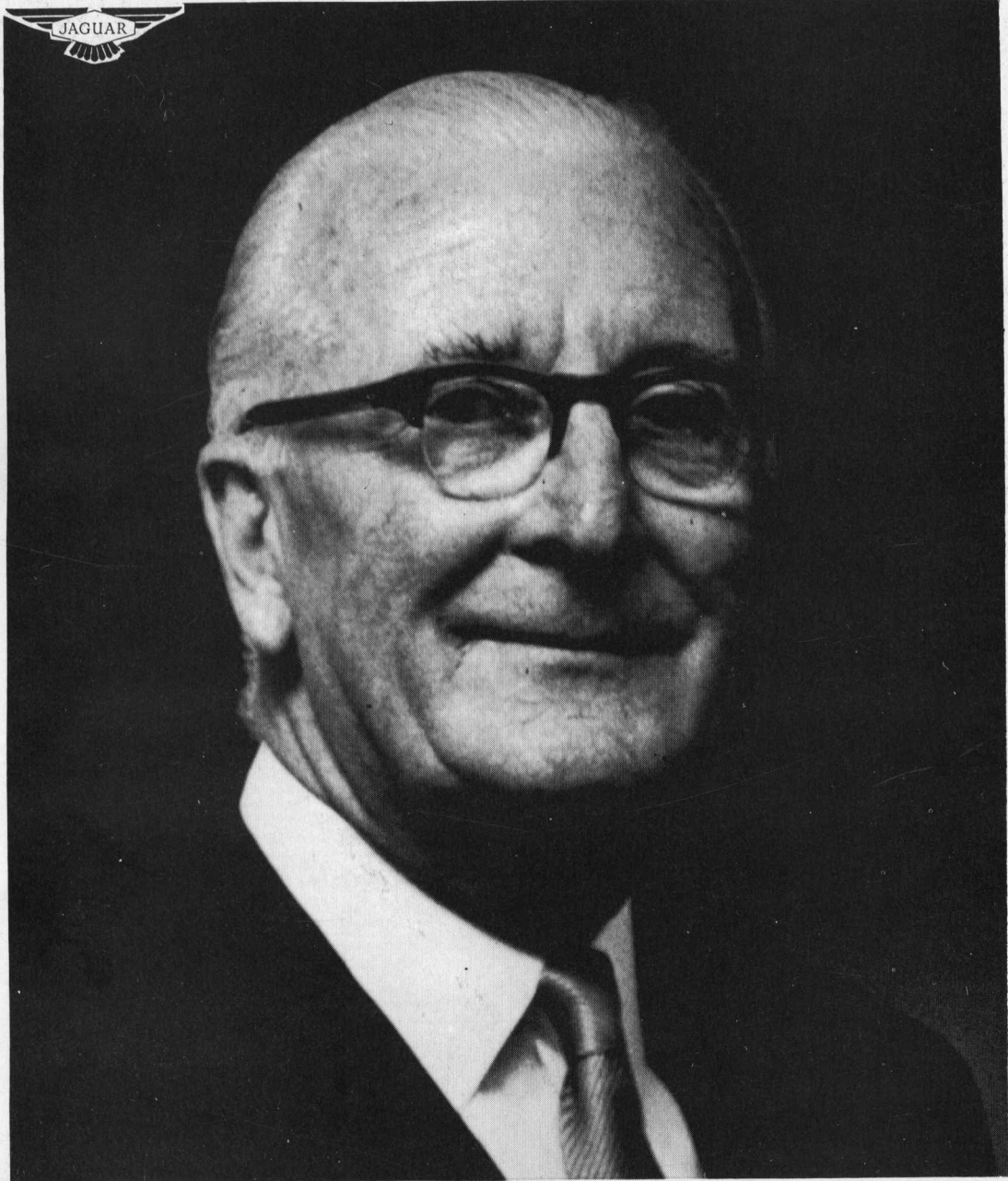


*The Society of
Automotive
Historians*

AUTOMOTIVE HISTORY REVIEW

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FALL 1985 ISSUE NUMBER 19



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Presentation of the first S.S. Jaguar, September 1935, at London's Mayfair Hotel

Photo from Andrew J. Whyte Collection

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AUTOMOTIVE HISTORY REVIEW

FALL 1985

ISSUE NUMBER 19

Sir William Lyons

Front Cover

At the age of 21, Lyons and a partner formed a small company to make motorcycle sidecars, which, over the years, grew to become Jaguar Cars Ltd., which still exists as a maker of quality luxury automobiles. The name "Jaguar" was selected by Lyons himself in 1935.

Photo, the First S.S. Jaguar, 1935

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The first car to bear the Jaguar name was shown at the Mayfair Hotel in London, September, 1935.

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Keith Marvin explores the highly probable relationship of three very large cars—the Porter, the Prado, and the little-known latter-day Lozier of 1922.

The History of the Jaguar (Part One)

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This is the first installment (of two) presenting an in-depth account of the evolution of the Jaguar car, as told by Sir William Lyons himself in a speech delivered in 1969. The second part of this article will appear in the next issue of *Automotive History Review*.

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This article by David G. Styles supplements Max Gregory's article "Coventry's Motor Mills" [AHR No. 18] with emphasis on Riley cars, also of Coventry.

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1946 Willys Prototype

Back Cover

This was a prototype of a six-cylinder Willys car, planned but never put into production for reasons known only to the Willys executives of 1946.

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BADGE ENGINEERING AMONG THE BEHEMOTHS

Fact or Fancy?

by Keith Marvin

This is the story of three makes of automobiles which graced America's automotive rosters briefly in the early 1920's—the Porter, the Prado and the Lozier. That's right—the Lozier. Whether it had anything to do with the earlier car of that name built in Plattsburgh, New York, and later in Detroit, is doubtful. The story is speculative, and based upon theory rather than on fact. Yet it may be factual, and I believe it is. Two of the three makes are little more than names, and may not have existed at all beyond prototypes, although it is more than likely that a few may have been completed.

The cars comprising this curious trilogy were all monsters in size, power and price, and existed in that exclusive and elusive area also occupied by such behemoths as the Locomobile "48" and the McFarlan Twin-Valve Six.

What I'm weighing here is in essence what I believe is the yet-to-be-proven information that all three makes were related—closely related—either by a tacit inter-factory arrangement or, at worst, by downright piracy. It may have been (and I think probably was) a case of badge-engineering, legal or otherwise. Briefly, here is the outline—a thumbnail sketch if you will—of the three cars in question:

PORTER — There is no speculation surrounding the Porter. It existed, or rather *they* existed as some 34 chassis were listed and accounted for as having been bodied in the Porter inventory of early 1922, shortly before the company failed and the remaining cars on hand went under the hammer. The Porter company had been named for Finley Robertson Porter (1872-1964) who had designed the Mercer T-head series and who had later produced a handful of high-powered F.R.P. automobiles at Port Jefferson, Long Island, New York between 1915 and 1917 when World War I put an end to the operation.¹ The Porter automobile was similar in concept to the F.R.P. and, designed in 1919, was introduced for the 1920 market year, its meager output of long-stroke, four-cylinder-engined beauties being completed within a year's time. The Porters were made by the American & British Manufacturing Company's Bridgeport, Connecticut, factory² and, whereas Mr. Porter didn't go to Bridgeport himself, the cars were built under the supervision of his son, Robert, who served as general manager of the operation. The cars were extremely high-priced, and although contemporary press releases and factory promotional brochures frequently disagree, it may be assumed that seldom if ever did a fully-equipped Porter cost its owner less than \$10,000, which in those days was a great deal of money indeed.³

PRADO — The Prado is far more elusive than the Porter, although I'm reasonably certain that at least one car and probably several were completed during the company's brief span of existence—two years or less.⁴ Announced for the 1921 model year, the Prado was a large and powerful piece of equipment powered by a Curtiss OX-5 eight-cylinder converted aircraft engine⁵ and was presumably available in any body style desired. The Prado was (allegedly) available at its home base in New York City, the address on its prospectus being given as 25 Church Street.⁶ Like its Bridgeport stablemate, the Prado was long, sleek, exuded an aura of power, and looked exclusive as hell. Chassis price was quoted at \$9,000 and it was available in chassis form as well as a "3-passenger DeLuxe Speedster," "Open Types" and Closed Types."⁷ A phaeton

with its roof in the up position accompanies the Branham listing, and this may be either a photograph or a highly effective drawing—it is hard to determine which. A sketch of a similar car with the roof down appears in the prospectus. On my copy of this leaflet someone has written in, at the bottom of the specifications, "249 - 44th St., Bkln, \$9,000—chassis with taxes." Who lived in Brooklyn with a Prado connection, I wonder, and how much was that chassis price *including* taxes?

LOZIER — This is the most obscure car in the trio, and I've encountered only two references to it.⁸ Ostensibly made by the Lozier Motor Company, of New York City, the car purported to be a six—a huge six—its engine listed as having a 4¾" x 5½" bore and stroke, and with a cubic-inch displacement of 584.8, developing 100 brake horsepower, at *what* revolutions per minute the listing failed to say. A seven-passenger touring model is quoted at \$8,500 with a limousine at \$10,000. But what make of engine could the power plant have been? Could it have been built exclusively for the Lozier or by those promoting it? Perhaps it was one which existed in theory as the shape of things, hopefully, to come. Could be. But if this was the case, *what* engine was under the hood of the car shown in this article? In the *Standard Catalog of American Cars 1805-1942*⁹ author Beverly Rae Kimes conjectures that the car might have been a leftover example of the aborted 1918 attempt to revive the early Lozier. It may have been, but I think this is unlikely. The last of the earlier Loziers carried price tags of \$2,775 to \$4,450, a far cry from the \$8,500 to \$10,000. Also, the picture of the 1922 monster shows a car with 1922 lines—a monster but an up-to-date one.

So here we have three juggernauts, all living entities at one time or another in 1922.¹⁰ Dinosaurs they might have been, but impressive they were as well.

What did these three big cars have in common?

For one thing, they shared a 142-inch wheelbase which placed them among the longest-chassied cars in the land at the time. Only the Springfield Rolls-Royce was longer—by 1½ inches,¹¹ which seems far more than coincidental, and I think it was.

The most singular factors in the similarities in which these cars abounded, at least between two of the three (I can't be certain about the Lozier because of the side view of the only photo available) was in the use of a right-hand steering post. Remember, this was 1922 and aside from certain foreign imports, cars built here for export, and three surviving eccentrics¹² left-hand drive was the rule of the road so far as these United States went¹³ in conformity to the accepted and adopted traffic pattern.

As for the Porter, its steering position may have been an anachronism, but it was an honest anachronism, as the chassis used for the car—or at least the first batch of them—had been fashioned for the earlier F.R.P. which had employed the right-hand steering position. Visually, the Porter had the air of elegance about it, not unlike the Rolls-Royce, and it looked more like a foreign make anyway. Since the majority of Porters were formal cars and programmed to urban traffic, the eccentricities of the driving position probably weren't too disadvantageous.

But the Prado—why in the world would a newcomer on

the automotive scene opt for a steering-wheel location at once at odds with the norm? Snob appeal? Ridiculous. As far as I'm concerned this wouldn't have been used unless there were extenuating circumstances.

I believe that these circumstances existed because the Prado was using chassis obtained from Porter. There were many other similarities as well. Not only this, but even the wordage in their respective catalogs showed additional similarities in both headings and phraseology which I feel surpass coincidence. Specifications for both cars are included in this article.

So here we have two cars (omitting the Lozier for the time being). They were equally expensive and their chassis were of identical length. They were both right-hand-driven, and although I never have been able to track down a front view of the Prado, its radiator shape appears to be the same as the Porter.

Other things they had in common? Both cars used Berling ignition and the oiling systems appear to be the same, and in the promotional and sales leaflets, wording describing both front and rear axles is almost identical. If the words "Porter design" are removed, the description of the frame of Porter and Prado alike is the same word for word. Both cars employed semi-elliptic springing front and rear, and likewise the steering description is word-for-word identical.

Both makes used Zenith carburetors, both favored 32 x 4½-inch wheels and 35 x 5 U.S. Royal tires, and, as previously noted, had a wheelbase of 142 inches with a 56-inch track. The cars used 12-volt battery systems and each carried gasoline tanks of 28-gallon capacity. Clutches were identical, and so were the cooling systems.

There were some differences, notably in the type of engine and in such things as the starter system and make of speedometer, but the similarities far outweigh the differences both in number and importance.

Wheels were different, it is true, Porter cars being equipped with artillery wooden ones on the heavier types, and wire wheels on the sporting models. Prado favored a disc type. A more significant difference was in the chassis weight in 1921 where the Porter chassis was described as tipping the scales at 2,800 pounds and Prado's weight listed at 3,900.¹⁴ Oddly, in the case of the Prado, this figure was reduced to 3,175 for 1922¹⁵ but I think the earlier figure was a misprint. Even so, this still gives a discrepancy of 375 pounds. If Prado was indeed using the Porter chassis, could this divergency have been due to the differences in the engine and/or the drive train? Possibly. Or could the use of aluminum in place of iron and steel here and there have had some bearing. Again, possibly.

As for the Lozier, which is hard to get at because of a lone known photograph and without any known promotional

material available, I must conjecture from what I have.

