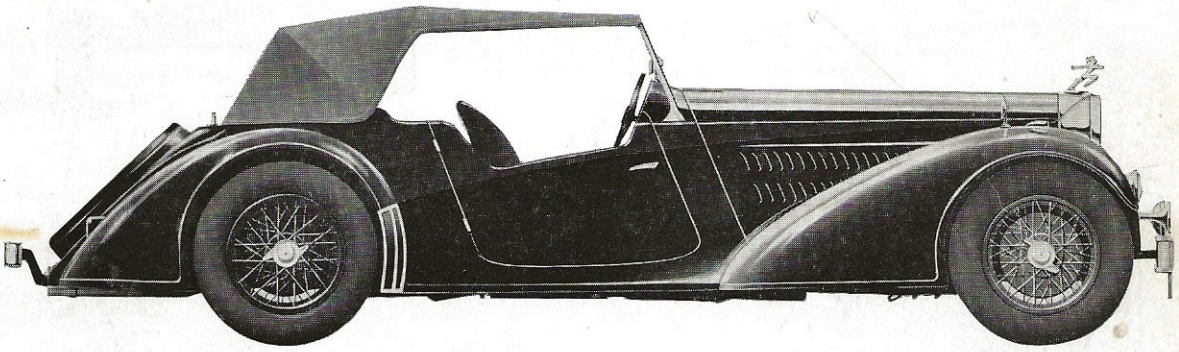
# The Alvis Speed Twenty & Twenty-Five, 3½- & 4.3-litre Models

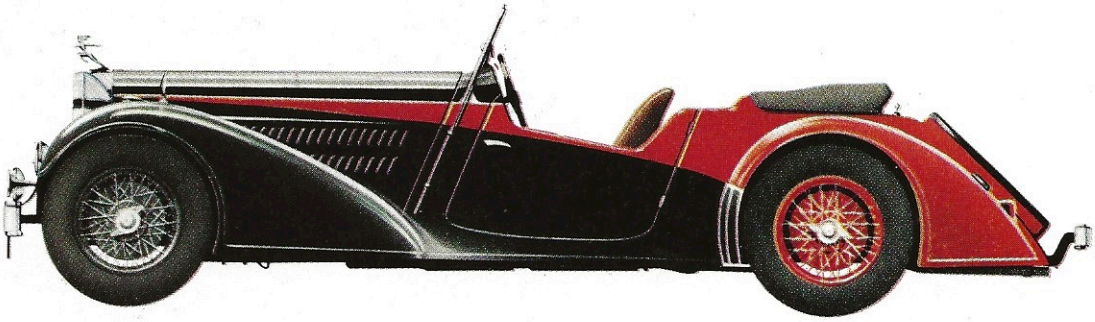


NUMBER 11

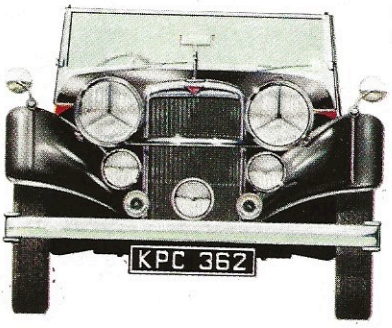
TWO SHILLINGS

PROFILE PUBLICATIONS

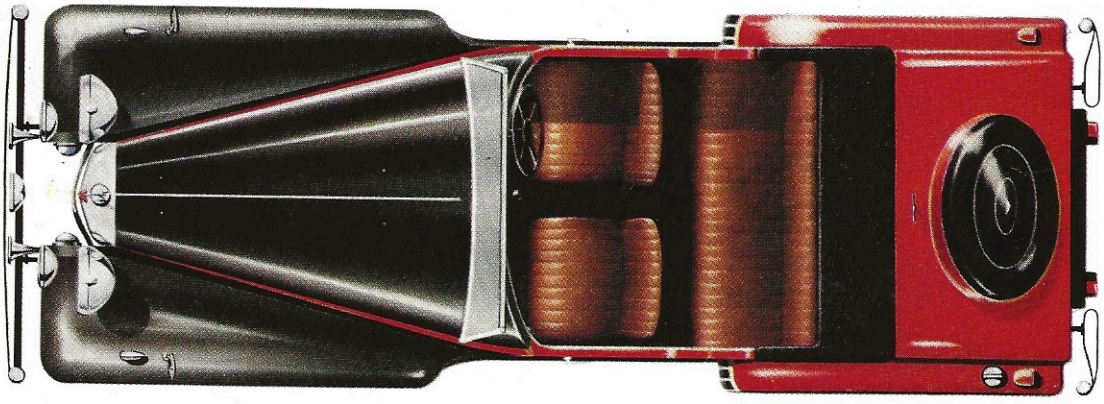
© WALTER WRIGHT.

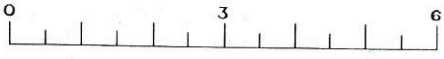


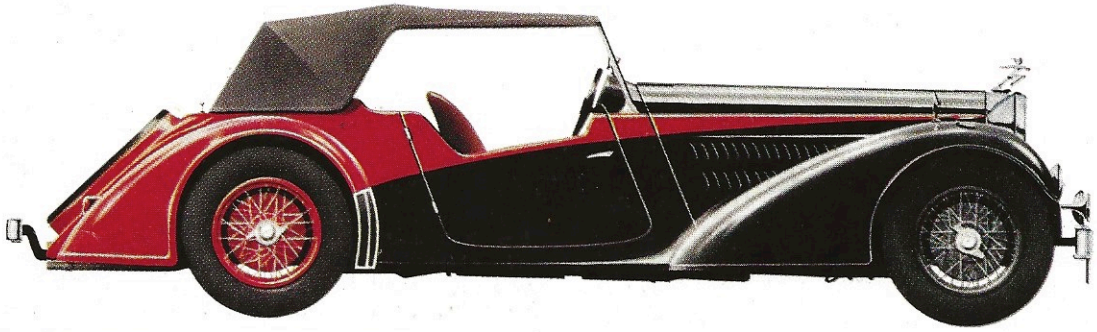
**1939 ALVIS 4·3-LITRE TOURER** by Vanden Plas. Owner: R. A. Parker, Esquire. Road tested by *The Autocar*, this car gave a mean average maximum speed of 100·84 m.p.h.



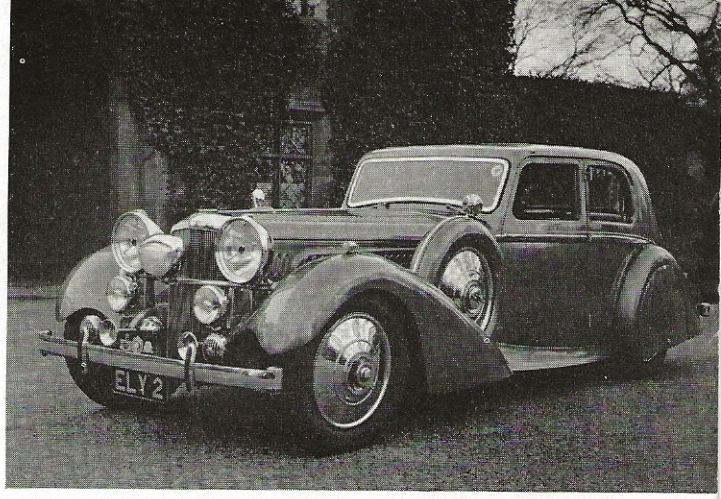

ALVIS



*4·3-Litre Charlesworth Saloon on the short chassis, entered in the 1938 RAC Blackpool Rally.* (Photo: Photographic Advertising)




# The Alvis Speed Twenty & Twenty-Five, $3\frac{1}{2}$- & 4.3-Litre Models

**by T. R. Nicholson**

Since it first appeared before the British motoring public in 1920, the name of Alvis had been associated primarily with a combination of high-speed reliability and good roadholding at reasonable cost. Alvises were solidly built from fine materials, which made for long life. Their most popular models, while being exceptionally fast, handling well, and exuding character, were of conventional, proved design. Therefore they were thoroughly practical all-round road cars, not world-beaters in competitions. There were sound economic reasons for this. When the Alvis Car & Engineering Company Ltd. had devoted most of their efforts to vehicles of the latter type, they had found themselves in dire financial trouble through catering for an over-specialised market. By 1931 they had learned their lesson.

