous illustrations and brief specifications. It is a fine little book of reference, and could be used to settle many of the arguments that continually arise when enthusiasts forgather to discuss the all-important topic of sports cars.

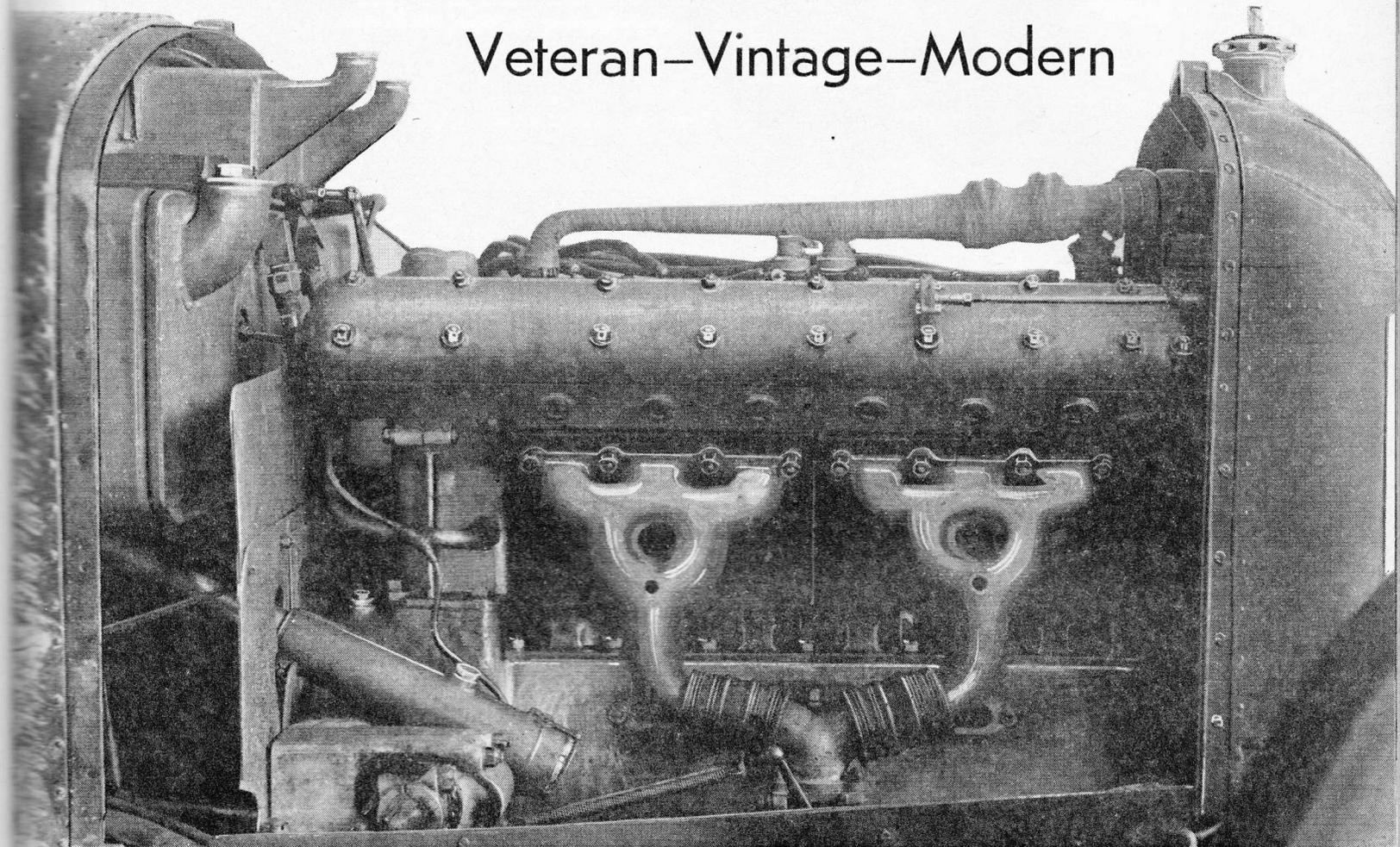
Pocket editions by Batsford (5s.), are augmented by the inclusion of two well-known titles, *The Sports Car*, by John Stanford, *The Racing Driver*, by Denis Jenkinson, *Veteran and Edwardian Motor Cars*, by D. Scott-Moncrieff, and *The Vintage Motor Car*, by Cecil Clutton and John Stanford. The smaller editions have the same high quality of production which one has come to associate with the publishers, and immediately solve the problems of gifts at Christmas time in the inexpensive category. The time is not far distant when these pocket issues will become as familiar on booksellers' shelves as are the Penguin and Pan series in other fields.

I should say that so far as Christmas gifts are concerned, *The Guinness Book of Records* at 12s. 6d. offers the finest book value obtainable anywhere. If you want to impress your friends with your vast knowledge of every possible record in the world, then this is your vade-mecum. I wonder how many insufferable bores have had additional ammunition supplied by reading and digesting this all-embracing volume? For instance, did you know that the rotating wing principle of the helicopter was illustrated in a painting of the Madonna and Child (circa 1490)? If you don't believe me, the painting can be examined in the Le Mans Museum. Also, did you know that the world's long-distance driving record was established as long ago as 1933, standing at 300,000 kilometres at an average speed of 58.08 m.p.h., covered by eight drivers in 133 days, 17 hours, 37 minutes at Montlhéry, in the famous Citroën "La Petite Rosalie"?

JOHN BOLSTER discusses

# STROKE/BORE RATIOS

## Veteran—Vintage—Modern



*TURNING POINT.* The 1922 six-cylinder 65 mm. x 100 mm. 2-litre Fiat engine, which was the first really high-revving Grand Prix power unit.

My tiny mind has been churning again, this time on the subject of stroke/bore ratios. Why was it, I asked myself, that the early Veteran cars had long-stroke engines? Then, the giant Edwardian racers of the heroic period were over-square, followed by more long-stroke cars just prior to the first war. The Vintage racers had long strokes, too, though engines were squaring up again before the second war. Finally, we have the current crop of miniature projectiles, which have the same stroke/bore ratios as the Edwardian monsters. How come?

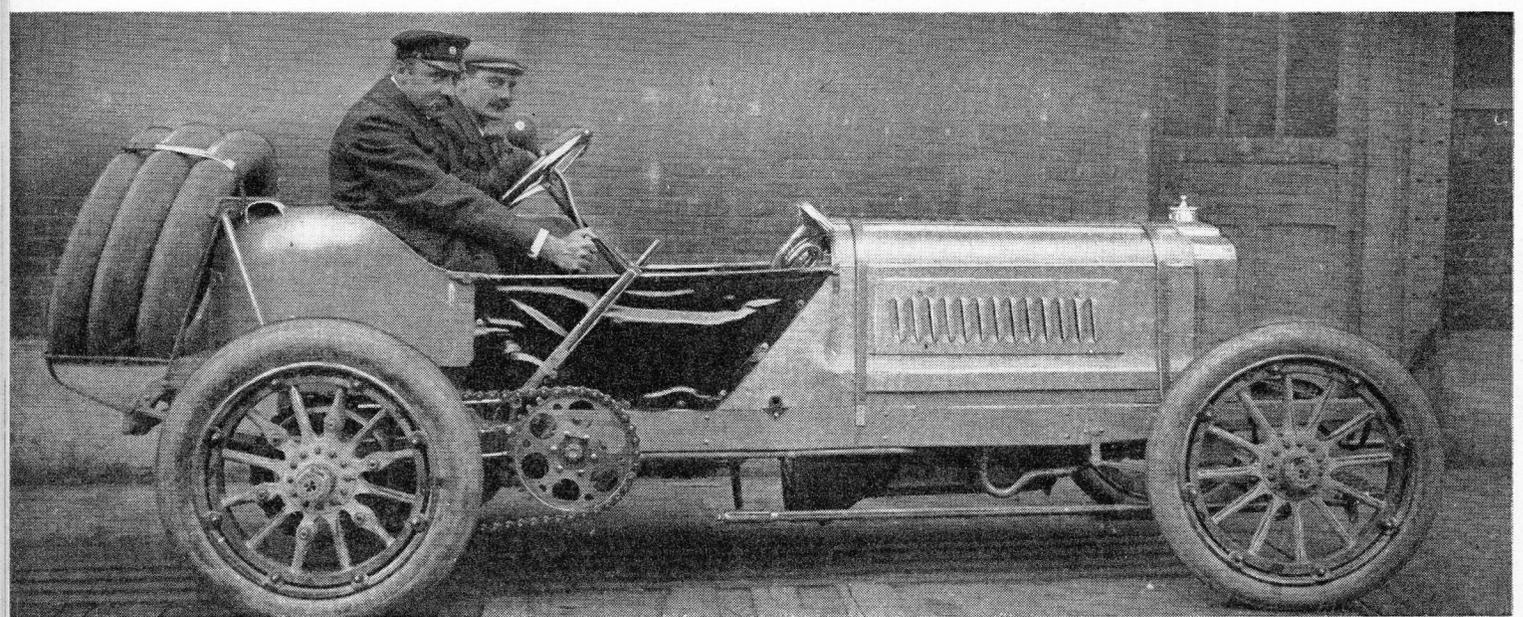
I think that the original long-stroke concept was inherited from the gas engine. The very first gas engines had no compression stroke, inspiring the mixture during the first third of the piston's travel and then firing it for expansion during the remaining two-thirds. Obviously, a long stroke was highly desirable for this extremely inefficient type of prime mover. Nevertheless, Etienne Lenoir fitted one of these vast contrivances with a heated vaporizer for liquid fuel, and proceeded to install it in a suitably hefty wagon. The Lenoir Special was timed at speeds approaching 3 m.p.h. in 1862 but I regret that we are unable to quote the acceleration figures.

Early gas engines had a stroke/bore ratio of 3:1 or more. When the four-stroke cycle was adopted, these extreme dimensions were somewhat curtailed and the Daimler engine, which was used in the world's first racing cars built by Panhard and Peugeot, had the comparatively moderate S.B. ratio of 1.5:1. This figure also applied to Panhard's own Phénix vertical twin power unit. Beau de Rochas, the inventor of the four-stroke cycle, insisted that the surface of the piston and cylinder should be "the smallest possible in relation to the largest possible contents". Few designers heeded his words, and combustion chambers had large pockets for valves and ignition tubes. Thus, a reasonable stroke was necessary, even when the compression ratio did not exceed 3:1, because cylinder heads had so much space to fill.

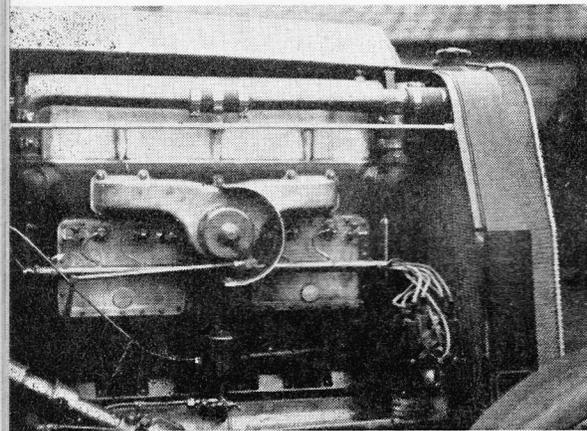
At the turn of the century, when motor racing was really getting into its stride, only weight was limited, even in the smaller classes, and constructors were free to build

as big an engine as they could get into the chassis. With very long crankshaft throws, rigidity was hard to come by, for the journals were very lengthy, to take the load, and of small diameter. High rubbing speeds could not be tolerated when lubrication was by splash, and so these long, thin journals made the construction of rigid crankshafts progressively more difficult as the stroke was increased. That is why four-cylinder engines were much more successful than "sixes", which require torsionally rigid crankshafts.

