

SAH JOURNAL

The Newsletter of the Society of Automotive Historians, Inc.

July-August 1997

Issue Number 169

IN MEMORIAM: CHARLES L. BETTS, JR. 1908-1997

It is with both a heavy heart and a heavy hand that I must chronicle the passing of *Charles L. Betts, Jr.*, on May 13, a Founding and an Honorary member of the Society of Automotive Historians. Charlie left this world peacefully at Pickering Manor in Newtown Township, Penn., where he had resided since suffering a stroke four years ago. This will come as a great loss to the many who respected, loved and appreciated a great gentleman who was probably one of the great authorities of automobile racing for many decades and in which his interest and vast knowledge in that field of automotive history remained razor-sharp to the last day of his life. I do not believe I'm out of line in stating that his interest and work in the cradle days of the Society of Automotive Historians is a testament to him and his love of automotive history for its own sake. The request by his wife, Vicky, that I write these lines means a great deal to me, an honor which I shall cherish forever.

Charles Betts served the SAH with great fidelity and, in a very real sense, motivated it through its earlier years, always preferring to maintain a low profile in his herculean work in its behalf which, perhaps, is why it holds its head high today.

In the SAH, Charlie served for many years as secretary and later as vice president. He was awarded its highest accolade, "The Friend of Automotive History" in 1984.

A native of Philadelphia, Charlie Betts was graduated from Chestnut Hill Academy and in 1933 from Rensselaer Polytechnic Institute, in Troy, N.Y., this country's oldest engineering institution, from which he received his degree in Mechanical Engineering. He served as an engineer for Allstates Design & Engineering, Trenton, N.J., and later for United Engineers & Constructors—now a part of the Raytheon Corporation, from which he retired at 65. In the field of engineering, he was awarded the Byllesby Prize and was also the recipient in 1940 and 1941 of the McGraw Prize.

Charles Betts was active in the affairs of the Antique Automobile Club of America from 1950 to the time of his death, serving for many years as an associate editor of *Antique Automobile* and writing numerous book reviews as well as numerous feature articles. He was the author of five articles on automobile racing published by *Automobile Quarterly*, in addition to which he wrote prolifically for other magazines including *Motor Sport*.

A charter member of the Stutz Club, Charlie wrote the opening chapter, "In the Beginning: Harry Clayton Stutz," edited by *Raymond A. Katzell*, and was fortunate in living to see the book's publication.

In 1948, he co-authored the book, *Auto Racing Winners: An Historical Reference Manual of American Automobile Racing* with his brother, the late *William L. Betts*, today a coveted collector's item and, in 1957, he was the author of *American Vintage Cars*, published by the Sports Car Press of New York City.

He was also instrumental as serving as editor and advisor to *Dr. Julian K. Quattlebaum* in the latter's book, *The Great Savannah Races*, published in 1957.

In 1954, he was the recipient of the *Thomas McKean Trophy* by the Antique Automobile Club of America which is awarded annually for "Worthwhile Effort in

Automotive Historical Research on the basis of Accuracy, Interest to Club Members and Use of Research Material."

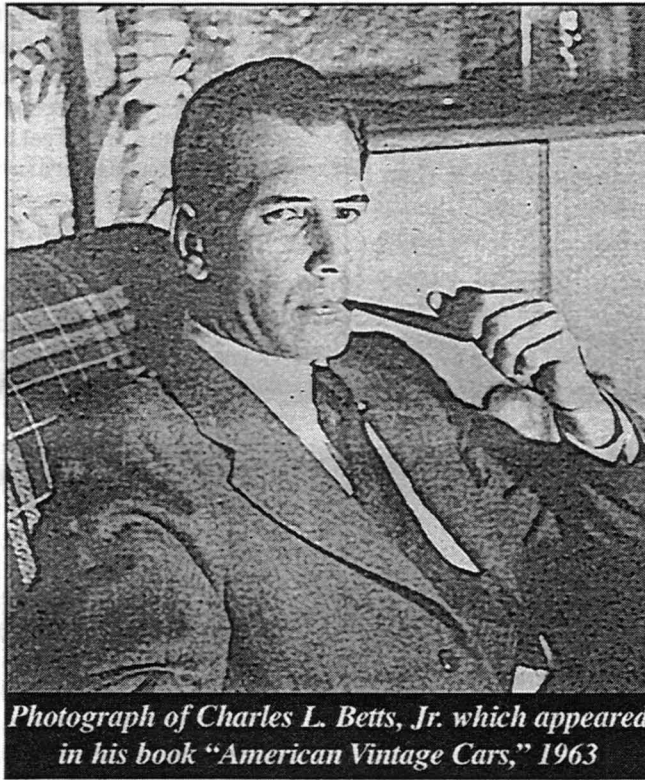
Charles Betts was a member of the Engineer's Club of Trenton, N.J., and was a communicant of the Episcopal Church of the Incarnation in Lower Makefield, Penn.