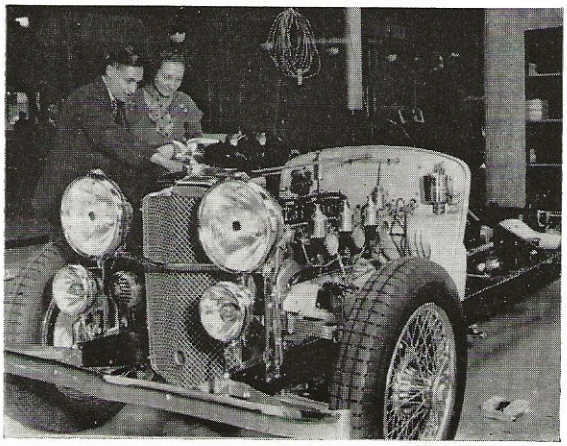
In that year the prototype of a new high-performance, medium-sized six emerged from the Holyhead Road works in Coventry. It was shown late in the same year as a 1932 model. This Speed Twenty supplemented a range which included earlier, staider versions of it that were basically similar—permutations of the smooth, fairly quite Silver Eagle—and also smaller, four-cylinder cars on the theme of the 12/50 h.p. model; a car which had saved the company and provided the backbone of its sales. Up to the war, the character of the Alvis range remained the same: the Speed Twenty and its developments were the glamorous models, backed up by a variety of less exciting, if in some cases more popular, 'bread-and-butter' four- and six-cylinder machines.

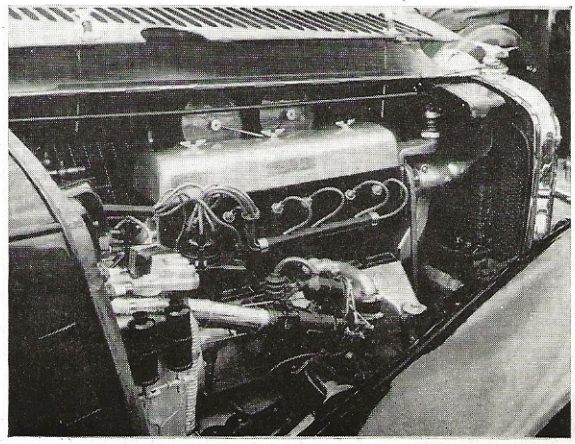
The new car was an immediate success, because it combined the qualities of the other Alvises with exceptionally low, handsome lines. It was described as a 'speed model' or a 'fast tourer' ideal for long-distance high-speed motoring, and was greeted lyrically by the motoring press as 'the best Alvis so far produced'. There was almost nothing like it on the British market at the time. As a rule, the few fast tourers were comparatively rough and noisy, while the new popular breed of small sports car was usually cheap and nasty.

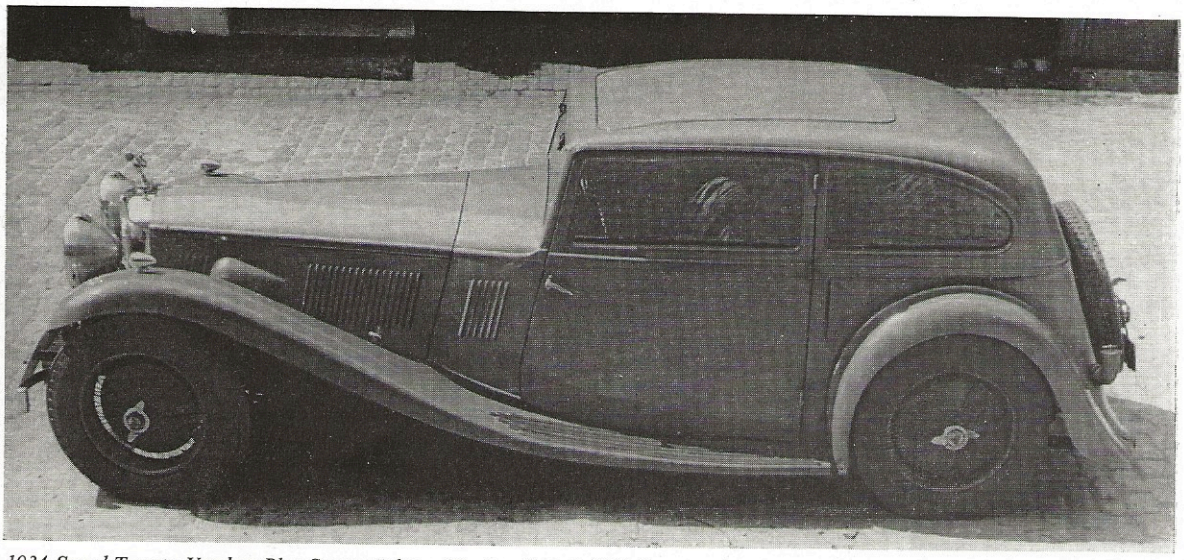
The men behind the Speed Twenty had made the firm, between them. Thomas George John had run the financial and administrative sides of the firm since the beginning. He was described in the 1929 catalogue as 'an idealist who believed that ideals could be achieved within the realms of commercialism'. He was a strong man, too, and was always the biggest shareholder, as he did not hesitate to remind anyone who made difficulties at company meetings. Captain George Thomas Smith-Clarke had been Assistant Works Manager with the Daimler Company Ltd. before becoming Chief Engineer, Chief Designer and Works Manager of Alvis in 1922. He had been responsible for the money-spinning 12/50, and had been appointed a Director in 1931.

Smith-Clarke had designed and built his new car in

*Left: 1934 Speed Twenty, showing near side of engine and independent front suspension.* (Photo: Radio Times Hulton Picture Library). *Right: Offside of engine, 1936 Speed Twenty.* (Photo: A. R. Buck)







*1934 Speed Twenty Vandem Plas Sports Saloon.* (Photo: Guy Griffiths)

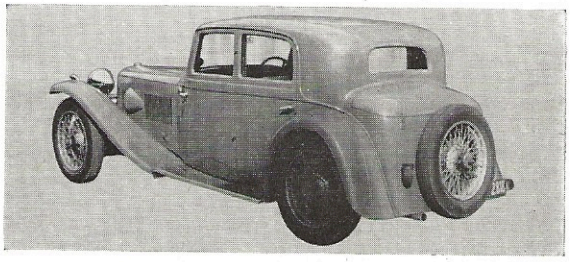
about three months; a *tour de force* which, unlike so many of its kind, produced an exceptionally good machine. The engine had six cylinders of 73 × 100 mm., totalling 2,511 c.c. Rated at 19·82 h.p., it was a development of a power unit already in service in the 20 h.p. version of the Silver Eagle, but modified to give a greater output with larger ports and a higher compression ratio, and strengthened to cope with this with a heavier crankshaft. The latter had four bearings, was heat-treated, and was statically and dynamically balanced. The camshaft, chain-driven from the rear of the engine (an unusual feature), operated two overhead valves per cylinder through pushrods and rockers.

Three SU carburettors looked after the induction. The mixture was controlled by a knob on the instrument panel, through a system of complex linkages. Fuel feed was by a mechanical pump from a 14½-gallon tank at the rear. The exhaust manifold was on the same side as the inlet manifold, giving a hotspot. Cooling was by pump, though there was no fan. A thermostat and water temperature gauge were, however, provided. The block was furnished with aluminium frost plugs. The cylinder head gasket was not expected to act as a water joint, separate porting being provided at the rear of the head and block.

The electrical system was 12-volt. There was dual ignition on the offside of the engine, by a combined BTH coil and magneto unit. A change-over switch enabled the driver to use the coil for starting, and as a standby, while the magneto was brought into operation for normal running. The magneto and the dynamo were both driven from the water pump shaft, in that order from the rear of the engine. All the auxiliaries were very accessible. This engine was rubber-mounted to the chassis. Notably smooth and flexible, it gave 87 b.h.p. at 4,200 r.p.m.