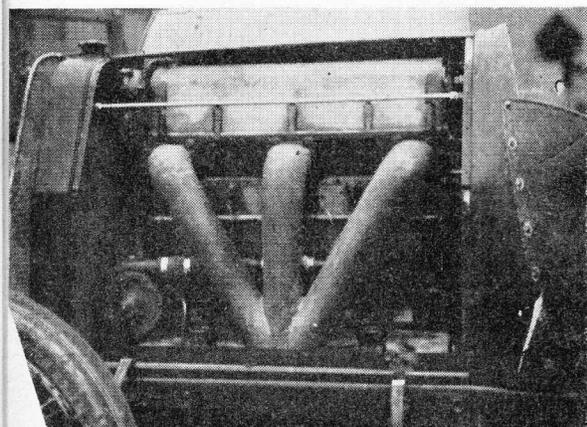
No such difficulty attended the stretching of the bore. Bigger cylinders meant bigger pistons, but with a low specific output these presented no heat-flow problems, even though the material was cast iron. So, the square engine was rapidly approached and by 1904 all the important contenders had over-square power units. Taking the Panhard as a typical example, most of the pre-1900 racers of this make had dimensions of 90 mm. x 130 mm. The 24 h.p. car of 1900 was 110 mm. x 140 mm., the 40 h.p.



▲ **OVER SQUARE.** The very successful Richard Brasier had a side valve four-cylinder engine of 165 mm. x 140 mm.



▲ **TWO VIEWS** of the 15-litre overhead camshaft engine of the 1912 Grand Prix Fiat, the last of the chain-driven monsters.



machine of 1901 measured 130 mm. x 140 mm., and the fabulous "Seventy" of 1902 encompassed 160 mm. x 170 mm., which is about 13 litres. By 1904 the Panhard had 170 mm. for both dimensions, and at the first Grand Prix in 1906 the great firm produced a 130 h.p. car of 185 mm. x 170 mm. (18,285 c.c.). To have got such a power unit into a car that had to weigh in at 1,000 kg. (2,204 lbs.) was a wonderful achievement. To save weight, thin sheet copper waterjackets were soldered onto the cylinders of the early Panhard racing cars.

However, the race was won by the Renault of Szisz, which had a side-valve engine of only 166 mm. x 150 mm., one of the smallest power units in the contest but of about the normal S.B. ratio. My uncle bought the car after the race and used it for touring, still with two bucket seats as a body!

The 1907 Grand Prix had no weight or engine limits but a fuel consumption formula was adopted, equivalent to 9.4 m.p.g. It is remarkable how economical the Edwardian giants were. The race was won by Nazzaro's Fiat, of which the four-cylinder engine had dimensions of 180 mm. x 160 mm. (16,320 c.c.), Szisz being second with his "small" Renault. The Fiat had (or rather "has"—I was gloating over it very recently) an engine with hemispherical combustion chambers and inclined valves. One rocker per cylinder, with a push-and-pull rod, operated both inlet and exhaust valves.

For the 1908 Grand Prix, it was decided that the monsters were getting out of hand, and so the bore of four-cylinder engines was limited to 155 mm., leaving the stroke free. This was a most interesting technical exercise, for it allowed designers to show just how long a stroke they could encompass without courting mechanical unreliability or reducing revolutions. It had been difficult to achieve a reasonably high compression ratio with over-square cylinders and side-valves, especially as the T-head engine was popular, particularly with Panhard, De Dietrich and Clément-Bayard. The once-unbeatable Panhards were losing their position through excessively conservative design, and they retained the T-heads, but De Dietrich and Clément-Bayard both realized that the two camshafts necessitated by that construction had great possibilities. They replaced their side-

valve barrels with overhead-valve cylinders, and the two side camshafts that were already in the crankcase did their stuff through exposed pushrods and rockers. The Weigel actually had an overhead camshaft.

It would be splendid to report that hemispherical heads were victorious, but in fact the race was won by Lautenschlager in a Mercedes, which had the inlet valves above the exhausts. This is fundamentally a good arrangement in promoting turbulence, and many inclined-valve heads have failed because the science of gas flow and port design has only recently been fully understood. In those days, designers could not rush to Harry Weslake if their new engines gave disappointing results! However, Benz cars, which did have push-rod operated overhead-valve gear, were second and third, and the aforementioned Clément-Bayard was fourth, representing the inclined O.H.V. brigade.

Let us return to the subject of stroke/bore ratios. The shortest stroke was 160 mm. and the longest 185 mm., giving capacities from 12 to 14 litres. Examples were Brasier, Fiat, Itala and Renault with 155 mm. x 160 mm., Mercedes, Mors, Motobloc, and Panhard with a stroke of 170 mm., De Dietrich and one special Mercedes with 180 mm., and old Adolphe Clément's long, low flyer with 185 mm. These were the first racing cars with reasonably high compression ratios, as an over-square side-valve power unit can only have a very low ratio.

At this point in history, the French industry retired hurt. Grand Prix racing was a French invention and for *les Boches* to take the first three places was intolerable. So, the next full Grand Prix was not until 1912.

During this period, the only real racing was for small cars, and was staged by a journal called *L'Auto*. The first *Coupe des Voiturettes* was run way back in 1905 and was really only a reliability trial for cars of under 1 litre in capacity. Curiously enough, the designers protested strongly at this rule, and suggested that progress could best be served if only the bore were limited and the engineer could choose his own stroke. As a matter of fact, there's a lot to be said for this argument, and I would love to see a "bore-only" formula tried today.

Anyway, for 1906 the bore of single-cylinder engines was limited to 120 mm.

and that of twin-cylinders to 90 mm. A minimum weight of 13½ cwt. was imposed, and a six-day reliability trial preceded the long-distance road race. This is another idea that I would like to see revived. The race was won by a Sizaire-Naudin with inlet-over-exhaust valves in its single "square" cylinder of 120 mm. x 120 mm. (1,357 c.c.), which developed 18 b.h.p. at 2,000 r.p.m.

The engines used in most of the cars were of the internal flywheel type, with a crankshaft consisting of two flywheels joined by a crank pin. Now, this type of construction was far more rigid than the spidery four-cylinder cranks of the big racers. Furthermore, if I may paraphrase a mathematical formula, the piston actually put work into the flywheels before its thump was felt by the main bearings. That is why some motorcycle engines run reliably with apparently inadequate support for the mains.

The result of all this was that the mechanical efficiency was extremely high for the epoch, and loadings could be envisaged that would burst a four-cylinder engine asunder. When these latent possibilities were realized, some of the most exciting little racing cars of all time resulted.

However, let us return to *L'Auto* in the year 1907. Other *Voiturette* races were run, but the great event of the year was staged by that magazine. Engine sizes were reduced, with a bore of 100 mm. for "singles" and 80 mm. for "twins". Weight was on a sliding scale to accommodate smaller cars. The preliminary six-days trial or rally, which demanded quite fast driving, was again held. Unfortunately, several competitors eliminated themselves by playing to the gallery on corners and striking solid objects, while others fell foul of the law. This caused a bit of a public outcry and so the organizers were forced to abandon the week on the road for future

events, which was most regrettable, but has its modern counterparts.

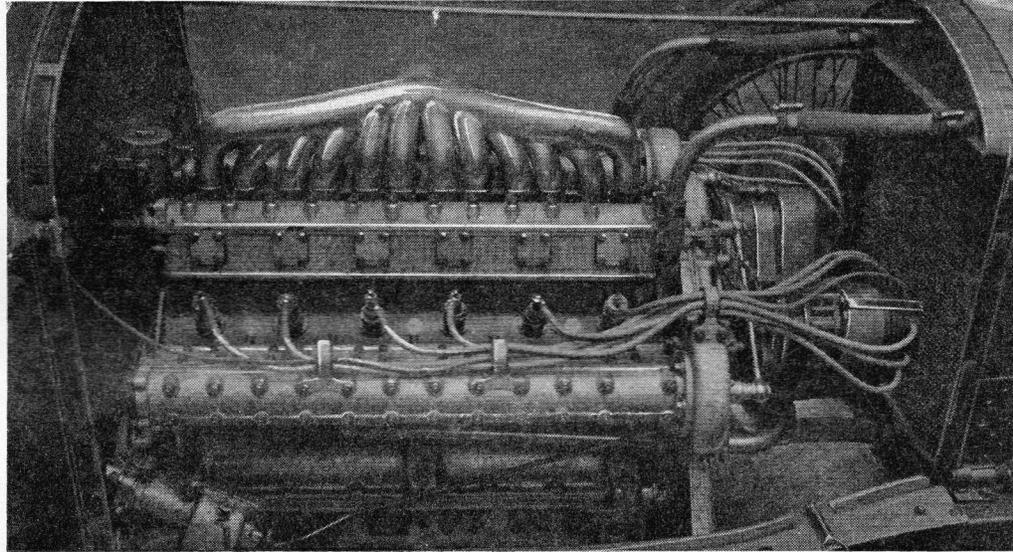
In spite of this, the race itself was excellent. A new small sports car, the Lion-Peugeot, made its first appearance and finished third, but the first and second places were taken by M. Naudin and M. Sizaire who drove—you've guessed it—Sizaire-Naudin cars. These "singles" had dimensions of 100 mm. x 150 mm.—the stroke was growing, you notice—giving a capacity of 1,178 c.c. and a power output of 22 b.h.p. at 2,400 r.p.m. on a compression ratio of 4.5 to 1. Remember that the big Grand Prix cars were only running at 1,500 r.p.m. at this time.

For 1908 it was to be a pure race, so quiet, flexible running on the road could be forgotten. The A.C.F. ("French R.A.C.")

were perhaps a bit jealous of the success of *L'Auto* and so they ran a *Voiturette* race themselves in connection with their Grand Prix—the last Grand Prix for several years, as I have already related. *L'Auto* therefore brought the regulations of their famous *Coupe* more or less into line with those of the senior body, holding their race later in the year.

Several manufacturers were desirous of running their new small four-cylinder cars, though the original idea had been to encourage the cheaper "singles" and "twins". Dimensions were laid down at 100 mm. bores for "singles", 78 mm. for "twins" and 62 mm. for "fours", which were also given a small weight penalty.

