

# SOME MUSINGS ON AND COMPARISONS BETWEEN A 1924 30/98 VAUXHALL, A 1927 3-LITRE SUNBEAM, A 1929 38/250 MERCEDES- BENZ, AND A 1931 4½-LITRE INVICTA

by G. E. MILLIGEN

AS the title suggests, the object of this article is to bring together some impressions of these four famous vintage sports cars as they occur to me, and which I trust may stir the memories of past, be of interest to present, and fire the enthusiasm of future owners of such pedigree machinery.

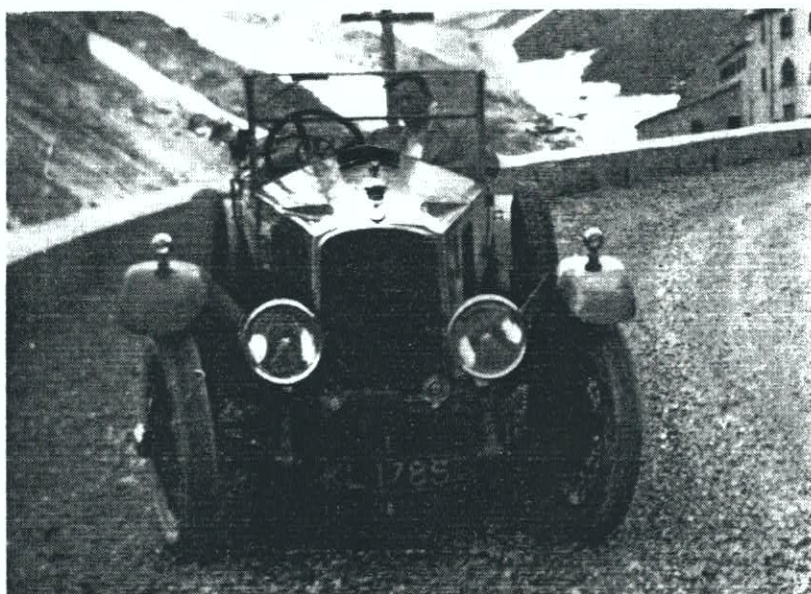
May I from the outset emphasise, however, that I make no pretensions to possessing expert knowledge of any of my four cars, and that my remarks may well stand to be corrected by the specialist "cognoscenti" of each model?

Having said this much, I should explain that the cars have all been in my possession for over twelve years, the Vauxhall in fact since 1927, and that all of them have, in due season, been restored to entirely original condition and specification, as standard ex-works; the time taken over the jobs has never been less than six months, in some cases considerably more, and below I quote the date restoration took place and the mileage completed since then:

<i>Car</i>	<i>Date of Restoration</i>	<i>Mileage</i>
Vauxhall	May, 1930	53,000
Mercédès	March, 1952	18,000
Invicta	April, 1954	14,000
Sunbeam	June, 1955	6,000

Comparing these cars simply from the design angle to begin with, one cannot but help being struck by the remarkable advance in chassis layout from the pre-1914-designed high over-slung Vauxhall to the low underslung wide Invicta evolved in 1930, and I think it will be agreed that Messrs. Invicta Ltd., with the help of Donald Healey, were about the first British firm who really tried to match their chassis to the performance of their engine. Further progress in layout of components is also particularly marked in regard to braking arrangements and the resultant effects on stopping power. Vauxhall Motors Ltd., obviously determined to be amongst the first manufacturers to equip their cars with four-wheel brakes in 1924, fitted that fearful arrangement with

7,500 FEET UP. — The author's 30/98 Vauxhall near the Gt. St. Bernard Pass Hotel.





kidney-box compensating mechanism on the crossbar between the front dumbirons, so that the footbrake applied the transmission brake and one brake on each front wheel—I shall mention the result produced later on! Sunbeams in 1927 fitted the Dewandre vacuum servo motor to assist braking power, and Mercédès in 1929 discarded it in favour of a purely unassisted system. Invicta in 1931 used a simple non-compensated non-assisted layout which is by far the most effective.