Survivors include his wife of 45 years, *Victoria Bedford Betts*; a daughter, *Susan B. Fegan*; five grandchildren; and a host of friends.

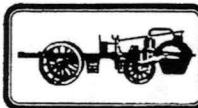
Funeral services were held May 19 at the Church of the Incarnation.

Thus, we draw the curtain on one who, in this writer's opinion, was a great man, a gentleman, a mentor, and one who left something of himself—a legacy, if you will—to anyone and everyone touched by the image of the motorcar, the countless ramifications surrounding it and its history, even as he did for so many years.

- Keith Marvin



Photograph of Charles L. Betts, Jr. which appeared in his book "American Vintage Cars," 1963



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EDITORIAL COMMENT:

NOTEWORTHY OR NOT

At what point does a car become historically significant? Is a car significant after one is built? After ten? After one hundred? Does the designer have to leave his mark on another vehicle also? Are some prototypes *not* significant? Who decides?

On the odd occasion that I mention a car that fascinates me, someone will invariably take the opinion that the mentioned car is not historically significant. Who's to say that Harley Earl didn't borrow someone's home-built car's fender design for a LaSalle?

All of the world's manufacturers have built prototypes and show cars for many years that never made it into production. Books like *Cars Detroit Never Built* and *Cars Europe Never Built* are filled with these cars. Even though these fantastic cars never directly made production, all of them can be directly related to cars that did.

But just like those factory built cars, pre-World War II home-built cars, to me, are noteworthy items. Anyone who built a car, for themselves or for sale, should be recorded, especially when the chassis, engine or other major components were fabricated exclusively for that vehicle.

Do kit-cars fall into that group? How about "turn-key" kit cars—ones built by the kit manufacturer based on the platform of another vehicle? Tucker built 51 cars and his production run is "noteworthy," but not many lists include Clenet or Gazelle or Consulier or Zimmer; all of which produced more cars than Preston's 51 Torpedoes.

Remember the Dale? This three-wheeled car was to compete in the economy car market of the early 1970s. Elizabeth Carmichael built the prototype out of wood and old car parts along with an Onan generator to sell car dealerships. She appeared on many television show like *60 Minutes* and, according to *David Burgess-Wise's* book, *Encyclopedia of Automobiles*, she took \$3 million in deposits.

Carmichael turned out to be a man and the Dale turned out to be a fake. Would the Dale have been noteworthy if it had not been accompanied by a scam?

What about modern cars modified for one market or another? The American market, in particular, is difficult to enter and nearly every car has been modified to be sold here. Citroëns are sold in many countries around the world, but not officially in the States since 1974. From 1986 to 1993, a small New Jersey company converted CXs and XMs for sale. While the CXs (known as CX Autos) were sold in numbers that may have exceeded 100, an estimated seven XMs were imported. The XMs featured door-mounted seat belts and headlights pulled from the Pontiac Grand Prix. This makes the American XMs unique, but does it make them historically noteworthy?

Will future automotive historians care that there were cars and trucks such as the Yugo, Aro, Beijing Jeep, Zil, Moskvovich, Lada, Proton, Timor, Samsung, Ssangyong, Hino, or Tropicia.

If cars like these are not significant, then what makes the AMC Pacer, Ford Granada, Oldsmobile Starfire, MG 1100, Volkswagen Type 411, Subaru Loyale, or Hyundai Elantra, and other well-documented cars, more important?

