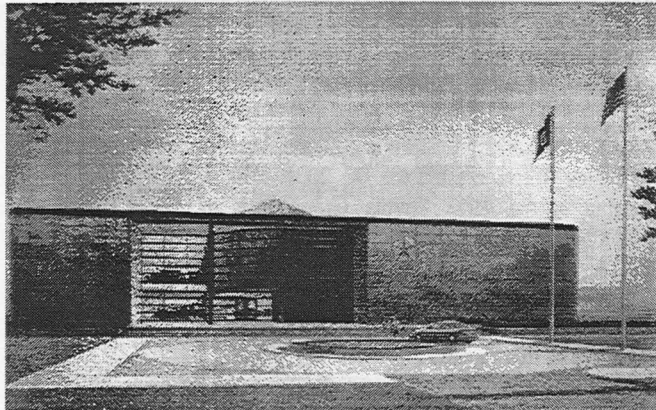


SAH JOURNAL

The Newsletter of the Society of Automotive Historians, Inc.

January-February 1997

Issue Number 166



CHRYSLER TO OPEN MUSEUM

In preparation for its 75th anniversary, the Chrysler Corporation has broken ground for the Chrysler Historical Museum. The two-story, 35,000 square foot museum will open in 1998 and it will be located on a 10 acre site at the corner of Featherstone Road and Squirrel Road, in Auburn Hills, Michigan. It will include a theater, gift shop, archive and research area, administrative offices, center atrium, and a courtyard, as well as display space for 40 vehicles and storage space for 75 more. Styling is to reflect the design of the nearby Chrysler Technology Center.

According to Chrysler, the museum is the first dedicated, on-site museum built by an American automobile company.

OOOPS!

The November-December *SAH Journal* erroneously listed the price of the dinner at the SAH meeting in France. The dinner at the Automobile Club de France's Salon Bugatti on February 6 will cost 450 FF per person. Deepest apologies to everyone that this error has inconvenienced. Reservations and payments should still be made to:

Laurent Friry
2 rue de la Gueriniere
F-91390 Morsang sur Orge
France
Fax +33 1 64 47 53 67
Email: Laurent.Friry@met.fr

Please ensure that your check or bank draft is in French francs. Interested members and guests should contact Laurent as soon as possible, as he must supply a head count to the ACF by January 22nd.

People wishing to visit the Berliet Collection on Monday, February 10th should contact *Paul Berliet*, President, Fondation de l'Automobile Marius Berliet, 39 av. Esquirol, 69003 Lyon, France, fax +33 4 72 33 20 25.

Also, *Dean Case* pointed out that Land Speed Record attempt driver *Craig Breedlove* is an American, and not British.

FORD DONATES VANS TO VETERANS

The Ford Motor Company revived a longstanding commitment to Disabled American Veterans by donating a huge fleet of its new Super Club Wagon XL 15 passenger vans to the Disabled American Veterans. A ceremony was held on August 20, 1996 at the historic Henry Ford estate in Dearborn, Michigan. Ford's CEO Alex Trotman presented a new Ford van to DAV National Commander Greg Reed. The vans were specially designed to carry the disabled veterans to hospitals, appointments, etc. The vans also have specially designed graphics in the style of the U.S. flag that were designed by Ford graphic artists. Hundreds of these vans will be distributed to DAV chapters throughout the United States.

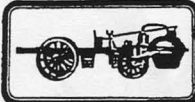
In 1922, the Disabled American Veterans held its second national convention in San Francisco. Many disabled World War I veterans had a difficult time in making arrangements to travel San Francisco as the financial burden and long train journey made it nearly impossible. Henry Ford read an article about this hardship in a Detroit newspaper. Ford quickly ordered that a large group of his beloved Model T's be used to ferry the veterans across the country to the city by the bay. Ford paid for the veterans expenses, too. At the ceremony was a Model T Ford used back in 1922 and the sheer size and contrast between the 1922 Ford and 1996 Ford vans was in itself a lesson in American automobile advancement.

It is good to see that in this day and age of huge corporations that the American auto industry still cares and gives back to America and her citizens.

- Kevin P. Murphy

Inside the Journal..

Editorial Comment	2
President's Perspective	3
"A Few Words From...John Rock"	4
"Notes on Early V8 Engines"	4
"The Fabulous Duesenberg Brothers" ...	6
"The Last Fleetwood: End of an Era?" ..	7
"The Honda Advance in Engine Design" ..	8
It Happened Years Ago	9
Additional News	10
25 Years Ago at SAH	12
Book Reviews	
DE DION-BOUTON	12
QUICK SILVER	12
Letters	14
Classified Ads	14



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EDITORIAL COMMENT:

MORE ELUSIVE VEHICLES

Grace Brigham has written a very interesting history of SAH and the automotive industry in general. She goes to great depth to outline many early attempts at self-propelled vehicles.

In the early issues of *The Newsletter*, the predecessor to the *SAH Journal*, Marshall Naul exposes many early vehicles names that have been listed as "manufacturers" when they never built more than an experiment. Some early "automakers," listed in many books, only announced the intention to build a car and never built one actual vehicle.

We, as members of SAH, have attempted clear up these discrepancies in history. This is such an important focus of our group that it has been part of the concept of SAH from day one.

As hard as SAH tries, even modern history has not been recorded entirely correctly. One of my favorite references, Krause's *Standard Catalog* series, is continually being improved. While researching the Mohs automobile (built by SAH co-founder, but not member Bruce Baldwin Mohs), I found the *Catalog* eluded to production of as many as thirty or forty. Actually only four cars were built.

I have some more modern names that should be checked. I would like to prove (or disprove) of the existence of these, and more.

BIZZARRINI - Barry Watkins and Giotto Bizzarrini, with the help of Luis Romo, created the BZ 2001. This roadster made its debut at the 1993 Toyota Grand Prix of Long Beach. Production has been mentioned in a few publications.

CIZETA - Claudio Zampoli and Giorgio Moroder combined forces to produce a sixteen cylinder sports car in Italy. Apparently, a few were built. Outside of a few sneak previews, little has been written of this supercar.

GOLD - The Gold Motor Company, founded by Nick Butler, produced the all-wheel drive Cirrus sports car. Powered by a Rover V8, the Cirrus' sales in Japan and Europe were planned for 1994.

GSA - Dick Guldstrand created the Grand Sport 90. Based on the ZR1 Corvette, the GS90 pushed 20% more horsepower at double the price of the donor car.

ISO - Piero Rivolta announced the revival of another long-gone famous make in 1993. The Iso Grifo 90 utilized a Corvette LT1 V8 modified by Reeves Callaway.

ITAL DESIGN - The BMW-based Nazca C2 show car was being readied for production in late 1993.

MEGA - Mega Industry of France displayed the Track sports car at the Paris Auto Show in 1992. Mercedes-Benz V12 power turned all four 20 inch wheels, wrapped in huge Michelin tires. Sales were intended for the Middle East.

NORWOOD - Styled like the Oldsmobile Aerotech test vehicle, the A12 was produced by Bob Norwood of Dallas, Texas. C.J. Batten built a 777cid DOHC V12 to generate 1240 horsepower. Sales were to be directed toward export only.

PERKINS - Michael Perkins of Texas displayed his M2 sports car in 1991. A price of \$125,000 was listed for the car and the intention was to build 50 copies a year.

This is only the beginning. Tresser, MCA Centaire, MIG, March Scar, Dome, Bulgari, and Caspita were all intended for production in the '80s or '90s, but where are they now?

The truth about many early makes may be lost forever. These cars (or attempts) are recent enough to have real, first-hand information. What happened to them?

This may be low priority when compared to the varied projects of our members, but if you have the knowledge why not share it? Some future historian may find these brands and may wonder where they went. We could provide the last word.

- Sam Fiorani, Editor *SAH Journal*

PRESIDENT'S PERSPECTIVE

....far behind them they heard a faint warning hum, like the drone of a distant bee. Glancing back, they saw a small cloud of dust, with a dark centre of energy, advancing on them at incredible speed, while from out the dust a faint "Poop-poop!" wailed like an uneasy animal in pain. Hardly regarding it, they turned to resume their conversation, when in an instant (as it seemed) the peaceful scene was changed, and with a blast of wind and a whirl of sound that made them jump for the nearest ditch, it was on them! The "poop-poop" rang with a brazen shout in their ears, they had a moment's glimpse of an interior of glittering plate glass and rich morocco, and the magnificent motorcar, immense, breath-snatching, passionate, with its pilot tense and hugging his wheel, possessed all earth and air for the fraction of a second, flung an enveloping cloud of dust that blinded and enwrapped them utterly, and then dwindled to a speck in the far distance, changed back into a droning bee once more.

Kenneth Grahame might be said to have been clairvoyant when he wrote those words in *The Wind in the Willows*, for they describe, in a way, my experience in the centenary observance of the London to Brighton Run in England this past November. The Brighton Road is no longer dusty, and sheer traffic prevents any semblance of speed, but "magnificent motorcar" with "glittering plate glass and rich morocco" aptly describes the 1903 Mors covered double phaeton in which I rode the 57 miles from Hyde Park to Madeira Drive, operating the bulb horn which saluted the thousands of spectators with an authentic "poop-poop!"

It represented the fulfillment of a lifetime's ambition, set in motion at the time I first saw the film "Genevieve" as a boy. I've attended the Brighton Run twice, in 1986 and again in 1988, but always on the outside looking in. This year I was overjoyed and indebted to be in the heart of it all, through the kindness of Layton Roberts, owner of the car, and our mutual friend Mike Worthington-Williams. The story of our day, which was peppered with adventures as mundane as an incipient flat tire and as potentially calamitous as a lost wheel, would lose their breath-snatching passion if retold succinctly enough to fit this page. I shall merely say that Layton is a most engaging host, embodying the motoring enthusiasm of Mr. Toad with the sagacity of Water Rat and the oratory of Otter. The Run was more than an adventure; it was an extremely moving experience. The thought that we were doing (very nearly) what those pioneer motorists had done (very nearly) a century earlier was heady stuff, I was on a high as we left Hyde Park, which turned to sheer throat-choking emotion as we crossed the finish line on Madeira Drive.