There is no doubt, of course, that progressive improvement in wheel and tyre design contributes much to the Invicta's superiority in braking and road-holding, particularly over the Vauxhall and Sunbeam, and whereas a mileage of some 8,000 is all that can be obtained on the Vauxhall's 820×120 high-pressure beaded-edge tyres, 14,000 miles on the Invicta's Michelins has only just begun to show some tread wear.

And now, turning to engines and gearboxes, I think it could safely be said that no four units vary in interest so much in their construction, manner of performing, and in general technicalities. This last aspect I must leave to those more qualified than I to deal with in detail but three examples of what I mean can briefly be referred to:

1. *Overhead Valve Gear Operation.* Vauxhall and Invicta, by pushrods and rockers; Sunbeam, double overhead camshafts operated by a train of gears driven from front end of crankshaft; Mercédès, single overhead camshaft operated by bevel-gear vertical shaft driven from rear of crankshaft.
2. *Cooling.* Vauxhall, by belt-driven fan combined with impeller; Sunbeam, by pump driven by gearing on front end of crankshaft; Mercédès, by slip-clutch-driven fan and pump driven by gears from rear of crankshaft; Invicta, by belt-driven fan and pump driven by chain from front end of crankshaft.
3. *Clutches.* Vauxhall and Mercédès, multi-plate; Sunbeam and Invicta, single-plate.

The list could go on indefinitely, really, and it is not difficult to see that the result of such constructional differences is to give each car that completely distinctive character, which is so much the charm and attraction of the vintage machine. This individuality, indeed personality, is something which the modern sporting car, however expensive or however good, can never and will never possess—no, not even the Continental Bentley or the 300SL Mercédès!

Now let us pass to that most interesting of comparisons between these four vintage cars, namely their behaviour and performance on the road.

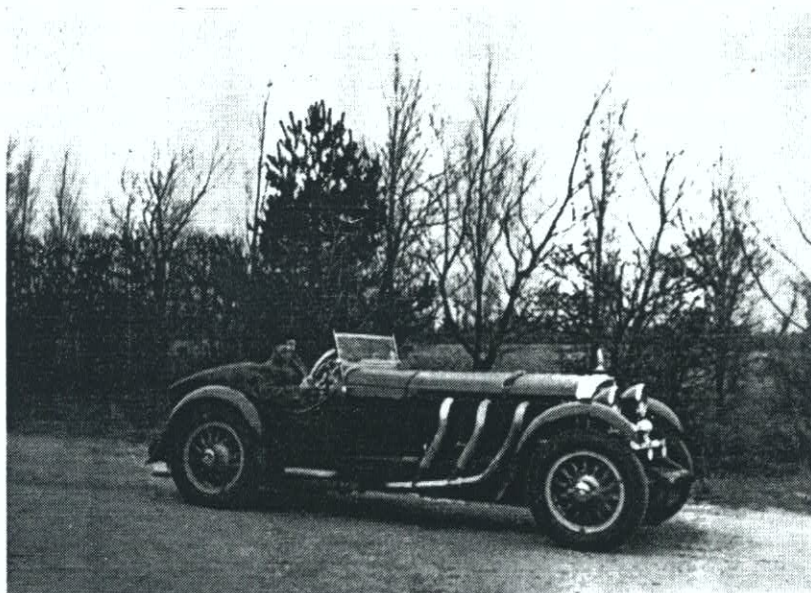
The Vauxhall differs, of course, from the others in having a four-cylinder engine, but nevertheless, due to careful balancing, it is beautifully smooth at all speeds, while the gearbox is delightfully quiet and the change, up or down, comparatively easy. The Vauxhall engine, in fact, is smoother than the six-cylinder Meadows of the Invicta, this latter, in spite of balancing, being quite rough, with pronounced vibration over the 2,250 r.p.m. mark. The Mercédès engine is, however, extremely quiet and smooth, and only comes second to the Sunbeam in this respect because of a slight vibration period round about 1,800 r.p.m. which quickly disappears at higher revolutions. As one would naturally rather expect, having been balanced, and equipped as it is with a vibration damper, the three-litre Sunbeam engine beats everything for sheer silkiness—unfortunately I cannot say for silence as well because of the clatter set up by the train of gears at the front end of the crankshaft. I believe even when brand-new there was considerable noise from this source, and the set of gears on my car, although equipped with new ball-races throughout and having completed only a moderate total mileage, persists in making itself obtrusively audible; a great pity, since in other respects this engine really does run like the proverbial sewing machine.