The A.C.F. race at Dieppe attracted a team of single-cylinder Sizaire-Naudins and

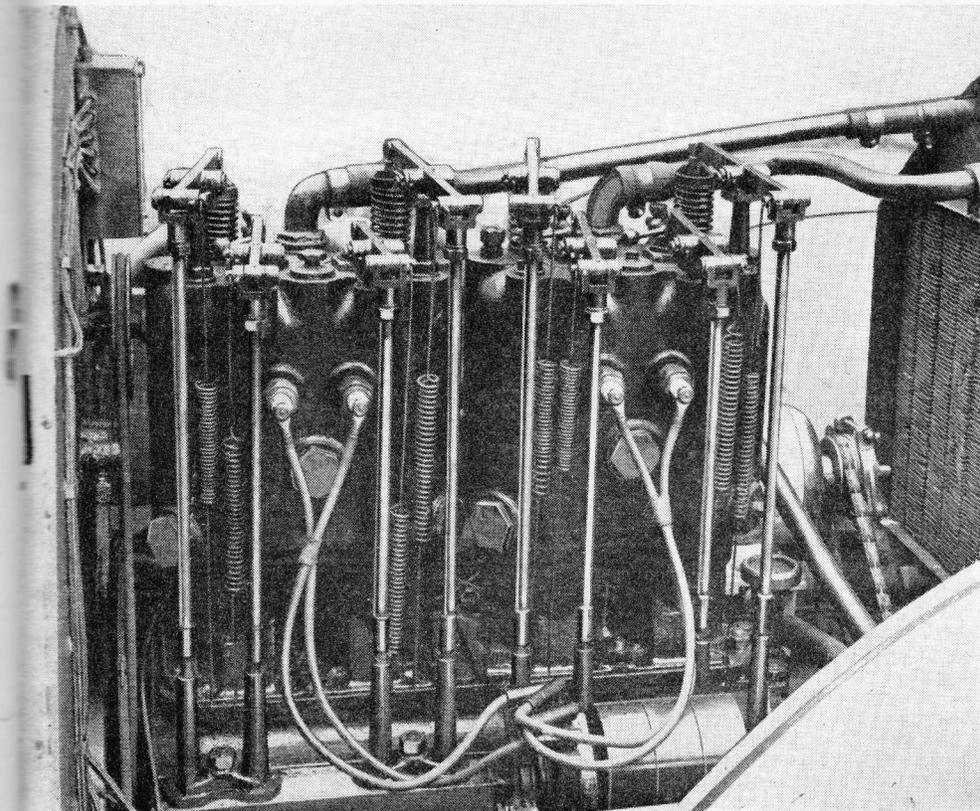


TWELVE CYLINDERS were used in the 1922 2-litre Delage which was world champion when supercharged in 1925. The exhaust manifold was in the "V" between the blocks.

OVERHEAD VALVES. A Darracq engine for the "four-inch" race in the Isle of Man, showing the exposed push-rods and return springs.

another of Lion-Peugeots, both with identical dimensions of 100 mm. x 170 mm. and both very fast. However, a new manufacturer, Louis Delage, entered a pair of neat little cars with single-cylinder De Dion engines of 100 mm. x 160 mm. with four sparking plugs in the head, and developing 28 b.h.p. at 2,800 r.p.m. Guyot, the driver, completely foxed the Sizaire and Peugeot boys by going right through the race without refuelling. Naudin realized too late and his wildest driving, which was "hairy" in the extreme, only netted him second place; Goux was third in the Lion-Peugeot. For reasons which we have already discussed, the four-cylinder cars were outclassed, even the O.H.C. Isotta-Fraschinis.

At the *Coupe des Voiturettes*, the Sizaire-Naudins appeared with a fantastic new engine, so tall that it was higher than the head of the driver, who had to look round it instead of over it. This was a "single" with no less than 2-litres capacity! It had dimensions of 100 mm. x 250 mm. and



developed 42 b.h.p. at 2,400 r.p.m. on a compression ratio of 5 to 1. One need hardly mention that Naudin won, Sizaire was second, and Goux was again third for Lion-Peugeot, a triumph for the long-stroke on the difficult Compiègne circuit.

Alas! For 1909 the organizers took fright and froze the stroke for "singles" at a maximum of 250 mm. "Twins" could go up to 80 mm. x 192 mm. and "fours" to 65 mm. x 140 mm. A curious sliding scale catered for those who wanted to go "square", but as this entailed a loss in total capacity the accent was still on the long-stroke jobs.

Sizaire and Delage retired for a rest, but Peugeot now had six valves in the head of

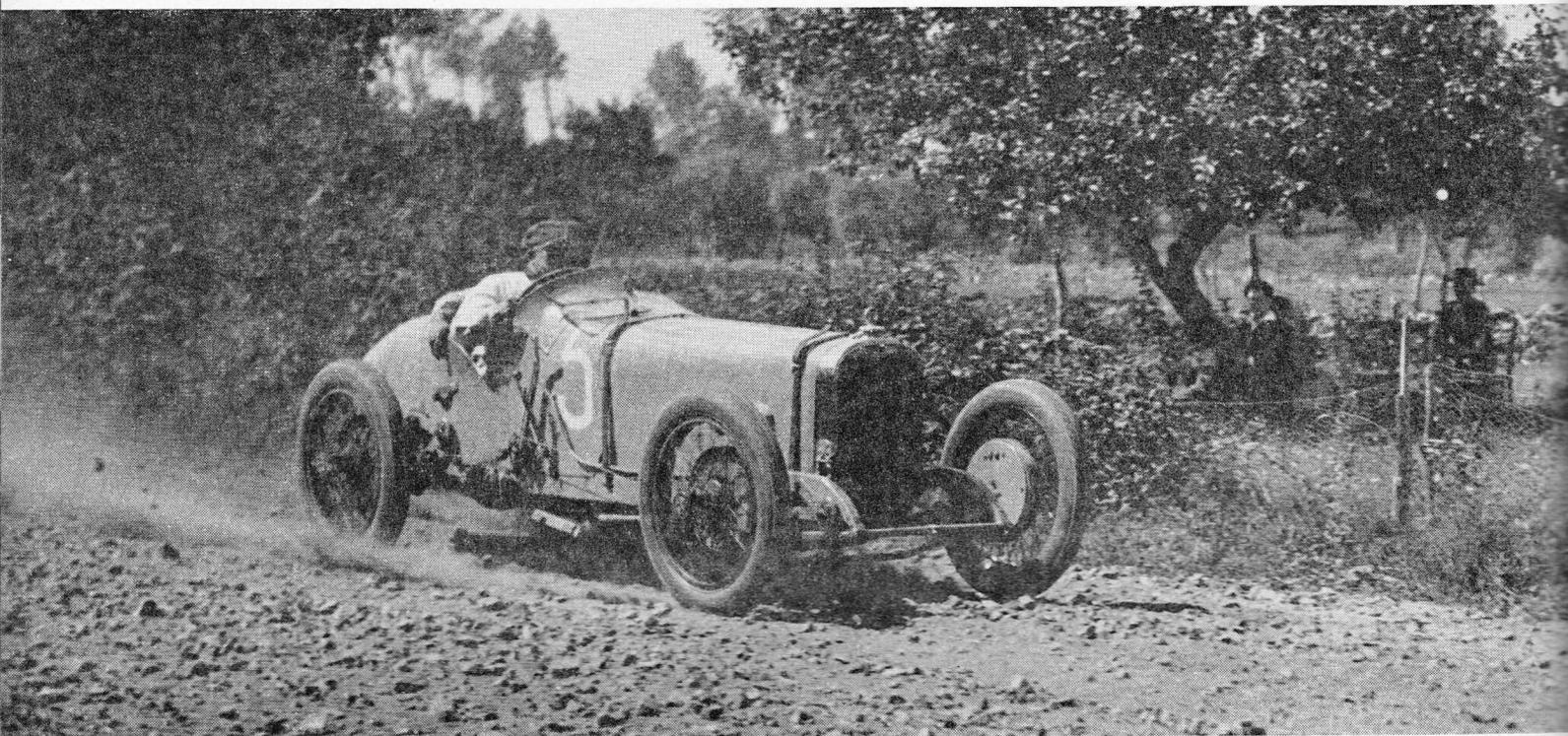
finished fourth, breaking the lap record at 55 m.p.h., which was a fair average on the Boulogne circuit. The four-cylinder Hispano Suiza team finished intact in the next three places—an omen for the future.

The 1910 event was the best race of the series, and it brings us the only recorded S.B. ratio of 4 to 1, for the organizers had decided to go back to limited bores only. De Dion at once built a 100 mm. x 300 mm. "single" which was used in the Corre La Licorne and was remarkable both for its height of 3 ft. 3 ins. and its capacity of 2,350 c.c. That was a stroke/bore ratio of 3 to 1 and the 16 deg. Lion-Peugeot "twin" had the shattering dimensions of 80 mm. x 280 mm. or 3.5 to 1. This engine had a

even if you use Dr. Lanchester's formula to evaluate it.

It is, as I know, extremely difficult to couple two V-twins together. Peugeot managed to do it and a V-4 resulted. With dimensions of 65 mm. x 260 mm. (3,440 c.c.), the Lion-Peugeot V-4 had the record S.B. ratio of 4 to 1.

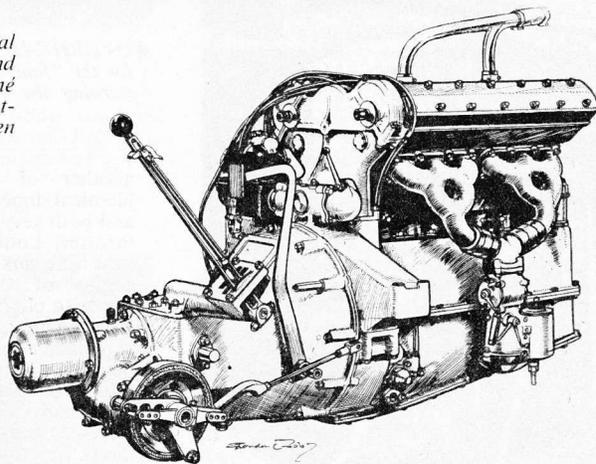
On the Boulogne circuit, the Lion-Peugeot "twin" of Goux battled mightily with the V-4 of Boillot. They were the fastest cars in the race, but then Goux ran into tyre troubles and Boillot's car started overheating, which necessitated several stops for water. So it was Zuccarelli who gained the day in an orthodox four-cylinder Hispano Suiza, with side-valves in a



▲  
1921 GRAND PRIX. Typical of road conditions near the end of a long-distance race. René Thomas in the 3-litre Talbot-Darracq straight-eight, often raced as a Sunbeam.

FIRST BRITISH VICTORY. The six-cylinder, 67 mm. x 94 mm. 2-litre Sunbeam engine, with which Segrave won the 1923 Grand Prix. Note brake servo and three-speed gear change.

By courtesy of "Autocar"



the 100 mm. x 250 mm. "single". They also produced a narrow 16 deg. V-twin of 80 mm. x 192 mm. This led the race in the hands of Goux, but was overtaken by Guipone in a "single" of the same team, and so it was Peugeots first and second, with the De Dion-engined Le Gui third. Boillot took 20 minutes to restart his Lion-Peugeot after a plug stop but thereafter

vertical camshaft to operate two horizontal exhaust valves per cylinder and an overhead camshaft to open one inlet valve in each head, of gigantic size. There were two carburetters and the exhaust stacks from the four ports were the highest parts of the car, which had a capacity of 2,803 c.c. and turned at 2,200 r.p.m.; 4,042 ft./min. piston speed is quite something with steel pistons,

T-head and dimensions of 65 mm. x 200 mm. From this Hispano the production model "Alphonso" of 80 mm. x 180 mm. was developed.