Thus began a three-week visit to Britain, in part a mission for SAH and a quest for some material with which to entertain and enlighten readers, but mainly a very pleasurable indulgence in motoring history. The first familiar face I saw was that of Hayden Shepley, travelling with a group of HCCA members from the USA. The following morning, at the start of the Run, I was pleased to meet for the first time David Burgess-Wise, a colleague and correspondent of some standing, making the Run in his 1902 De Dion Bouton. I just missed Peter Card, piloting his brother's De Dion, but welcomed fellow Nutmegger Doug Magee, who with his brother Bill was carrying the Connecticut flag with, respectively,

Locomobile and Pope Hartford. Dave Brownell was a passenger in the 1904 Panhard et Levassor of a Dutch party, and I was later to learn that Alvaro Casal Tatlock was aboard the sole South American entry.

There were low points to the day. We overtook the Burgess-Wise car within the last ten miles of the Run, unmistakably suffering from irreparable ills, judging by David's expression. I was sorry to hear, too, of Malcolm Jeal's freak accident with the De Dion-engined combination "Victoria," in which his wife Eunice was quite badly injured; we wish her the speediest of recoveries.

SAH featured prominently in the rest of my trip. The United Kingdom Chapter held a meeting the following Sunday, which is reported elsewhere in this *Journal*. I was delighted to be able to open and close the meeting, to see some old friends and meet many new ones. Others members visited during my travels included Karl Ludvigsen, Peter Moore, Nick Baldwin, John Dyson, and Alan Gardner.

Part of my mission was to present a number of SAH awards to UK recipients who had been unable to travel to Hershey in October. I was honored to have tea with Friend of Automotive History Scott Bailey and wife Peggy at their home in the Cotswolds during the first week of my stay. On my final weekend, I made the formal presentation of the Friend Award to the Baileys at the National Motor Museum, Beaulieu, Hampshire. At that time I also conferred the Brigham Award for the best overall treatment of automotive history during 1995 on *The Road Back*, the journal of motoring history. Editor Nigel Trevena was unable to attend, due to illness, but his wife Teresa was there and also her stepfather Denis Bray, who accepted on Nigel's behalf.

We had gathered at Beaulieu for a seminar entitled "So You Want to be a Motoring Author?", an all-day program on the joys and perils of writing and publishing motoring books. A number of our members were presenters for the seminar, including Jonathan Wood, Nick Baldwin, and Michael Ware. Nick Georgano had travelled from the channel island of Guernsey for the event, Tom Warth was on hand from Minnesota, and many other UK members were in attendance. It was a very worthwhile day, even for those of us who thought we understood the automotive publishing business, and the capacity crowd in the Museum's lecture theater attested to the interest in the topic. It is an area on which SAH might be much more active in the USA, as suggested at the last Board meeting by Sinclair Powell.

That last weekend was its own sort of adventure. I was glad to be able to spend some time, my first opportunity in some years, with long-time friend and colleague Mike Worthington-Williams, now making good recovery from a September heart attack. Mike had invited me to make the journey from Wales to Beaulieu with him in "Arthur," his 1927 Austin Twenty. Mike feels strongly that cars should be used, not cosseted, and the fact that he puts many thousands of miles on Arthur each year attests to this. By choosing the proper route and arranging our travels during daylight hours, Mike demonstrated that motoring need not be the frenetic chore that it is in many parts of the world today, particularly in an old car.

It was with some reluctance, then, that I returned to my "real world." The lesson for all of us is that wherever we go in the world we can find knowledge, excitement, and fellowship in automotive history.

- Kit Foster

A FEW WORDS FROM...

JOHN ROCK

John Rock has been gracious enough to contribute his words to this issue of the SAH Journal. Mr. Rock, who retired on January 1, 1997 from his post as General Manager of General Motors' Oldsmobile Division, has been responsible for the recent redirection of the America's oldest surviving automaker.

As SAH Journal readers know, the Oldsmobile name goes back almost 100 years--to the dawn of the U.S. auto industry. In every sense of the word, Ransom Eli Olds was an automotive pioneer and one of the business' true innovators.

Olds' Curved Dash Runabout was the world's first mass-produced gasoline-powered motorcar, quickly becoming the hottest-selling thing on wheels by the turn of the century. But R.E. Olds' genius went way beyond making great cars. He had a sixth sense for promotion, and an inspired feeling for the new field of automotive advertising. He also established the very first automotive retail network, with convenient hometown showroom locations that made shopping for a motorcar easy, repairs quick and affordable.

I like to think that the New Oldsmobile is following through on our founder's best instincts, gearing up for the most new-product introductions in a good long time and turning our showrooms into the easiest places to shop for a new car. No-hassle. No-haggle.

So here we are: Oldsmobile is 99 and counting, ticking off the months until our odometer clicks over to 100 next August. And getting ready for one of the biggest birthday parties you ever saw.

The highlight of the week-long celebration will be a Centennial Day Parade of Oldsmobiles from every production year from 1897 on up to the present. So far, we've managed to line up cars and trucks from every year except 1906 and 1914. We'd love to hear from any SAH readers who can help us complete the picture.

Although hotel space in Lansing is already at a premium for the week of August 17-23, you're all invited to our 100th birthday party. Join us for an affectionate look back into our glorious past. Help us to celebrate the better days ahead. And be sure to look me up at the Western Style barbecue following the big parade.



John D. Rock

NOTES ON EARLY V8 ENGINES

by Jan P. Norbye

To me, the most intriguing of the pre-1914 V8s is that of de Dion-Bouton. It was built in an incredible number of sizes, for more than a decade, and in quantities large enough to have left a number of survivors.

Much has been written about de Dion-Bouton history, and about the pioneer V8 engines. But nowhere have I found a clear statement as to who designed the de Dion-Bouton V8. *Griff Borgeson's* excellent V-type engine roundup in *Automobile Quarterly* concentrated on the 1896-1908 period and did not discuss the de Dion-Bouton V8.

Other sources let it be tacitly understood that Georges-Thadee Bouton created it. The problem with that is that Bouton was apprenticed to a mechanic at the age of 15, never received any higher education, and probably did not master all the intricacies of designing an engine in detail, though as a partner in the business he was responsible for the engineering staff and its work.

It is my contention that the V8 was the work of Pol Ravigneaux, who joined de Dion-Bouton in 1900 as a draftsman and rose in the ranks to become chief designer and eventually technical director. A contemporary of Charles Faroux, his fellow graduate from the Ecole Polytechnique, his personality was always overshadowed by the domineering Faroux. But Ravigneaux left lasting technical innovations (and some key patents) behind him, whereas Faroux, aside from writing the regulations for the original 24-hour race at Le Mans, might as well have been drawing pictures in the sand.

Pol Ravigneaux patented a free-wheel device in 1905 and an ingenious planetary transmission in 1911, which gave a choice of four speeds with no more than 8 geared wheels. It became the most-used type of planetary gearing until the Simpson patents were issued between 1948 and 1963, and was a feature of all the four-speed Hydra-matics. He also invented a disc-type clutch with a 3-finger (120° spacing) release mechanism that was used on the V8 cars.

He seems to have left de Dion-Bouton at the start of WWI, for during the war he served as technical director of a gear company, Societe Mayen.

The de Dion-Bouton V8 was designed, tested and developed in 1908, publicly displayed in 1909, and put in production in 1910 model cars.

The original unit was laid out with cast-in-pair cylinders having integral L-heads, the banks disposed at a 90° angle, and the valves operated by a single, chain-driven, central camshaft. The spark plugs were mounted opposite the valves and not opposite the flat-topped pistons.

The crankshaft was a two-bearing design with the crankpins spaced at 180° (single-plane type) and the con-rod big-ends in a fork-and-blade arrangement, one big-end straddling the other on the same journal.

When V8 production began in 1910, however, each bank of 4 cylinders was cast-en-bloc, and the crankshaft ran in three main bearings. One of the blocks was mounted back to front, so that all the valves were placed inside the V. Here we must look back to the first 4-cylinder de Dion-Bouton of 1906, which had all cylinders cast singly, and a long, five-bearing crankshaft. When the 4-cylinder engines went to cast-en-bloc construction in 1909, the crankshaft was much shorter, and the number of main bearings was reduced to three.

That's why the production-model V8 crankshaft got the central bearing. The whole secret of offering a wide range of V8 engines can be summed up in two words: modular construction. The concept was just as valid then as it is today, permitting multiple permutations (i.e. wider choice for the customers) at low cost.

The V8s shared blocks, crankshafts, valves and valve train, and camshafts with the four-cylinder units. This meant that the four-cylinder crankshafts had to be designed with adequate bearing area for a V8, and the blocks could not extend below the bottom of the bore so as to fit both types of crankcase. The V8 crankcase consisted of two aluminum castings, one upper and one lower, joined at the crankshaft center line.

The valve stems and galleries did not pose a problem, for on both V8 and 4-cylinder engines, the cams impinged on roller followers mounted on pivoted fingers of a length that was suitable for both types.

Over the 13-year life span of V8 engine production at the Puteaux works, de Dion-Bouton made do with just four different crankshafts, giving strokes of 100, 120, 130 and 140 mm. There was greater variety in bore size, for just a change of cutting tool or machine setting would permit changes of several mm in the same block casting as long as cylinder spacing was identical.

To some extent, crankshafts were also interchangeable, though major differences in stroke could not be accommodated due to complications over con-rod length and swing-clearance, or leaving the piston crown too far below deck height at top dead center to meet the specified compression ratio.

The car-model code letters were given alphabetically in chronological order, the first letter indicating the basic type and the second letter its place in the succession of model variations.

The A, B, C, D, and E models were built prior to 1915. The H models were developed during the war and put into production in 1918-19. The I and J models were postwar creations. V8 production ended in 1922, and when de Dion Bouton next introduced an eight-cylinder car, it was 1929 and it had a straight-eight engine.