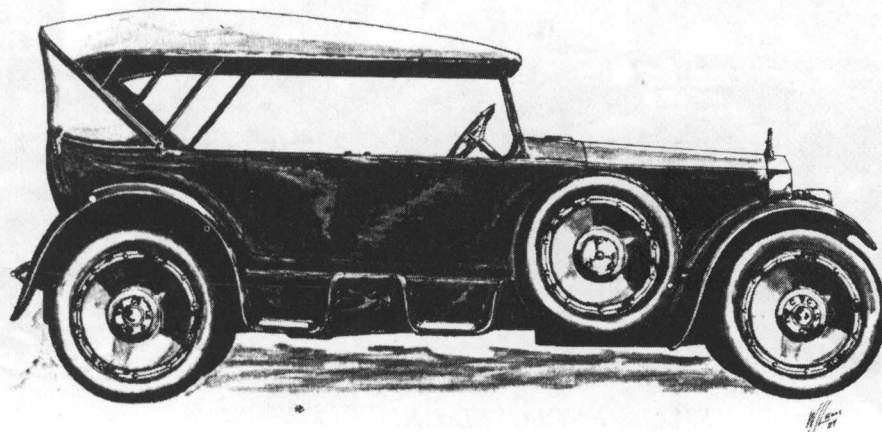
Like the Prado drawing in the prospectus, we are dealing here with a large open car—obviously the seven-passenger touring model which carried the \$8,500 price tag. The similarity in appearance to the Prado is striking, and its body, disc wheels, side-mounted spares and individual step plates resembles it closely. The clincher, however, as far as I'm concerned, is its radiator shape, and from what I can see, this is also identical—or very, very close—to both Porter and Prado.

The x-factor is in the steering position. If this was on the right, there would be little doubt—by me, at least—that it was a scion of the Porter. If it was conventionally placed on the left, it may not have had any connection whatsoever with it. Yet something tells me that the Lozier was based on a Porter chassis. Like Prado, the Lozier engine—at least as projected—was something else again, and according to its sole listing this was (to have been) a big six of "own" manufacture, whatever that meant.

Let's assume that the Prado, at least, was a kissin' cousin to the Porter, and then examine the reasons why some person or persons in New York City were using the Bridgeport behemoth as the chassis for a New York-based product. It makes very good sense, really.

Consider. When the Porter was announced, this country was in the midst of a post-war boom, and automobiles, in short supply since April, 1917, were in tremendous demand. Nearly every type of car was being offered in the marketplace, both proven makes and newcomers in the field, and every price range was well represented in that market by January 1920. Porter was one of these, and it seems obvious that it overextended its production badly, for whereas a number of cars had been sold both in this country and abroad, at the time the company folded a scant two years later, no less than 19 cars which had been bodied and which awaited buyers—buyers who would never come—sat around unsold in various locations.¹⁶ On top of this overextension, a short but severe depression hit the land. Purse strings tightened as auto production ground to a slow crawl, and as the dollar tightened, so did business. There just wasn't much loose cash around, and the luxury car makers were among those hardest hit.

This economic slump finished a number of established makes of cars,¹⁷ sent many on the first lap of a downward spiral to oblivion, and stifled others planning to enter the market. Fewer consumers were buying new cars, especially expensive luxury cars, and the beautiful Porters exemplified the futility created by the economic situation, cars which had been produced for a market which had become almost non-existent overnight. Had those backing Porter been able to bide their time for, say, a year, chances are that the cars could have been sold at a lesser figure but probably at a

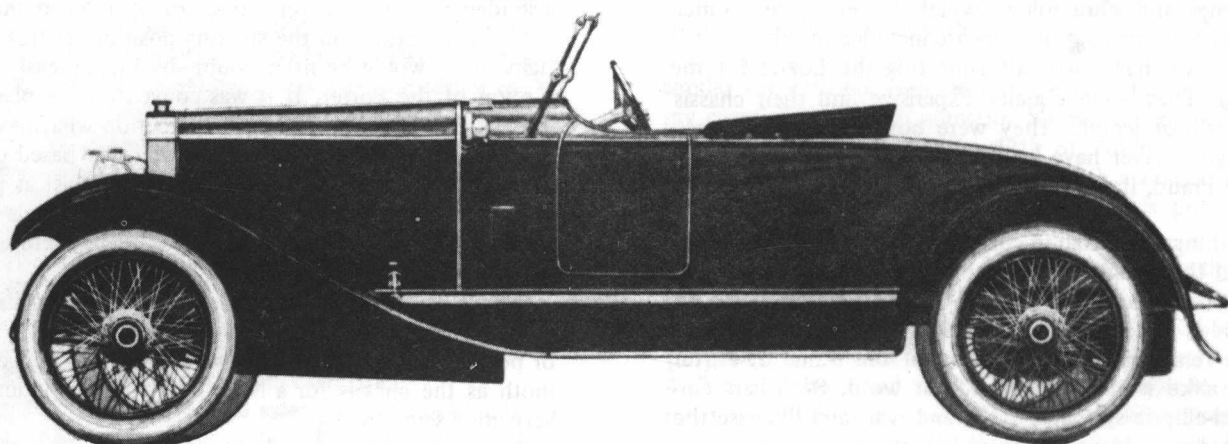


PRADO Touring Car, 1921, with modified Curtiss OX-5 90 horsepower aircraft engine.

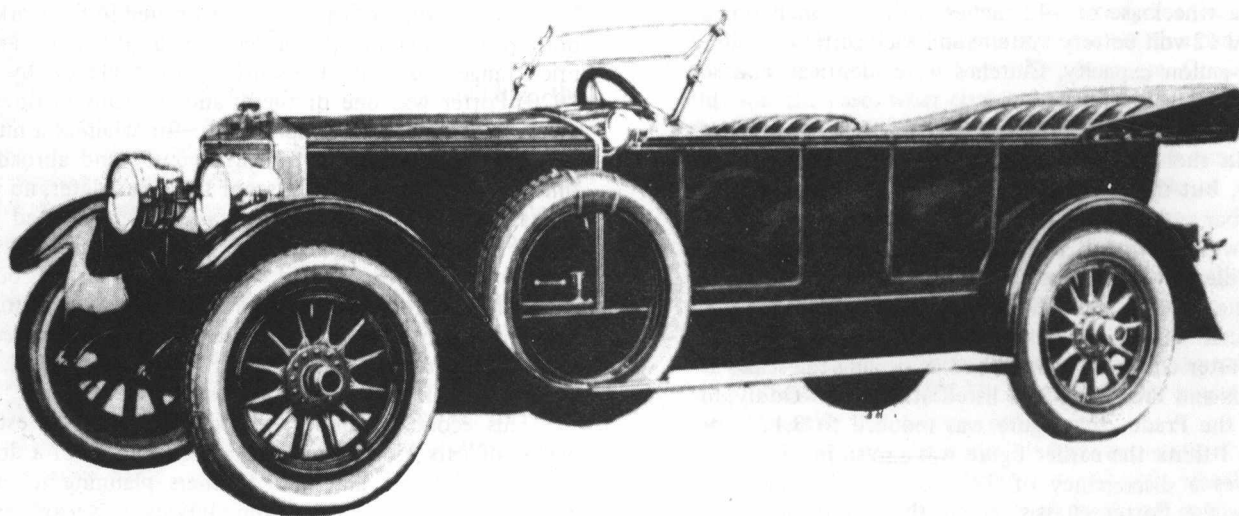
Drawn by SAH Member William J. Lewis, Anaheim, California

SELECTED PHOTOGRAPHS OF PORTER CARS, FROM PORTER LITERATURE OF LATE 1920

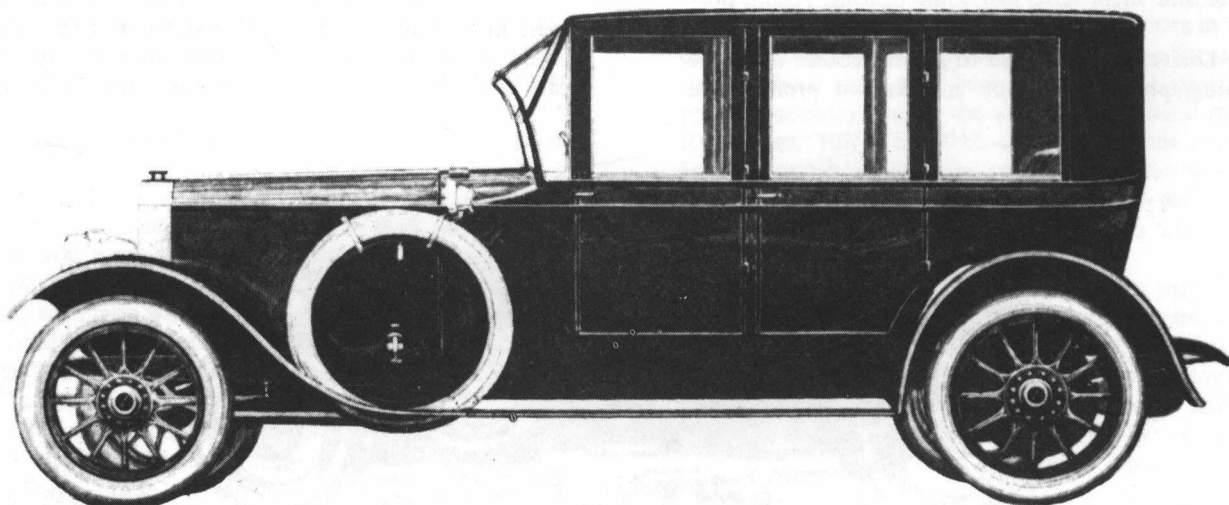
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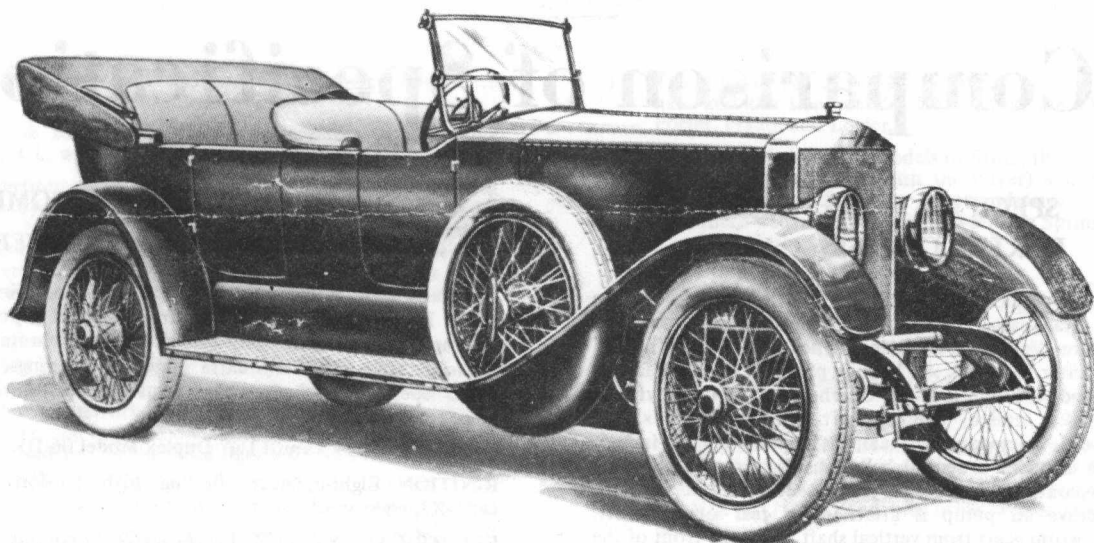
ROADSTER
Body Style R



SEVEN-PASSENGER TOURING CAR
Body Style T



SMALL ENCLOSED DRIVE LIMOUSINE
Body Style T



PORTER Sport Touring Car, 1920, with wire wheels, side mounted spares

From Keith Marvin Collection

profit nonetheless, and Porter might have survived longer. The situation was such, however, that business conditions, the state of the dollar, and those existing white elephant cars threw the company to the dogs, and the remaining stock of spanking new Porters was sold at auction in the spring of 1922, with \$10,000 and \$11,000 cars being sacrificed at about \$4,000 each.¹⁸

We're getting ahead of our story. In late 1921, when the depression had hit, a concern like Porter which had stopped active production (since it was then concentrating on an attempt to unload that damned existing stock of 19 cars at almost any price) would presumably have jumped at the opportunity of selling any viable parts on which an offer might be made, such as existing chassis, which it doubtless had in some supply.

This is what I believe happened. It would have been to the company's advantage to sell what it could for what it could get for what it had lying around, and presumably there were chassis lying around.

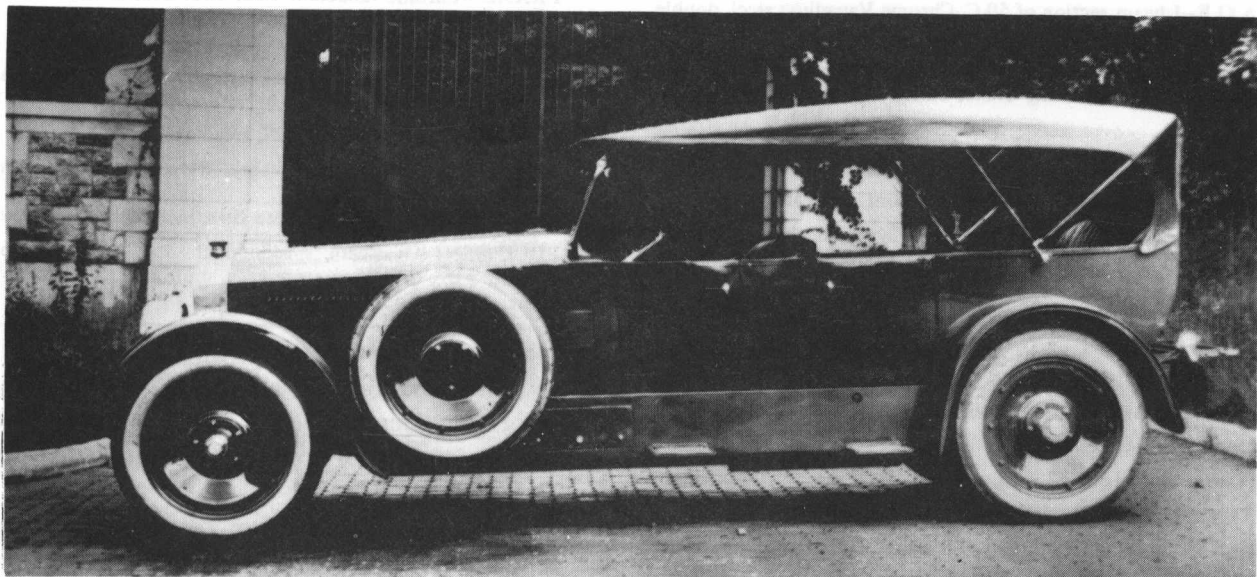
And it would be mutually beneficial for anyone who wanted to market a car of his own make and/or name to explore such viable parts, such as chassis, with this purpose in mind, and with the financial situation being what it was at the time, trying to get the best components obtainable at sacrifice

prices. It all makes perfect sense, and I have little doubt that this is exactly what happened.