Unfortunately, that was the end of it all as far as fancy S.B. ratios were concerned, for the *Coupe des Voiturettes* became the *Coupe des Voitures Légères*. This was an event for 3-litre cars, with single- and twin-cylinder devices barred, and S.B. ratios were pegged at a maximum of 2 to 1. Most firms chose a middle course at 80 mm. x 149 mm., but Peugeot adapted the V-4 to dimensions of 78 mm. x 156 mm. The 1911 race was a tremendous battle between the Delages, with the former dimensions, and the longer-stroke Peugeots. Bablot's five-speed Delage—which I have actually driven—had five speeds and opposed valves in a clerestory head, but it beat Boillot's Peugeot because it was light on tyres, whereas the high Peugeots caned their *pneumatiques*. 1912 was the year of Britain's glory, and a two-day race between Sunbeams and Vauxhalls resulted in a victory for the former. Both makes had L-heads, but whereas Coatalen chose the popular 80 mm. x 149 mm. dimensions, Pomeroy's Vauxhalls pioneered the return to short strokes with 90 mm. x 118 mm.

The 1913 race was the last *Coupe de L'Auto*, and it was won in convincing

fashion by Peugeot, with an entirely new car of orthodox design with twin camshafts, the work of Ernest Henry. The S.B. ratio was the 2 to 1 maximum.

Let us return to Grand Prix racing, which returned in full force in 1912 after going off at half cock in 1911. Fiat built a team of chain-driven monsters, entirely in the 1908 tradition except for their overhead camshafts. Peugeot had a team of smaller cars, built for an event in 1911 which "politics" prevented them from entering. The dimensions of the four-cylinder engines were 110 mm. x 200 mm., which were the maximum for the 1911 fiasco. This gave a capacity of only 7.6 litres, but Henry mounted his twin camshafts above the head, thus initiating a design feature which was to become standard for racing cars.

Peugeot had unrivalled experience with the long-stroke engine, and so although the bottom end of the Henry design was orthodox, they ran it at 2,200 r.p.m., a piston speed of 2,880 ft./min., at which it developed 130 b.h.p. It is history that the virtuosity of Georges Boillot as a driver, coupled with the reliability of the Peugeot, finally prevailed over the very fast and remarkably stable 15-litre Fiats.

This victory persuaded designers that there was something magic about long-stroke engines, whereas the virtue of the Peugeot lay in its valve gear and comparatively high revolutions. However, the 1913 race was on a fuel consumption basis at just over 12 m.p.g. and the distance was reduced to 566 miles, which was considered absurd by many. Henry cut down his Peugeot to 5.6 litres and did it again, hotly challenged by Delage with a larger version of the *Coupe de L'Auto* engine with clerestory head.

The 1914 race has been described so often that it is only necessary to recall that it was a Mercedes grand slam but that Boillot out-drove the Germans throughout. He had to over-drive his Peugeot, because his tyres were inferior to those on the Mercedes, and his engine just failed to last the distance. The formula specified 4½-litre engines, and the single-cam Mercedes and the twin-cam Peugeot had S.B. ratios around 1.8 to 1. Truly, the Henry influence was now strong in all countries.

After the war, the Grand Prix formula was for 3-litre cars and everybody realized that the four-cylinder engine was on the way out. Henry had gone to Ballot, and he designed a straight-eight with twin overhead camshafts and a stroke/bore ratio of 1.72 to 1. However, the typical Henry bottom end, with a crankshaft on ball bearings and jet lubrication to the floating bushes of the big ends, prevented the unit from running safely at more than 3,800 r.p.m. when other designers were thinking in terms of 5,000 r.p.m. Thus, the theoretical advantages of multi-cylinders were not realized. The Ballots were beaten by the American Duesenberg in the Grand Prix, and though Henry then designed a car for Sunbeams, it is sad to record that this was the end of his career.

In 1922, the formula was reduced to 2 litres and the Fiat was the car. With a twin-camshaft six-cylinder engine of 65 mm. x 100 mm., the stroke/bore ratio had descended back to 1.54 to 1, though the square engine was still a long way off. The success of the Fiat was due to its sturdy bottom end, with roller bearings between each crank throw, similar big ends, and an elaborate dry-sump lubrication system. It simply walked all over the other contestants, including the Henry-designed Sunbeam, because it ran at 5,200 r.p.m.

Louis Coatalen fired the unfortunate

Henry and persuaded Bertarione, one of the Fiat designers, to come to Sunbeam. Time being short, he used many of the old chassis parts but produced a six-cylinder engine very like that of the Fiat, with welded steel cylinders, a fixed head, and roller bearings throughout. A slightly shorter stroke gave dimensions of 67 mm. x 94 mm. and a stroke/bore ratio of 1.4 to 1. De Hane Segrave won the French Grand Prix with this car in 1923, which sold many Rolls-Royces and Morris Cowleys abroad and, one hopes, some Sunbeams, for it was a famous British victory.

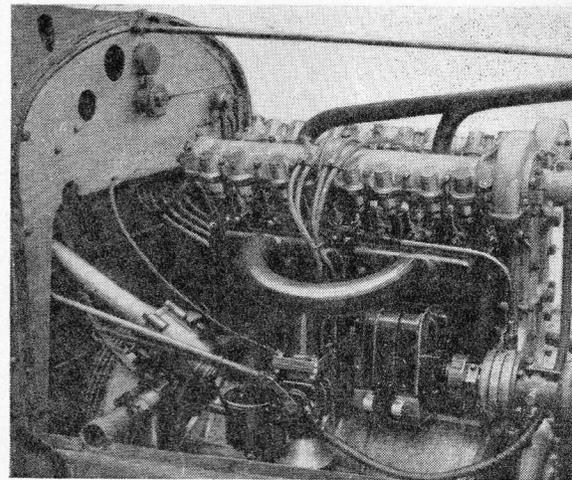
With more time at his disposal, Bertarione redesigned the Sunbeam throughout for 1924. The new cars were longer, lower, and with four speeds instead of three. Most important, a supercharger was added to the power unit, drawing mixture from the carburetter for the first time. Alcohol was appearing in the fuel mixtures at this period, and the increase in volumetric efficiency was great, because of the internal cooling thus provided for the blower. The result was the fastest team of cars in Europe, which lost the French Grand Prix only through defective magnetos but allowed Segrave to win again at the Spanish Grand Prix.

The mantle of the Sunbeam passed to the P2 Alfa Romeo, which had a straight-eight engine of 61 mm. x 85 mm., about the same S.B. ratio as the British car, but as both power units turned at 5,500 r.p.m., the difference in output was small. The next year, 1925, saw Delage take the championship with the 12-cylinder 2-litre, which produced 195 b.h.p. at 7,000 r.p.m. This engine had a stroke/bore ratio of 1.5 to 1, which can be justified because the unit was first run unsupercharged in 1922. A really high compression ratio is more easily achieved with a long stroke in an unsupercharged engine, but in a "blown" unit a high static ratio is not required.

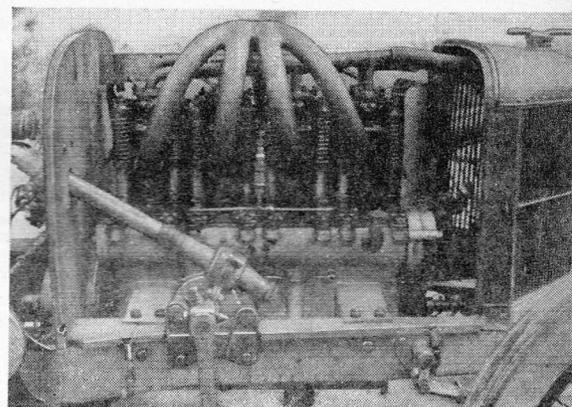
The subsequent 1½-litre formula became the private property of the straight-eight Delage, with a stroke/bore ratio of 1.35 to 1. Designers of supercharged engines were fully aware of the advantages of the over-square configuration, but a small piston did not melt so easily, which made them reluctant to go all the way.

For the next few years, a world depression rendered Grand Prix racing much less interesting, and nobody could lay down an all-roller-bearing engine with 23 timing gears. Let us therefore consider sports and touring cars. The Vintage car was enormously affected by the British taxation system. Our R.A.C. rating took only the bore into account, and so the long-stroke engine was artificially encouraged. As the Englishman was considered to be as rich as a Swiss is now, no Continental firm would risk losing his patronage by offering a car that was heavily taxed in England.

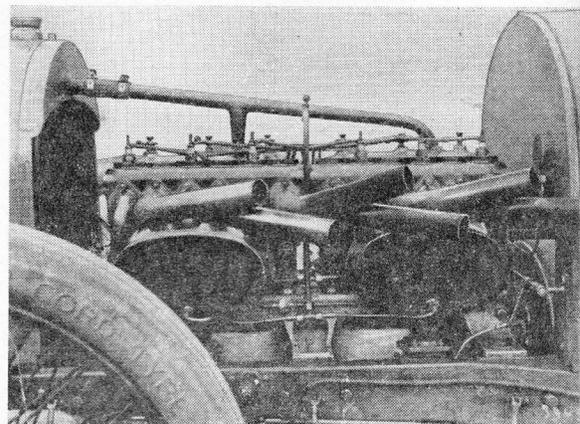
For some curious reason, an Englishman would pay over £1,000—and that means £3,000 in today's money—for a 3-litre Bentley, simply because it was only 15.9 h.p. by the R.A.C. rating. It is absolutely true that he would regard this as a valid reason for choice against a competitive six-cylinder machine, because the tax was £16 against £21. I shall never understand this crazy obsession that we had in the 1920s, but I do know that the £23 tax killed the Model T Ford when the Morris Cowley became available with a £12 tax. W. O. Bentley chose the dimensions of 80 mm. x 149 mm. for his 3-litre because of the pre-war racing results attained by engines of that shape. I am sure that the cheap taxation came as a pleasant surprise to him, but I am equally sure that when W. R. Morris restricted his



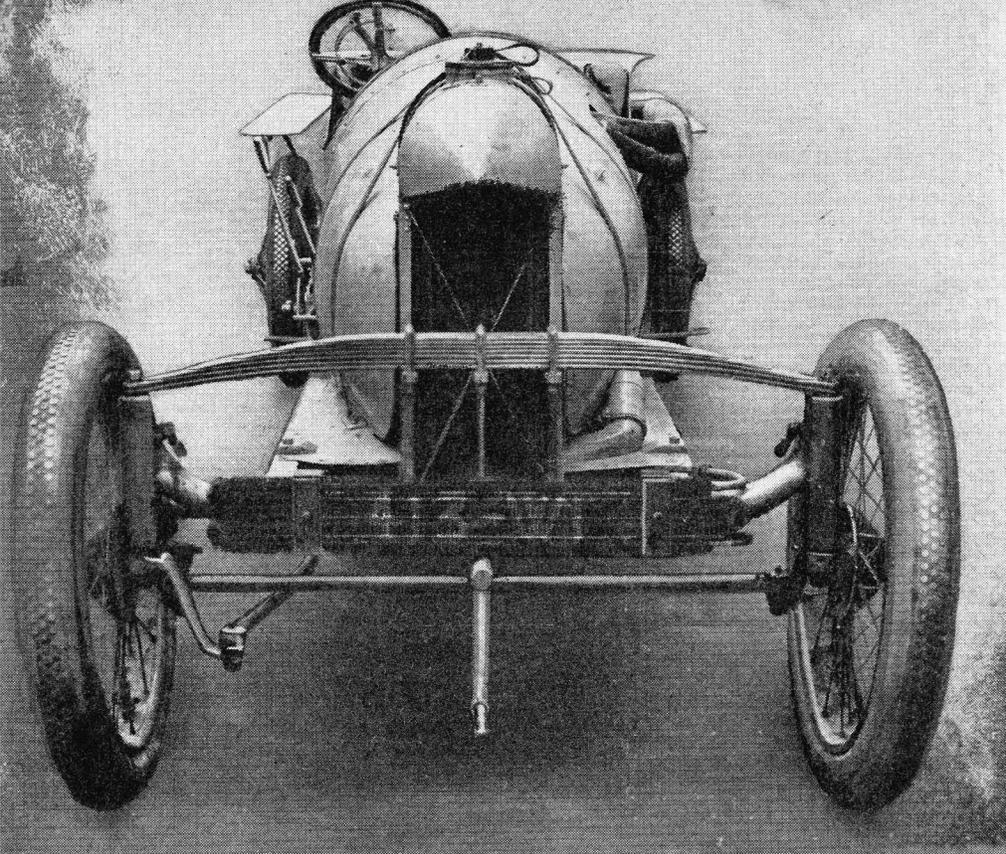
▲ **LONG STROKE.** The smallest version of the extremely successful twin overhead camshaft Peugeot engine was the 2½-litre which won the Targa Florio in 1919.