It was in the form of power for the fledgling aircraft industry that the V8 made its initial breakthrough. Renault began building a V8 engine for airplanes in 1907 and Fiat followed in 1908. Most famous of all was the Hispano-Suiza V8 which came into being in 1915 as a 140hp 11.8 liter, and came out of the war as a 300hp 18.5 liter unit. Hispano-Suiza and licensed manufacturers in France and abroad produced just short of 50,000 of them in a little over 3 years!

Three little-known passenger-car V8 engines appeared in the 1919-22 period: Piccard-Pictet, Suere and Bellanger, at least two of them in production cars.

Piccard-Pictet of Geneva was established almost 100 years before gasoline-driven automobiles existed, as water-turbine makers and iron foundries. Car production began in 1906 under contract with the Societe des Automobiles de Geneve, which had a license agreement with Marc Birkigt of Hispano-Suiza, but no industrial facilities. The cars were first sold with an S.A.G. label, later becoming Piccard-Pictet (or Pic-Pic).

Their chief engineer, Leon Dufour, invented and patented a single-sleeve valve engine in 1910, only to discover that Argyll in Scotland was already in production with an engine sharing most of the same features (under Burt-McCullum patents).

Piccard-Pictet secured the Swiss manufacturing rights to the Burt-McCullum invention, and began production of the 16hp blocks on a common crankcase, with the banks disposed at a 60° angle, and the same sleeve valves. It is doubtful that it ever got beyond the prototype stage. The few surviving Piccard-Pictet cars, all have four-cylinder engines.

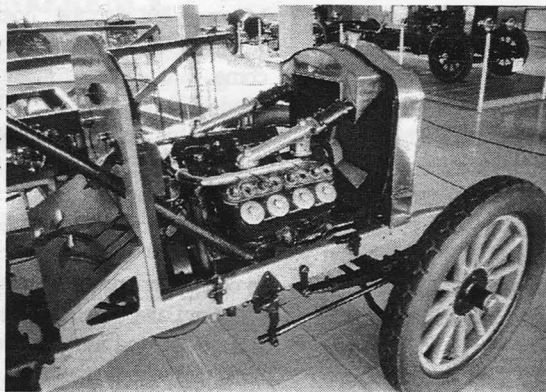
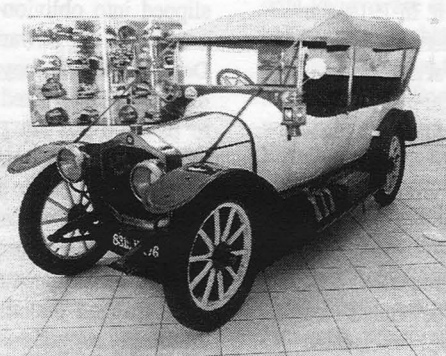
Etablissements J. Suere in Avenue Daumesnil in Paris, a short walk east of the Bastille, had been engine makers since 1905 and began to assemble light cars about 1909. They made single-cylinder and four-cylinder models up to 1914, production of the latter being resumed after the war. The Suere V8 appeared in 1920 and was the smallest V8 ever applied to a production car (45 x 90 mm = 1,145cc), for which the makers claimed a peak output of 19hp at 1,800 rpm. Suere's V8 production came to an end after 18 months to two years, during which period the company's mainstay was still the four-cylinder cars.

The Bellanger V8 was displayed at the Paris Salon in 1919.

The company had started making four-cylinder cars in 1913 in a small factory in Neuilly, but after the war moved into a very spacious plant, boulevard de Dixmude at Levallois. The V8 was an attempt to break into the luxury-car bracket. It failed, but the engine was highly noteworthy for its design features. A 90° V8 with a single central camshaft, it followed marine-engine practice in having a tunnel-mounted crankshaft.

The combustion chambers were narrow cylindrical extensions above the cylinders, topped by spark plugs, with the valves at a normal (90°) angle to the cylinder axis. They were not pushrod-operated, but opened by curved walking-beams pivoted near mid-stroke point and closed by coil springs. With 90 x 125 mm bore and stroke, it had a displacement of 6.362cc and was rated at 50hp.

Bellanger stuck to four-cylinder engines after 1922 but went out of business in 1927, and the big plant was sold to Rosengart.



THE FABULOUS DUESENBERG BROTHERS

Iowa's Claim to Automotive History

by Peter F. Stevens

Editor's note: The following article appeared in the Fall 1996 issue of The Iowan Magazine. Mr. Stevens' article would make a good complement to the recent "Duesenbergs in Europe" edition of Automotive History Review. Thanks to Mark Ingebretsen of The Iowan for allowing this reprint.

Fred Maytag knew a good thing when he saw it. In 1910, the Newton [Iowa] entrepreneur, on the verge of immortality for the washing machines bearing his name, took one look at a diminutive auto dubbed "the fastest and strongest two-cylinder car in America" and thought the road buggy a real winner. Maytag quickly made a sweet offer to the car's inventors—a pair of Iowa brothers named Duesenberg. The brothers, whose surname would prove synonymous with the last word in automotive power and elegance, planted the proverbial seeds of their fame in Iowa.

In 1885, Frederic and August Duesenberg emigrated from Germany with their widowed mother and five siblings. The family settled in the small farming community of Rockford, and the two brothers came of age working in the corn fields. But Fred and Augie also possessed a keen mechanical ability, though neither had attended trade school.

Seventeen-year-old Fred found an outlet for his love of gadgets in the mid-1890's, when he was hired by a Rockford tool dealer involved in the construction of windmills. By the time the young Duesenberg left the job in 1897, he had gleaned practical mechanical skills that fueled his desire to build far more elaborate machines.

Fred Duesenberg possessed another innate talent, one that revealed itself in the bicycle mania that swept America in 1897. Strong and athletic, he pedaled his way to regional fame as a racer. Thanks to his athletic reputation, he was able to secure financial backing for a bicycle repair and design shop he and Augie opened in Des Moines. Fred supplied the venture's design vision, while Augie contributed much of the hands-on expertise. But even as the brothers tenaciously pattered away on two-wheelers inside their cluttered shop, another vehicle stoked their creative imaginations.

The automobile was taking the nation by storm in 1900, and two Iowans were contributing to the excitement. In Grinnell, W. Spaulding was at work building gas-powered cars, and 10 years earlier in Des Moines William Morrison unveiled his electric car—the world's first. The unveiling took place at an 1890 Seni Om Sed parade, the traditional Capital City celebration that continues to this day. (Note: Seni Om Sed is Des Moines spelled backwards.)

The Duesenbergs' first foray into mechanized transportation occurred when they affixed a small engine Fred had designed to one of their bikes. From there, Fred, grasping that the brothers' future lay with automobiles, shuttered up the bike shop in 1902 and took a job at the Rambler Car Company in Kenosha, Wisconsin.

He returned to Des Moines brimming with new-found knowledge on how to build a viable car from scratch. Soon after, Fred and Augie jumped into Iowa's "car wars" by opening the Iowa Automobile & Supply Company. The fledgling firm specialized in modifying cars for the county-fair racing circuit. The venture floundered in 1903. The brothers filed for bankruptcy protection, listing assets of \$1,070.50 and debts of \$2,115.95.

Neither Fred nor Augie wanted to close up shop—at least not until the pair had built at least one car of their own design. And from scratch. The odds they faced were onerous, for nearly 5,000 different car models had rolled out of plants and workshops during that era. Most clattered straight to the scrap heap.

In 1904, the first Duesenberg nosed its way onto the streets of Des Moines and into this competitive fray. Fred and Augie dubbed their creation the "Marvel." The small, two-cylinder buggy was a far cry from the sleek, powerful vehicles the brothers would someday design. The Marvel might have easily slipped into oblivion—and the Duesenberg brothers with it—were it not for Edward R. Mason, a prosperous and well-known Des Moines attorney who was sniffing for profits in the auto industry. Mason sized up the Marvel and its inventors and offered to bankroll the duo. He attached one condition, however: the Duesenberg cars must bear the name Mason. Fred and Augie, never ones to let ego stand in the way of opportunity, agreed. The Mason Motor Car Company was off and running.

In 1906, the first Mason/Duesenbergs materialized on Des Moines' bustling streets and on rutted country roads. Iowans soon realized that the brothers had created a dependable and amazingly rugged road buggy.

A buggy which caught the eye of another prominent central Iowa businessman: Frederick Maytag. Then in his 50s, Maytag was the very visage of the era's savvy capitalist with his well-trimmed mustache and meticulously combed hair, and starched collar.

Maytag had already made a fortune with his world-famous self-feeder attachments for threshing machines. Years later, of course, he would win fame as maker of the Gyrafoam washing machine.

But in 1910, Maytag and son Elmer purchased controlling shares of the Mason Motor Car Company. They changed the company's moniker to Maytag-Mason and took the brothers Duesenberg along for the ride. Following the purchase, the company moved to Water-medium-sized, four-cylinder Mason-Maytags, but also the "boat-tailed body" of the duo's Model H Roadster of 1910—a glimpse of the elegant Duesenbergs to come. Whitewall tires and upholstered seats accentuated the Model H's graceful lines. The car united the ruggedness of the Marvel with the classy appointments of a grand touring car.

But the Duesenbergs' relationship with the Maytags didn't fare as well as their cars. A rift over the company's direction had developed. Fred and Augie wanted to build race cars for the increasingly popular auto contests. Maytag wanted the brothers to concentrate on passenger vehicles.

Fred and Augie walked out of Maytag's plant for good in late 1912—and into legend. Their race cars were a force to be reckoned with on the track. But the brothers' chief renown came in the '20s and '30s with the luxury cars they built: The Duesenbergs. So redolent of luxury, the name inspired the slang tribute "a Doozy." Mercedes, Jaguar, Cadillac, Lexus, and Rolls-Royce all lay claim to the title of the world's ultimate status car. But for countless auto connoisseurs, the last word in automotive elegance is the car that "you can never pay too much for," the Duesenberg, produced by two brothers who always took pride in their status as "two farmers from Iowa."

REMEMBER THE ERA PAST: THE END OF THE FLEETWOOD

by Richard Sills

On November 27, 1996, the last Cadillac Fleetwood rolled off the GM assembly line in Arlington, Texas. This traditional full-frame rear wheel drive beauty is being discontinued, along with the Buick Roadmaster, Chevrolet Caprice, and Chevrolet Impala SS.