Excelling all the others, however, is the Sunbeam gearbox, on which it is a joy to ring the changes. The pleasing hum from the indirects, coupled with a particularly musical exhaust note, induces one to play tunes quite a bit more than is really necessary—but there you are, this is just another instance where your vintage machine can give you a thrill no modern car can ever do. Any fool (I admit it is amazing what some people *can* do) can make a quiet change on a synchromesh box, but to those of us who appreciate the art of silent gear-changing, the perfect close-ratio crash-type box on the Sunbeam is a thing of joy and beauty.

But if the Sunbeam and Vauxhall gearboxes are things of joy, those of the Mercédès and Invicta are things of worse than sorrow. The difficulty of getting a quiet change on the Mercédès is only exceeded in degree by the raucous and unmusical howl set up on the in-



GRAND CAR.—Mr. G. E. Milligen's 1929 38/250 Mercedes-Benz.



directs by the Invicta. Mercifully, both these cars possess marked ability to crawl at and pull away from nearly zero m.p.h. in top gear, so that the noise of painful crashes and grinding cogs is reduced to a minimum by the simple expedient of remaining in top gear on all possible occasions! (I am afraid I sense a raised eyebrow or two amongst a few VINTAGE AND THOROUGHbred CAR readers!) Incidentally, may I remark that when I acquired the Mercedes in 1941, inspection of the gearbox revealed over one-third of 2nd and 3rd gears chipped away—previous owners evidently pressed hard on the gear lever, regardless!

When it comes to general handling, however, the palm must go to the Invicta, in spite of the tractor-type gearbox. Perfect steering, good visibility, excellent road-holding, good brakes and that solid well-knit feeling, combine to make this car outstanding. But the Mercedes compares very favourably in many respects, and thanks to excellent weight distribution is extremely steady and accurate under all conditions. With a good lock and perfectly smooth clutch (the latter reputedly a weak point, but with which I have never had any trouble after curing an oil leak from the gearbox on to the linings with a modern-type of seal), it is remarkably easy to handle in traffic, an unexpected attribute. Bowling along at some 60-65 m.p.h. (1,500-1,600 r.p.m. in top) is real cruising in a big way. The main failing of the Mercedes is in braking power and the heaviness of the steering on corners at speed. By the latter I mean that it is a matter of sheer physical strength to get the car round,

but on reflection I suppose this is not to be wondered at. After all, if you want to change the direction of travel of a vast and heavy 7-litre engine located in the front end of the chassis and moving at high speed, you must expect some opposition; so perhaps it might be useful to suggest to any prospective owners of such machinery that they should partake of a course of P.T. before embarking on high speeds. This would also be useful for operating the foot brake, because it is a fact that if you are capable of applying with the foot (or even with both feet if you can manage it) a seemingly quota of foot-pounds per square inch to the said pedal, velocity is reduced reasonably quickly.

As is to be expected with an older design, neither the Sunbeam nor the Vauxhall behave so well on the road as the Mercedes and Invicta. The brakes previously referred to on the Vauxhall are quite an unknown quantity, in fact, from the safety angle, best assumed as singularly shy of doing their stuff, although the 30/98 driver always knows that the hand-brake, with its long lever and operating shoes in the rear drums, is meant to be used and will not let him down. The brakes on the Sunbeam, although powerful and requiring comparatively little effort due to the servo, do not always exercise their powers as honest brakes should; application at high speed seems to produce unseemly tugs to one side or the other (I suppose it depends on the weather) and serve to keep one fully alert when travelling at anything more than a very moderate speed in case sudden application might be



necessary. But on straight roads both cars will run up to 65 m.p.h. with effortless ease and with plenty to spare; yet all the time you feel you are really moving and motoring, and although only the Invicta is capable of matching the long-distance averages attained by the modern 85-90 m.p.h. saloon comfortably and safely, you arrive at your destination not so very much later after all and with that wonderful sensation that you have done something more than just travelled from one place to another.