It could have been a case of outright piracy, the utilization of one car under a different badge, something like the Palm car of Australia,¹⁹ but I don't believe this was the case. Whoever headed the Prado venture, I'm sure that whatever his purpose—whether it was an ego trip, a desire to make a quick buck, or a combination of the two, he worked hand in glove with Porter personnel in obtaining the necessary chassis, and I think that before placement of the Curtiss OX-5 engine or drive train plus the disc wheels, the Porter and the Prado were identical. It would have been very simple. All one needed to do after acquisition of the chassis itself would have been to add the engine, drive train and wheels and change the nomenclature by the simple expedient of providing a new radiator emblem, hubcaps and serial number plate. Presto! a new make of car entered the American marketplace!

Was the Prado a slightly reworked Porter, then? Or was that right-hand drive and other similarities just rank coincidence? I don't think so.

And Lozier? What of that? Was the steering wheel on the right, too? Perhaps. And if it was I think the make was simply a Porter in disguise. I'd really like to know.



1922 LOZIER Touring Car. The car shown in this photo is the only one definitely known to have been built, and no brochures or other promotional materials have been found.

Photo contributed by Henry Austin Clark, Jr.

A Comparison of Specifications

SPECIFICATIONS PORTER CHASSIS

ENGINE—Porter design. Four cylinder 4.6-in. bore, 6 $\frac{3}{4}$ -in. stroke; three point suspension. Crankcase made of aluminum alloy. Crankshaft 3-bearing, 50C. Chrome Vanadium Steel double heat treated and finished all over. Shaft is counter balanced. All bearing pins—2 $\frac{1}{2}$ in. dia. Bearings are bronze shells, lined with Fahrig metal. Overhead valves 4 per cylinder operated through rocker arms by one camshaft. Both inlet and exhaust valves 1-13/16-in. dia. Horsepower developed at 2100 R.P.M. is 125. Crankshaft thrust is taken on a special ball thrust bearing. Cylinder are cast en bloc with separate head, gas tight joint made by copper asbestos gasket. Special positive air pump is attached to rear of camshaft. Camshaft driven by worm gears from vertical shaft down the front of the motor which in turn is driven by a worm gear and pinion from the crankshaft. The pump, magneto and generator are driven by worm gears from the vertical shaft. Vertical shaft and camshaft are mounted on ball bearings. Westinghouse starting and lighting system is used. Cooling is by a large centrifugal water pump and fan.

Ignition is by Berling two spark independent. Two spark plugs per cylinder are used.

The oiling system is pressure and splash combined. The oil is drawn by a positive pump from the sump and is forced under pressure by individual leads to each main bearing and by a separate lead to the camshaft. Entering the camshaft housing at the rear, it then flows to the front of the camshaft housing and then down the vertical shaft housing back to the sump. The oil to the main bearings is thrown out through the bearing where it is caught by a scoop and forced into the connecting rod big ends. From here it is thrown out on to the cylinder walls. It then falls back into the oil trough. The scoops on the big ends of the connecting rods then catch it and force part of the oil into the connecting rod bearing again and the rest is forced back into the sump.

CLUTCH—The clutch is a multiple dry disc one with non-burning composition on the discs. Mounted on ball bearings.

TRANSMISSION—Porter design. Four speeds forward and one reverse. Three point suspension giving utmost flexibility and no strain. Drive taken through two universal joints. Tire pump and speedometer mounted on transmission.

BRAKES—Service set is on transmission and emergency on the rear axle. Both sets are air-cooled by fins around the outside of drum. Both sets are expanding. Rear brakes are extra large.

REAR AXLE— Full floating type. Mounted on ball bearings throughout. Torque is taken by one large torque tube on left side of propeller shaft.

FRONT AXLE—I beam section of 50 C. Chrome Vanadium steel, double heat treated. Ball bearings throughout.

FRAME—Porter design. Chrome Vanadium steel, heat treated, with tubular members for supporting brake, clutch and transmission mechanism.

SPRINGS—Front springs—Semi-Elliptic.

Rear Springs—Semi-Elliptic.

Hartford Shock Absorbers used on both front and rear.

STEERING—Porter design. Worm and Sector Type. All shafts and gears of Chrome Nickel Steel, heat treated and adjustable for play in any direction.

CARBURETOR—ZENITH—2 $\frac{1}{2}$ in. fixed jet type.

RADIATOR—Porter design. Square tube with silver mountings. Radiator is mounted on flexible trunions.

WHEELS—34 x 4 $\frac{1}{2}$ Artillery wheels with 35 x 5 U. S. Royal Cord Tires.

WHEELBASE—142-inch. Car tracks, 56-inch.

BATTERY—Presolyte [sic] 12 volts.

GASOLINE TANK CAPACITY—Twenty-eight (28) gallons.

INSTRUMENTS—Speedometer, clock, oil gauge, moto-meter areo type, ammeter, switches for lights, magneto and starting.

WEIGHT—2800 lbs.

PRADO AUTOMOBILE COMPANY SPECIFICATIONS IN BRIEF

ENGINE—Eight-cylinder V-type Curtiss OX-5 Aviation Motor, redesigned for Prado chassis, 4" bore, 5" stroke, 100 horsepower at 1700 RPM, 90° angle cylinder banks, 5 bearing crankshaft, chrome nickel steel heat-treated, thrust taken by extra large ball bearings, covered overhead valves operated through rocker arms by one camshaft. Motor three-point suspension.

CARBURETOR—Zenith 1 $\frac{1}{2}$ " Duplex Model 06-DS.

IGNITION—Eight-cylinder. Berling high tension magneto Model D-81-X2, eight spark plugs.

ELECTRICAL SYSTEM—Leece-Neville two-unit system. Starting motor operated from instrument board through solenoid switch, 12-volt Willard 90 A.H. battery.

COOLING—Cooled by large centrifugal water pump and fan.

LUBRICATION—Pressure feed to all bearings by high-pressure oil pump, located in lower half of crankcase, through pressure regulating valve. Oil pressure indicated at all times by gage mounted on instrument board.

CLUTCH—Multiple disc dry plate, housed in flywheel, mounted on ball bearings.

TRANSMISSION—Special design. Four speeds forward, one reverse. Three-point suspension giving utmost flexibility, driven through universal joint. Integral with transmission are power-driven tire pumps and speedometer drive.

BRAKES—Service brake of contracting type on transmission shaft. Emergency brakes on rear wheels. Rear brakes extra large, air-cooled by fins around outside of drums.

REAR AXLE—Full floating type mounted on ball bearings throughout. Torque taken by a large torque tube on left side of propeller shaft.

FRONT AXLE—"I" beam section chrome vanadium steel heat-treated, ball bearings throughout.

SPRINGS—All semi-elliptic; rear spring 56", front spring 36".

STEERING GEAR—Worm and sector type, all shafts and gears of chrome nickel steel heat-treated and adjustable for play in any direction.

CONTROLS—Right hand drive and control, spark, throttle and air control levers on top of steering wheel. Foot accelerator.

FRAME—Chrome vanadium steel heat-treated with tubular members for supporting brakes, clutch and transmission mechanism.

GASOLINE SYSTEM—Tank carried on rear of frame, capacity 28 gallons, gasoline supplied to carburetor by Stewart vacuum tank, 3 gallons reserve.

WHEELBASE—Wheelbase 142", tread 56".

WHEELS—34 x 4 $\frac{1}{2}$ Disteel wheels. Two spare wheels, one carried on each side of chassis.

TIRES—35 x 5 U. S. Royal Cord tires, including two spare tires.

EQUIPMENT—Waltham speedometer and clock combination, oil pressure gage, oil temperature gage, motometer, ammeter, switches for lights, magnetos and starting, horn, tire pump, tools.

These specification tables were copied directly, word for word, from literature published by the two companies, Porter and Prado. Original spelling, punctuation and capitalization have also been followed.

Note that, with the exception of engine details, the descriptions of the two makes are virtually the same—in many cases identical. Coincidence is highly improbable.

FOOTNOTES

1. Probably between nine and a dozen F.R.P. automobiles were completed.
2. The American & British Mfg. Co. also operated a large factory at Providence, R.I., where it produced fire apparatus.
3. The only advertisement I can find for the Porter which listed a price was one by its distributor, the Morton W. Smith Co. of 19 West 44th St., New York City, in which the chassis is listed at \$6,750. However, in its 1921/1922 inventory, even the cheapest open models are quoted at figures exceeding \$10,000. This is not surprising, considering that such coachbuilders as Fleetwood and Brewster did most of Porter's coachwork.
4. *Branham's Reference Book*, 1924 Edition, cites Prado serial numbers in 1921 as "211 to 215" and for 1922 as "221 and up." One can't necessarily go by such amorphous figures which are little better than guesswork, but if one feels that there might be something to this, the implication would list 1921 'production' at five cars. The "and up" of the 1922 figures doesn't leave anything to go on whatsoever.
5. After the Armistice ending World War I, hundreds and hundreds of unused Curtiss OX-5 aircraft engines were left over and Curtiss was selling them for as little as \$50 each. Other car makers who experimented with the Curtiss OX-5 engine included the Gregory and the Wharton, as well as some custom cars designed by Miles H. Carpenter which bore the Curtiss badge.
6. In this prospectus the company is listed as "The Prado Automobile Company" although in most other publications such as *Branham*, it appears as "Prado Motors Corp."
7. *Branham Reference Book*, 1924 Edition.
8. *Auto Reference Manual*, November 1, 1922, and the *Standard Catalog of American Cars 1805-1942*, by Beverly Rae Kimes and Henry Austin Clark, Jr.
9. Published by Krause Publications, Iola, Wisconsin 54990, 1985.
10. They didn't all exist at exactly the same time, however. Porter was out of business after April, Prado was still being listed into the summer, and the only listing I can find for Lozier is dated November.
11. The Rolls-Royce wheelbase measured 143½ inches. The Cunningham and the Locomobile "48" shared the 142-inch length with Porter, Prado, and Lozier.
12. These included certain models of Stutz, the Brewster (the position of which was optional with the buyer) and the American Rolls-Royce which stuck to the right-hand-drive to maintain its claim that there was no difference between the Springfield series and the cars from Derby.
13. But not Canada. Nova Scotia and Prince Edward Island motorists drove on the left side of the road until 1923 and 1924 respectively. In Newfoundland (which enjoyed Dominion status until 1949) driving on the right didn't become law until 1947.
14. *Branham Reference Book*, 1924 Edition.
15. Ibid.
16. Eight fully-bodied Porters were garaged at the Brewster factory at this time, another seven were at the Morton W. Smith distributorship in New York City, three were at the American & British Mfg. Co. plant, and one other was at Bridgeport's Blue Ribbon Company.
17. Among these were Allen, Beggs, Commonwealth, Briscoe, Ferris, Grant, Pan American, Phianna, Piedmont, Saxon, Scripps-Booth and Texan. There were others.
18. Statement of Joseph Gest of Montreal who attended the auction (See "Porter: Prestige, Personality and Pride," by Keith Marvin—*The Upper Hudson Valley Automobileist*, April 1959, and *Antique Automobile*, July 1962.
19. There was no pretense by the Palm promoters that the Palm was anything but a Model T Ford with a "Palm" badge replacing the Ford script on the radiator and hubcaps.

ACKNOWLEDGEMENTS

The author would like to thank the following for their assistance in the preparation of this article: Henry Austin Clark, Jr., Ralph H. Dunwoodie, Louis G. Helverson and the Automobile Reference Collection of the Free Library of Philadelphia, Arthur Lee Homan, Beverly Rae Kimes, Herbert Lozier, John M. Peckham, and William J. Lewis for his sketch of the Prado.

BIBLIOGRAPHY

- Automobile Identification*, by Sgt. John F. Brennan, Scientific American Publication, New York, N.Y., 1924.
- Automobile Reference Manual*, November 1, 1922.
- Branham Automobile Reference Book*, Ben F. Branham, Chicago, Ill., 1924.
- Cars of 1923, The*, by Keith Marvin and Arthur Lee Homan, Automobileists of the Upper Hudson Valley, Inc., Troy, New York, 1957.
- Complete Encyclopedia of Motorcars, The: 1885 to the Present*, Edited by G. N. Georgano, Third Edition Reprinted, Edbury Press, London, 1984.
- "Flying on the Ground: Curtiss' Wild Conversions," by Keith Marvin. *Special Interest Autos*, August 1983.
- MoToR, The National Magazine of Motoring, January 1921 and January 1922. MoToR, New York, N.Y.
- "Porter: A Brief History," by Keith Marvin. *Old Cars Weekly*, January 24, 1978.
- "Porter: Prestige, Power and Personality." by Keith Marvin. *Upper Hudson Valley Automobileist*, April 1959, and *Antique Automobile*, July 1962.
- Specification Book for U.S. Cars, 1920-1929*, by G. Marshall Naul, Keith Marvin and Stanley K. Yost. Motorbooks International, 1978.
- "Wharton, The: Southern Money for Southern Development," by Keith Marvin, *Upper Hudson Valley Automobileist*, April 1983.