At present, Cadillac has no plans to adapt the Fleetwood name to any other model. If the name is discontinued, the industry will be abandoning one of the last vestiges of the custom coachbuilders of the "classic era."

In that era, wealthy buyers made arrangements with their preferred custom coachbuilder to design a car body to their specifications, much as one would order a custom-made suit. Just as one would select the fabric for a custom-made suit, these buyers had to decide which drive-train and chassis to order as a means of propelling the custom body--would it be a Packard, a Cadillac, a Lincoln, etc. This decision was generally made with assistance from the chauffeur, who had his own ideas about which car was mechanically superior.

The works of the custom coachbuilders were widely promoted at the time, through newspaper ads and otherwise. In my office, I have a framed "advance proof" of a newspaper ad that was to appear in the *Washington Post* and the *Washington Star* on December 8, 1927. The ad was placed by the Washington-Cadillac Co., located at 1138-40 Connecticut Avenue, N.W. Below the Cadillac and La Salle insignias, the ad read as follows:

Announcing an Exclusive
Cadillac La Salle Salon
Showing Special Custom Bodies
by

Fisher, Fleetwood, Brunn and Willoughby

"The Cadillac Motor Car Company will exhibit at the New Willard, the Wardman Park, the Mayflower and the showroom of the Washington Cadillac Company,

December 10th to 17th inclusive, a magnificent array of Cadillac and La Salle models, with special custom bodies by Fisher, Fleetwood, Brunn and Willoughby.

These exclusive examples of the art of custom builders, mounted on the famous chassis of the New Cadillac and La Salle with their 90-degree, V-type, eight-cylinder engine, created a profound impression at the New York Salon.

You are cordially invited to attend this special showing and inspect at your leisure these beautiful new creations."

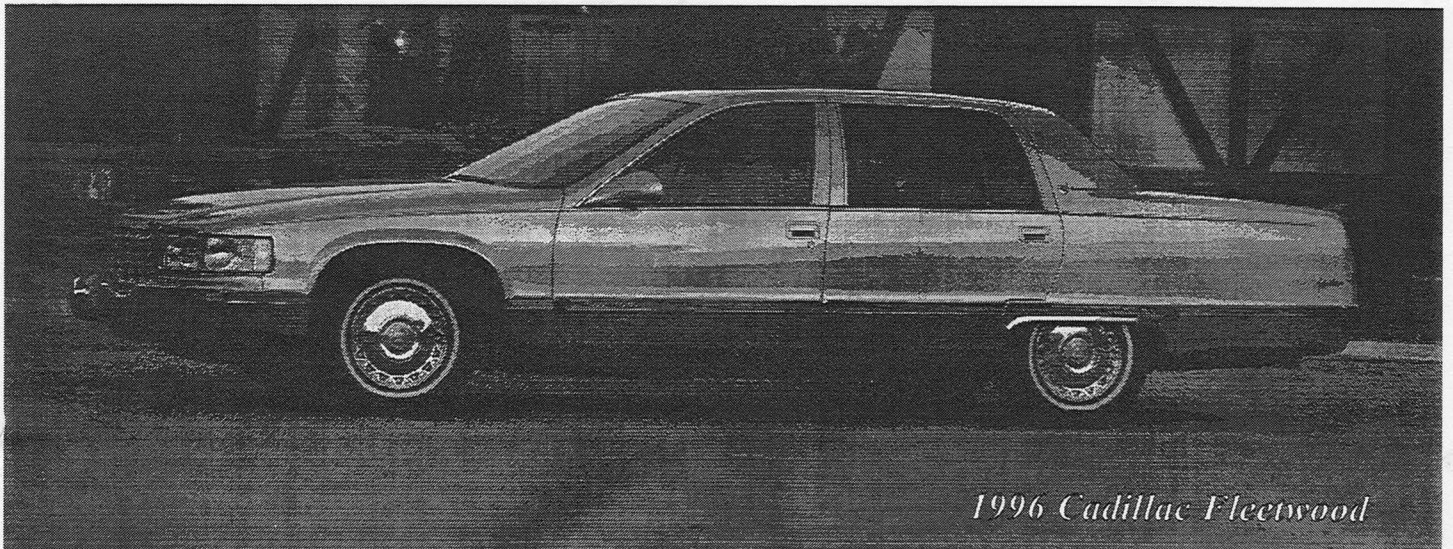
A pencil marking at the top of the proof indicated that it was sent for the inspection and approval of Mr. Francis Willoughby.

Several observations I found interesting:

1. Even though Fisher and Fleetwood were at that point "captives" owned by General Motors (GM acquired full control of Fleetwood in 1926), the outside coachbuilders of Brunn and Willoughby were given equal billing.
2. The cars were exhibited simultaneously at three of the best hotels in town and at the Cadillac dealership. Readers were invited to come to any of those locations. Did Cadillac have sales representatives on duty at the hotels as well as at the dealership?
3. We generally think of the Fisher bodies as being fitted to the standard models of Cadillac and La Salle; yet, this ad includes Fisher among the manufacturers of the "special custom bodies."

The artistry and exclusivity of the custom coachbuilders created an aura which surrounded even the standard-model Cadillacs of the day.

Perhaps Cadillac's present-day managers will conclude that the Fleetwood name has too much "brand equity" (to use a nineties term) to abandon, and will bring back the name on some future Cadillac model which represents the modern interpretation of the Fleetwood heritage.



1996 Cadillac Fleetwood

THE HONDA ADVANCE IN ENGINE DESIGN

by Max Gregory

As Honda became the pre-eminent name in motorcycles and they do not normally feature in the writings found with SAH publications, perhaps a question of eligibility could arise about matters relating to Honda motorcycle history. However, as Honda is also a familiar name in the realm of automobiles, as it is with small industrial engines, garden cultivators, lawnmowers and tractors, perhaps this will aid its acceptability.

The center-point of this study is the unusually high speeds at which the engines of Honda design, as fitted to its motorcycles in the late 1950s, normally ran. For example, both the C-100 Super Cub and the C-92 Benly peaked at 9500 rpm and the CS-71 Dream at 9000 rpm. None of these were special racing motors but were tractable commuter machines advertised under the slogan "You meet the nicest people on a Honda." By comparison, other competitive Japanese 50cc engines, marketed against the C-100 Super Cub peaked at speeds of 4000 to 7000 rpm. Competitive 125cc engines, up against the C-92 Benly, had peak speeds of 4800 to 8000 rpm. The 250cc group selling against the CS-71 Dream had top engine rotational speeds of 5500 to 8000 rpm. As the two engines quoted at 8000 rpm were fitted to Lilac machines which made a feature of high specific power outputs and had sporting pretensions, they might not have been user-friendly machines like the Honda models but performance oriented with their power curve located in the higher speed ranges.

Specific power outputs of the Honda machines were also proportionally higher. In the 50cc group the little C-100 Super Cub produced 4.5 hp against others with outputs ranging from 1.5 hp @ 4000 rpm to 3 hp @ 7000; six models averaging 2.6 hp @ 5250 rpm. In the 125cc class, the C-92 Benly gave 11.5 hp compared with outputs from 6 hp @ 5000 rpm to 10.5 hp @ 8000 rpm. The average for a group of eighteen competitors being 8.2 hp @ 5000 rpm.

The degree of supremacy was not so marked in the 250cc category as the 20.3 hp output of the CS-71 Dream was equalled by the Lilac LS38 and the Yamaha 250S Racer at speeds of 8000 and 7500 rpm, respectively. The minimum output from a member of the group, however, was 11.5 hp @ 5200 rpm while the average for a group of fourteen 250cc models was 15.2 hp @ 5600 rpm.

Because power obtained from increasing the rotational speed of an engine entails no increase in the size or weight of the frames to support the engine and no increase in the amount of engine internal friction, the gains obtained are all able to be applied to the essential task of moving the vehicle. Students of automotive history will be aware of the strides made in motor progress allowed by the arrival of the little DeDion-Bouton engine in the early years of motoring. Its ability to spin happily at speeds not previously experienced enabled motor vehicles of that time to actually perform in a useful way instead of merely being able to drag themselves along. The impact of that advance cannot be over-

emphasized and the number of budding constructors in many countries which either bought DeDion engines or built copies, whether under license or not, stands as testimony to that point.

It is likely that a similar scenario was again re-enacted in the Honda case, one which became noted at the time referred to but which also went on into further years with racing engines which ran at 20,000 rpm. Strangely enough, none of the Honda histories sighted by this writer have made any reference to this aspect of its engineering innovation. In this regard the experience of noted Australian automotive engineer, Mr. Alan Hawker ("Bob") Chamberlain, might be of interest. Mr. Chamberlain, a nephew of noted figure of aviation history Harry Hawker, had wide industry experience. He was the supplier of original equipment pistons for the Holden car manufacturing project in the 1940s, designed the successful line of Australian-made Chamberlain farm tractors and had spent the war-time years as a member of the joint U.S.-British Army Tank Design Group, based at the Chrysler plant in Detroit working on transmission. Following the sale of the piston company and his withdrawal from active participation in the tractor firm, he was invited by Honda to be a guest at its engineering conferences, indeed an honor of high order from a company which was so proud of its all-Japanese design input. The time frame was around the mid-1960s when Honda was working on its first Grand Prix car racing entry. His participation was necessarily dependent on his agreement to maintain confidentiality in respect of current projects. It was during this time that he became aware of the racing car under discussion and came to the view that it was a most significant advance in the design of high speed internal combustion engines, removing a major impediment to increased efficiency and standing as a landmark design development of modern times. Although he had formed the opinion that Honda did not particularly want the story told, he thought it important that it should eventually be brought to the fore as recognition and acclaim were rightfully due to Honda.