Talking of speeds brings round the question of the maximae of which these four cars are capable. Well, I must confess I really do not know, because, not being all that interested in this point, I have never had any of the machines flat-out or timed in any way. All I can say is that the cars will reach and maintain the following speeds quite easily: Mercédès 100 m.p.h. (without supercharger), Invicta 85 m.p.h., Sunbeam 75 m.p.h., and Vauxhall 70 m.p.h. Ultimate maximae are probably some 5 to 7 m.p.h. more than these under favourable conditions, while I naturally refer to *genuine* speeds and cars in *standard* touring trim.

All four cars run on Castrol R, and thus leave behind the most delightful fragrance wherever they go. This is invariably accompanied by a variety of exhaust notes in true vintage style and all as originally designed by the makers. Vauxhalls favoured a deep-throated roar, Sunbeams a sonorous zoom, Invicta a distinctly loud bark, and Mercédès, true to Teuton tradition, nothing less than a thunderous blast. Here I must mention the Mercédès supercharger. When brought into action by fully depressing the accelerator pedal, a tremendous lot of things happen all at once, the sum total of which is to convince any passenger not acquainted with its habits, that everything is disintegrating and that his or her last hour has come. But in fact a most significant boost is given to engine power and the car will jump out of its skin to give you a jab in the back the like of which you will probably never have experienced before. Acceleration, undoubtedly somewhat mediocre for such a large engine, even bearing in mind the high gear-ratios, becomes distinctly brilliant and will even give the most expensive modern sports car a run for its money; my recollection of a road report of the 38/250 SSK gave the acceleration from 10-30 m.p.h. as 2.5 sec. in first gear. Also, the most wonderful noise is

produced, which makes you feel that perhaps the jet era is not so modern after all! Unfortunately many undesirable things happen as well once the supercharger is cut in, not the least of which is a staggering increase in petrol consumption and tyre wear; but perhaps worst of all is the appalling strain put on the engine, clutch and final drive by the unavoidably sudden increase of some 50 b.h.p. all at once—that is the pity of it—it is all or nothing, and I personally never use the supercharger except under the most exceptional circumstances. In defence of the makers, I must say they state it is only for occasional use for passing other traffic or on hills when an extra burst might be required, and that it should not be engaged for more than 20 seconds at a time; anyhow, there is no doubt that its continued use soon puts paid to engine bearings, clutch plates, gearboxes and final drives, etc., as many a 38/250 owner has found to his cost!

Petrol and oil consumption over the periods for which the cars have been running are as follows:

Car	Petrol, m.p.g.	Oil, m.p.g.
Mercédès	11	500
Invicta	15	1,200
Vauxhall	16	1,500
Sunbeam	17	1,100

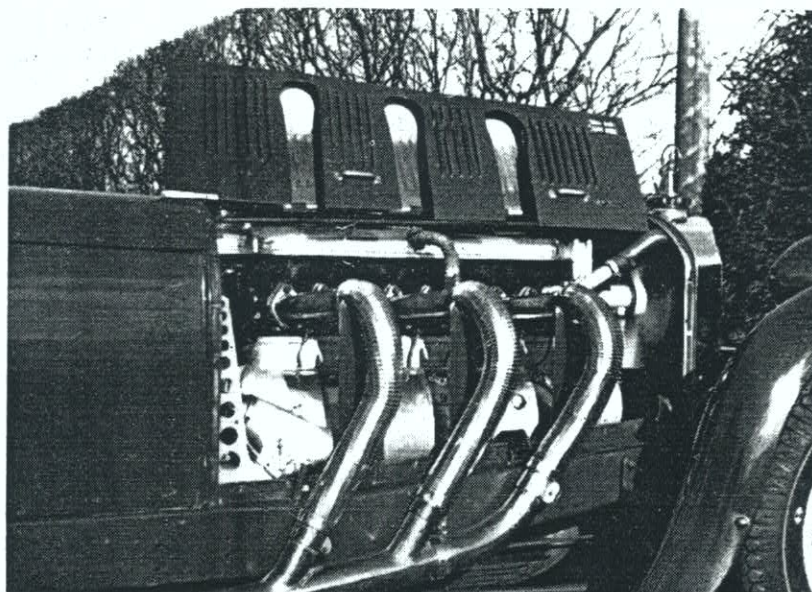
—from which it will be seen that the Mercédès is rather greedy.