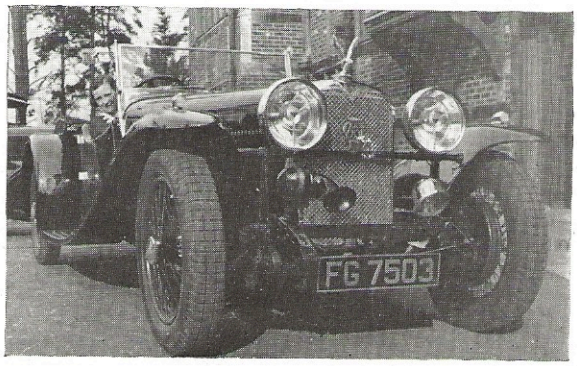
The single dry-plate clutch was of Alvis manufacture. The gearbox was made in unit with the engine; the first instance of this kind of construction in an Alvis. It was of normal, sliding-pinion 'crash' type, with four forward speeds. Two alternative sets of ratios were offered—in the case of the lightest of the models, the open four-seater sports tourer, 4·55, 6·42, 9·3 and 14·3:1. Standard ratios with the heavier cars were 4·77, 6·6, 10, 16·9:1. Though not exceptionally so for the day, these ratios needed to be fairly low, because of the quite small engine for the size and weight of car; a disadvantage imposed by the penal British horsepower tax, which was based on engine bore. As the clutch and flywheel assembly was heavy, upward changes were slow, except in expert hands, and though the short, stiff gearlever was pleasant to operate, the gearbox needed knowing. The massive open propellor shaft, designed for well over 6,000 r.p.m., was in keeping with the rest of the car: there was no skimping. It drove to a fully-floating spiral bevel rear axle.

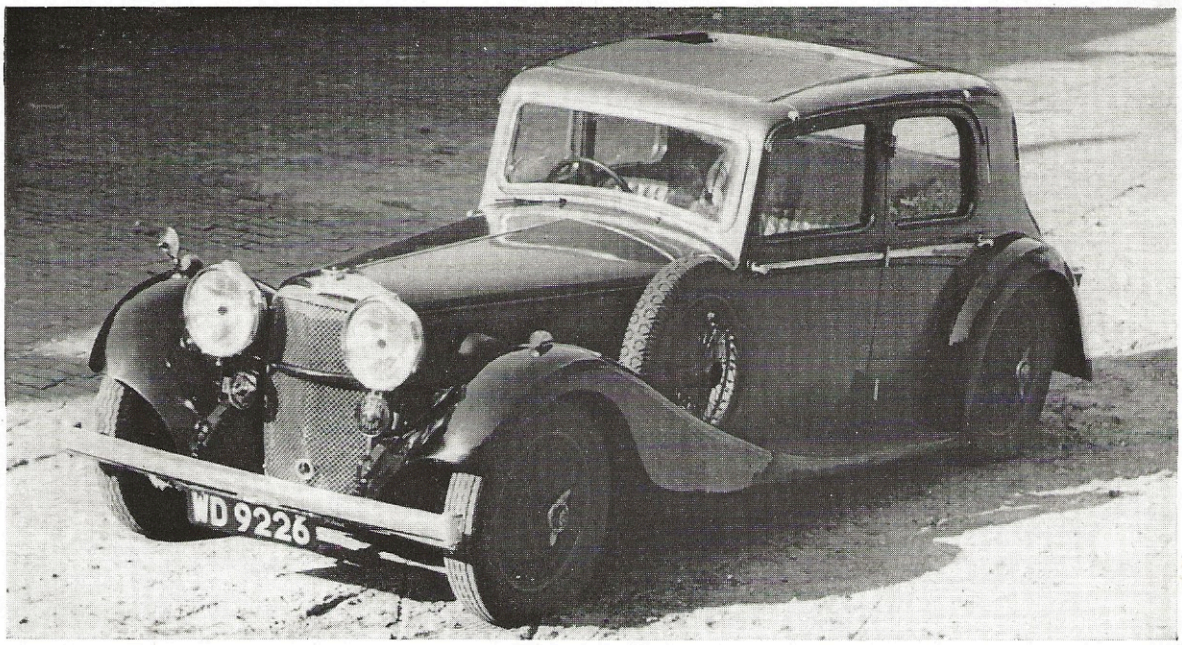
The normal chassis, which was similar to that of



*1932 Speed Twenty saloon by Carlton.* (Photo: Guy Griffiths)

*One of the first Speed Twenties: 1932 Vanden Plas Sports Tourer.* (Photo: C. W. P. Hampton)






*1935 Speed Twenty Charlesworth Saloon.* (Photo: Guy Griffiths)

the Silver Eagle, had a wheelbase of 10 ft. 4 in., though an 11 ft. wheelbase was listed. The track was 4 ft. 8 in. The frame, dropped and cranked up over the rear axle, had rigid, deep side members. There was a normal beam front axle. Half-elliptic springs were fitted, those at the rear being underslung. All were damped by Hartford friction shock-absorbers. Luvax-Bijur one-shot chassis lubrication was adopted. The Marles-Weller steering was excellent. The 14 in. brakes were first-class, stopping the Speed Twenty in 25 feet from 30 m.p.h., but they needed heavy pressure. This chassis gave handling that was taut and of 'perfectly uncanny steadiness', to quote a test report.

A bare chassis could be bought for £600, but customers usually plumped for one of the standard body styles. They were designed by Charles Follett Ltd., the London and Home Counties distributors, in conjunction with Vanden Plas (England) 1923 Ltd., and other firms. (Follett had put money into the company in 1931, and had agreed to take part of the output.) Styles comprised the four seater, four-door Sports Tourer, and two four-door Sports Saloons by Vanden Plas and Charlesworth, priced at £695, £750 and £825 respectively. A little later, a four-door tourer by Cross & Ellis was also listed.

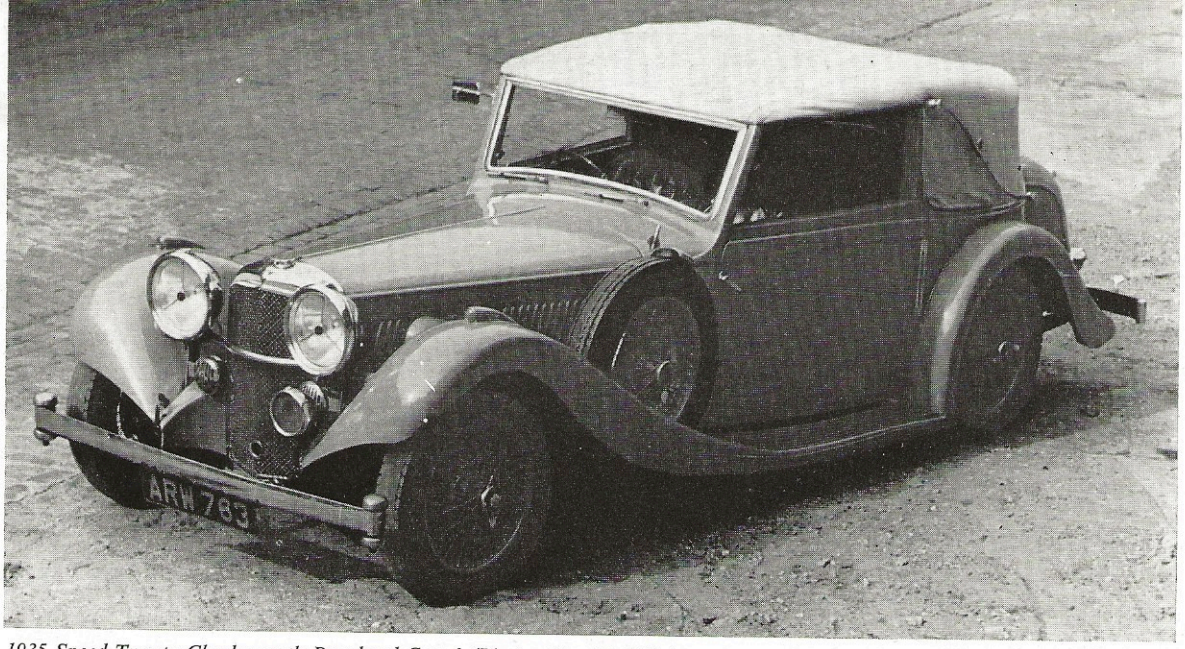
The range for 1933 included a Vanden Plas Sports Tourer, now £725, the Vanden Plas saloon at £865, a Vanden Plas four-seater Drophead Coupé at the same figure, a Thrupp & Maberly saloon at £895, and a third saloon by the Mayfair Carriage Company Ltd. Other coachbuilders built to special order on bare chassis, Carlton, Duple, Mulliner, Ranalah and Bertelli, among them. It was already becoming apparent that most customers were demanding comfortable closed bodies. Correspondingly, the sporting note of early Speed Twenty advertising was damped down. In fact, all the bodies fitted to Speed Twenty were notably comfortable and roomy of their kind. Heavy bodies and heavy chassis meant that the Sports Tourer weighed 26 cwt., and the Drophead Coupé 3 cwt more.