He formed the impression that Sochiro Honda was an intuitive engineering genius, seeming to have an innate understanding of all the underlying factors involved in engine design, even though he lacked formal training and was unable to make even the most elementary engineering drawing. At his side, however, he had Yoshido Kudo, who had been formally trained to the highest level, and the degree of interaction between the two was a quite amazing thing, according to Mr. Chamberlain. To quote from a 1979 letter to me, "Honda made a great, but unrecorded, contribution to the art of running internal combustion engines at very high speeds...Kudo had the necessary scientific background...What Honda had was an incredible streak of genius and, by untrained instinct, just seemed to be able to know what would work and what would not. He could not read even an elementary drawing yet could picture in his mind just what he wanted. He had an incredible degree of communication with scientifically trained Kudo and, between them, they have made a massive contribution to engine design...So far as I know the story of the discoveries into such things as cylinder wall vibration at very high speed has never been told."

The principle behind the safe high engine speed breakthrough lay with cylinder wall vibration. A cylinder barrel or wall could be viewed as a flat sheet curved around in the form of a cylinder, and this flat expanse was capable of developing waves or ripples under excitation caused of developing waves or ripples under sound or vibration, these effectively seizing the piston. The cure for this phenomenon was to form stiffening ribs into the cylinder wall during construction.

Knowing of my interest in automotive history, he drew my attention to the matter with the proviso that it not be raised during his lifetime, so that his agreement to confidentiality would not be questioned. In recent times, following his passing and that of Sochiro Honda, I have attempted to seek the help of the Honda company in covering the subject. However both Honda Research and Development and the Public Relations division advise that they can now find neither engineering drawings, etc., from that time nor are they able to locate any engineers of that day. It was, at one point, thought that there was a chance that a paper would be written by such an engineer dealing with engine design of the period, however nothing further has been heard of this project. Accordingly, I have now proceeded as best I am able without the hoped-for support of Honda engineering drawings or notes, but with, however, the permission of the Honda Company.

It is a matter of great regret that this account cannot be illustrated with any drawings, engineering memos or test results from that period however the Honda R & D Company of Wako-shi, Saltama, and the Public Relations Division, Honda Motor Co., Tokyo, are thanked for their co-operative responses and permission to proceed.

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IT HAPPENED YEARS AGO...

Ninety-five years ago...

January 15, 1902 - Japan's first motor race is held in Uyeno Park, Yokohama. Only three vehicles are entered, but thousands come to see the competition. The winner was an Auto-Bi driven by T. Sudo.

Ninety years ago...

January 1907 - International Harvester Company built its first car in Chicago, Illinois.

February 1907 - The American Mercedes, built in Long Island City, New York, by William Steinway, ceased production when a fire destroyed the factory.

Seventy-five years ago...

January 19, 1922 - Henry Ford bid \$8 million to purchase the Lincoln Motor Company. The company was in receivership for debts amounting to about \$10 million.

January 22, 1922 - George B. Selden died at the age of 75.

February 4, 1922 - Lincoln Motor Company sold to Ford Motor Company for \$8 million. (has also been listed as February 24)

Seventy years ago...

January 1, 1927 - Massachusetts became the first state to require automotive insurance.

Sixty years ago...

January 18, 1937 - Ford Motor Company produced its 25,000,000th car.

Fifty-five years ago...

January 1, 1942 - The Office of Production Management ordered ban on sales of new cars and trucks took effect.

February 5, 1942 - Cadillac built its last civilian automobile.

February 10, 1942 - Civilian car production ends at Ford.

Fifty years ago...

January, 1947 - Preston Tucker hired Alex Tremulis to be the Chief Stylist for what was to be the Tucker 48.

February 1, 1947 - Ferrari announces the introduction of its first automobiles. Street and competition versions of the type 125 are expected.

Forty-five years ago...

February 5, 1952 - New York City erects the first "Don't Walk" sign.

Thirty-five years ago...

1962 - Positive Crankcase Ventilation became standard on all cars and light trucks built in the United States.

Twenty-five years ago...

January 1, 1972 - American federal law required new safety features on 1972 model year cars including that annoying light and buzzer to remind passengers to attach their seat belts. Air bags were originally included in the legislation, but Ford and GM claimed that this deadline was impossible to meet.

Ten years ago...

January 1987 - Toyota introduces the Lexus name and the "L" logo at the Los Angeles Auto Show for the first time.

February 1987 - Cadillac introduces the Italian-built Allante.

Five years ago...

February 12, 1992 - General Motors introduced the Canada-only brand Asuna.

ARCHIVAL COMMITTEE SEEKS BOOKS

The Society's Archival Committee is trying to locate copies of all publication award winning works, in order to fill out the newly-established collection located at the library of the Auburn-Cord-Duesenberg Museum in Auburn, Indiana.

The following is a partial list of books which received the Cugnot Award or a Cugnot Award of Distinction. If you have a copy of one of these, and wish to contribute it to our archive, please send it to:

Sinclair Powell
8 Ruthven Place
Ann Arbor, MI 48104 USA

All such contributions are tax deductible to the extent allowed by law.

A subsequent appeal will seek Benz and Brigham Award-winning works, as well as later Cugnot winners.

Cugnot Awards

- 1972:** *A History of Sports Cars* by G.N. Georgano, E.P. Dutton.
1973: *Mercedes Benz Racing Cars* by Karl Ludvigsen, Bono/Parkhurst Books.
1974: *Mack*, by John B. Montville, Aztex Corp.
1975: *American Automobile Racing*, by Albert Bochroch, Viking Press.
1976: *Kaiser-Frazer: The Last Onslaught on Detroit*, by Richard M. Langworth, Automobile Quarterly Books.
1977: *The Public Image of Henry Ford* by David L. Lewis, Wayne State University Press.
1978: *Isotta-Fraschini*, by Tito Anselmi, Segrate.
1979: *Packard: A History of the Motor Car and the Company*, edited by Beverly Rae Kimes, Automobile Quarterly Books.
1980: *The Complete Encyclopedia of Commercial Vehicles*, edited by G.N. Georgano, Krause Publications.
1981: *Jaguar Saloon Cars*, by Paul Skilleter, Haynes.

PUBLICATION AWARD NOMINATIONS SOUGHT

NICHOLAS-JOSEPH CUGNOT AWARD

The Nicholas-Joseph Cugnot Award recognizes the best book in the field of automotive history published during the previous calendar year. This year the Cugnot Award is being considered separately from the Carl Benz Award for periodical articles. Cugnot Committee chair Nick Fintzelberg has announced that nominations will be received until March 1st, 1997. Nominations may be made either by mail, phone, or fax to:

Nicholas Fintzelberg, Chair
730 Golden Park Avenue
San Diego, CA 92106 USA
Phone (619) 222-0072
Fax (619) 222-2684

Nominations are encouraged for works on subjects directly related to motor vehicles, automotive accessories, or the automotive industry. The Committee is especially to learn of works from publishers not regularly known in the world of

automotive history. However, topics which are narrow in scope, which are principally photo-journalistic in nature, or which do not reflect original research or the use of primary sources are unlikely to be realistic contenders.

Nominated works must bear a copyright date or date of issue in calendar 1996. Nominations should be accompanied by a copy of the work; if this is impossible, the address of the publisher must be given in full so that the Committee may request a copy.

CARL BENZ AWARD

The Carl Benz Award recognizes the best article on automotive history appearing in a periodical publication. As with the Cugnot Award, the Committee is anxious to learn of works appearing in non-automotive publications; original research and use of primary sources are among the most important criteria on which nominations are judged. Don Keefe has agreed to chair this year's Benz Award Committee. Submit nominations to:

Don Keefe, chair
6173 Doe Haven Drive
Farmington, NY 14425

Nominations must have appeared in publications bearing a copyright or cover date in 1996. Serial articles appearing in parts of 1995 or 1997 will be considered for the Benz Award if they have not previously been nominated. Nominations should include a copy of the nominated work; the deadline for Benz Award nominations is March 1st, 1997.

E.P. INGERSOLL AWARD

The E.P. Ingersoll Award was instituted to recognize the best treatment of automotive history in other than print media. Previous winners have been video productions and audio tapes, but any non-print media are eligible. As for the other publication awards, nominated works must have been produced in 1996. Nominations, with a copy of the work, should be sent to:

James A. Wren
5930 Glen Eagles Drive
West Bloomfield, MI 48323 USA

Deadline for all nominations is March 1st, 1997.

BRIGHAM AWARD

Nominations are sought for the Richard and Grace Brigham Award, which is presented annually to the periodical which exhibits the best overall treatment of automotive history over all issues published during the previous calendar year. Nominations should be sent to Brigham Committee chair:

Matt Sonfield
24 Tennis Court Road
Oyster Bay, NY 11771 USA

Copies of all 1996 issues (or a representative sampling for frequently published periodicals) must accompany the nomination, and will be returned after the award is presented, if so requested.

A publication may receive the Brigham Award only once in a five-year period. Previous winners ineligible for this year's award are:

The Bulb Horn, Collectible Automobile
La Vie de l'Auto, The Classic Car
The Hispano-Suiza Society Newsletter
The Road Back

Nomination deadline for the Brigham Award is March 1st, 1997.

NOMINATIONS FOR FRIEND OF AUTOMOTIVE HISTORY

The Friend of Automotive History is the Society's premier award, recognizing exceptional contributions by an individual to the cause of automotive history, usually over a lifetime of service. Former Society president David Lewis again chairs the FoAH Committee, and is accepting nominations from all members of the Society. Nominators should summarize the accomplishments and contributions their nominees have made in our field. Letters of nomination should be sent to:

David L. Lewis
2588 Hawthorn Road
Ann Arbor, MI 48104 USA

The deadline for Friend nominations is June 1st, 1996.

CONTRIBUTIONS SOUGHT FOR SILENT AUCTION

The annual Silent Auction of books, literature, and automobilia is the Society's major fund-raising event, and, next to membership dues, our largest source of income. *Jim Schild* has agreed to continue as chair of the auction.