The Cover Story...

The History of the Jaguar

By Sir William Lyons — Contributed by Andrew J. A. Whyte

PART ONE
OF TWO

The following text and its accompanying photos (unless otherwise noted) was contributed by SAH member Andrew J. A. Whyte, of Effington, Warwickshire, England. Mr. Whyte is a dedicated Jaguar historian, and the author of books on the history of this make, including Jaguar: the history of a great British car, now in its second edition and published by Patrick Stephens Limited, Denington Estate, Wellingborough, Northants, NN8 2QD, England.

This 'History of the Jaguar' is a transcript of a paper read by Sir William Lyons in 1969 to a group whose name, unfortunately, we do not know, but in this story Lyons provides us with a step-by-step account of the history of Jaguar Cars Ltd. from its humble beginnings as the Swallow Sidecar Company, makers of sidecars for motorcycles, through its years as body builders for a number of chassis manufacturers, to its later position as a producer of high quality luxury automobiles.

What I have to say in my paper today is of a rather different character to the papers read to you by my predecessors. This is because I have been expressly invited by your President to speak to you about the history of Jaguar and the role of the specialist car, both of which subjects have, of course, a special interest for me. I am, therefore conscious that I may express myself in greater detail than perhaps I should in a paper of this kind, and I hope that you will forgive me if what I have to say introduces a large element of my personal experiences. It would take longer than the time available to me this afternoon to give you a complete history, so I have confined myself to what I have felt are the highlights in the growth of the company.

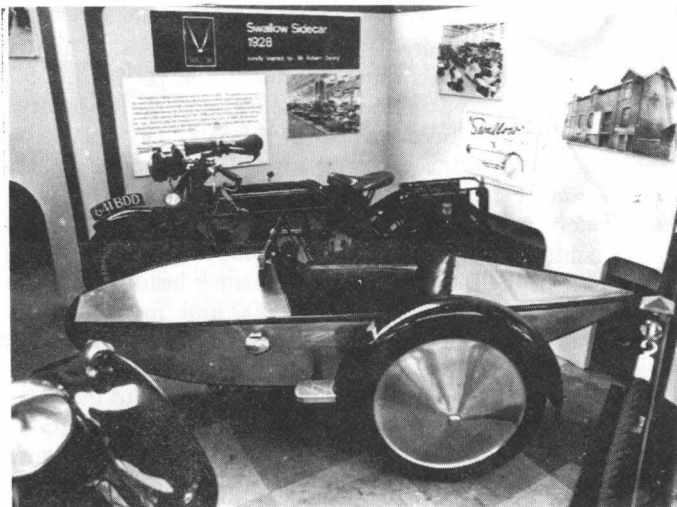
I think it is appropriate that, in presenting to you a picture of the history of Jaguar, I should start in the year 1922, when I joined with a partner in Blackpool to make Swallow sidecars for motorcycles. We started with three men and a boy—the latter, incidentally, is still with Jaguar in a senior position. We started with an overdraft of £1000, provided by guarantees of £500 each by our respective fathers. I am afraid it proved very inadequate but, by repeated appeals for help to the manager of the Bank, which I visited each Saturday morning for the wages, (I usually arrived after the Bank had closed and often kept the workpeople waiting), I managed to keep paying the mounting accounts, and the business on an even keel. I will always appreciate the confidence of the bank manager in allowing the overdraft to exceed the guarantee by a considerable margin.

It proved to be a successful business within the limits of the potential markets, and it was these limitations which, in 1927, turned my thoughts to building a body on the Austin Seven chassis, which Sir Herbert Austin had brought out. The conception of this car had a strong appeal, except that the body was a very stark affair, albeit very practical, as it provided reasonable seating for four people and was wonderful value for money. I believed that it would also appeal to a lot of people if it had a more luxurious and attractive body. We therefore bought one of these chassis and produced the first Austin Swallow, an open sports two-seater and, in the following year, a saloon model; both had their own special radiator cowlings and looked very different from the ordinary Austin.

I took the saloon up to Henlys—a new, forward-thinking and quickly growing business. They immediately gave me an order for 500 cars—we sold it as a complete car—but stipulated that they, Henlys, should have the distribution south of a line drawn from and including Bristol to the Wash. I did not know how on earth we were going to make 500 but I accepted the order with alacrity, and indeed considerable amazement. I also agreed to the territory for which they asked. My visit to Henlys was the occasion of my first meeting with Frank Hough and Bertie Henly, the two partners. Hough was a dynamic man with a determination to do things quickly; Henly was the steadying influence and he was also the finest salesman I have ever met. I recall that during my visit to their showroom, then 91 Great Portland Street, a salesman came up to Bert Henly and said he had a customer who wished to buy a second-hand Austin, which was standing in the Showroom, but he could not afford the £350 which was being asked for the car. "Could Mr. Henly make any reduction?" asked the salesman. After some discussion, Bertie Henly agreed to accept £325 but the salesman returned to say the customer still could not afford it, whereupon Henly said, "Let me have a go at him." I was an interested spectator whilst the discussion was taking place, and when Henly returned he said to the salesman, "Take him into the office and get his cheque for a new Alvis." This satisfied me that, if anyone could sell Austin Swallows, it was Henlys.



William Lyons at the age of 19 or 20, astride his favorite motorcycle, a 1921 Harley-Davidson.



The Swallow Sidecar was Jaguar's ancestor. This Model 4 was made in 1928.

I returned to Blackpool full of exuberance, and I had little sleep for the next six months as chassis arrived at Blackpool railway stations in numbers with which we could not cope—the station yard was full and the stationmaster was raising hell. There was nothing for it but to get into larger premises—we could hardly call the one we occupied a factory.

We had already found that our supply lines were too extended, and the type of labour we wanted had to come from the Midlands, so I went to Coventry to see what I could find and, after several days' search, found a disused shell-filling factory. This was one of four separate buildings. Two of them were occupied by a firm of body builders, supplying fabric covered bodies to Hillman; the other two were vacant and I was interested in one of these. The building was actually on the market for sale, but as we had no capital to buy it, I managed to persuade the owners to lease it to us at a reasonable rent. It was five times larger than the premises we occupied in Blackpool and I felt it was a tremendous step forward. It was in terrible condition and the contractor's price for repairing and repainting it was more than the total value of our net assets, so we engaged a lot of labourers and did the job ourselves for a fraction of the cost. So, in September 1928, we

moved, lock, stock, and barrel from Blackpool.

Arthur Whittaker, who later became general manager and then a director, and finally deputy chairman, headed the advance contingent; he telephoned me to say that the main electric feed cable to the factory had been stolen, something I found difficult to believe, but it was unfortunately true and it cost us £1,200 to have it replaced. However, we soon settled down and got production moving.

It was a most exciting time. We worked from 8 o'clock in the morning until 11 or 12 o'clock at night, for we aimed to raise production from 12 a week to 50 within three months. We knew we could only do this by adopting a new method of coachbuilt construction; all bodies made in this country in those days were coachbuilt. Whereas in Blackpool each body-maker had been responsible for the complete framing-up of the body, the latest method used for volume production was the machining of the wooden parts in specially constructed jigs, so that they could be assembled rather like a jigsaw puzzle. This saved a tremendous amount of labour, but the introduction of the method caused us many headaches. In fact, we were in such trouble at one time that the body-makers approached me *en-bloc* and told me that the whole thing was too complicated and doomed to failure, and that we should resort to the old method. We persevered, knowing that the economies could be considerable and before Christmas we had achieved our 50 bodies a week. We were really in business!

One of the reasons for the profitability of the Austin Swallow was system of wage payment which ensured that the amount provided in our price build-up for labour costs was not exceeded—a state of affairs I would be very happy to see today!

Firstly we made a time-study of all the operations, very much as modern practice, although it was done more crudely. Of course, we only had to deal with body build, trim and paint, and then mount the body on the chassis as it came to us from the Austin Company. However, unbeknown to them, we had to do one or two modifications to accommodate our body design. I recall that one of these was needed because the radiator filler neck was $\frac{1}{2}$ " too high for our special radiator cowl. We solved this problem by placing a block of wood on the top of the filler neck and striking it a sharp blow, which resulted in a very neat depression in the brass radiator tank,



Sir William Lyons and William M. Heynes (Chief Engineer 1935-1969) with late model Austin Swallow (built 1927-1932), and new Jaguar 2.4, which was introduced in September, 1955.

thus lowering the filler neck to the required height. I am sure Sir Herbert Austin, as he was then, would not have approved, although it was a perfectly sound job—even if the methods were somewhat unconventional by engineering standards.

However, all operations were priced according to the time factor involved, to give an earning rate of about five pounds per week, which was very good pay in those days and equivalent to a wage of £40 per week today. We then printed books of vouchers—one book for each car—each voucher covering one or more operation. The value of the vouchers varied in accordance with the price at which the operation had been costed. Upon completion of an operation, or when convenient, the operator, who wrote his name in on the place provided on the voucher, presented it to the foreman for his signature and authorisation for payment. At the end of each day, the vouchers were handed in, and all the only wages clerk we then employed had to do was to add up the value of each man's vouchers and pay him accordingly on Friday night. On all the factory walls were large notices which said, "No daywork paid."

Yes, we did have occasional labour problems, even in those days, but they were quickly resolved to everyone's satisfaction. For instance, when we came to Coventry the additional labour we engaged during the first week did not take very kindly to the methods I have described, and they endeavoured to break us from them by storming into the stores and distributing the contents of the parts bins on the floor, as a demonstration of their objection. We dealt with this outbreak by simply saying—"that is the system we work; if you do not like it you need not work here." Only a few left and within a couple of weeks everyone was earning good money, particularly as we often worked well into the night. We had a wonderful enthusiasm and to achieve the output target for the day was a challenge to all.

So successful was this venture that by the summer of 1929 we had acquired the adjacent factory and had commenced to produce the Standard Swallow, Swift Swallow, Fiat Swallow, and Wolseley Hornet Swallow, all of which raised our production to something like 100 per week, and we had started to make really good profits which we ploughed back into the business.

A great deal of the body designs we had used were dictated by chassis design and, therefore, I badly wanted to produce a chassis which did not inhibit body design to such a degree. So, in 1930, we designed a chassis frame which would accommodate the Standard 16 or 20 h.p. engines, suspension and transmission. Rubery Owen made it for us and R. W. Maudslay, who was then chairman and managing director of the Standard Motor Company, agreed to supply the complete chassis using this special frame. This was about the time that John Black joined Standard from Hillman as general manager. This hybrid was to be called the S.S. 1, a name which was

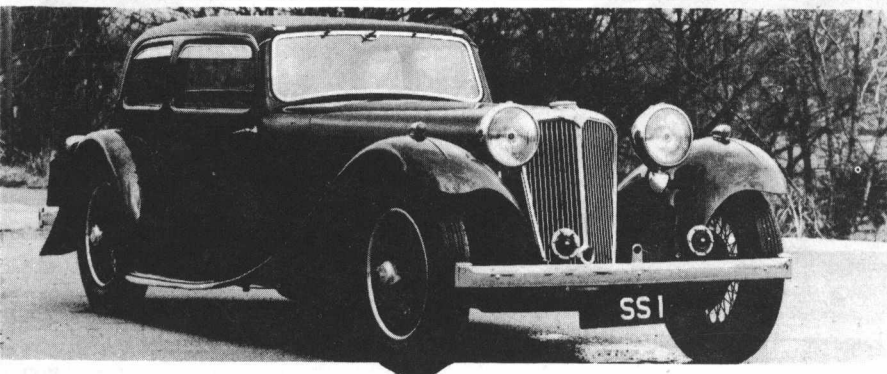
agreed upon after a long argument with Maudslay and Black, which resulted from my determination to establish a marque of our own. There was much speculation as to whether S.S. stood for Standard Swallow or Swallow Special—it was never resolved. We introduced this car at the 1931 Olympia Motor Show and its low line and long bonnet caused quite a sensation. Harold Pemberton of the Daily Express had been up to the works two days before the Show opened which resulted, to my amazement, in a huge picture occupying nearly all of the front page of the Daily Express, with banner headlines describing the car as "The car with the £1,000 look for £310." The Show was a great success and we signed up distributors and dealers all over the country—many of them still represent us.

The car, unfortunately, did not quite live up to the promise of its appearance for by no means could the engine be described as a good performer for its capacity. I was sure, however, that the way was now clear for a complete car of our own—not only had it to be a good-looker, but also it had to have an exceptionally good performance. So we started to design a completely new body and, at the same time, we called in Harry Weslake to design for us an overhead valve cylinder head for the Standard Motor Company's 6 cylinder side valve engine which had a seven bearing crankshaft and, basically, was very good. We used the same block, covering up the valve chest with a plate, and it made a good-looking unit. But, more than that, it had very good performance.

Now we had the cylinder head design, but we had no machine shop in which to make it. So I talked to John Black, who was more-or-less running the Standard Motor Company, Maudslay having been quick to realise his capabilities, and Black agreed to put in the plant to make the new head and supply the engine complete. This proved to be an ideal arrangement.