In spite of this, the performance of the new car was entirely out of the ordinary for its type. A 1933 Vanden Plas Sports Tourer would exceed 85 m.p.h. in top gear, though most would not quite touch the 90 m.p.h. claimed by their makers. It would also throttle down to 15–20 m.p.h. in the same gear. Top speed in third gear was between 60 and 70 m.p.h. The latter figure was regarded as the maximum sustained cruising speed. Forty m.p.h. was attainable in second gear. From rest, the Sports Tourer took about 14 seconds to reach 50 m.p.h., around 18 seconds to reach 60, and 25 seconds to reach 70. It would also return a fuel consumption of up to 18 m.p.g. overall, driven hard; the Drophead Coupé a little less.

With the Speed Twenty, Alvis had no competition among other 1932 models. The only opposition in its class for performance, refinement, quality and comfort came from the Talbot 105, the saloon model of which cost £895 and the tourer £835.

## DEVELOPMENT OF THE SPEED TWENTY

The Speed Twenty was still a fast car, but from 1934 its makers' emphasis on comfort and convenience in fact grew, even though in that year their literature went so far as to call it a sports car. The models for 1934 incorporated two major and several minor changes. First, in the interests of passenger riding comfort, independent front suspension of the type that had been fitted to the Crested Eagle since its inception early in 1933 was introduced on its faster sister. Independent suspension was no novelty at Holyhead Road, for the production front-wheel-drive cars of 1928 had used a system of four quarter-elliptic springs with parallel link action at the front and swing axles with quarter-elliptics at the rear. However, the new type consisted of a single transverse leaf—the first example to appear on any British car—with wishbone linkages below. Alvis-designed front shock absorbers supplemented it. André Telecontrol shock absorbers, adjustable from the driver's seat were fitted at the rear. In fact this suspension did not fulfil its purpose of affording a softer ride, but it did improve roadholding and steering a little, at the cost of added weight. The




*1935 Speed Twenty Charlesworth Drophead Coupé.* (Photo: Guy Griffiths)

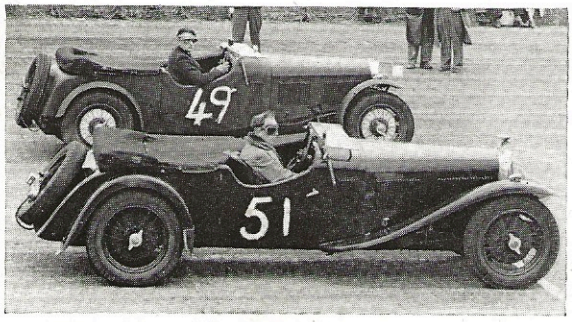
trackrod was moved back behind the sump.

Secondly, an all-synchromesh gearbox was fitted; the first to appear on a British car. It incorporated General Motors patents. Unit construction was abandoned—this gearbox was a separate entity. An inertia lock made premature meshing impossible, allowing a virtually 'unbeatable' change. The box was split on the horizontal centre line, permitting a centre bearing for the mainshaft and layshaft. This box was very expensive to make, but was a beautiful piece of mechanism, quiet and hard-wearing.

The valve springs were now of Alvis's own, peculiar design, intended to prevent valve bounce at high revolutions. They consisted of a cluster of tiny, multiple planetary springs to each valve. The frame was stiffened up by means of a cruciform central cross-member. DWS permanent hydraulic jacks were added. Finally, the mixture control by long linkages was done away with in favour of an easy-starting unit, which consisted of a small additional carburettor that was fitted to one of the existing instruments, usually that at the front. It was controlled from the dashboard by wire cable.

The chassis price remained at £600, with these refinements, and the cost of complete cars for 1934 actually went down. The standard bodies this year were the Cross & Ellis Tourer at £695, the Charlesworth Saloon at £825, and a Drophead Coupé by the same builders at the same price. For what was offered, in the way of quality, performance and amenities, there was nothing but the Talbot 105 (the saloon version of which now cost £795) to touch the Alvis Speed Twenty at its price. Bentley and Lagonda offered comparable machines for more or less the same market, but their saloons cost £1,460 and £895 respectively.

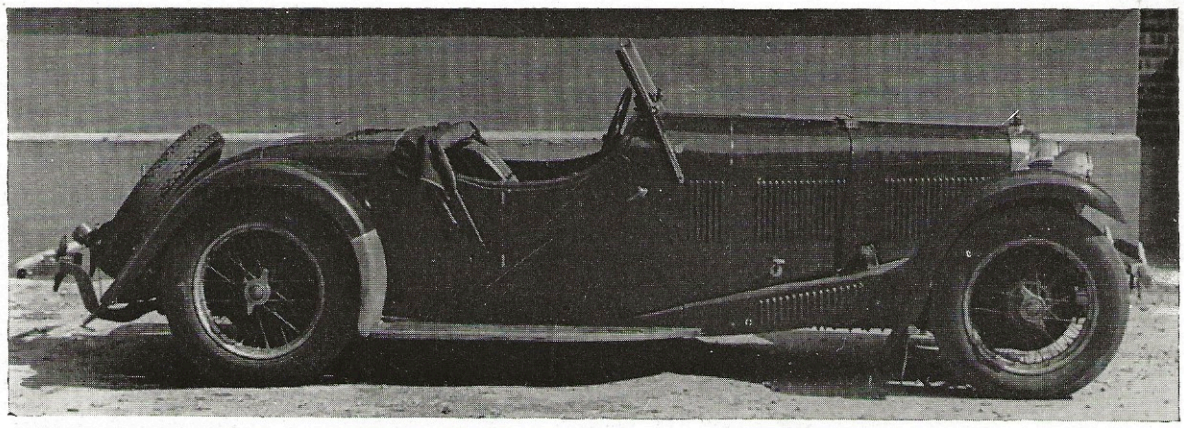
*Sporting breed: two Speed Twenty Tourers—1932/33 Vanden Plas (foreground) and another, possibly a modified 1932 car by Cross & Ellis—on the starting line in a 1949 Vintage Sports Car Club Silverstone speed trial.* (Photo: Guy Griffiths)



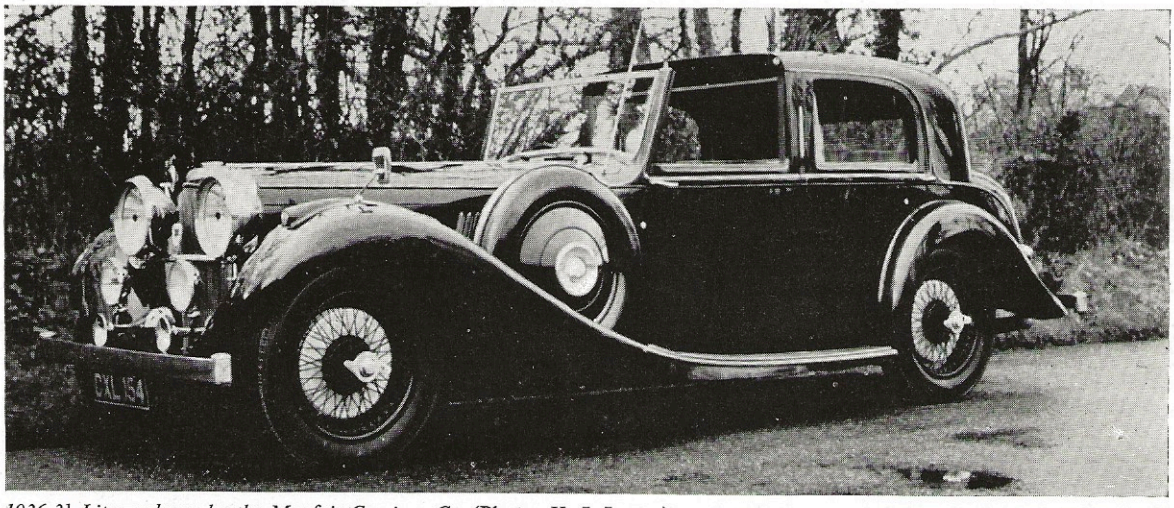

The added weight of their improvements persuaded Alvis to increase the power output of the Speed Twenty engine for 1935. This was done by lengthening the stroke to 110 mm., giving a capacity of 2,762 c.c. A fan was added. This engine, which was capable of higher r.p.m., was mounted at two points at the front instead of one as hitherto, a braced crossmember being added for the purpose. This allowed the trackrod to be brought forward to a more normal position in front of the sump, eliminating the two long draglinks on either side. André Telecontrol shock absorbers were now fitted at the front as well, replacing the Alvis instruments, which had tended to wear quickly. A further improvement was the substitution of a lighter, Borg & Beck clutch for the previous Alvis affair. Silencing was improved—the exhaust note of earlier Speed Twenties was a little too healthy for the more sedate owners who predominated. The accelerator pedal was moved from a central position between the clutch and brake to their right, as was normal, and the capacity of the fuel tank was increased to 16 gallons.