Jim is looking for donations of automotive books, sales literature, small items of automobilia, and automotive art, to be sold to the highest bidder through a silent, postal auction. Past experience has shown that shop manuals are not good sellers, but all types of books and quality literature and art are in great demand. Since the Society is recognized by the Internal Revenue Service as a 501 (c)(3) exempt organization, donors may take tax credit for their contributions to the extent allowed by law. Please send your auction contributions, by July 1st, to:

James J. Schild, chair
SAH Silent Auction
933 Strodman Road
St. Louis, MO 63138 USA

BEAULIEU AND BOURNEMOUTH PRESENT HISTORY CONFERENCE

Close on the heels of "The American Automobile Industry: Past, Present, Future" came a United Kingdom motoring history conference held at the National Motor Museum on October 12th. Sponsored jointly with Bournemouth University, the session was chaired by *Michael Ware*, curator at NMM, and Professor Bryan Brown of the University.

Nine presenters covered topics from the sociology of the motor car to motor sport to lubricants. Participants came from academe, industry, the motoring history community at large. A similar event is being planned for October 1997.

Members interested in attending next year's conference, or in obtaining the proceedings of the 1996 event, now in preparation should contact:

Prof. Bryan J.H. Brown
Bournemouth University
Phone +44 01202 595178
Fax +44 01202 595255
Email bbrown@bournemouth.ac.uk

SAH AWARDS PRESENTED IN BRITAIN

Two of the Society's 1996 awards were not able to be presented at the annual banquet at Hershey because the recipients were unable to make the trip from their homes in the United Kingdom. Through the kind offices of curator *Michael Ware*, a presentation ceremony was held Saturday, November 16th, as part of a program on publishing motoring history at the National Motor Museum, Beaulieu, Hampshire.

SAH president *Kit Foster* made the presentations on behalf of the membership. Friend of Automotive History Scott Bailey and his wife Peggy were our guests at the meeting and received the award before the assemblage at the Museum's lecture theatre (a gathering slightly larger than the Hershey meeting, by the way). Editor Nigel Trevena of *The Road Back*, the Richard and Grace Brigham Award winner, was unable to attend due to illness, but his wife Teresa and Nigel's stepfather-in-law Denis Bray accepted the award for him.

The conference, titled "So You Want to be a Motoring Author?", was jointly sponsored by the Museum, the Michael Sedgwick Trust, and the magazine *The Automobile*. Roger Banks of *The Automobile* again accepted the Benz Award of Distinction for "The Steam Automobiles of James Herbert Bullard," by Scott Jamieson, which appeared in their February 1995 issue. Msrs. Banks and Jamieson had also been present for the Hershey presentations.

UK CHAPTER HEARS HISTORY

The Society's United Kingdom Chapter met on Sunday, November 10th, at Brooks Auctioneers in Clapham, London. The all-day program featured four presentations on automotive history and a tour of the Brooks mews in which a number of noteworthy cars were being assembled for an upcoming sale. President *Kit Foster* welcomed members and guests to the meeting, which had been arranged by Chapter secretary *Peter Card*.

Jonathan Wood spoke on the origins of the VW Beetle, based on his extensive research in Volkswagen's own archive and interviews with former employees. His talk was illustrated with slides of early and rare VW photographs.

Richard Barnett, media officer for Britain's Society of Motor Manufacturers and Traders, explained the SMMT and its history, particularly its role in sponsoring Britain's motor shows over the years. He also described the SMMT's archives, and the ways in which researchers may gain access to them.

"Publishing *The Lanchester Legacy*" was the title of a presentation by Chris Clark, describing the adventure of writing, publishing, and distributing his first book. This was a very instructive discussion, both for those with publishing experience and those without.

The day concluded with a talk by *Andrew King* on Greeves motorcycles and the Invacar. Burt Greeves produced motorcycles of distinctive design which were for many years the bikes of choice in competition riding. His concept for the Invacar arose from the requirements of a disabled friend, and later became a national scheme in transportation.

About twenty members and guests attended the meeting, which was held in Brooks' boardroom by the kind hospitality of managing director Malcolm Barber.

25 YEARS AGO AT SAH

From *Newsletter* #23, February 1972:

In the President's Paragraphs, *John Peckham* warned members not to use the name of the Society "solely to add legitimacy to a commercial enterprise, or to indicate official support of the Society where none had been given." This was later made official Society policy in Article I of the Bylaws:

Section 5 - Limitations on Commercial Use of Name and Emblem. Neither the name nor emblem of the Society may be used commercially in any manner without written permission of the Board of Directors.

The 12-page *Newsletter* also featured articles by *David Lewis* on the good publicity that Ford Company enjoyed during the 'teens and 'twenties, and one by *Janius G. Eyerman* on Hillman in the United States, 1947-1956.



DE DION-BOUTON - De l'automobile...à l'aéronautique, by *Pierre Boyer*, 1995. Hardcover, 232 pages, with text in French, 570 photos, 11 1/4 x 11 1/4 ins./285 x 285 mm. ISBN 2-89078-025-9. La Librairie du Collectionneur, 4, rue Cassette, 75006 Paris, fax 33 (1) 4544 3902. Price (if ordered from publisher) 690 FF plus 40 FF for surface mail or 65 FF for same, registered. Also available from leading book dealers in many countries.

At last, a basic reference work on one of the greatest men and marques in the entire history of the automobile, and of the very idea of the automobile in most of its ramifications.

The Count Albert de Dion, who succeeded to the title of Marquis, was a big man in life and remains a true giant in history. This book, conceived and executed in a grand manner, does honor to its subject and provides the reader with a very substantial introduction to it.

The bedrock foundation on which this hefty volume is based is its trove of splendid period photos, most of them from the factory's original glass-plate negatives. The graphics justify the price of the book, and its ample dimensions allow liberal layout space, in spite of the huge number of images. There are six of them which fill two-page spreads, making them almost two feet, more than half a meter, wide. In his introduction, the author describes how, in 1950-51, the firm by which he was employed occupied a portion of the vast old DDB factory premises at Puteaux, just across the Bois de Boulogne from Paris. There, old DDB archives were being thrown out by the truckload. Although not yet a DDB devotee he could not stand it, and lugged home all that he could. He became interested in DDB and finally, in 1990, went to work on creating this book. What luck for posterity.

The work is not profound. It is, instead, straightforward and thorough, and the quality of print and of reproduction are just fine. A dark sepia tone, called bicromic, is used. Here is an outline of the staggering contents:

The human background. The steam phase, 1882-1889. Choice of the IC engine. Trikes, Quads, and Motorcycles, 1895-1925. Real cars for the road, 1899-1929. The first two-cylinder in '03, the first four in '04, the first V8 in '09. Paris-Peking and New York to Paris. Bicycles, 1908-11. Aviation, 1884 to the end of World War I. Military vehicles, rail cars, locomotives, and yet this is still merely a sketch of the world imagined, invented and created by this fascinating personality who was Albert de Dion. We know so little about him. We would know infinitely less if, in spite of hard times, he, himself, had not caused certain records of his achievement to be published in the 1930s and if the author of this book, *Pierre Boyer*, had not rescued some of the vanishing archives and recognized their worth to our collective patrimony.

He also has done a wonderful job of sorting out the technical data of around 300 models of vehicles which the Puteaux factory produced over the decades. One little detail is omitted consistently: piston displacement. Bore and stroke are there, so if you want to know it you get to calculate it yourself.

- Griffith Borgeson

QUICK SILVER - An Investigation into the Development of German Grand Prix Racing Cars, 1934-1939, by *Cameron C. Earl*. Introduction by *Karl E. Ludvigsen*, 1996. Hardcover, 170 pages including 54 pages of photos and technical drawings, 7 1/2 x 10 ins. ISBN 0-11-290550-1. Stationery Office, P.O. Box 276, London, SW8 5DT UK. £40 sterling. Seven Hill Book Distributors, 49 Central Ave., Cincinnati, OH 45202, (800)545-2005. \$60.

"This document had a bombshell's impact on the motorsports community of Britain and indeed the world" read the first words of this unusual book.

It certainly had a considerable impact on journalists when it first reached *The Autocar* offices in November 1948, as this reviewer vividly recalls.

Quicksilver is a reprint of a British Intelligence report originally published in October 1948 through H.M. Stationery Office. A new introduction has been added by auto historian *Karl Ludvigsen*, our fellow SAH member and twice winner of the annual Cugnot Award. This alone assures a keen analysis and new facts. Karl has concentrated on a profile of the extraordinary young man *Cameron C. Earl*, who at the age of 24 authored this historic investigation titled *British Intelligence Objective Sub-Committee (BIOS) Report No. 1755*.

Anyone with a special interest in one of motor racing's greatest eras, the Thirties, when German industry developed the Mercedes-Benz and Auto Union special cars to contest international Grand Prix, should have this book because it is the whole truth in compact form. Also, at the time it was a breathtaking revelation of hitherto secret data.

Of course much has been learned since, revealed in many able books. A few of the racing cars have even been restored and demonstrated by private owners. Yet here is a technical report little short of a masterpiece in its truth and clarity. Here are the facts about concept, construction, performance, even cost of those marvellous cars. Until then we had been able to gather all too little factual material.

Yet the Cameron Earl report nearly came too late. He did not go to Germany until April 22-May 20, 1947 and for some strange reason, publication did not come for another 18 months. Even before that time some hard information was being published in the motoring press. Laurence Pomeroy of *The Motor* went out to talk to Uhlenhaut of Mercedes in 1946.

Among other information, *The Autocar* published in February 1947 a couple of pages of intimate photos of chassis and engine of the very advanced 1 1/2 litre V8 supercharged Mercedes-Benz which had won the Tripoli GP of 1939.

Most significantly, early in 1947 the first "liberated" Mercedes Grand Prix car (1939 3 litre) was smuggled into England by army truck from Czecho-Slovakia and landed up at a garage near Brooklands. I got hold of Alec Issigonis, already an established industry engineer at Nuffields, who also loved car racing, and without delay we went down to Surrey complete with an *Autocar* staff photographer and technical artist R.E. Poulton. Alex's expert comments and Poulton's beautiful sectioned drawing were duly published April 4, 1947.

A further spur to Earl's report was probably the ambitious BRM (British Racing Motor) project which proposed to build a V16 1 1/2 litre to the formula at that time. They actively sought financial and technical assistance from government and industry. Rolls-Royce was asked for superchargers and Standard undertook casting of the complex cylinder heads, for instance. Cameron Earl afterwards confirmed to our sports editor Sammy Davis that he had written his report for "the few people actively engaged in the construction of GP racing cars."