▲ **MEDIUM STROKE.** The four-cylinder 85 mm. x 132 mm. 3-litre Alcyon engine of 1912. The four radial valves per cylinder had the valve springs located on the pull-rods. Note the induction manifolds.



▲ **SIDE VALVES** were used on the Belgian Excelsior, one of the very few Edwardian six-cylinder racing engines.



**Bibliography.** In preparing this article, numerous journals and catalogues were used to check the figures, and what a lot of mistakes they made in those days! Also, I am extremely grateful to the authors of the following books, which helped me in my task, *Racing Voiturettes* by Kent Karlake; *A Record of Motor Racing* by Gerald Rose; *The Grand Prix Car*, Vols I and II, by Laurence Pomeroy; *The Book of the Motor Car* by Rankin Kennedy; *The Motor Car, 1765-1914*, by Anthony Bird.

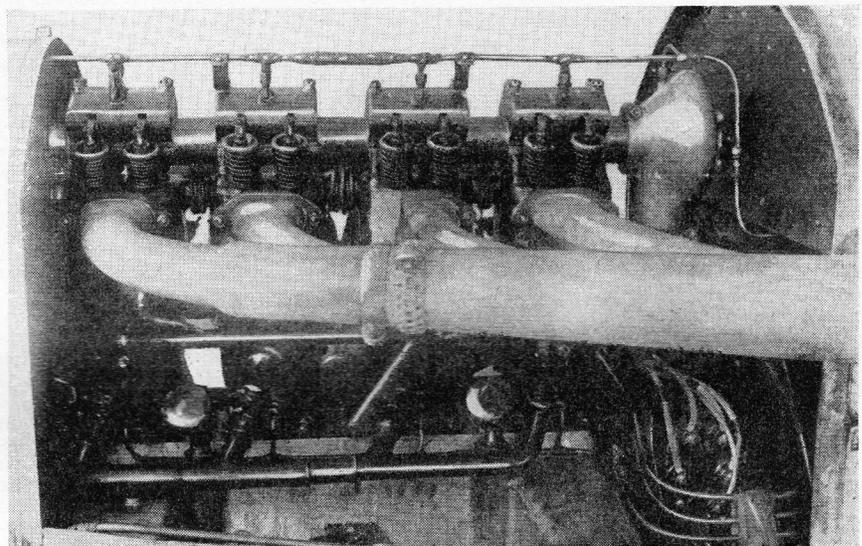
◀ **INDEPENDENT SUSPENSION.** *The Sizaire-Naudin in four-cylinder form had opposed horizontal valves and a 3-litre engine with 2:1 stroke/bore ratio.*

1914 **GRAND PRIX** winner was this single-camshaft Mercedes with four separate cylinders on its long-stroke engine.

block to 69 mm., he chuckled to think of Henry Ford and his 95 mm. cylinders, for the Morris had a longer stroke than the Ford and they both had about the same maximum power output.

Thus the long-stroke engine, with all its faults, was assured of artificial protection during the currency of the R.A.C. formula. Now that this curious method of rating is no longer with us, the cars of commerce are already square or even over-square. I think that the Vintage cars would have taken some few years to lose their long strokes, even under a more enlightened system of taxation, for neither design nor metallurgy had reached the stage where high revolutions and long life went hand in hand. In any case, some of my long-stroke Vintage cars had a personality that many later vehicles lack, though one cannot express such things in figures.

Let us return to racing cars. Strokes continued to shorten, though the P3 Alfa

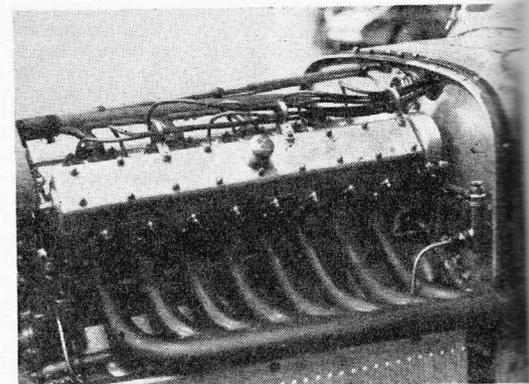
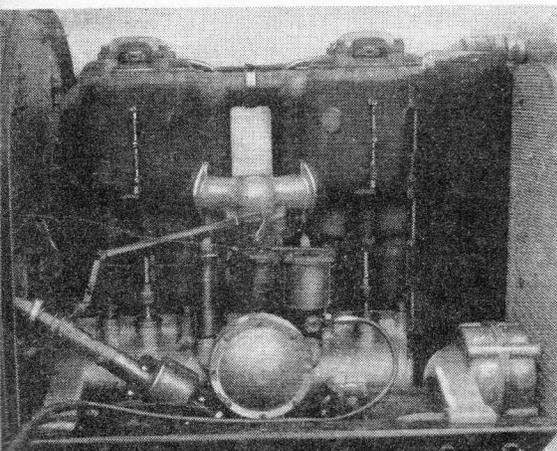


**ROTARY VALVES.** *The Itala engine, which had two rotary valves for four cylinders. The driving shafts can be seen at the bottom of the cylinders.*

Romeo and the E.R.A. were exceptions. The German cars of the Hitler era were almost square, the C-type Auto Union having an S.B. ratio of 1.13 to 1 and the Mercedes-Benz W125 a 1.085 to 1 ratio. Maserati abandoned the classical 69 mm. x 100 mm. for 78 mm. x 78 mm., both for four- and eight-cylinder cars, and then came the war.

Since the war, the over-square engine has been the normal wear, examples being the 16-cylinder B.R.M. with an S.B. ratio of 0.975 to 1, and the 4½-litre Ferrari at 0.93 to 1. All the current G.P. cars are over-square, notably the B.R.M. at 68.5 mm. x 50.8 mm., which is an S.B. ratio of 0.74 to 1. Squarest of the squares? Indubitably the Ford Anglia at 0.59 to 1. If alcohol fuel were still permitted, strokes would be longer to achieve "dope" compression ratios.

All the same, I'd still love to have a go in one of those long-stroke Lion-Peugeot's, wouldn't you?



**STRAIGHT EIGHT.** *The supercharged Talbot-Darracq 1½-litre Grand Prix engine of 1925.*

# CORRESPONDENCE

## Peter Madge Replies

HAVING started the Racing Car Show correspondence, I'd like to comment on some of the replies.

Mr. Smith, being organizer of the Show, quite naturally took up the cudgels. His disarmingly courteous reply forces me to be fair and qualify my generalization of "scruffy" for the car exhibits. There have indeed been some beautifully finished examples, but I stick to my word about others and in particular the Lancia-Ferrari which would have been a godsend to the manufacturers of a rust-removing preparation. I also include Volkswagens, Zephyrs, Minis, etc., because however highly polished they may be they still do not belong at a Racing Car Show. As to the finance of the Show, Mr. Smith has the key to the cash-box so we must accept his word. The accounts are published, I presume.

Messrs. Mann and Forrest thought I wanted to see the hall filled with Formula cars. Not at all, I've been watching those all the season. They should be on show, of course, but historic cars are the interesting ones and in motor racing, any car built before the current season is historic. I reiterate my original point—the Show is fine if you like that sort of thing, but in fairness to intending visitors it should be publicized as "The Performance Equipment Show—including an Exhibition of Competition Cars."

Finally, Mr. Forrest wanted to know if I run a car. Yes, Mr. Forrest, I have a Lotus Elite and the only bolt-on goody I want is a device that screams "NO!" at people who ask if I built it myself. I was one of those unfortunates who bought an Elite just before it was marketed as a sort of glorified "Airfix" kit. That was goodbye to my status symbol—these days you see the most awful people driving Elites! This Christmas I am sending Colin Chapman a small but effective parcel-bomb. Any pre-kit Elite owner wishing to sign it should contact me.

LONDON, S.E.26.

PETER MADGE.

## Don't Forget the Tiddlers

I WOULD be most interested to learn whether other readers who may be planning to race a Mark I or Mark II Sprite or an M.G. Midget in club events next season share my concern at the recent B.R.S.C.C. statement to the effect that the top capacity limit in small Grand Touring events at national and international meetings will be raised to 1,150 c.c. to accommodate the new bigger-engined Sprites and Midgets.

It seems to me very likely that, with this precedent having been set, a great many Grand Touring club races next season may be run with a small car class of up to around 1,200 c.c. instead of 1,000 c.c. as previously. Indeed, I understand that the B.A.R.C. are taking a step in this direction. This is understandable in view of the new Sprite and Midget, plus the new Triumph Spitfire. But it is going to be rather hard on those club drivers like myself, who, with only limited means, race a Sprite or Midget which serves as a road car as well. Having spent a fair amount of money on modifying my car

to the point where, whilst drivable on the road, it is capable of getting round a circuit fairly quickly, I am now faced with the prospect of competing against cars which, in standard form are not much slower than mine. Modified, they are likely to prove substantially faster. By next season I suspect that to stay with even a well "road tuned" 1,100 c.c. Sprite, Mark I and Mark II owners are going to have to fit virtually Junior engines, or spend their time circulating at the tail end of a much faster field.

Even when merely "racing for fun" this can be a rather miserable situation. But it can be readily avoided if race organizers will follow the precedent set last season in Mini races. The introduction of the Cooper-Mini to club racing created a situation virtually identical to the one I now foresee in next season's Grand Touring events, in view of its much greater potential than the original Mini. The problem was fairly and simply overcome by dividing races into two classes—Cooper-Minis and "other" Minis. Surely a similar pattern could be followed next year in small Grand Touring and sports car events. I would suggest that these be for cars of up to 1,200 c.c. (excluding o.h.c. engines) with two classes of up to 1,000 c.c. and 1,001 c.c. to 1,200 c.c. Obviously this will minimise the chance of an outright win by the smaller engined cars, but the chance of a class win would still provide their owners with a worthwhile incentive.

I hope this proposal attracts some sympathy from club meeting organizers. Let me re-emphasize that my concern is for club events; national and international races are an entirely different matter. But if club racing is really "for the entertainment of the drivers themselves", then it is so unreasonable that those who cannot afford the most up-to-date machinery should still have some chance of success?

NEWCASTLE-UPON-TYNE, 3.