The Sports Tourer now weighed 27 cwt., and the Vanden Plas Sports Saloon no less than 31½ cwt. However, the latter's maximum speed was still in excess of 80 m.p.h. The chassis price was unaltered, but complete cars were a little more expensive, the Sports Tourer costing £700, and the Sports Saloon and Drophead Coupé £850.

Nineteen thirty-six was the last year of the Speed Twenty. The models for the new season were little changed, except for the provision of wider bodies, and

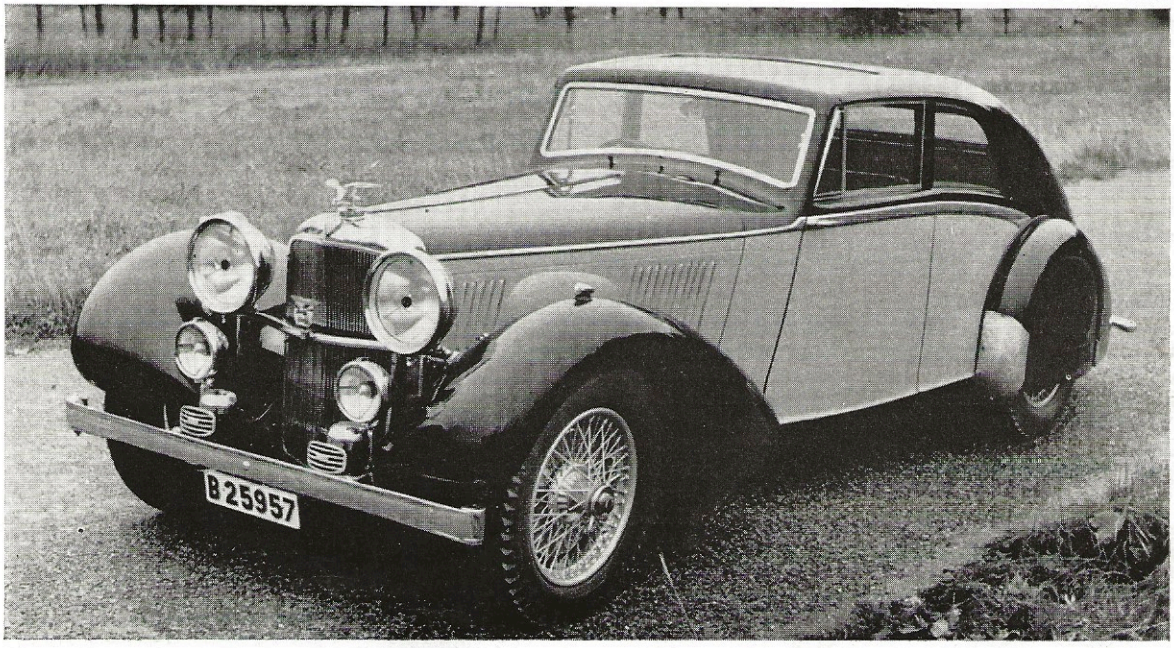


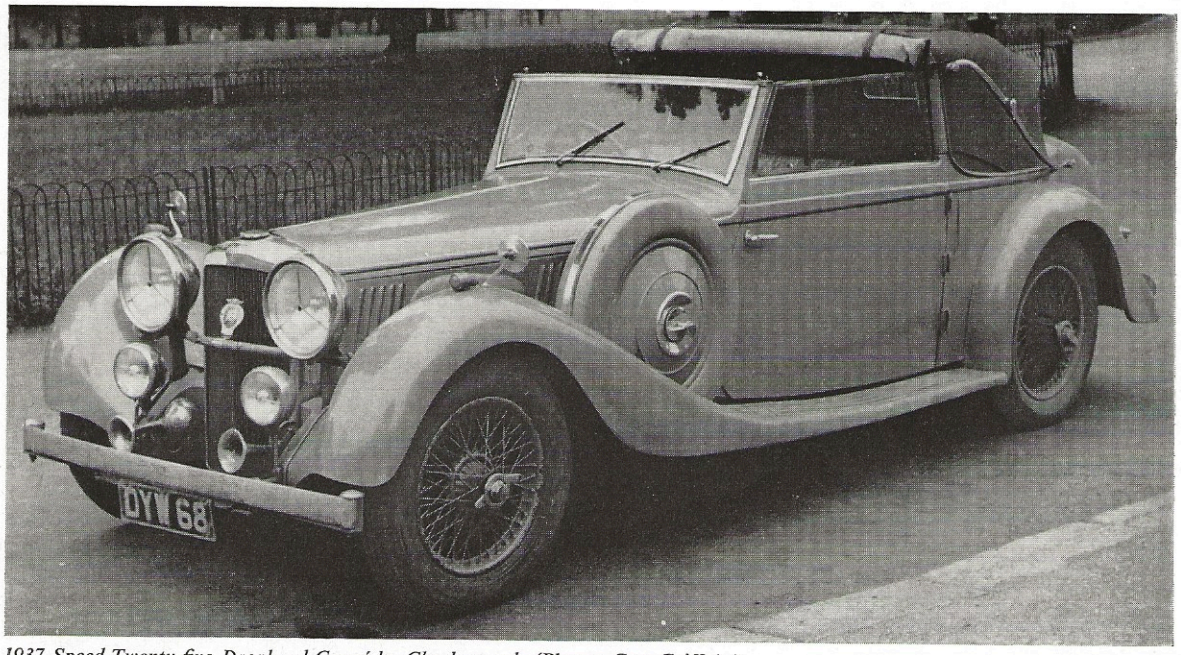
*A 1932/33 Cross & Ellis two-seater, one of the most attractive models.* (Photo: Guy Griffiths)




*1936 3½-Litre sedanca by the Mayfair Carriage Co.* (Photo: K. J. Jenner)

*Bertelli-bodied 3½-Litre, powered by a 4·3-Litre engine, owned by H. Widengren, the racing driver.* (Photo: William Boddy Collection)






*1937 Speed Twenty-five Drophead Coupé by Charlesworth.* (Photo: Guy Griffiths)

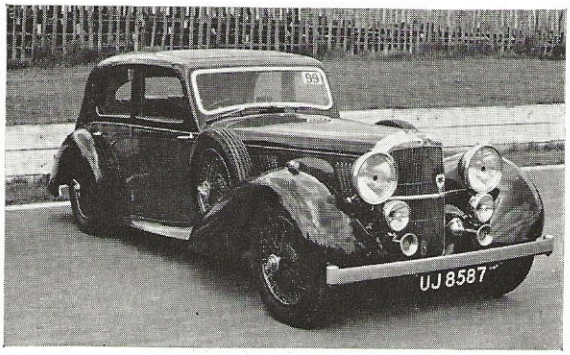
dual electric fuel pumps instead of the single mechanical instrument. Prices were unaltered.

Alvis themselves had ceased to race officially in 1930. The Speed Twenty in normal trim was hardly suitable for this type of exercise, but Charles Follett, and also C. G. H. Dunham, the Alvis dealer of Luton, competed energetically on Brooklands Motor Course. It is said that a special car was built for Follett for the 1932 Tourist Trophy, but was too late to enter. In early 1933 Sir Henry Birkin had another built for him to suit A.I.A.C.R. regulations, but he did not live to race it. After the war B. Chevell used a lowered, rebodied and mildly-tuned 2,511 c.c. Speed Twenty in club racing, later fitting it with a 4·3-Litre engine. It is now raced by A. Charnock in Vintage Sports Car Club events.