Finally there must have been foot-dragging among British Intelligence officialdom just because motor racing was a low priority in those stirring times. In a 6 page February 1947 brief on Mercedes to Alec Issigonis, I concluded "only since the war have details become available from the factory. And even then a shoddy job was done by the allied technical staff who ignored the racing department altogether." The troops are always against HQ! But, all this finally moved the Whitehall types.

Most of the *Quick Silver* book is made up of the *Report* itself, over 100 pages in facsimile, a nice touch as the plain typewriter text gives authenticity. It is divided first into Mercedes-Benz, dealing with general development of chassis, power units, suspension, etc, plus a special section on the 1 1/2 litre. Then Auto Union covering the same features, plus a brief note on their proposed V12, 1 1/2 litre of 1939.

The two teams are compared and a special section with photos is given to the Porsche/Mercedes Land Speed Record car; things never revealed before, with its 2,850 bhp, 44.5 litre, V12 aero engine, estimated 466 mph capability and unique streamlined form.

Finally there are over 50 pages of photos and detailed factory drawings of five Mercedes and two Auto Union competition types. As the latter had been built in what was by then the Russian zone, Auto Union drawings are lacking. So the Ludvigsen Library was able to add four more from both 1933 and 1935 types, for this *Quick Silver* edition.

The introduction reveals that author Cameron Earl's prodigious technical ability stemmed from his graduating brilliantly from high school in Scarborough almost direct into the wartime army by 1941. There he proved himself at Experimental in the army tank design department. He rose to captain, went on to research at the Royal Navy Scientific Service; and continued enemy equipment investigation up to 1947. Becoming keen on motor racing, which was just reviving in Britain after the war, sadly he died very young, killed when testing one of Bob Gerard's ERAs in 1952.

For *BIOS Report No. 1755* he interviewed extensively Rudolf Uhlenhaut of Mercedes-Benz and Professor Eberan von Eberhorst for Auto-Union, the chief engineers responsible; but unfortunately not Doctor Porsche himself. There was a rush at war's end in Europe to grab top engineers, the most dramatic aspect of which race of course being the rocket scientists, America gaining the top prize in the shape of Von Braun. In the car world, who got whom was kept quite quiet but Aldy Aldington of Frazer Nash signed up Uhlenhaut briefly and Fielder of BMW. Eberan von Eberhorst went to Aston Martin for a while. Poor old Porsche went to Renault to advise on a rear engined car, but was imprisoned by the dastardly Communist element there in 1947, actually during the whole time Earl was investigating in Germany. The nightmare eventually came to an end and Uhlenhaut even went back to producing more Grand Prix winners in the post war era, to great acclaim.

All this admittedly valuable and authentic information plus illustrations is priced quite high at \$60 in the USA. However, the book is well produced in hardcover and has that dashing Gordon Crosby drawing on the dust jacket showing Caracciola passing Rosemeyer in the German GP 1937.

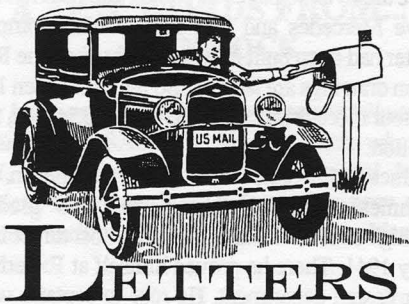
The puzzling title of *Quick Silver* is not to be confused with Karl Ludvigsen's current 600 page volume *Mercedes-Benz: Quicksilver Century*.

The Mercedes cars throughout the Report are described as Type M. Ludvigsen gently points out that Daimler-Benz used W for types of car, after "Wagen" and "M" for types of engine, after "Motor". Apparently Pomeroy made the same mistake.

Finally the cover blurb says the report was "once enigmatically described as 'the second most interesting book on motor racing ever published.'" But it was just a little in-joke when on 21 November 1948, I sent an inter-office memo to my mentor and sometimes boss sports editor Sammy Davis, urging him to give urgent prominence to the *Report*, calling it "the second most interesting book on motor racing ever published!" The first, of course, had to be Sammy's own book titled *Motor Racing*.

In that memo I considered that the main new items to reveal were, the cost of racing to the Germans, the Mercedes-Benz/Porsche land speed record project, and the conflict of opinion between Uhlenhaut and Eberhorst about front and rear engines. These are all subjects of continued interest and value.

- John Dugdale



LETTERS

More on History in Marketing

I must write to compliment you on your fine [editorial] "History in Marketing" in the November-December 1996 issue of the *SAH Journal*. I have thought the same thoughts since I first started studying automotive history. How about General Motors remembering Mr. William C. Durant in a manner of Nissan and Mr. K?

I would like to bring one commercial of the Ford Motor Company to your attention that I thought was their best. I am in Chicago, so I don't know if you may have seen this commercial in the Pennsylvania market. The following are the famous words of Mr. Henry Ford of 1907 being read at the same time the words are rolling up the TV screen against a black background.

I will build a motor car for the great multitude. It will be large enough for the family, but small enough for the individual to run and care for. It will be constructed of the best materials, by the best men to be hired, after the simplest designs that modern engineering can devise. But it will be so low in price that no man making a good salary will be unable to own one--and enjoy with his family the blessing of hours of pleasure in God's great open spaces.

Towards the end of the text being read, the black background gives way to a black and white photo of Henry Ford behind the remaining words. As the commercial becomes silent, the photo of Mr. Ford gives way again to the black background and the words "Have you driven a Ford lately?" comes to the middle of the screen and that gives way to the Ford "oval" again, all in silence. It was great!

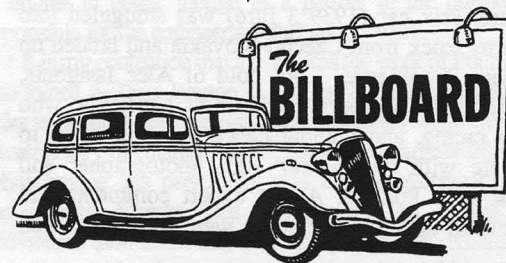
I remember the first time I heard these words in the Ford commercial. I was in another room of the house when I heard the text being read. I quickly remembered that these words were of Mr. Henry Ford, and fortunately I got to the TV to see most of the commercial. I must say my blood did a complete reversal in my veins at least 12 times!--especially when the black and white photo of Henry Ford appeared. I wish I could obtain a copy of the commercial.

I agree that the automotive industry has a proud history and it could be used to pave a path to the future while educating our young--and old--through advertising. I believe the road to the future is best served by first knowing where you have been. **Robert J. Degenhart, 5692 W. Goodman Street, Chicago, IL 60630**

History of Hubs

All Alvis cars from 1932 to 1939, with one exception, used an unusual method of securing their centre lock wheels. Instead of its usual spline drive, [it formed] a circular conical pressed steel plate of undulating form (nicknamed "the jelly mould"). The undulations lodged onto a similar matching plate which was the hub of its wire wheel. (The one exception was the immediate pre-war 12/70 Alvis which used cheaper proprietary axles with splined hubs.)

I cannot remember any other car using this system but I seem to recollect thirty-odd years ago seeing at auction an American car of the twenties with a similar system. Can anyone enlighten me as to the origin of this patent design? **Peter Richley, 14 Upper Queens Road, Ashford, Kent, England TN24 8HF.**



The Billboard welcomes non-commercial advertisements from members. Ads are free, and should concern items of interest to historians: information, books, literature, photographs, illustrations, memorabilia; offered, wanted or to trade. Ads for vehicles or parts are not accepted. To advertise regular sales or services, contact Sam Fiorani, P.O. Box 7073, St. Davids, PA 19403-7073 for display ad rates.

WANTED: To complete collections: *Antique Automobile*, all 1937 through 1939, Dec. 1940, #4 and #12 1941, all 1942, #1 1943, and Dec 1945; *Bulb Horn*, all 1940/41, #1 and #3 1943, #2 and #3 1944 and #2 1945; *Horseless Carriage Club Gazette*, all 1938 (copies are okay), and all 1942. **Peter Richley, 14 Upper Queens Road, Ashford, Kent, England TN24 8HF. Phone or fax: 44 1233 620552.**

WANTED: Any information on John Walter Christie (1866?-1944), American inventor, automotive and military tank designer, and 'Speed King'. I would sincerely appreciate any leads on Christie's papers and archives and surviving examples of his automobiles, fire engine tractors, tanks and other inventions. **Ed Krampitz, Jr., P.O. Box 69, Drewryville, VA 23844-0069. Phone: (804)658-4596.**

WANTED: Technical and parts information on a 1973(?) Chaika recently donated to the Duke University Art Museum. Also, any historical information on the Chaika car and GAZ, the manufacturer. **Nathan Swanson, 5018 Green Oak Drive, Durham, NC 27712. Email: Swans003@acpub.duke.edu**

WANTED: Any Holsman literature or memorabilia. **Jim Miller, 809 Donegal Drive, Papillion, NE 68046. Phone: (402)592-1363.**

WANTED: Photos, illustrations, and information about the early days of Corvette styling, planning, and production for an upcoming book on Corvette history. **Noland Adams, P.O. 1134, El Dorado, CA 95623. Phone: (916)626-3232. Fax: (916)626-0536.**

WANTED: Original and off-beat Italian motorcycle sales literature, dealer items, signs, banners and other memorabilia. Top \$ paid. **Steven Rossi, 106 Kent Drive, Cortlandt Manor, NY 10566. (201)573-2270 days, (914)736-5354 evenings and weekends.**