I have taken all four cars abroad at one time or another, and on balance prefer the Sunbeam, especially when accompanied by the fair sex. There is masses of room for the masses of unnecessary feminine impedimenta which just cannot be done without, while this car has the best springing for Continental roads. The appalling steering lock is a nuisance on mountain passes, but this is compensated for by the superb gearbox already referred to. Due to the fact that one is virtually perched on the back-axle in the Mercédès, an olde worlde bone shaker is not in it when rough roads are encountered, and although by virtue of the high fuel consumption it would be very expensive, and due to lack of luggage room it would be rather inconvenient, I would have no qualms about taking the 38/250 anywhere in Europe and expecting to arrive—its power, handiness and reliability can cope with the worst possible conditions.

As to the Invicta, I am afraid that, owing to the extremely low ground clearance, it is a



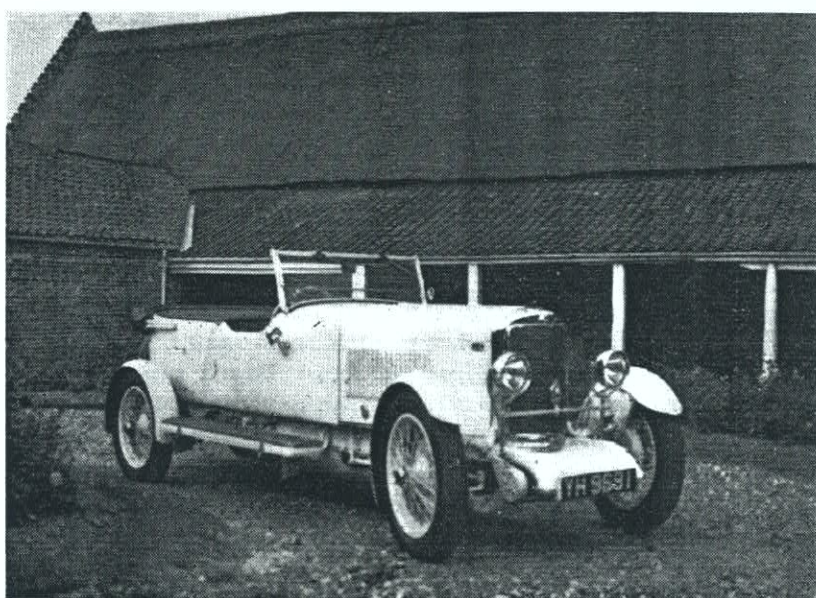
IMPRESSIVE.—The engine of the 38/250 Mercedes-Benz.



“main roads only” car if one is to avoid trouble. Excellent as it is in other respects, and ideal solo or for a couple of sporting gents, the low sump and still lower tail pipe are a continual source of anxiety on ferries, hump-backed bridges and the smaller mountain passes. In many ways the Vauxhall is an excellent car for foreign touring, but a somewhat strenuous pre-war tour of over 5,000 miles in Poland, Hungary and Czechoslovakia sorely tried the rather primitive methods of securing so much of the bodywork and wings to the chassis; these necessitated constant attention

with a spanner, and with fixing nuts and bolts all sizes and shapes, Whitworth, B.S.F., Metric, Unclassified and Unmentionable, the tightening operation lost its novelty, to say the least, after enforced repetition every couple of hundred miles or so. But the Vauxhall will go anywhere it is possible to go, and in 1931 climbed the Stelvio Pass (over 9,000 feet and quite rough in those days) without the slightest difficulty or trace of overheating, in the middle of July.