## THE 3½-LITRE

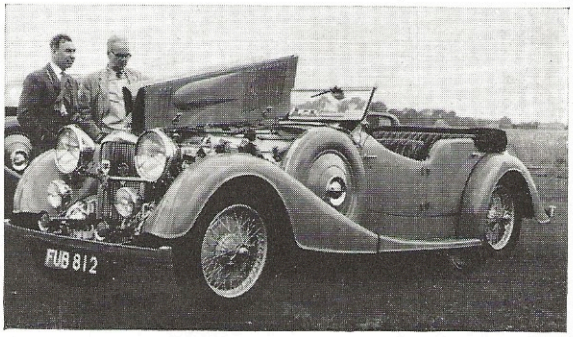
Late in 1935, Alvis introduced a new car alongside the Speed Twenty, as an alternative that combined the performance of the earlier, lighter Speed Twenties with new standards of smoothness, quietness and comfort. The 3½-Litre was in fact a luxury car with sports-car speed and acceleration. It was greeted, in its turn, as the best Alvis yet made. The engine was basically the same as that of the Speed Twenty. Its bore was enlarged to 83 mm., giving a cubic capacity of 3,571 c.c. and a rating of 25·63 h.p. Light alloy pistons were used. A new, seven-bearing crankshaft with a vibration damper fitted at its front end gave smoother and more flexible running. The exhaust was quieter, and the carburettors were fitted with an air silencer. This engine produced 110 b.h.p. at 3,800 r.p.m. Maximum revolutions were 4,500 r.p.m. The gear ratios were slightly closer-spaced. There were two alternative sets of ratios: 4·11, 5·9, 8·34, and 12·95:1, or 4·33, 6·22, 8·79, and 13·65:1. The ride was softer, but there was no pitch or roll. The fuel tank was increased in capacity to 17 gallons. Specifications were otherwise similar to the 1936 Speed Twenty.

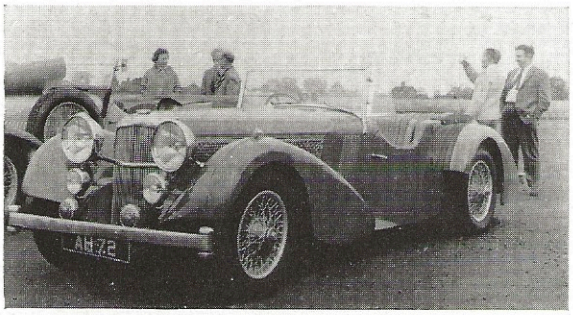
The wheelbase was lengthened to 10 ft. 7 in,. to accommodate the finely-appointed Saloon and Drophead Coupé bodies which were normal wear. The roof line of the saloon was 1 in. higher than of the Speed Twenty. The company sold only the bare chassis, at £775, but many bodybuilders designed coachwork specially for it. The Mulliner and Charlesworth Saloons cost £1,170, that by the Mayfair Carriage Company £1,175, and the Vanden Plas and Freestone & Webb Saloons £1,270. Vanden Plas and



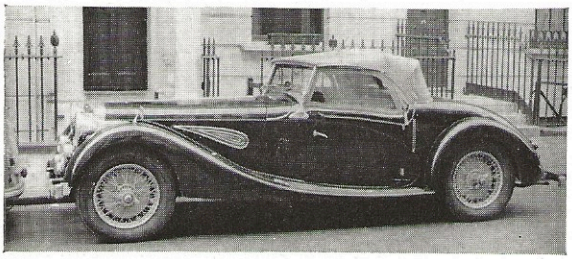

*1938 3½-Litre Saloon by Vanden Plas.* (Photo: Anthony Pritchard)

*1938 Speed Twenty-five Cross & Ellis tourer.* (Photo: A. R. Buck)

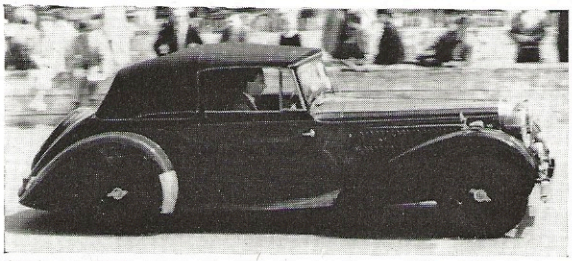




*1937 Speed Twenty-five Vanden Plas tourer with special 'Continental' body.* (Photo: A. R. Buck)



*Mystery car: possibly a 4·3-Litre, with special body.* (Photo: R. Kirby)



*1938 4·3-Litre short chassis drophead coupé by Whittingham & Mitchell.* (Photo: K. Malcolm Hardy)

Mann Egerton Drophead Coupés were also available.

The Freestone & Webb Saloon weighed 35 cwt., but even so, the new car was a little faster than the Speed Twenty. Maximum speed in top was in excess of 90 m.p.h., and it could be throttled down to 5 m.p.h. in the same gear. Well over 60 m.p.h. was available in third, and nearly 50 m.p.h. in second. Acceleration figures for the saloon almost equalled those for the Speed Twenty Sports Tourer. From rest, the 3½-Litre took 14 seconds to reach 50 m.p.h., less than 21 seconds to 60 m.p.h., and about 28 seconds to 70 m.p.h. At 3,000 r.p.m. the cruising speed was between 70 and 75 m.p.h. At the same time, fuel consumption was no heavier.

## THE SPEED TWENTY-FIVE

The 3½-Litre was so clear an improvement on the Speed Twenty that a replacement for the latter, developed from the former, was introduced in autumn 1936 for the 1937 season. While retaining the 3½-Litre's comfort and refinement of running, the new Speed Twenty-five offered still more performance, and kept the Speed Twenty's lowbuilt, dashing appearance, that had been lacking in the 3½-Litre, even though its roof line was no lower than on the last-named. Not surprisingly, the new Alvis was regarded as a still better car than any of its predecessors, and even today many people think that it was the finest to come from Holyhead Road before the war.

The engine of the 1937 model was generally the same as that of the 3½-Litre, and the choice of gearbox and axle ratios was unchanged. Important chassis differences comprised the Speed Twenty's 10 ft. 4 in. wheelbase for all models, the addition of Dewandre vacuum servo assistance for the brakes—a much-needed innovation—and the substitution of Luvax finger-tip control shock absorbers for the André Telecontrol system. They had three positions: hard, normal and soft. The Speed Twenty-five handled perceptibly lighter than the Speed Twenty.

The bare chassis was the same price as that of the Speed Twenty: £600. The open Four Seater Sports model cost £700, and the four-door Saloon and Drophead Coupé £850 each. Offord and Lancefield were among bodybuilders who created coachwork to special order for the Speed Twenty-five at various times. For 1938, prices went up to £625, £735 and £885 respectively. The engine was given better exhaust extraction, and at the same time made quieter, by the provision of dual exhaust manifolds and pipes, each furnished with three silencers. The front of the chassis was boxed in and so stiffened up. The 1938 Saloon weighed a little over 36 cwt., but fuel consumption remained at 16–19 m.p.g. The Charlesworth Saloon was a very fast car indeed. It could exceed 95 m.p.h. in top gear. Speeds in the other gears were about the same as for the 3½-Litre, but acceleration was much better. It took a shade over 11 seconds to reach 50 m.p.h. from rest. To 60 m.p.h. the figure was 15 seconds, and to 70 m.p.h., just under 22 seconds.

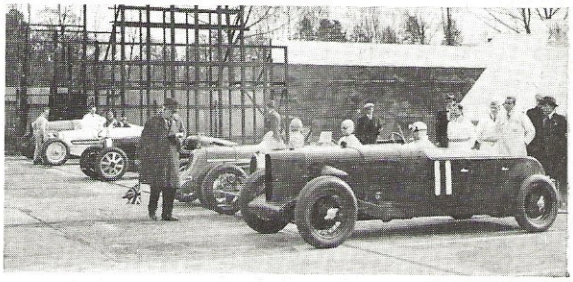
The 1939 models included a new standard Saloon and Drophead Coupé without running boards. Prices were unchanged for that and the following season, but for 1940 engine location was made more positive by the addition of two tie rods to the frame at the rear of the power unit.