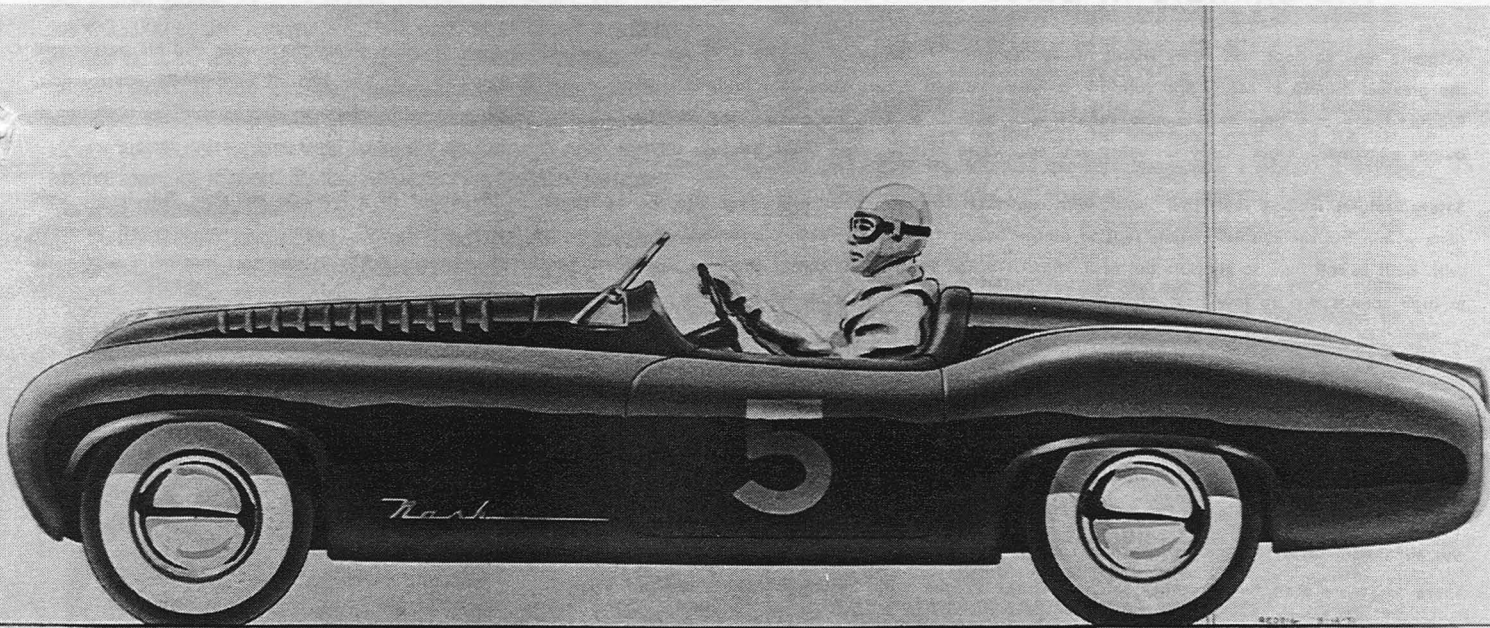
WANTED: Any information written or otherwise about the Vector automobile, Vehicle Design Force (located in Venice, CA), Vector Aeromotive Corporation, Lee Brown (owner of Precision Auto Body Shop of Los Angeles), and Gerald Wiegert. Also, background information on the modern Bugatti automobile and the all-wheel drive Pontiac 6000 STE/SE. **Sam Fiorani, P.O. Box 7073, St. Davids, PA 19087-7073. Phone: (610)275-6866. Fax: (610)277-2505. Email:SVFiorani@AOL.COM**

WANTED: Any reference to wire wheels and their design. I am particularly interested in the determination of factors in the layout of the lacing, hub width, etc. **G. Marshall Naul, 534 Stublyn Road, Granville, OH 43023.**

WANTED: Ford TT (Model T one-ton) original photos, literature on accessories, information, posters, signs, etc. Also, diagram of strong hold brake setup. Plus, information (history and other products) on the Hall Scott Company of California; maker of Ruttel rear ends for Ford TT. **Gordon Conway, 10431 N. 477 E, Demotte, IN 46310. Phone: (219)345-5492.**

NEEDED: For a forthcoming article on early Hispano-Suiza supercharged engines, a copy of the article signed by Charles Faroux that appeared in the June 13, 1912 issue of *L'Auto*. **Don Manuel Lage, Iveco Pegaso S.A., Dir. Commercial Vehiculos Medios y Pesados, Avda. de Aragon 402, 28002 Madrid, Spain.**

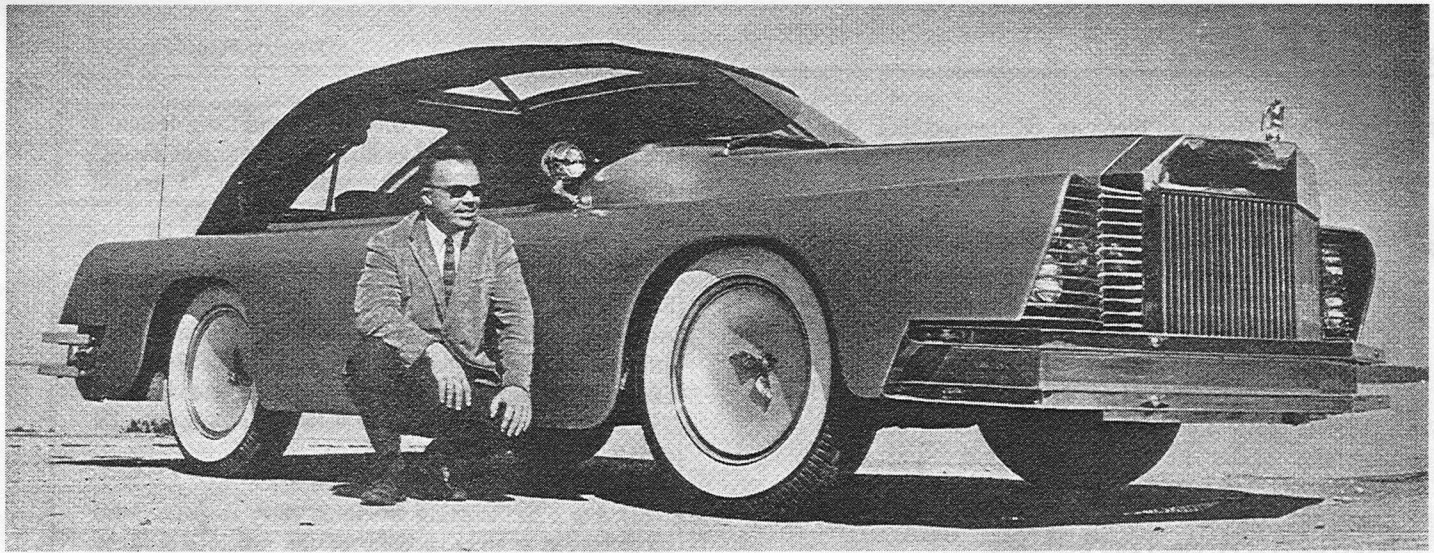
REQUEST TO MEMBERS IN ARIZONA/SOUTHERN CALIFORNIA: I would greatly appreciate copies of any ads on GM's EV1 appearing in newspapers and magazines in your area. These are unavailable in the East. Many thanks. **Taylor Vinson, 1314 Trinity Drive, Alexandria, VA 22314.**



• NASH COMPETITION SPORTS CAR

This painting, dated August 14, 1951, was drawn by William (Bill) Reddig as a possible Nash-Healey. Reddig was one of the youngest members of the Nash styling team and helped design some of the most successful Nash and AMC cars of all time, including the 1952 senior Nash line, the Metropolitan, the mid-sized 1954 Rambler four door sedans and wagons, and the benchmark 1956 Rambler. (This drawing has never been published previously)

Courtesy of the Patrick R. Foster Collection



Inventor, Bruce Baldwin Mohs, manufacturer of this Mohs auto and over 1200 other Mohs vehicles now on the road.

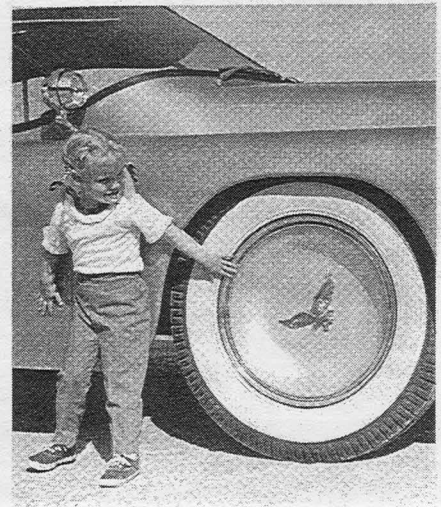
The Mohs Ostentatienne Opera Sedan

The ultimate in personal transportation with the greatest of safety

A totally new concept, the Mohs shares no components or design philosophy with any other car. A dignified machine giving the owner and his passengers the greatest degree of safety and comfort, convenience and luxury consistent with this advancement in the "state of the art" of automobile construction. Produced one at a time as a custom vehicle with options to suit the owner, the Mohs is a sound investment with minimum depreciation and maximum owner enjoyment. Quite likely its value will appreciate in advancing years because of its unique construction, advanced ideas and classic design.

Safety features include seats that swing with centrifugal force on turns and pivot into the horizontal in the event of a head-on collision. Full length arm rests within the car conceal chassis rails at elbow height for side collision protection. Cantelever roof beams which will support the car inverted combine with built in roll bars to support the roof without vision obstructing corner posts or side posts. Large circumference 7.50x20 tires give maximum protection at high speeds due to low heat generation. Tubes are filled with pure nitrogen.

The 74" tread width, center to center, compared with 62" for other luxury sedans gives unparalleled cornering characteristics. The rear center entry eliminates doors opened in traffic with the valuable side benefit of eliminating the wind noise and draughts of side doors. This feature also allows the owner to enter his car erect and with dignity. Brake drums are fully exposed to the air stream under the car for perfect cooling rather than being encased within the wheels. There are more than twenty other safety features unique with the Mohs which demand your inspection and careful consideration for conservative safe motoring.



100,000 mile tire life should be considered average.

MOHS
MOHS SEAPLANE CORP., MADISON, WIS.

Kit Foster contributed this 1975 Mohs Ostentatienne Opera Sedan advertisement. Only one of this model was ever produced around 1967 and was advertised until around 1976. This copy was signed by Mr. Mohs himself.