Now that I am on the subject, may I be so bold as to make a comment or two on vintage



FINE LINES.—The author's 3-litre twin-cam Sunbeam retains its original appearance.



motoring abroad. First of all, roads generally are still quite rough as judged by British standards, and so, when planning a day's run, it is not wise to count on averaging more than some 60 k.p.h., about 35 m.p.h., excluding stops. This may seem distinctly slow to the driver of a modern car on straight (though regrettably increasingly-congested) French or other Continental roads. But one must bear in mind that whereas the modern car with independent suspension, ride-control, etc., etc., can cope with very un-level crossings, *Passages à Niveaux, Chaussées Déformées* ("Deformed Road" warnings usually hopelessly understate the case in my experience) and other hazards with virtually no reduction in speed, to do the same with a vintage car would almost certainly break something not less than a spring leaf, if not an engine or gearbox mounting, apart from subjecting the bodywork to a terrible grilling. Mind you, things *can* happen to the modern car, and I must admit I could not help smiling when touring Brittany in the Invicta this year, when a small heavily-laden Renault passed me at speed as I was negotiating a dreadful surface at some 30 m.p.h. At the bottom of the hill was a really super un-level crossing with the rails showing well above the road surface—alas for the poor little Renault—there was the most expensive noise as bits of ironmongery deposited themselves in the road and brought the speeding Frenchman to an abrupt and, I should think, lengthy halt. So if you would spare your vintage car abroad, a moderate daily mileage is essential.

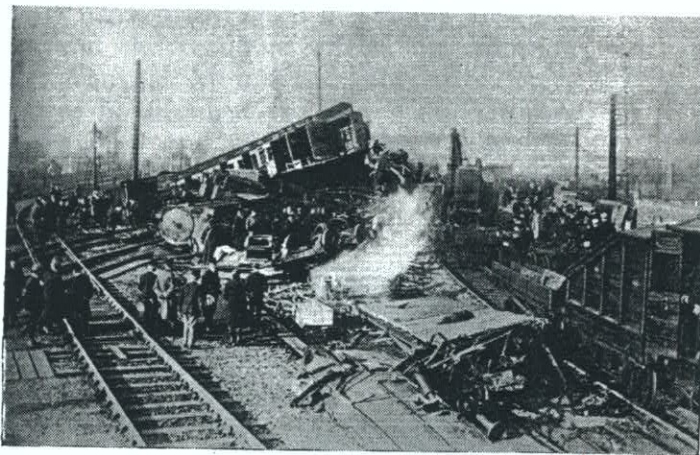
Secondly, be prepared for crowds of sight-seers the moment you stop anywhere. All owners of vintage cars, and especially of the type which are the subject of this article, know already the interest their machines attract in this country; believe me, the curiosity is three or four times as intense abroad. No doubt this is very greatly due to the fact that in the nineteen-twenties and even up to five or six years ago, car population in relation to acreage on the Continent has never been anything like as dense as in this country; so even the older generation, with probably nothing more to remember than the odd Citroën, Renault or F.I.A.T., gape at machinery such as the Sunbeam and Invicta with incredulity; and when told that the Mercédès will do 160 k.p.h. they just do not believe you—quite impossible that in 1929 one travelled at 100 m.p.h.! Unfortunately, interest goes rather too far sometimes, and on more than one occasion I have left the

Sunbeam unattended for a few moments in Italy to come back and find a group of young Italians happily poking about under the bonnet which they had quite unconcernedly lifted. A French enthusiast did the same thing to the Invicta at La Baule, but apparently failed to fasten the bonnet properly so that later, at some 60 m.p.h., it flew open, fortunately without incident.

One other thing before taking your vintage car over is to see that you have any forms of special equipment such as jacks, grease guns, tools, etc., with you, because vintage equipment of any kind is just unheard of, relegated in fact to the limbo of forgotten things—and if you run on Castrol R (which is most unlikely!) do take a supply with you; price in France, 45s. per gallon!

And so this brings me to the end of this rather wandering dissertation on my vintage stable, except perhaps to ask myself, which car do I like best? I am afraid this is really quite unanswerable; you just cannot sort out the pros and cons of one car against the other and then say, "This is the one". All I can say is, all four are my treasures, of which the faithful 30/98 has shared 28 years of my existence.

#### A PLEASANT CHANGE



After news of increasing road accidents it comes as a change to read the latest book by the well-known motoring historian, L. T. C. Rolt (*Red for Danger*; The Bodley Head, 28 Little Russell Street, London, W.C.1, 16s.), for it is a history of railway accidents, amusing and tragic.

As so many of our readers enjoy history we recommend this book, which describes runaway locomotives, the Tay Bridge disaster, how Charles Dickens' health was affected by a railway accident to the detriment of English literature, and explains the development of railway signalling, etc.—J.F.