All this coincided with the arrival of W. M. Heynes, who joined us from Humber, and who was to become chief engineer, and later vice chairman (engineering). He was entrusted with the design of chassis and all three units—body, engine and chassis—which came together as the first S.S. Jaguar. It was really a good car. When we introduced it to our distributors and dealers at the Mayfair Hotel, we displayed it on a stage and asked the seated audience to write their estimate of the selling price of the car on a card which was handed to each of them. With two scrutinisers from the gathering as supervisors, a comptometer operator calculated the average of all the prices handed in. This came to £765, so when I announced that the actual price was £395 it created quite a lot of excitement and, indeed, added much enthusiasm for the car.

A derivative of this was the S.S. Jaguar 100, which was based on a shortened version of the new chassis, with a very practical two-seater sports body. We did produce an interim model with the side-valve engine called the S.S. 90 but it was soon replaced by the S.S. 100. The new engine in this car



The S.S. 1 was William Lyons' first real step towards building a marque of his own. Bodies were designed to fit a special frame and chassis produced by the Standard Motor Company to accommodate Standard's engines, transmissions and suspensions. The car was introduced at the 1931 Olympia Motor Show where it became an immediate success.

Photo reproduced from a brochure of "The Guild of Motoring Writers," contributed by A. J. Whyte.

produced 40 h.p. per litre which, outside the racing-car field, was outstandingly good in those days and gave the S.S. 100 a performance superior to all its competitors, except perhaps the B.M.W. 328, which was its equal. This enabled it to win most of the important rallies—the outstanding one being the best performance in the International Alpine Trial of 1936—a performance which it repeated no less than 12 years later, in 1948, against all the very latest machinery. It also won 1st place in the R.A.C. Rally of 1937, and the best overall performance and 1st in class in the Welsh Rally of the same year and again in 1938 and '39. These competition successes helped the company to build up a name for performance and things were going in the right direction, but I knew we had a long way to go before we were producing the type of car at which we were aiming.

In 1935 my partner expressed a wish to retire. I investigated the possibility of making a public issue which yielded to the company £85,000. My partner took cash for his shares but I retained my 50% holding and later acquired additional shares to obtain a majority holding.

In March 1946 we issued £100,000 5½% Preference Shares of £1 each. Thus in total the finance introduced into the company since its inception amounted to £185,000.

Between 1955 and 1964 we issued to our shareholders bonus shares to the par value of £2,147,000 which, just prior to the amalgamation with B.M.C. to form B.M.H. had, together with the Ordinary and Preference Shares, a market value of £16m.

War broke out in 1939 which, of course, put an end to car production and turned our energies to aircraft and aircraft engine components, for which we built up a sizeable machine shop. We made fuselages for Stirling bombers and the first Meteor jet fuselage—the Meteor was the first operational British jet aircraft to be produced. We repaired complete Whitley bombers, and manufactured a multitude of other things—including over 200,000 two-wheeled trailers.

I have a vivid recollection of the arrival of the first Whitley bombers at our Foleshill factory, as they went past my office window on a convoy of Queen Mary transporters I followed them into the factory and was surprised how little they seemed to be damaged. Together with the works manager and chief inspector, I examined them carefully, and I made the remark to them—which I will never forget—"We'll have these repaired in under a month." Some of them were still there a year later. I was at the time ignorant of the stringent Aeronautical Inspection Directorate requirements. Each aircraft had to be stripped to the extent that its repair almost required the same number of man-hours as a complete aircraft. I still think that, at that critical time, some short-cuts should have been made in view of the urgent need to get them back into the air as quickly as possible, as there was so much risk involved in fighting the war and such an acute shortage of aircraft that this would have been a comparatively minor risk. Evidence of the very serious nature of the shortage of aircraft was brought forcibly to light by Lord Beaverbrook when he re-established the Whitley, which had been relegated to the reserve list, and cancelled the new Manchester aircraft, for which we had already built a new factory and partly equipped it with plant. We had looked forward to building the Manchester, but we threw ourselves wholeheartedly into getting the damaged Whitleys back into the air as quickly as we could. We were responsible not only for repairing them, but also for getting them flight tested and, for this purpose, we used a nearby airfield which had been commandeered for us.

One of the questions I have been asked many times is, "Why did we choose the name 'Jaguar'?"



William Lyons (S.S. Jaguar 100) about to win and make the best lap time of the day in the "trade" race at the S.S. Car Club's 1938 Donington Park race meeting. These drivers, front to back, are: William Lyons, Sammy Newsome (dealer, racer and rallyist), and William Heynes (Jaguar technical chief).

We felt that we should give a model name to our new 1936 O.H.V. Models, so I asked our publicity people to let me have a list of the names of animals, fish and birds. I immediately pounced on 'Jaguar' for it had an exciting sound to me, and brought back some memories of the stories told to me, towards the end of the 1914-1918 war, by an old school friend who, being a year older than I, had joined the Royal Flying Corps, as it was called in those days. He was stationed at Farnborough and he used to tell me of his work on the Armstrong-Siddeley 'Jaguar' engine. Since that time, the word Jaguar has always had a particular significance to me and so S.S. 'Jaguar' became the name by which our cars were known.

After the war the initials S.S. had acquired a tarnished image, as it was a reminder of the German S.S. troops, a sector of the community which was not highly regarded, and it was considered to be most desirable to discontinue its use and change the name of the company from S.S. Cars Limited to Jaguar Cars Limited. Before we did this and in spite of our having already used the name, I asked Sir Frank Spriggs, then managing director of Armstrong-Siddeley and with whom I had become friendly during the war, if he had any objections to our doing so. He said they had no intention of using the name and agreed to our proposal both verbally and in writing. It is amusing that some 23 years later the British Aircraft Corporation should ask our permission to call their new jet strike fighter 'Jaguar'—to which we agreed, but later we were unable to agree that their joint company with the French 'Breguet' Company should be formed under a title incorporating the Jaguar name. Our choice of name has proved to be most fortunate for it has helped to build up our world image. There are few places to which one can go where the name 'Jaguar' is not known as a car.

The second and final installment of this article will be published in the next issue of Automotive History Review, and will include the remainder of Sir William Lyons' speech of 1969 as it applies to Jaguar Cars Ltd. Additional information contributed by Andrew J. A. Whyte will tell the Jaguar story to the present date.

The Fisher Body Craftsman's Guild Competition

NOTICE!

It has come to our attention that John L. Jacobus, 10103 Gates Avenue, Silver Spring, Maryland 20902, is working as a volunteer for the Smithsonian Institution, Washington, D.C., on a project to collect, for display and preservation, a select number of award-winning models from the Fisher Body Craftsman's Guild Design Competition that was held yearly during the period 1930-1968.

In addition, Mr. Jacobus is endeavoring to collect copies of the *Guildsman*, the official publication of the Fisher Body Craftsman's Guild, a project that originated with the late James J. Bradley, former curator of the National Automotive History Collection. In return, Mr. Jacobus plans to donate all copies of the *Guildsman* so collected to the National Automotive History Collection at the Detroit Public Library in memory of Mr. Bradley.

If any SAH member is a former member of the Fisher Body Craftsman's Guild, Mr. Jacobus would be pleased to call him for guidance and any other information that might be of help in the fulfillment of this worthy project.

Charles L. Betts, Jr., Secretary, SAH.

HISTORICAL NOTES FROM JOHN JACOBUS REGARDING THE GUILD COMPETITION

General Motors' annual Fisher Body Craftsman's Guild model car competition was organized by Mr. A. W. Fisher in the 1930s to involve America's youth in the automobile industry; thousands of youngsters, aged between eleven and twenty years, competed for thousands of dollars in scholarships by a scale model automobile of their dreams.

From a marketing point of view, GM's model building competition was an ingenious ploy to get the GM name into millions of homes and at the same time tap the creative minds of America for new ideas. GM visited the schools of virtually all the winners to sell classmates on participating, but also to imprint the GM mark of excellence in the minds of each future automobile buyer. There were other benefits as well, for the program encouraged youth to work with its hands, using the very tools and materials which built the greatest of American industries (the auto industry); and who knows how many young men may have discovered a vocational interest?

The greatest attraction of all, probably, was the potential for kids to participate in the prophecy of American automobile design, and the hope that maybe their three-dimensional ideas would catch the eye of a stylist or industrial designer, and in a few years perhaps come rolling down their street. More importantly, youth had a direct pipeline for submitting its ideas to the fashioners of automobile styles and makers of American dreams.

In addition to being an ingenious marketing scheme as well as a legitimate cultivator of vocational interests, the models themselves—the final products—were magnificent, superb examples of craftsmanship, artistry and design. Each year's winners re-reflected the automobile design evolution played out on our highways and streets.

As a result of scoring high in the competition, I visited GM's styling studios at the age of 16 to get a closeup look at the winners. Needless to say, I was shocked and dumbfounded, for these were not the products of amateurs but obviously from the hands of prodigy designers, masterminds and crafts wizards. Reflecting on my own excruciating experiences in building one of these, it was hard to believe that some of the \$4,000-\$5,000 winners were only 13 or 14 years old.

Creativity and ingenuity were also keys to success: ivory buttons shaped for headlamp lenses, toothpaste caps for red tail lamp lenses, and chrome drawer-pulls filed to fit for hub-caps (scale rubber tires were provided by GM free of charge).

The participants had to have a working knowledge of the properties of wood, plaster, fiberglass, adhesives, aluminum (plus chrome plating, if desired) and the most complex task of all-lacquer or enamel painting and the fitting of pre-cut and polished metal hardware. In retrospect I appreciate today that these were complex skills requiring many years to master.

The fate of these sculptors' 500 hours of labor hinged upon the construction of a simple rectangular shipping crate that would cradle and carry their work of art unscathed across America by Greyhound or railroad to the Tech Center in Warren, Michigan, by the June 5th deadline. There it would be opened and scrutinized by the very men who shaped and influenced the design of automobiles we rode in and saw everywhere around us.

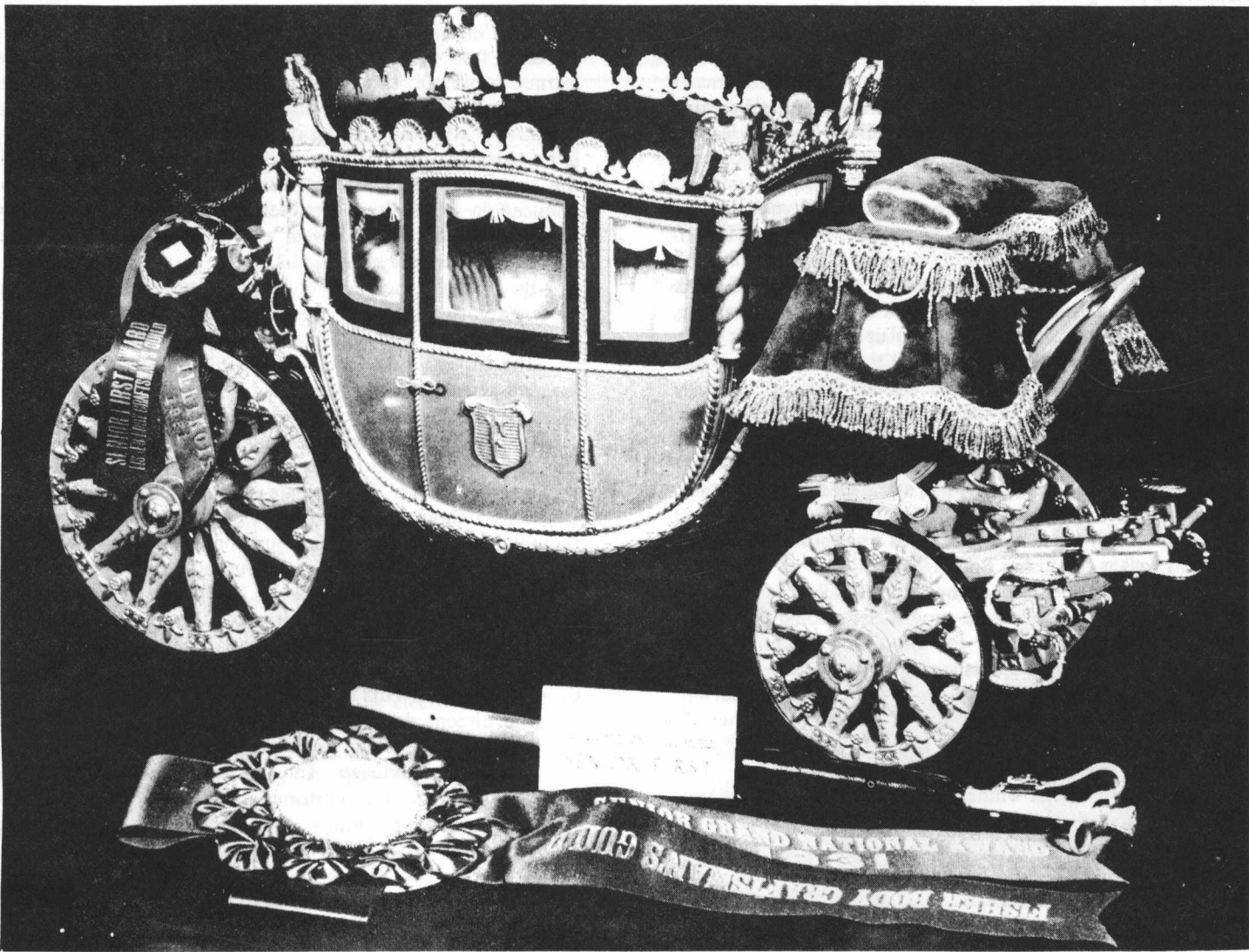
In 1968, General Motors phased out the program because of declining participation. The "me" generation or "instant gratification" set would never be able to devote the time needed to see a project of this magnitude through to completion. Besides, the ideals of America had shifted from "ingenious-enough-to-build-one" to "smart enough-to-earn-enough-to-buy-one." America was moving from a hands-on, do-it-yourself society to an information, technology society. When GM came to my high school principal a second time requesting permission to make a presentation to an assembly of 2000 students in my honor, the corporation was turned down. The position of the principal was clear; we honor scholastic achievement—not artistic or aesthetic achievement.