P. MITCHELL.

## Formula For T.T.

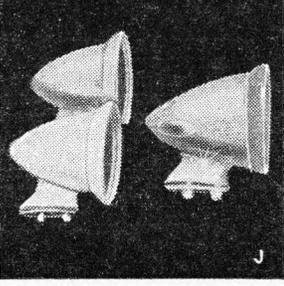
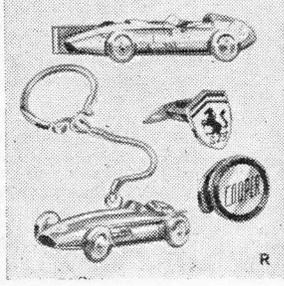
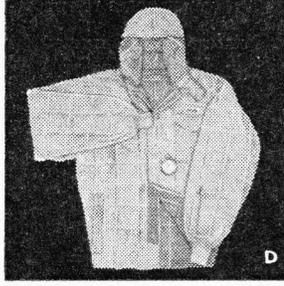
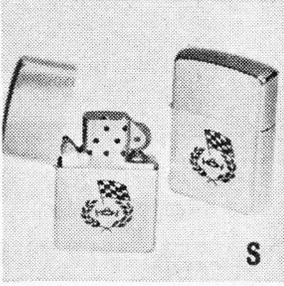
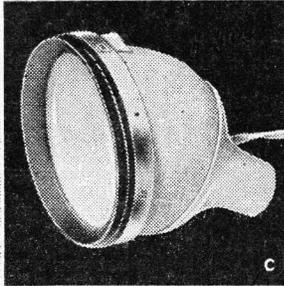
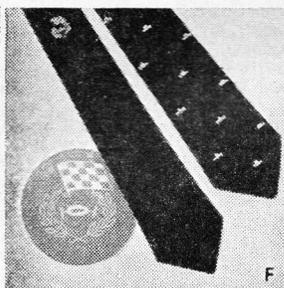
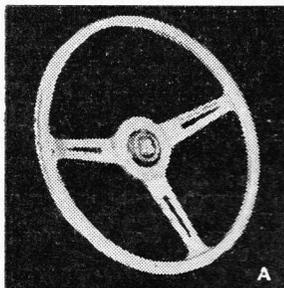
ALL that Mr. Everitt says about the T.T. last week is unquestionably true, but he is a bit hard on poor old Goodwood. It may have started life as an aerodrome but now it has been properly surfaced and planned as a car racing circuit. Flat circuits are not ideal but you can have a lot of fun at Goodwood, apart from the truly disgraceful prices of refreshments. Presumably, all the officials are fed free so they never get to notice what the poor paying public is being charged for sustenance.

My view is that closed G.T. cars will never have the appeal of open cars for the utterly simple reason that you can't see the driver. It's a matter of psychology—spectators like to see a mere man fighting almost insuperable opposition in the shape of a ton of steel, glass and rubber that really prefers to travel in a straight line. The formula for a successful T.T., one worthy of its tradition, is to make it a scaled-down Le Mans. Run it on the Long circuit at Brands Hatch, for at least six hours; compulsory pit-stops and driver changes; run it for unlimited sports racers and prototypes, excluding dangerously slow (and dull) "tiddlers."

TONBRIDGE, KENT.

BRIAN WRIGHT.

The Editor is not bound to be in agreement with opinions expressed by readers



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# Club News

By MICHAEL DURNIN

THE regulations have been published for the 1963 Mobilgas Economy Run, organized as always by the Hants and Berks M.C. for the Mobil Oil Co., Ltd. Next year's event takes place from 23rd-27th March, starting and finishing at Harrogate. Only vehicles homologated as series production touring cars of British manufacture are eligible, and these must have been initially registered on or after 1st January, 1961. Entries opened on 1st December, and close on 26th January, 1963, and regulations and entry forms are available from the secretary of the meeting, P. D. T. Stephens, The Coach House, Sandhurst Lodge, Crowthorne, Berks. Entries will be limited to 40.

## Coming Attractions

- 8th December. *Vintage S.C.C. Driving Tests, Silverstone, near Towcester, Northants. Starts 11.30 a.m.*  
*Hagley and D.L.C.C. Ken Wharton Memorial Trophy Television Driving Tests.*
- 8th-9th December. *Southport M.C. S. R. Tobias Trophy Rally. Starts Riverside Cafe, Salmesbury, Preston, Lancs. (M.R. 94/578301) at 11 p.m.*  
*Shenstone and D.C.C. Shenstone Rally. Starts Bryn Howel Hall Hotel, near Llangollen, Denbighshire (M.R. 108/2513418), at 11 p.m.*
- 9th December. *Bristol M.C. and L.C.C., Dursley M.C. and Stroud M.C. Production Car Trial. Starts Roman Camp Filling Station, near Cross Hands, at 10.30 a.m.*  
*Seven-Fifty M.C. and Weedon E.C.C. Silverstone Sporting Trial. Starts Military Training Ground, Tuffield, near Northampton, at 10.30 a.m.*
- 15th December. *Rand Grand Prix, South Africa (F1).*
- 15th-16th December. *Lancs and Cheshire C.C. Lakeland Rally. Starts Northways Filling Station, Heath Road, Whitchurch, Salop.*
- 29th December. *South African Grand Prix, East London (F1).*
- 5th January. *New Zealand Grand Prix, Pukekohe (F.L.).*
- 12th January. *Vic Hudson Memorial Trophy Race, Levin, New Zealand (F.L.).*

## SWANSEA M.C.

### RALLY OF THE VALES

SINCE its elevation to national status, Swansea Motor Club's "Rally of the Vales" has never enjoyed as successful a night as it deserves, through no fault of the organizers; in previous years freak weather conditions and assorted adverse factors have tended to play havoc with the event, and on Saturday last, the club found itself with a sadly depleted entry. This was a great pity since the Welsh boys on their home ground staged an admirable event, which more than lived up to their promises to give nothing away and, improbably, they found some new roads in Cardiganshire.

In the absence of the Pat Moss/David Stone Anglia, the first car away from Swansea Guildhall was the Austin-Cooper of Geoff Allen and Barry Hughes, which departed shortly after six o'clock on the first leg of an unfashionably leisurely main road section through Llanelly to the sprint course at Pembrey airfield and the first of the tie-deciding special tests. This roughly triangular six hundred yards test was comparatively easy meat for Bobby Parkes's big Healey in 31.60 secs., with the Tony Fisher/Brian Melia Austin-Cooper doing 31.85 secs., while David Siegle-Morris was mistimed and took his Ford Cortina round in 31.94 secs. on his second attempt. Practically the entire field offended the noise meter situated in the middle of the test.

The route continued by road-book through Kidwelly and Carmarthen, lulling crews into a false sense of security by the time they reached the Whitland refuelling control, which was also the beginning of the serious business of the night, in the shape of a 130-mile straight-forward navigation section.

In ideal fine and dry competitors' conditions, the route led north into a series of tight sections in the maze of white and yellow roads around Llanfyrnach, and entrants were soon finding that time dropped was virtually impossible to recover; meanwhile Gallimore's DKW Junior was having mechanical trouble, and the Pollard/Baines Rapier had the misfortune to be clouted by a non-competing car whilst stationary at a control. David Davies and Dennis Cardell (Austin-Cooper), for whom the event had assumed critical importance by virtue of their precarious position in the Welsh Association Rally Championships, had persistent ignition troubles which cost them time. As the route continued, bypassing Newcastle Emlyn towards Penbryn on the North Cardigan coast, John Brown took Siegle-Morris out of T.C. 34 in the wrong direction and put paid to their chances thereby. Gerald Dinwiddy, with Frank Rutter's Riley 1.5, found himself in an unidentified river and subsequently withdrew, and the field now swung south towards Penrhiwllan before looping east round Llandyssul (where the hard-driven Chris Williams/David Evans Anglia gave up the ghost, seized up solid, and was retired), to the end of the section and the halfway halt at Saron.

Clerk of the course Alex Blair had prophesied that, at this stage, nobody would be "clean," and, indeed, only one car, the John

La Trobe/Julian Chitty VX 4/90, was found to be unpenalized. Local boys A. and R. Jones (Mini-Cooper) had dropped only one minute, while the Simister/Robson Allardette had dropped four: Tony Fisher and Brian Melia found themselves well in the running, tying with the Reg Galpin/John Owen Austin-Cooper, which was, however, to lose valuable time later in the night with a split sump guard which had to be removed. Bill Bengry and David Skeffington, SAAB mounted, were only one minute behind.

On again, with an occasional patch of ice to be seen, to the second navigation section, 80 miles in length and heading first south to Llanpumsaint and the more familiar ground of the Llandovery map; almost immediately, Welsh Rally Championship contenders Des Tilley and John Griffiths ditched their Austin-Cooper most convincingly, but were hauled out and pressed on towards Llanogwad, looping first Llanarthney and then Porthrhyd, the organizers using the old ploy of hopping between three maps in one mile sections or thereabouts. Even so, a good proportion of the field failed to locate a cunningly sited T.C. 71 just short of the tie-deciding special section at Carmel.

Timed in seconds, this consisted of a fairly downhill winding white road, with a surface largely made up of wet mud; bogey time was four minutes, which nobody achieved, but Perry's rorty Anglia came very close with 4 mins. 4 secs., while the Allan/Hughes Cooper did 4 mins. 5 secs., and Norman Harvey, with David Jenkins, made a characteristically determined run in his Austin-Cooper in 4 mins. 7 secs.

The route was now heading southwards in the direction of Kidwelly and Bobby Rumble, navigated by Fred Morse, buried his Mini-Minor in a bank and dropped 20 mins., no less, in literally digging it out! From Kidwelly, competitors now found themselves again attempting, at the end of the section, the special test at Pembrey, with Bobby Parkes fastest once more in 30.44 secs. Finally, came a further main road run in, to the ultimate control at Swansea's Dragon Hotel.

As things turned out, the tie-deciders were necessary on this occasion; Howard Strawford's results team had a provisional general classification available while competitors were breakfasting, and this indicated that John La Trobe and Julian Chitty, 7 mins. down, had won outright and taken the *Daily Telegraph* Perpetual Trophy, "on the road," from Phil Simister/Graham Robson (Allardette) by one minute. Tying for third place was the Fisher/Melia Cooper and the similar car of A. and R. Jones, both of which had dropped 14, though Fisher's performance on the special tests gave him the place. So ended the 1962 "Rally of the Vales"; by common accord tight and interesting, gimmick-free, well marshalled, and very definitely "on." May next year's entry do justice to the event.

HOWARD BILEY.

#### Results

- 1, J. La Trobe/J. Chitty (VX4/90) 70 penalties;
- 2, P. Simister/G. Robson (Allardette) 80;
- 3, A. Fisher/B. Melia (A.-Cooper) 140;
- 4, A. Jones/R. Jones (A.-Cooper) 140;
- 5, A. McBride/D. Barrow (Allardette) 230;
- 6, B. Bengry/D. Skeffington (Saab) 250;
- 7, I. Smart/H. Britton (Mini-Austin) 260;
- 8, G. Allen/B. Hughes (A.-Cooper) 320;
- 9, R. Galpin/J. Owen (A.-Cooper) 330.