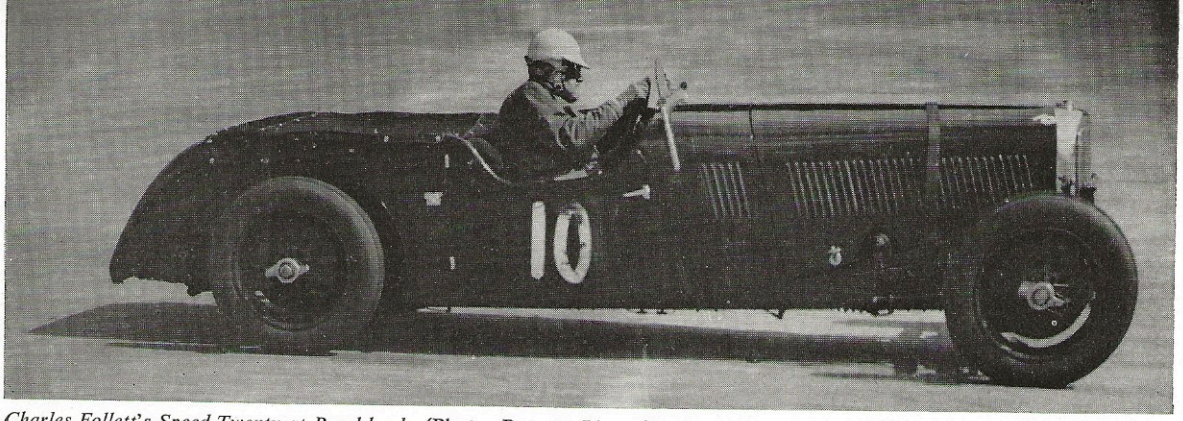
## THE 4·3-LITRE

At the same time as the Speed Twenty-five made its bow, the 4·3-Litre was introduced. It was initially regarded as a replacement for the 3½-Litre. It was one of the fastest catalogued cars of its period, but lacked a little of the refinement and quietness of running of the Speed Twenty-five, and was thirstier. Neither was it quite so good-looking, for although the bonnet was 1 in. lower than that of the 3½-Litre, it was still higher than that of its companion model.

The cylinder bore was enlarged once again, to 92 mm., giving a cubic capacity of 4,397 c.c. and a Treasury rating of 31·48 h.p. This unit provided 123 b.h.p. at 3,600 r.p.m. Maximum revolutions were unchanged. The engine's other mechanical features were the same as for the Speed Twenty-five, except for the provision of dual coil ignition in place of the coil and magneto. The same choice of gearbox and axle ratios was available. There was only one chassis

*C. G. H. Dunham's Speed Twenty leaves the line at Brooklands, 1935.* (Photo: Sport and General Press Agency Ltd.)






*Charles Follett's Speed Twenty at Brooklands.* (Photo: Barratts Photo Press)

length to be had at first; the 10 ft. 7 in. of the 3½-Litre. The steering was slightly higher geared, but otherwise the 4·3-Litre shared the improvements of the Speed Twenty-five, as to Dewandre vacuum servo assistance for the brakes and Luvax shock absorbers.

The chassis cost £750. For the first model year of 1937, the four-door Saloon by Charlesworth, cost £995 complete. The Mulliner Sports Saloon was priced at £1,145, and the Vanden Plas pillarless Saloon at £40 more. The Drophead Coupé cost £1,065. The very odd-looking 'O.F.' Enclosed Continental Tourer by Offord carried a price tag of £1,225. The 34½-cwt. Charlesworth Saloon could just reach 100 m.p.h. Its acceleration figures were also truly outstanding—9 seconds from rest to 50 m.p.h., 13 seconds to 60 m.p.h., and 18 seconds to 70 m.p.h. Fuel consumption however, had now increased to between 15 and 16 m.p.g. Its nearest competitors might compare with the 4·3-Litre in speed, but not in price. The V12 Lagonda saloon cost £1,450, and the 4¼-Litre Bentley Saloon £1,510.

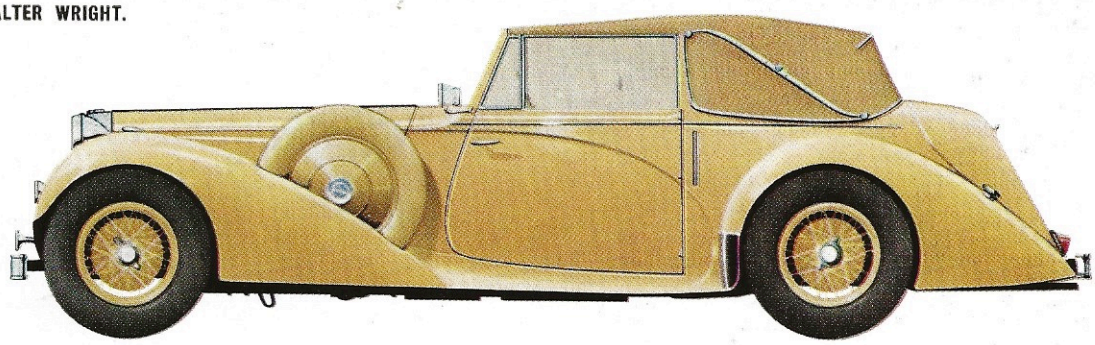
For 1938 the range was unaltered except for the deletion of the ill-advised 'O.F.' Tourer, and the addition of a new, even more shattering machine in the shape of the Vanden Plas Special Short Chassis Sports Tourer, at £995. It was made on a 10 ft. 4 in. wheelbase, which was also available with other bodies, and had higher, better-spaced gear ratios than the heavier cars: 3·82, 5·46, 7·75, and 12·02:1. (These ratios, too could be had with other coachwork.) In spite of a weight of 32½ cwt., it was capable of a clear 103 m.p.h. in top gear, with 80 m.p.h. on third and 56 m.p.h. on second. Its acceleration figures were the best ever noted in the press for a catalogued car: 0–50 m.p.h. in 8·3 seconds, 0–60 in under 12 seconds, and 0–70 in a little over 16 seconds. A 1939 model improved further on these figures, returning 0–50 in 7·6 seconds, 0–60 in 11·3 seconds, 0–70 in a shade over 15 seconds, and 0–80 in 21 seconds, By this time, a 19-gallon fuel tank was fitted.

For 1940, the compression ratio of the 4·3-Litre was raised, and a further new model was offered: the Vanden Plas 'razor-edge' Saloon at £1,195. The other styles remained the same. Then war came, this line of splendid cars came to an end, and the Holyhead Road factory met the same fate at the hands of the Luftwaffe. The serial numbers not being consecutive, the total number made of these Alvises is not known.

© T. R. Nicholson, 1966

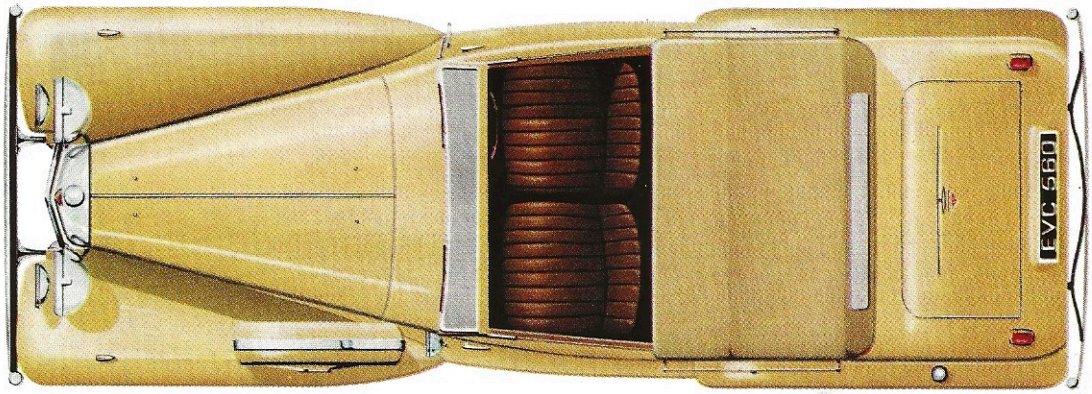
*Post-War Special: A. S. R. Charnock's ex-Chevell car, with 4·3-Litre engine, at Prescott.* (Photo: Guy Griffiths)

© WALTER WRIGHT.