Whenever I mention to a friend that I participated for five or six years in the Guild, they remark that yes, they remember the program or they built one but never finished it. When I attended the Art Center College of Design (formerly in Los Angeles, now in Pasadena), the school noted for training future Detroit, European, and Japanese stylists, I met some of the young men who had succeeded

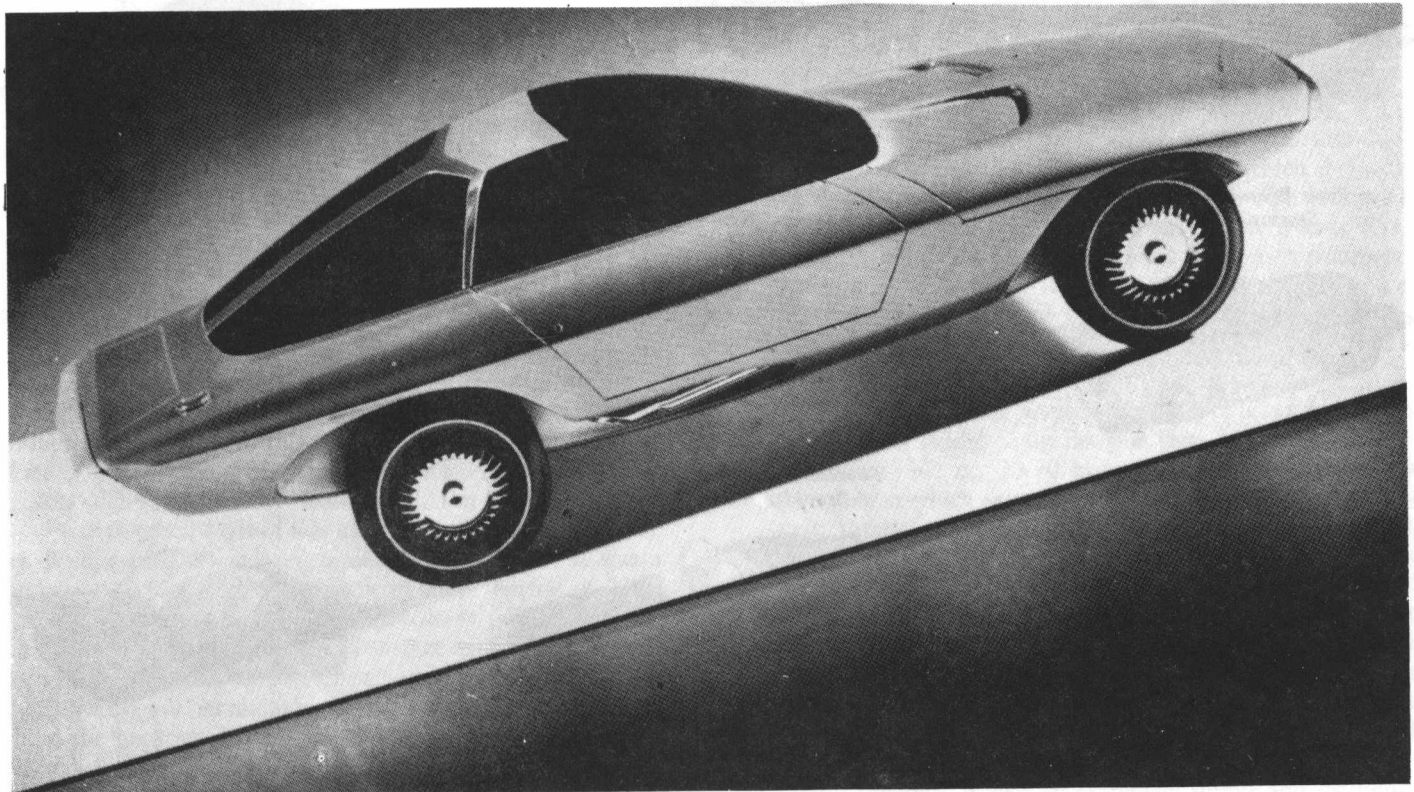
The following article was written by Grace Brigham and published in the February 1961 issue of The Road to Yesterday. It is based on information provided by William G. Quigley of the Fisher Body Craftsman's Guild, who also supplied the accompanying photographs.

A FINE CRAFTSMAN

A phrase heard all too seldom nowadays by adults who make the things we use—a fine craftsman—could apply to the boys whose models reach the final judging in the Fisher Body Craftsman's Guild competition. The praise inherent in the three words is well earned by the boys who spend hours, months, and years learning the mastery of tools and the proper use of materials; adapting or designing tools for a specific job; developing original and practical designs which fit the require-



First Fisher Body Craftsman's Guild winner, 1931. Made by Albert W. Fischer, Waukegan, Illinois, in about 1200 hours



1950 Fisher Body Craftsman's Guild winner. Made by Peter G. Wilnikka, Stockton, California

with a backbone tube with swinging half-axles in the rear, rigid front axle, a front-mounted flat twin-cylinder air-cooled engine with overhead valves of 1056 cc and 11-12 hp. From 1926 to 1934 this was built with a more powerful 14 hp engine as Model Tatra 12. We must also mention the Tatra 54 (1931-1934) with 4 cylinder flat air-cooled engine, 1465 cc, 22 hp, the Tatra 57 (1931-1935) with the similar engine, but 1155 cc and 18 hp, later built as Tatra 57A (1936-1938), and 57B (1938-1949) with 1256 cc 25 hp engine, as well as a bigger Tatra 75 (1933-1942) with a flat 4-cylinder air-cooled 1688 cc 30 hp engine.

On March 5, 1934, the Tatra 77 was demonstrated to experts and journalists. This model was the first series-production streamlined car in the world, with flush-sided body and a V8 air-cooled 2973 cc (60 hp) engine mounted behind the rear axle, a design of E. Ubelacker and Hans Ledwinka. This was built from 1935 to 1936 (150 cars) as Tatra 77A with a more powerful 3380 75 hp engine and a maximum speed of 150 km/h. 25 cars were made of the luxurious 12 cylinder Tatra 80 of 1931, with water-cooled V12 5990 cc 120 hp engine.

In 1936-1950 there was a successful Tatra 87 with V8 air-cooled engine of 2968 cc, 75 hp, 160 km/h, and in 1936-1937 the Tatra 97 with 4-cylinder flat air-cooled engine, 1749 cc, 40 hp and 130 km/h; both with rear-mounted engines.

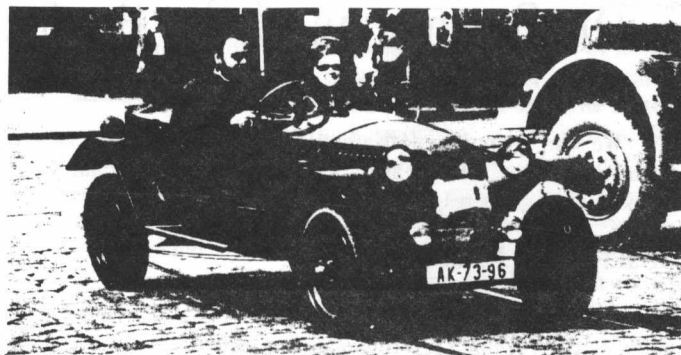
From 1897 to 1945 there were about 60 different types of Tatra cars.

LAURIN & KLEMENT

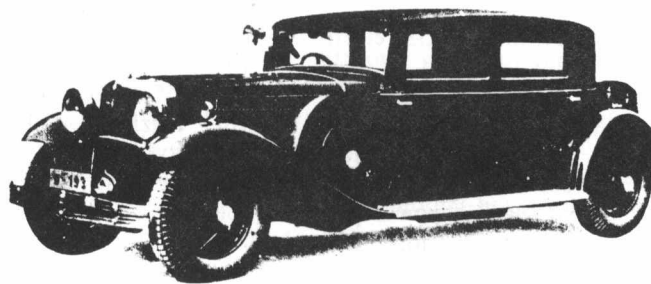
The priority of Koprivnice in the production of the first motor car in Bohemia cannot change the fact that Mlada Boleslav (Jungbunslau) is the actual main center of the Czechoslovakian automobile industry, even though the first car was produced there only eight years later.

Vaclav Klement, originally a blacksmith, later a bookseller in Mlada Boleslav, was highly interested in technical novelty of that time—the bicycle—and got one of the first products already fitted with ball-bearings for himself. When he found a good companion and an excellent expert, Vaclav Laurin, they decided together to establish a workshop in Mlada Boleslav. A few days before the end of 1895 they rented a small workshop of 144 square yards equipped with a 2 hp steam engine, three machines, and seven workers. First they began to produce bicycles, but these had but poor sales. But the two enterprising companions did not give up, and Klement bought a motorcycle from the Paris Exhibition. They started to produce a motorcycle of their own design under a Czech name "Slavia." While the famous racing drivers, Toman, Podsednicek, Vondrich, Heironymus and others brought many victories from the racing tracks abroad, the Laurin and Klement firm was working hard designing their first automobile. From 1905 they started production of cheap two-seaters, the so-called voitur-ettes, with a top speed of 28 mph and a surprisingly low fuel consumption of 48 mpg. The front-mounted engine was a 7 hp four-stroke, water-cooled V-twin, 1005 cc and later 1114 cc displacement. Other important types were a four-seater 2-cylinder type C2 (1907-1915, 2278 cc, 10/12 hp), a luxurious 4-cylinder type E (1907-1911, 4556 cc, 24/28 hp), a cheap Model F (1907-1918, 4 cylinders, 2427 cc, 14/16 hp), and a straight-eight FF of 1907 (4845 cc, 35/40 hp). In the twenties were produced mainly the expensive passenger cars, also with slide-valve Knight engines:

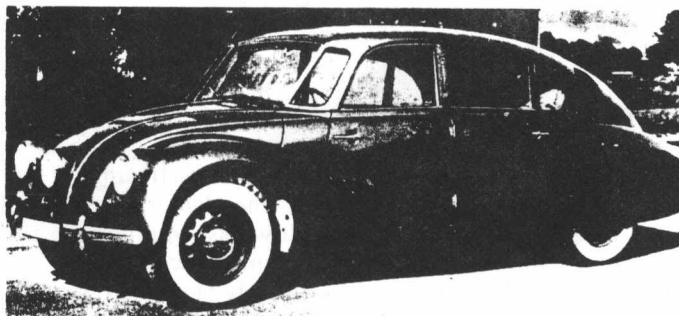
Mk6,	1921-1925,	6 cyl.,	3498 cc,	14/50 hp
445,	1923-1924,	6 cyl.,	4962 cc	19/60 hp
150,	1923-1925,	4 cyl.	1460 cc,	6/20 hp
400,	1924-1925,	4 cyl.,	3308 cc,	13/40 hp



1927 TATRA Type 11 tourer, 1056 cc *Czechoslovak News Agency*



1935 TATRA Type 80 6-Litre, V-12 *Keith Marvin Collection*



1935 TATRA Type 87 2.9 Litre V-8 *Czechoslovak News Agency*

In 1925 the Laurin & Klement factory was bought by the Skoda joint-stock company of Plzen, which still exists in Mlada Boleslav as the Czechoslovakian top automobile factory. These successful ones were sold as Skoda types:

110	1925-1928	4 cyl.	1794 cc	7/25 hp
4R	1928-1930	4 cyl.	1944 cc	32 hp
6R	1928-36	6 cyl.	2918 cc	50 hp
860	1929-1932	8 cyl.	3880 cc	60 hp
650	1930-36	6 cyl.	2703 cc	50 hp
Popular	1934-1942	4 cyl.	995 cc	20-22 hp
Popular	1100-1101 OHV	1938-1944	4 cyl.	1089 cc 30-32 hp.
Superb	1938-1940	6 cyl.	3140 cc	85 hp

Up to 1945 there were about 65 Laurin and Klement types and 31 Skoda types

VELOX

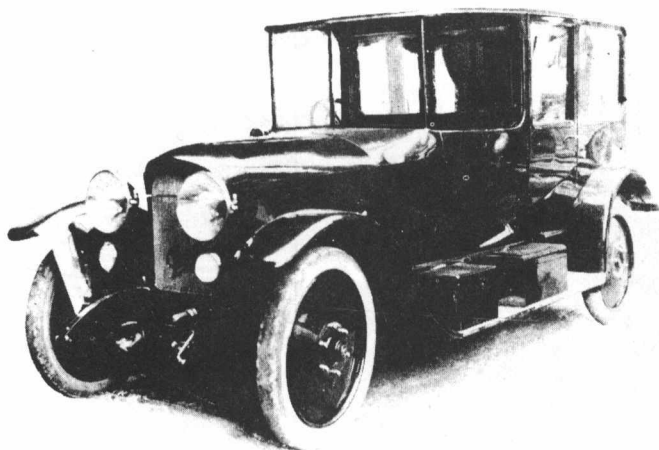
The 1906/1907 Velox passenger car was called "Russian Type" owing to deliveries of taxicabs to Moscow. These cars made in Prague-Karlin quarter, had a water-cooled, vertical single-cylinder engine placed under the driver's seat. Displacement was 1020 cc, giving 10 hp at 2000 rpm, with magneto ignition and drip lubricator. Especially good was the three-speed and reverse constant mesh gearbox with a fully independent clutch in each couple of transmission gears. One of the rear wheels was driven by a chain and the other through a differential gear. The foot brake was on the gearbox, the hand brake in the rear chain wheel; top speed 30 mph.