## FARNBOROUGH D.M.C.

### WINTER MIXTURE RALLY

HAVING provided torrential rain, floods and gales in previous years, the Clerk of the Weather's contribution to the 1962 Winter Mixture Rally was not entirely in keeping with the name of the event, for the night of 1st-2nd December, if bitterly cold, was dry and clear. Early threat of fog did not materialize and the Abergavenny police officer's view, expressed at the supper stop, that the route would be almost free from ice, proved to be accurate, although there was some roadside snow in the Glascwm area.

Conditions, then, were favourable for the 83

starters who set out from Oxford and Birmingham, led by Brian Culcheth and Peter Noad (Sprite), who were attempting to repeat last year's win and to provide Peter with his hat trick. "Tish" Ozanne, navigated by John Huntridge, made a most welcome re-appearance in a Mini-Cooper.

As usual, the Mixture was supported by Veedol (U.K.), Ltd., and the awards were lavish, including a weekend in Paris for the winning crew, while there was the opportunity for B.T. & R.D.A. Silver Star and A.C.S.M.C. Championship contenders to add to their scores. Advance planning was well up to the event's usual high standards. There were news bulletins at the start and at supper, the entire route was available at the start, there were to be no route checks, and timing was arranged on the "Express and Star" system. The organizers, in short, were confident that their



290-mile route, mostly on O.S. 141, was good enough to stand on its own merits.

After supper, the plot led initially across the Black Mountains to that tricky little area south of Hay-on-Wye. The "hairpin which doesn't tie up with the map" was used again and wrought its usual havoc. Several crews narrowly avoided dropping into the ditch at the exit, until the Mac/Malkin Rapier, taking the necessary two "bites" at the corner without the benefit of reverse gear, came to grief, although the car, undamaged, was soon man-handled out. Approximately half the entry wrong-slotted here, patronizing the non-going Digedi Vale instead of Control 18. Hereabouts the M. Blunt/M. Woods M.G.A was seen to be in difficulties.

The pace eased slightly through Talgarth and by way of a large loop which led to the northern road over the Brecon Beacons, where the pressure came on again with three successive "ones". Just beyond these the Denis Thorn Anglia lost all its navigating lights, overshot as a result, and another clean sheet was spoiled.

Those who navigated correctly over the river found themselves in Llanfihangel Nant Bran and en route for the Epynt Artillery Range with the customary series of short sections; but those who made 42 to 43 in the minute allowed found little else to trouble them. The organizers had helped by easing the schedule a shade too early here.

Next came the white road down Little Hill and this led the survivors to the last series of closely grouped controls north of the Llanbehr Hill. The Andrews/Rogers Anglia suffered two punctures here, bringing a fine run to an end, and Ted Cowell lost his only minute through being balked by a Mini which stopped outside Control 61 and could not restart.

Peter Ward and Frank Herwin, going well in their Herald, lost time through a split hose but continued after refilling the header tank from the sources available within the car. The unfortunate F. Wilson and J. Granville rolled their 1.5 Riley on a wicked right-hander outside Hay-on-Wye just before the run-in began, the strapped-in occupants being unhurt. Midway through the run-in to Tewkesbury the Broad/Bloom Morris 1100 was observed tail-down, the rear suspension having collapsed.

During the not-inconsiderable wait for breakfast to be served, Brian Culcheth/Peter Noad (Sprite) and Brian Stevens/Tony Straker (Mini-Minor) handed in what they confidently believed to be clean sheets, despite which it was indicated that five crews were equally penalized, all one minute down, but that there were no unpenalized cars. Apparently the cards concerned had been carelessly marked by marshals whose ticks had overlapped two spaces. The essence of the E. and S. system is the ease with which results can be produced, and with all the necessary evidence, and the Stewards, available the matter might with advantage have been resolved on the spot, instead of which the organizers decided to sleep on the problem. It is to be hoped that a satisfactory outcome will do justice to those concerned and that this unfortunate ending will not have marred what was otherwise a first-class Winter Mixture.

MICHAEL DURRIN and RON AMBROSE.

## FALCON M.C.

### ZELLEY CUP RALLY

TWENTY-EIGHT starters left Woolmer Green near Stevenage on the 24th November for the Falcon M.C. Zelle Cup Rally, co-promoted with the Cambridge C.C. and the Bedford M.C. A 90-minute main road lead-in section to near Great Dunmow allowed navigators to plot the 53 map references mostly on 148, 24 of which were time controls. A "5" immediately after the start proper caused most crews to lose their clean sheets through wrong slotting onto a disused airfield. Several short tight sections on slippery mud-covered roads followed, terminating in a "2" to Control 16 through the long ford at 617122, where the two remaining clean sheets of the Messenger/King Anglia and the Alan Piggott/Tony Mitchener Rapier were lost. Many drivers lost the prop in this ford, whilst the Jaguar of Watson/Barlow parked in the water but kept the motor running until the Blank/Robinson Zephyr had completed a plug change in mid-stream.

The pace eased until a "9" around Stansted airfield had many crews trying the tempting yellow non-goers in this area. No one cleaned the subsequent "4" from SE 504244 to NE 480242, including the hairpin at 502247 concealed beneath printing on the map.

An excellent flooded half-mile in 1 minute down the Furneux Pellam white road was

## VICKERS-ARMSTRONG (HURN) C.C.

### STARLIGHT RALLY

Fog and muddy roads on 24th-25th November assisted Peter Baker in making this year's "Starlight" the most successful ever. One hundred and fourteen time controls, of which 109 were marshalled, and six "via" controls manned, in 220 miles made this a very tight event. Twelve route cards were issued at various stages en route from the start at Sticklands Garage, Gillingham, Dorset.

A full entry of 60 was received of which 58 started the course by turning South out of Gillingham to three tight controls. Eleven minutes were allowed to drive North of Shaftesbury where a new card was issued and competitors had three one minute controls followed by three two minute controls.

The first mishap occurred when a TR2 disappeared through a hedge closely followed by a "Mini", but luckily there were no casualties.

Time control 20 found the cars working once more south of Gillingham where a loop using the same control twice fooled several navigators. Quiet through Templecombe was the "order of the night" and skirting Corton Hill towards the end of section four, drivers found many white roads which made them work very hard. The fog lifted slightly in the area and E. G. Willmott (Austin-Healey 100/6) used a little too much power on a corner and had to explore the virtues of driving in a ploughed field. After this diversion Mr. Willmott carried on round the course with even greater enthusiasm.

The hill out of Sticklinch proved too much for some of the cars and a delay of some 30 minutes was experienced here by some

cleaned by no one and claimed several cars lacking in the waterproofing department. Best here were the Robbins/Rowcroft Gazelle and the Frost/Marr VW, both dropping one minute.

The rally continued, using the fords at 388201 and Barwick and caught even the leading crews for the odd minute here and there up to the finish, at the very much improved Jacks Hill cafe near Graveley, where everybody reckoned it a good hairy thrash. The organizers, Steve Temple-Cox and Alan Wakeling, were pleased that they had proved it possible to run a half-night non-nonsense event in the home counties using 148 and without plot and bash, hydrants, any order, regularity or the like, with no complaints from locals and having a winner 23 minutes down on the road.

Classic remark was made by Graham Warren with his description of eight stone of Abbott showing two tons of Hillman (extras) containing 16 stone of Warren down a white road under water.

W. D. CREED.

#### Results

1, Messenger/King (Anglia), 230; 2, Hawes/De'Ath (Mini), 260; 3, Piggott/Mitchener (Rapier), 270; 4, Frost/Marr (VW), 350; 5, Abbott/Warren (Minx), 450; 6, Robbins/Rowcroft (Gazelle), 460; 7, Singer/Hirst (Anglia), 1,370; 8, Jennings/Hayden (Gazelle), 3,740; 9, Sprigg/Banham (Herald), 4,060; 10, Creed/Yvonne Warren (Mini), 4,260; Best Novice—Sully/Chard (VW), 4,790.

competitors while Skoda was persuaded to go upwards. Skirting Glastonbury, competitors used roads with dykes on either side and they also experienced many 90 degree bends with controls at two minute intervals. Ben Smallshaw and T. Mears both came adrift and dropped into these deep water-filled ditches. Neither of the cars sustained very much damage and the crews were unhurt.

After the petrol stop at Copley the route went north to skirt Bath and Bristol. A main road section enabled those late to make up time for the sting in the tail. Travelling through Priston, Wellow and Shoscombe, the route provided 20 time controls in the last hour, all marshalled.

Even when exhausted at the end of the event, the competitors all expressed congratulations to Peter Baker for a very fine rally.

#### Results

1, H. Faure (Cooper-Mini); 2, G. Best (Cooper-Mini); 3, I. Holmes (Cooper-Mini); 4, J. Huson (Cooper-Mini); 5, P. Purdy (Cooper-Mini); 6, D. Jackson-Smith (Cooper-Mini).

## HARROW C.C.

### PETIT RALLY

REFERENCES were given one hour before the start in the recent Petit Rally, organized by the Harrow Car Club, but despite this no clean sheets materialized. Brian Culcheth (after his short spell of navigating for Eugen Bohringer in the R.A.C. Rally) won, with Peter Noad navigating him.

#### Results

1, B. Culcheth/P. Noad, 30 marks lost; 2, P. B. Jones/D. Kirkham, 150. Novice Award: P. G. Cowell/J. Davis.

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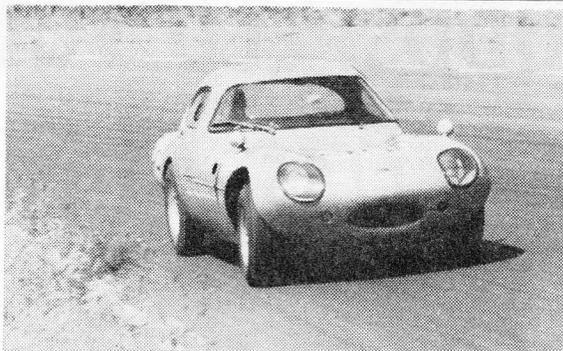
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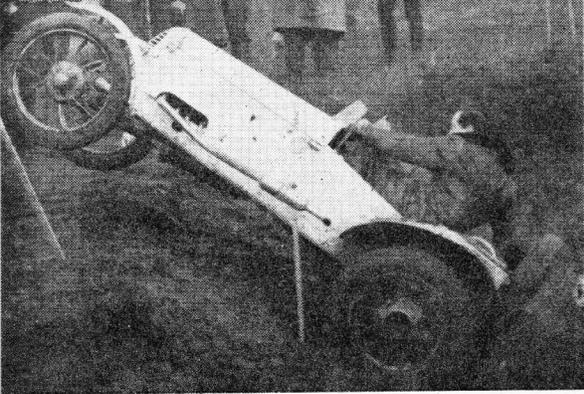
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RALPH NEEDHAM leaps into the air at the finish of one of the sections during the Lister Trial.

## ROTHERHAM AND D.M.C. LISTER TRIAL

IN the Rotherham and District Motor Club's annual Lister Trial on 25th November, Lol Hurt emerged the winner after a first-class drive in the afternoon bringing him from fourth to first place. The Trial consisted of eight sections, with four "laps," on ground which was very wet, but in first-class condition for this time of year.

Section one started with a right-hand bend, then up a sharp climb on to grass-covered ground, climbing steadily to a tight, left-hand loop, with muddy surface, round a large bush and up a cambered climb on grass to the end. T. Marshall, R. Needham and Lol Hurt all made clean climbs, with K. Lees making a terrific bid for the top, but failing on marker No. 2.