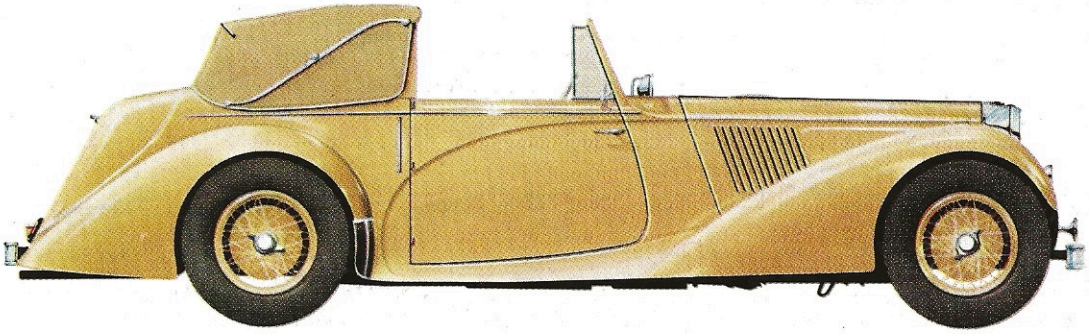


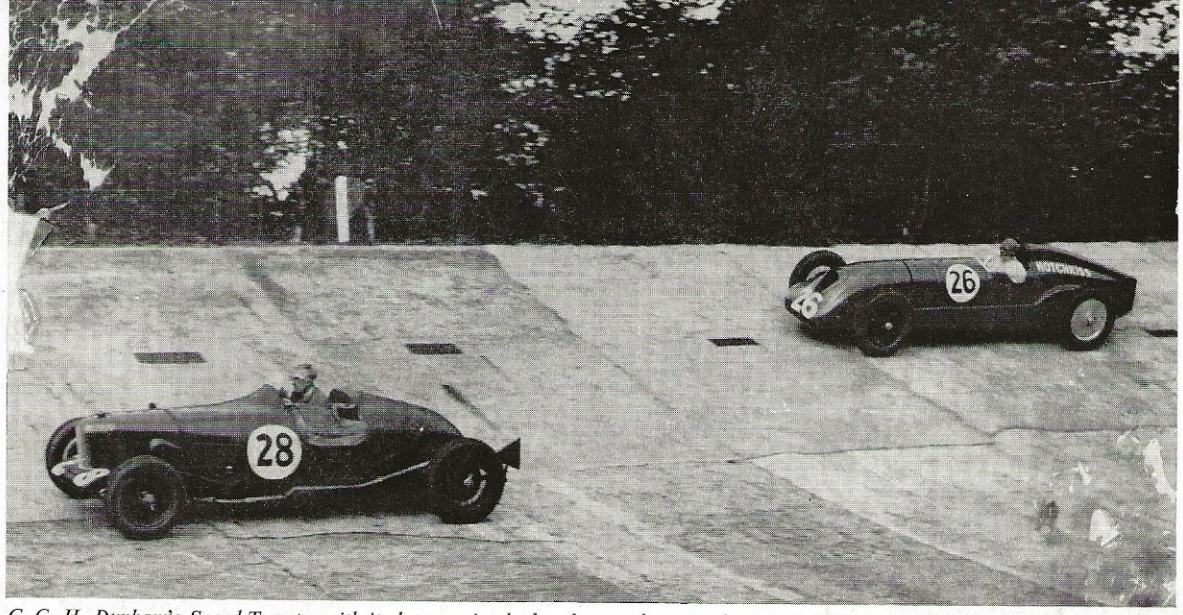
**1940 ALVIS SPEED TWENTY-FIVE DROP-HEAD COUPE by Charlesworth. Owner: A. R. Buck, Esquire.**






0 3 6






*C. G. H. Dunham's Speed Twenty, with its later racing body, about to be overtaken by a Hotchkiss at Brooklands.* (Photo: Planet News Ltd.)

## SPECIFICATION SPEED TWENTY ALVIS

### ENGINE

Six cylinders in line. Bore and stroke (1932–34) 73 × 100 mm., 2,511 c.c. Treasury rating 19·82 h.p. 1935–36: 73 × 110 mm., 2,762 c.c. Camshaft driven from rear of engine, two overhead valves per cylinder actuated by pushrods and rockers. Alvis patent multiple valve springs, 1934–36. Detachable head. Four-bearing crankshaft. Engine rubber-mounted.
*Ignition*: BTH 12-volt. Combined coil and magneto unit.
*Carburation* Three SU carburettors. Mechanical fuel pump (dual electric pumps 1936), 14½-gallon tank at rear (16 gallons 1935–36).
*Cooling*: Pump. 1935–36: Pump and fan.
*Claimed output*: 87 b.h.p. at 4,200 r.p.m.

### TRANSMISSION

*Clutch*: 1932–34: Alvis single dry-plate. 1935–36: Borg & Beck.
*Gearbox*: 1932–33: Sliding pinion, in unit with engine. Four speeds and reverse. Ratios 4.55:1, 6.42:1, 9.3:1, 14.3:1 or 4.77:1, 6.6:1, 10:1, 16.9:1. 1934–1936: All synchromesh, separate.
*Final drive*: Fully-floating spiral bevel. Ratios 4.55:1 or 4.77:1.

### CHASSIS

*Frame*: Channel section steel, dropped. 1934–36: cruciform central crossmember.
*Wheelbase*: 10 ft. 4 in. normal. 11 ft. wheelbase also listed.
*Track*: 4 ft. 8 in.
*Suspension*: 1932–33: Half-elliptic (underslung at rear) with Hartford friction shock absorbers. 1934–36: Independent front suspension by single transverse leaf, half-elliptic at rear. André Telecontrol shock absorbers at rear. 1935–36: André Telecontrols at front and rear.
*Brakes*: Mechanical, 14 in. drums.
*Lubrication*: Luvax-Bijur one-shot chassis lubrication.
*Wheels*: 19 in.
*Price*: £600.
DWS permanent jacks 1934–36.

### WEIGHT

Complete Vanden Plas Sports Tourer 1932: 26 cwt. 1935: 27 cwt.

## SPECIFICATION 3½-LITRE ALVIS

Generally as for 1936 Speed Twenty, with the following major differences:

### ENGINE

Bore and stroke 83 × 100 mm., 3,571 c.c. Treasury rating 25.63 h.p. Light alloy pistons. Seven-bearing crankshaft with vibration damper. Fuel tank capacity 17 gallons. Claimed output 110 b.h.p. at 3,800 r.p.m.

### TRANSMISSION

*Gearbox*: Ratios 4.11:1, 5.9:1, 8.34:1, 12.95:1 or 4.33:1, 6.22:1, 8.79:1, 13.65:1.
*Final drive*: 4.11:1 or 4.33:1.

### CHASSIS

*Wheelbase*: 10 ft. 7 in.
*Price*: £775

### WEIGHT

Complete Freestone & Webb Saloon 1936: 35 cwt.

## SPECIFICATION SPEED TWENTY-FIVE ALVIS

Generally as for 3½-litre, with the following major differences:

### ENGINE

1938–40: dual exhaust manifolds and pipes, each with three silencers.

### CHASSIS

*Wheelbase*: 10 ft. 4 in.
*Suspension*: Luvax fingertip-control shock absorbers.
*Brakes*: Dewandre vacuum servo assistance.
*Price*: 1937: £600. 1938–40: £625.

### WEIGHT

Complete saloon 1938: 36¼ cwt.

## SPECIFICATION 4.3-LITRE ALVIS

Generally as for Speed Twenty-five, with the following major differences:

### ENGINE

Bore and stroke 92 × 110 mm., 4,387 c.c. Treasury rating 31.48 h.p. 1939–40: 19-gallon fuel tank. Dual coil ignition. Claimed output 123 b.h.p. at 3,600 r.p.m.

### TRANSMISSION

*Gearbox*: Ratios 1937: as for 3½-Litre and Speed Twenty-five. 1938–40: additional option of 3.82:1, 5.46:1, 7.57:1, 12.02:1.
*Final Drive*: Ratios 1937: as for 3½-Litre and Speed Twenty-five. 1938–40: additional option of 3.82:1.

### CHASSIS

*Wheelbase*: 1937: 10 ft. 7 in.
1938–40: 10 ft. 7 in. or 10 ft. 4 in.
*Price*: £750

### WEIGHT

Complete 1937 Long Chassis Saloon 34½ cwt.
Complete 1938 Short Chassis Sports Tourer 32½ cwt.

PRINTED IN ENGLAND. © Profile Publications Ltd., P.O. Box 26, 1a North Street, Leatherhead, Surrey, England.
Printed by The Whitefriars Press Ltd., London & Tonbridge, England. U.S. 2nd Class Mailing Rates applied for.