RAF

RAF—Reichenberger Automobil-Fabrik—was founded by the known car driver and textile magnate Theodor von Liebig in Liberec (Reichenberg) in 1907. One year later this firm introduced its first car, a 4-cylinder 4508 cc, 30 hp passenger car with 4-speed gearbox and brakes on all four wheels. Available also was a small 2-cylinder, 10 hp version of this car. In 1909 there was the 30 hp passenger car bodied as landaulette, double phaeton and a sports car. From 1909 to 1912 RAF produced a successful type H-10 with a 4-cylinder 5300 cc engine developing 45 hp. Another 1909 type, the FW-25 with 4-cylinder 3053 cc 25 hp engine was built as a 4-5 place phaeton, or light truck with a load capacity of 800 kg. In 1912, as the first in the Austro-Hungarian empire, RAF bought a license to produce the Knight engines, later (since 1913) used also by Laurin & Klement in their cars, as RAF united with Laurin & Klement in 1913.

PRAGA

The beginning of the existence of one of the most important Czech makes, Praga, was in 1907 when První českomoravská továrna na stroje (The First Czech Machine Factory) in Prague, and Fr. Ringhoffer Co. of Prague-Smichov founded in March 1907 the Prague Motor Car Company: Prazské automobilní továrna - Prager Automobil-Fabrik, with trade mark PAT-PAF (in 1908 already known as Praga.) From the outset, the Praga was a symbol of quality. To 1914 there were made cars under License Renault, Charron, and Isotta-Fraschini, all of them with 2- and 4-cylinder engines. In 1914, to the factory came a new constructor-in-chief, Frantisek Kec, who created a whole scale of classic cars with 4-cylinder water-cooled sv-engines, solid axles, semi-elliptic springs, and a 4-speed gearbox.



1921 PRAGA GRAND 3.8 Litre Saloon

Autocar

PRAGA TYPES

MIGNON – 15 series, 1911-1926

GRAND – 1 series, 1912-1919. 3824 cc.

ALFA – 12 series, 1913-1927, 1130–1328 cc.

PICCOLO – 6 series, 1924-1926. Up to 4th series, 707cc.
Later 824 cc. 1927, 7th series, 856 cc.

GRAND – (Straight-eight SV engine) 2nd-11th series, 1928-1929, 3582 cc; 17th-18th series, 1930, 4429 cc.

PICCOLO – 201-205, 8th-20th series, 1928-1934. 995 cc.
(A very successful small car) Model 306, 1932-1934, 1449 cc, had broad wheel track. All engines had detachable aluminum heads with Ricardo combustion chambers.

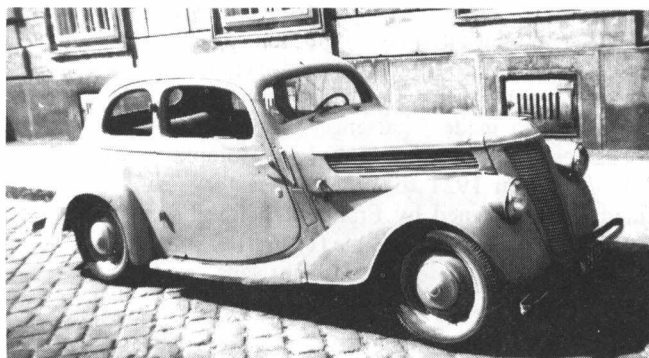
BABY – a small car of 1934-1937 (996 cc) did not sell as well as its predecessor, Piccolo. J. Petranik, together with Frantisek Kec, established a new type of Piccolo of 1128 cc (1937-1941), and later a Super Piccolo of 1660 cc.

LADY – 1935-1941, 1700 cc, with trapezoidal front axle and coil springs.

ALFA – a six-cylinder model of 1937-1942 had a 2492 cc engine.

GOLDNE – 1935-1938, 3912 cc.

After World War II the production of passenger cars was stopped, and only several luxurious limousines with bullet-proof bodies were made, all for government purposes. Praga now builds light and semi trucks only, and Avia trucks under Renault-Saviem license in the modern factory in Prague-Letnany.

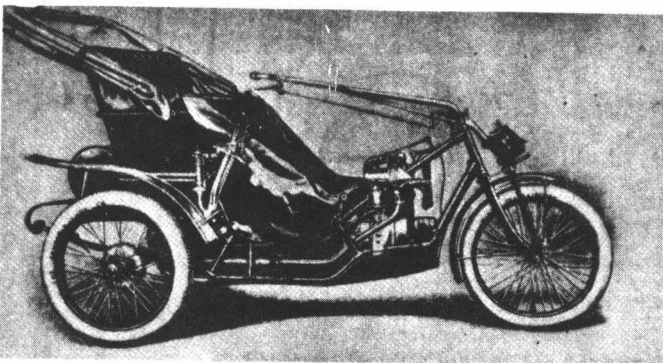


1939 PRAGA Baby 1-litre saloon

G. N. Georgano Collection

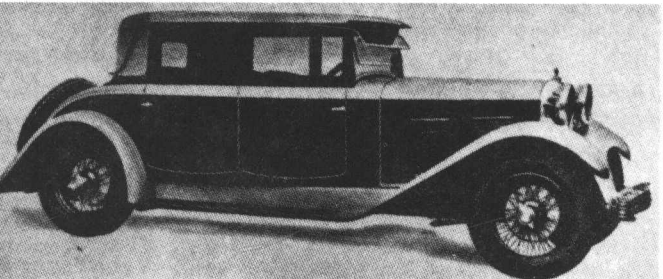
WALTER

Fitter Josef Walter began in Prague in 1898 to repair the cycles; then he produced his own cycles, and, since 1902, the motor-cycles. In 1909 he made a passenger car fitted with the Fafnir engine. In the spring of 1910 arose the three-wheelers for two or four passengers, well known in Russia, too. In the new factory in Jinonice he made, since 1913, the Walter W III cars (4-cyl. 1840 cc engine, 20 hp, 75 km/h) and W I (4-cyl. 1240 cc, 13 hp, 80 km/h). After World War I the WZ 1500 came, in 1920 known as the Wiz and Wizi (2100 cc). Type P1 had a 1940 cc engine, and type 1500 was made to 1928. Wizi was reconstructed to 4B (1900 cc OHV) and was produced (together with the 6B type, 6-cyl. 2500 cc) to 1932. A big Royal had a 12-cylinder 5900 cc engine. In 1923-1938 Walter made the famous type Junior with 4-cylinder 1000 cc SV and later OHV engine, under the Fiat Balilla license. Then followed the Princ and Regent cars. After World War II only lorries were made, using the Praga RN chassis.



1909 WALTER 7 hp 3-wheeler

Ing Adolph Babuska



1929 WALTER 6B Super 3.3 litre saloon

Ing Adolf Babuska

KAN

Kralovehradecka toverna automobilu Alois Nejedly, Kukleny, also known as Konigsberger Automobilfabrik Nejedly, produced cars from 1910 to 1914. Type A (1910) had a single cylinder 880 cc engine, 5-7 hp, and in 1911 came a 2-seater with single-cylinder 7 hp engine and 4-seater with a twin-cylinder 11 hp engine. The driver, Franz Czernil, won with this car the 460 km reliability run in 1913. In the same year were also made 5-passenger cars with 4-cylinder in-line SV engines, 1330 cc, 20 and 30 hp, developing a top speed of 70 km/h. From 1921 to 1923 this factory made small cars named Start, designed by Frantisek Petrasek, and fitted with a 2-cylinder 1114 cc SV engine (type B) or 4-cylinder 1460 cc SV engine (type C), later built as light vans.

WIKOV

Frantisek Wichterle founded in Prostejov in 1878 a small factory making agricultural machines, which was in 1900 one of the largest of its kind in Bohemia. In Prostejov there was also another similar firm owned by Dr. Frantisek Kovarik. These two factories united as the joint-stock firm called Wichterle Kovarik, Ltd. They bought, in Vienna, an Italian Ansaldo car in 1922 which was a pattern for designers Maly and Kostal. Their own first car was the Wikov 7/28 of 1924 (4-cylinder, 1480 cc, 32 hp, 70 km/h) available as a limousine, cabriolet, delivery van and ambulance. Wikov 40 and Standard were available as a 4-6 place limousine or cabriolet. In 1931 was introduced the streamlined body, and in 1932 arose the prototype of a small car with the water-cooled 2-stroke twin-cylinder engine in the rear. At that time, the Wikov 35 had a 1740 cc 35-37 hp engine, and the Wikov 40 the 1940 cc 40-43 hp engine.

Z

"Z" is not only the last letter in the alphabet but also one of the Czechoslovakian successful small and sports cars. Ceskoslovenske zavody na vyrobu zbrani v Brne (founded in 1918), later Ceskoslovenska zbrojovka Brno (arms factory), began in 1923 to produce small cars named Disk (designed by B. Novotny) which were later called Aero. In 1925, they made the type Z 18 and this one was in production to 1931. Z 18 had a 2-stroke twin-cylinder 990 cc engine, 18 hp, top speed about 80 km/h. The Z 9 was produced from 1931 to 1939 with the same engine and many body types. The Z 4 (1933 1936) had a 2-stroke 2-cylinder 980 cc engine, 25 hp, 80 km/h. From 1936, the small Z 6 was produced with a 2-stroke, 2-cylinder 750 cc engine and a maximum speed of 90 km/h. The latest type Z 5 Express was fitted with a 2-stroke 4-cylinder 1500 cc engine, 40 hp, 110 km/h

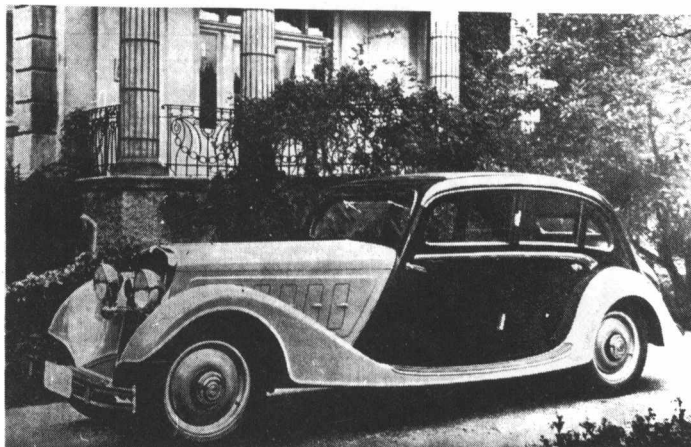
AERO

The aeroplane factory, Aero, in Prague-Vysocany, produced from May 1930 the very popular car Aero 662 with 2-stroke twin-cylinder 662 cc engine; from 1933 with 750 cc engine and open body for 2-3 passengers. At the 1933 Prague Auto Show the more powerful 1000 cc Aero was introduced, with 28 hp 2-stroke 2-cylinder engine. As the double-thousand it was later presented as the Aero 50 with 1996 cc 48 hp engine and with front-wheel-drive (as the Aero 30). During World War II, the 4-seater Aero Pony (750 cc) and the Aero Record (1500 cc) were secretly designed, but these never came into production, and in 1946 were replaced by the Aero Minor II, designed by R. Vykoukal.



1932 AERO Type 30, 995 cc two-seater

Neubauer Collection



1932 WIKOV Type 35

G. N. Georgano Collection

Coventry's First Motor Cars

by David G. Styles

Mr. Styles, whose book *As Old as the Industry* won the SAH's Cugnot Award two years ago, has submitted the following article which is both a commentary on and an addition to Max Gregory's article *Spinning and Weaving at the Motor Mills* (AHR No. 18). In an accompanying letter he writes, "My reason for writing is twofold—firstly to offer an article in response to Mr. Gregory's article, and secondly to appeal to the membership of our Society for any information members may have on pre-World War II Riley cars in America (especially cars in action at competitive events).

"The point behind the article is that there are a few points in Mr. Gregory's text which need clearing up, and this is aimed at doing that as well as offering some interesting information about one of the earliest innovators on the British motoring scene."

Max Gregory's article in issue No. 18 of *Automotive History Review* was fascinating and especially interesting to me, since I conducted a great deal of research into that period of Coventry's motoring developments through my interest in Riley history generally, as well as in preparation for my book: *As Old as the Industry*.

It is revealed in a little book entitled *The Riley Romance*, written in 1930 by Edward H. Reeves, who was the Riley Motor Club's first general secretary, that Percy Riley's first car was only the third in Coventry. Yet in Mr. Gregory's article, we find mention of the two cars made by the Great Horseless Carriage Company and two more from the related company of Daimler. With the Bollee Tricycle and the Pennington Motor Raft already on record as in use in that great city, how could Reeves' statement possibly be correct when Percy Riley didn't finish his vehicle until 1898?

Many years ago I read Anthony Bird's *The Motor Car, 1765-1914* and noted carefully his remarks on the "first" Daimlers. I spent many hours delving in the Coventry and Warwick Collection, now a part of the Coventry City Libraries Department, then but an element of the Herbert Museum and Art Gallery. After all that, and discussions almost twenty years ago with the Coventry Motor Taxation Department (which also handled new vehicle registrations) about early registrations, nothing happened to bring Edward Reeves' statement into contest — until now!

After extensive review of those researches, there is still no substantial evidence to show that either Daimler or GHCC ever actually manufactured a motor vehicle in Coventry before the year 1898. Indeed, the recorded facts about these two companies and their activities give rise to great speculation about when they actually did start manufacturing motor cars. For example, it is known that the first Daimlers were imported to Britain from Germany and the illustration of the "First English Daimler" four-seater in Mr. Bird's book bears such a strong similarity to the vehicle depicted in Mr. Gregory's article as a GHCC as to suggest they are one and the same car. This leaves the two-seater (Figure 38 from *The Motor Car*) as being the better candidate for the title of "First Daimler" and various evidence suggests that it was built in 1896—though where is an interesting and challenging question (far more likely Germany than Coventry).