The second section started with a steep drop into mud, and immediately out again up a short steep climb. The course then turned left back into a gully of water and mud, finishing with a steep climb to the finish. Most of the competitors failed early in the section, with K. Lees making the best climb to marker 1, followed by A. Bush driving hard to reach marker 4.

Section three was a steep, long climb on a grass and bracken surface, with two bends on a slightly adverse camber. Most of the entry failed at the bend on marker 9, but K. Lees, T. Marshall and G. D. Hobson all reached the eighth marker.

Section four was similar to the third. Both Lol Hurt and T. Marshall really showed the benefit of their past experience to gain a good advantage, both reaching the top, while the rest of the entry all failed near the start.

One of the shorter hills of the Trial was section five, which started with a straight run through a stream on to a wet, muddy surface, finishing in a steep, sharp climb, with one or two tree roots to make things more difficult, but all save three of the entry cleared the section.

Section six, better known as the gully, started with a sharp, right-hand turn, through a hedge and up a long broken earth surface in a gully surrounded by trees on one side and a hedge on the other. On the first circuit this section beat the entire entry with the highest climbs to marker 9 being made by T. Marshall, R. Needham, G. D. Hobson and Lol Hurt.

The seventh section comprised a straight, steep climb with a broken earth surface into a left and right bend finishing with a long run in deep mud. Again this section proved too

much for some, but G. D. Hobson put up a brilliant performance and cleaned the section, becoming the only competitor to reach the top during the event.

Section eight, perhaps the most interesting for the drivers, started with a sharp left-hand bend (with a small but sturdy tree on the apex causing one or two competitors some trouble) up a short climb of bracken and grass to a downhill descent, then into a flat area where competitors had plenty of room to position themselves to attack a steep, bumpy climb to the finish. Only one competitor, R. Needham, managed to master this section, most of the entry failing at the beginning.

At the lunch break the order was A. Bush, 73 marks lost; R. Needham, 77; T. Marshall, 84; and L. Hurt, 85.

During the afternoon only two sections were changed—number two section becoming more of a fast run through the mud and water, pleasing the spectators, and soaking most of the competitors. Clean climbs were made by G. D. Hobson and Lol Hurt.

Section four, also changed drastically by some ex-trials boys, proved a real tester with a twisting approach to a steep climb with a bend on a slightly adverse camber. The best climb to marker 2 required real skill from T. Marshall, with G. D. Hobson and Lol Hurt not far away, failing at 3.

It was interesting to see Hurt in the afternoon really burning the course up with six clean climbs, the nearest to him being Hobson and Marshall with four climbs.

The Lister Trial sets the pattern for the "Centenary" in February, this is an R.A.C. Championship event which attracts entries from all over the country. J.D.

### Results

1, L. Hurt, 138 marks lost; 2, T. A. Marshall, 161; 3, A. Bush, 163; 4, R. Needham, 179; 5, G. D. Hobson, 188; 6, K. Lees, 202. Team Award: L. Hurt and R. Needham.

## HAGLEY AND D.I.C.C.

### PRODUCTION CAR TRIAL

EARLY SNOWS and frost had already softened the ground of the three sites near Inkberrow where the Hagley and District Light Car Club held its restricted production car trial on 25th November. The event, which counts towards the British Trials and Rally Drivers Association Production Car Trial competition, was therefore made far more difficult than usual. In all, 25 sections were prepared and the majority of these turned to quagmires after the first few cars had attempted them. One section was deleted as a result of this.

A great deal of credit must therefore go to the outright winner, Malcolm Hazlewood, who won in his Healey Sprite not only on index but also secured the lowest number of penalty markings to win the Whittington Trophy. Some 10 points behind in the opposite class came R. W. Bates with a Ford Popular, whilst in the rear-engined class the winner was P. M. Appleton in his VW, only 2 points ahead of Mike Hinde in a similar car.

An unusual sight in a production car trial was the Lotus Elite of Bob Rose, who did not attempt the afternoon sections, which were

## STAFFORD AND D.C.C.

### NOVEMBER HANDICAP

AT one minute past twelve, Roy Parker/Peter Johnson left Moss Pitt Service Station. Stafford, for the 120-mile November Handicap Rally, a closed-to-club event run by the Stafford and D.C.C. recently. There were 20 entries, one of whom non-started, and the event was run in thick fog and frost which later cleared for a while, and then descended once more.

The event was run on maps 119 and 120, never more than 12 miles from Stafford. Unfortunately, some marshals did not appear, but who could blame them—the fog was terrible!

Archer/Bird (Simca) lost means of stopping and went through the nearest hedge, but managed to continue with one headlamp working—they won the novices award, though, so it was well worth it! Murphy/Griffin (Mini-Minor) left the road after spinning on mud and remodelled the n/s door. They also continued and finished.

A tale of woe, however, was related by MacCall/MacCall (Citroën) who retired from the rally and then, on their way home, put it into someone's garden railings. They were pulled out by Shepherd/Mrs. Shepherd/Miss Bridgewater (Volkswagen) who, because of their Good Samaritan act, lost a probably good placing.

Several crews retired with travel sickness, possibly due to the fog and nerves. M.H.

### Results

1, B. Bristow/R. Harper (Cooper-Mini), 1130; 2, P. G. Brown/L. Jennings (Mini-Minor), 1340; 3, J. Heaston-Ready/B. Garton (Austin-Healey 100/Six) 1500. Novices Award: W. J. Archer/A. Bird (Simca), 1947. Team Prize: Bristow/Harper (Cooper-Mini) and Parker/Johnson (A40s), 2910.

considerably modified in some cases in an endeavour to make the going a little easier.

Other notable performances were put up by Frank Wall, winner of the North Midland Trial, in his Mini-Cooper, and J. Phillips, in a most unsuitable A35, obtained a first class award together with Derek Holland and Austen May in a Morris and Austin respectively.

In the Open Class Don Yates and Graham Herbert both gained first class awards, it being very pleasant indeed now to see Graham doing well after many hard tries.

The trial eventually ended almost in the dark and most competitors and marshals were glad to return to the warmth of the Tardebigge Country Club where an excellent meal and a film show was laid on. M.T.

### Results

Whittington Trophy: Malcolm Hazlewood (Sprite), 73.4; Novice Award: R. A. Jager (Popular), 102.3; Team Award: M. Hinde and M. Hazlewood.

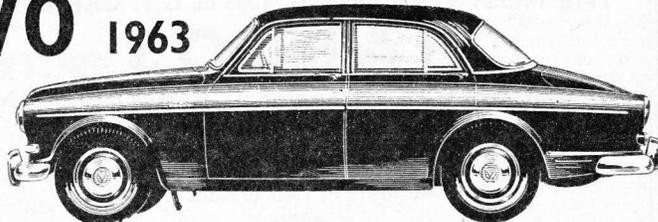
Front-Engined Touring Cars: Class Award: R. W. Bates (Ford), 83.6; 1st Class Awards: J. Phillips (A35), 87.6; D. H. Holland (Morris 1000), 87.6; F. E. Wall (Mini-Cooper), 92.7; C. A. N. May (Austin-Cooper), 92.7.

Front-engined Cars other than Touring Cars: 1st Class Awards: D. R. Yates (Sprite) 84.4; G. H. Herbert (Sprite) 94.8.

Rear-engined Cars of any Type: Class Award: P. M. Appleton (VW), 88.2; 1st Class: M. Hinde (VW) 90.4

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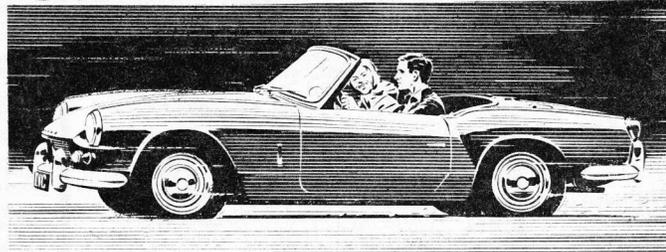
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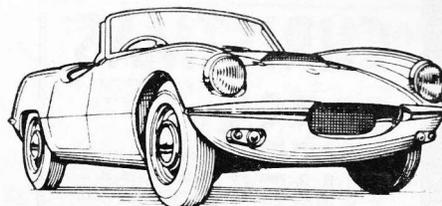
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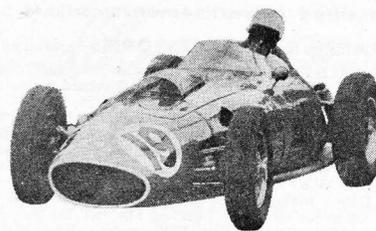
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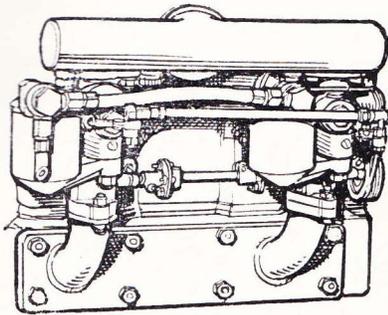
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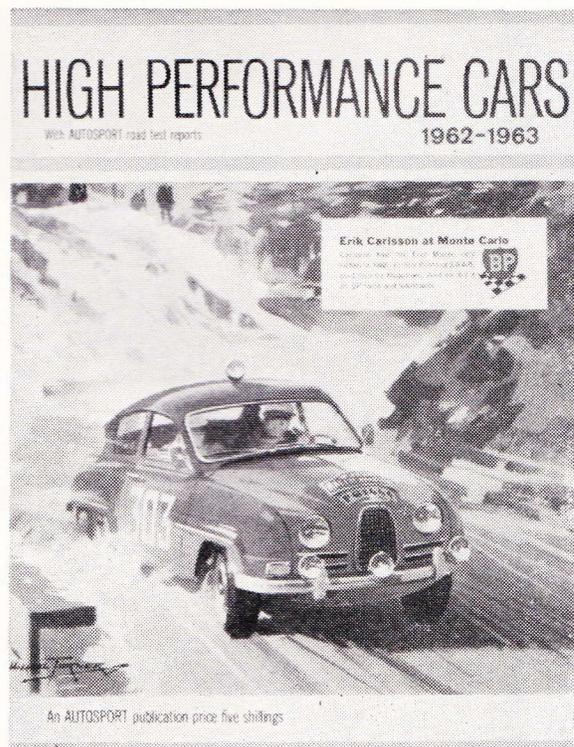
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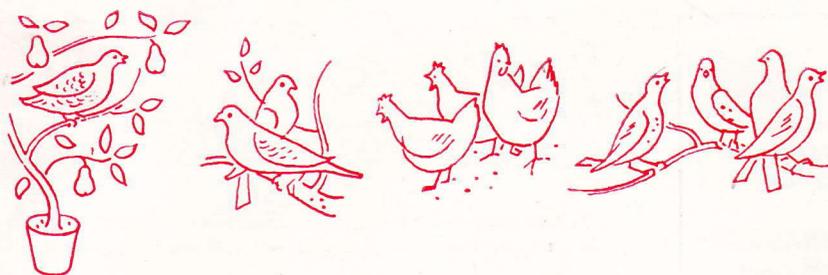
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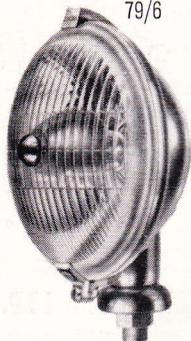


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