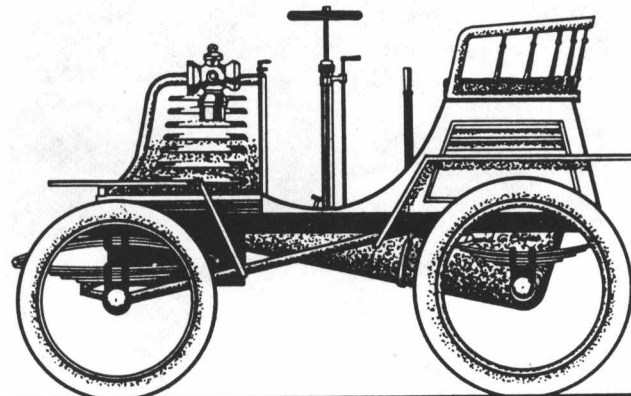
Mr. Gregory quotes William McNeil's reminiscences of his involvement with the Motor Mills (built on Longford Road on the outskirts of Coventry), which began in 1897 at GHCC, under the general management of Charles Crowden, who had only just taken over a factory which had been gutted by fire

and which had no relevant plant or equipment in it. Crowden had the task of turning what McNeil acknowledged as a "mixed and weird assembly" of plant and stock of materials into the tools of manufacture—and it is highly unlikely that he was successful within the year. Anthony Bird clearly takes the same view, in light of the comment in his book that: "it is doubtful if any cars were made in Coventry before the end of 1897" — an opinion shared by many students of that era.

From my own researches, I am inclined to support the Bird line because, coming back to McNeil's reminiscences, he remembers unpacking a Bollee tricycle—hardly the action of a company set on manufacturing cars of its own designs and undoubtedly the machine referred to in Edward Reeves' book. Add to that the presence of Mr. Pennington's workshop in the Motor Mills and the fact that Reeves says of Riley: "spurred on by the sight of a Pennington Motor Raft and a Bollee tricycle on the streets of Coventry, Percy Riley completed his car in 1898." The motor raft was undoubtedly owned by Pennington himself and was almost certainly built towards the end of 1897. There is no reference, as there almost certainly would have been if they had been there, to either Daimler or GHCC vehicles.

Let us remember that the British Motor Syndicate was the proprietary company of both the English Daimler company and GHCC. That syndicate was headed by one of the greatest con-men of the industry's history — H. J. Lawson. Now Mr. Lawson was known to "adjust" the truth occasionally (his financial adjustments were what finally brought him down). Noting William McNeil's recollections of the true manufacturing potential of the Motor Mills and his memory of vehicles being assembled there, it is far more likely that the four-seat Daimler (or GHCC, as you will) was imported in boxes from Germany—its greatest claim to being the "First English Daimler" being that it was assembled in England. But I suggest that is as far as it goes.

On the other hand, since English Daimler and GHCC were part of the British Motor Syndicate, we cannot dispute the the same car (or one of whatever number were brought into Britain at that time—1896 or '97) may have been labelled GHCC, but it's pretty certain that they are one and the same car. This may well have had something to do with the fact that Daimler in Coventry was having problems in its relationship with the German company and that, finally, the first concrete evidence of a genuine English-built Daimler car was the 1898 3½ horsepower 2-cylinder machine, which almost certainly did not go into production, despite plans to build it in quantity.



1898 SINGLE-CYLINDER RILEY - THE FIRST RILEY CAR

Whatever conclusions are drawn about what cars were built, where and by whom, in those first years of Britain's infant motor industry—and whether Percy Riley's first car was or was not the third in Coventry, the inescapable fact is that his vehicle was a fascinating piece of machinery, not least because of the tender age of its constructor and the novelty of its design. So, its importance to the development of the motor vehicle generally should not be overlooked, as seems to have happened to many of Riley's contributions and great successes in subsequent years.

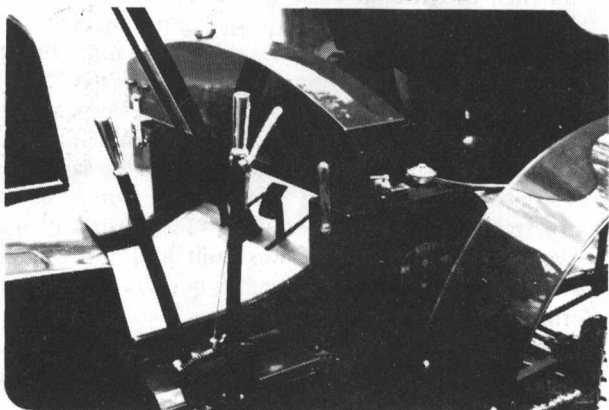
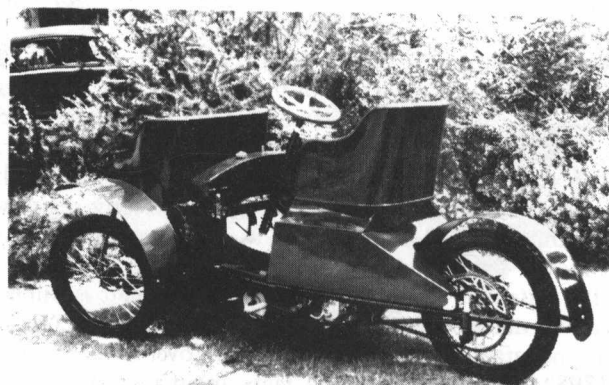
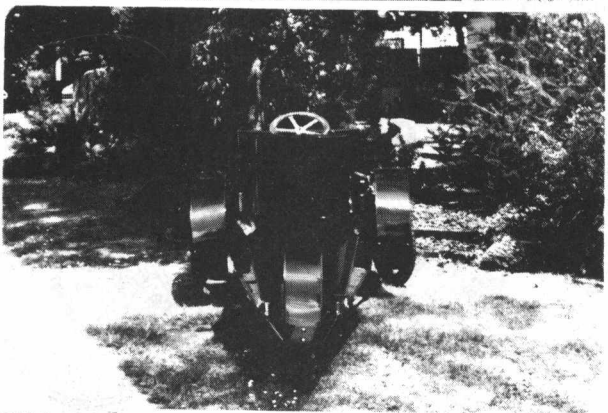
Percy Riley was the second son of William Riley, Jr., who had become general manager of his father's ribbon-weaving business at the age of 19, in 1870—so early maturity was no stranger to the Riley family. William had bought the Coventry cycle-maker, Bonnick and Company, in 1890 and re-named it the Riley Cycle Company in 1896, in whose workshops that same year Percy went to work building his car whilst still a pupil at King Henry VIII Grammar School. Encouraged by elder brother Victor, and indulged by his father, young Percy stuck steadfastly to his task until it was complete.

Perhaps the most fascinating aspect of this little motor car is that Percy Riley began his first sketches and calculations at the tender age of ten! He was barely fifteen years old when the car took to the road in the early months of 1898, and yet its 2¼ horsepower engine had a mechanically-operated inlet valve—a concept which Benz attempted to patent over a year later, in 1899, but was thwarted in the attempt by Riley's priority on the design. Percy Riley had yet to learn the benefits of certain protective steps in business and, whilst Victor ensured that he never made the same mistake again, he clearly did not realise the significance of his own invention until it was almost too late. Indeed, it was already too late for Percy in one way since, had he realised the impact such a patent might have on the industry and his family's fortunes, the mechanically-operated inlet valve would almost surely have been a British patent in 1898!

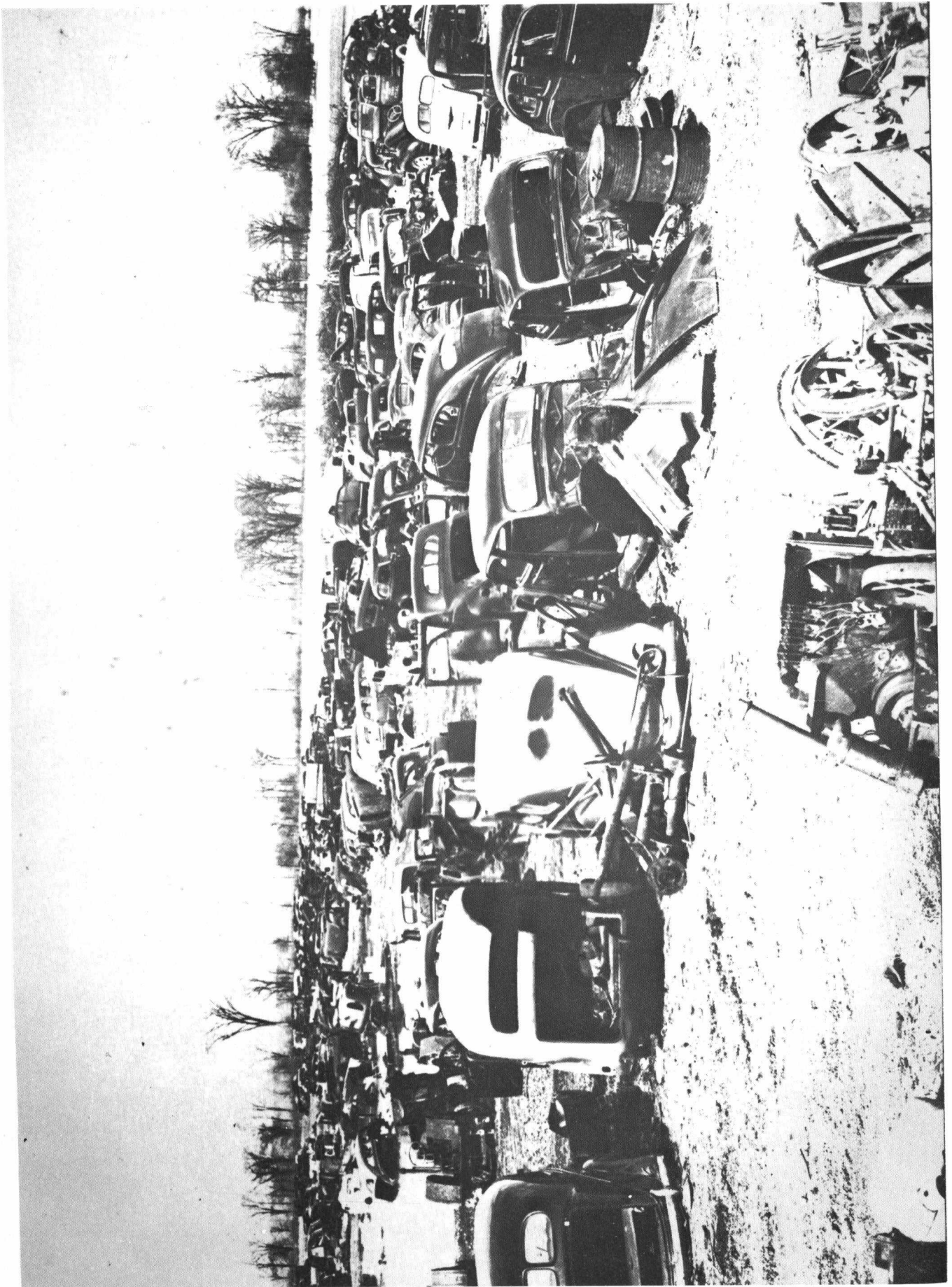
The chassis of the Riley car was of metal channel-section, with a wheelbase of approximately four feet. The body was mounted directly onto the frame and both axles were sprung—the front being double elliptics and the rear half-elliptic. Steering was by wheel, rather than the common tiller rod of the day, and spoon brakes were applied by hand to the rear wheels. The brake lever was pushed forward to rotate the shaft which ran across the chassis to bring the front-mounted brake spoons into contact with the tyres. Riley took the view that retardation would be more effective with the brakes mounted in front of the wheels, rather than by following common practice and fitting them to the rear, especially considering the prospect of the brake having to scrape mud from the tyre surface in bad weather, recalling the types of roads most common common to Britain at that time.

The 2¼ horsepower engine was front-mounted and the engine cover was top-hinged at the rear to allow easy access from the front of the car. Drive was by belt to the rear wheels and two substantial steady-rods ran longitudinally from under the seat down to the rear of the engine to prevent excessive movement, to avoid stretching or breaking the drive-belt as the result of spring movement. The wheels were non-removable wire-spoked and were fitted with solid rubber tyres. The seat was a two-place spindle-backed fixture with a box beneath it, in which could be stored tools and repair items.

Apparently this car was seen frequenting the streets of Coventry for some years after it was built, demonstrating the success of the design and the quality of its construction. It was finally sold to a new owner in Belfast some years before the Great War of 1914-1918. Many years later, Victor Riley decided to try to preserve some of the early Rileys before they disappeared forever. So he bought a number of the old products of the family business, but attempts to recover that first car failed, despite a reward of £50 being offered in 1930 (a handsome sum in those days) for information leading to its successful location.



1904 Riley Tri-Cycle. Sorry we can't reproduce the beautiful red color. These photos were loaned to us at the SAH Annual Dinner Meeting at Harrisburg, Pennsylvania, by Kurt Schulz, of 59 Rowson Street, Boronia 3155, Victoria, Australia.



JOURNEY'S END — A winter day in an automobile graveyard. How many makes can you recognize? Photo contributed by John Conde.



1946 Willys-Overland Model 6-70, a prototype which—for reasons known only to Willys executives—was never put into production.
Photo from the collection of John Conde

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