With all of the Society members who study and research Mercedes-Benz and General Motors and Volkswagen and, of course, Ford, I would never tell them that their niches are less significant than any other. I still find one-offs, prototypes, and home-builts along with Russian, Korean, Malaysian, and Eastern European cars very interesting. I hope that more people join me researching the backgrounds of these cars. Someday, I may be the world's preeminent Vector historian. I just hope, when that day comes, someone cares.

- Sam Fiorani, Editor

PRESIDENT'S PERSPECTIVE

"In all probability the world's automotive industry and its products are in the beginning phase of profound changes both in quality of autos built (and sold) as well as in automobile design." Thus wrote SAH founder and then-editor *Marshall Naul* in this publication some years ago, his words could have been said about many periods in our century, for the automobile industry has encountered its share of "profound change."

Henry Ford's assembly line (for which much of the credit must fall to Walter Flanders) was one such profundity. One could similarly nominate the Harley Earl-influenced emergence of styling which led seamlessly into the 1930s fetish for aerodynamics, or the development of the high-compression V8 engine. Still later, we could cite Sir Alec Issigonis's transverse-engine front drive Mini, which became (though not immediately) the pattern for a world's worth of cars previously hooked on Hotchkiss drive.

In fact, Marshall was writing in SAH's March 1974 *Newsletter*. The "profound change" to which he referred was the incipient downsizing of U.S. cars occasioned by the petroleum shortages of the previous few months, "[L]arge and very large automobiles are 'going begging,'" he wrote, "and the demand has changed its pattern from these to the smaller, compact and sub-compact autos...while no publicity has come to notice, it is likely the designs which were to have been the 1975, 1976 and later models for makes such as Cadillac, Lincoln and Chrysler have been scrapped and are now being modified."

Did this, in fact, occur? The '75 and '76 Caddies and Lincolns, after all, were still pretty big, "to some extent [it did]," notes historian-journalist *Mike Lamm*, citing the downsizing of the 1976 Cadillac Seville and all the 1977 GM B-body "full-size" cars (Chevy Caprice, etc.), "we all panicked."

In hindsight, it seems the more profound changes were yet to come. The 1980 conversion of the GM X-body cars to front drive and the steady evolution which followed is certainly one of them. The crux of Marshall's comments come in his final sentence; "it is hoped that some historian has realized the importance of this current phase, now only a few months old, and is keeping track of the important events which in the future may be judged to be as important as the Model T in the history of the automobile."

Many of us feel the seventies are less than interesting. Some feel the decade hasn't reached "historic" status; others regard the period as a low for civilization in general. Regardless of our feelings about the seventies, did we (or even *one* of us) record the events of those times?

To be sure, tomorrow's historians will be able to study the evolution of the industry through contemporary press reports, from *Automotive News* to the *Wall Street Journal* to the enthusiast press. The more determined scholars will be able to study corporate memos and correspondence (the Big Three *have* archived their records, haven't they?). What we risk missing out on is the people.

Historians and journalists have done fairly well with preserving and publishing the first-person accounts of 1950s engineers and stylists, and we are now seeing many recollections of the sixties. This is not before time; each month we see more obituaries of influential industry figures. Robert Bourke and Zora Arkus-Duntov are two recent examples. The men and women who presided over the profound changes of the seventies have been, by comparison, ignored. The people then at the height of their careers have now retired. Some of us know them (some of us probably *are* them, or, rather, *they* are us). We should be capturing their stories.

And what might the 1977 Cadillac have looked like?



The front page of this *Journal* notes the passing of founding member and long-time secretary Charles Betts. To me, Charlie *was* the SAH, from the time he answered my query for membership information. Within a few days of writing I received not only a membership brochure but also a letter from Charlie painstakingly explaining what SAH was and what it was not. What it *was* was just what I had been looking for; I became an enthusiastic member and Charlie became a good friend—supportive of my work and encouraging me to take a greater part in our organization. The rest, I might tritely (and immodestly) say, is history.

That SAH has the stature it does today is due in no small part to Charlie's perennial, unselfish work, often unsung and always with good humor. Charlie was the consummate gentleman. I never heard him utter a cross word about anyone, even when everyone else's tempers had simmered and boiled over. He was our friend, and we are the better for it.

- Kit Foster

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OBITUARY:

WERNER OSWALD (1920-1996)

This one of the world's finest automotive historians died in Stuttgart on December 20. Trained as an aircraft engineer, *Oswald* joined the staff of *Das Auto* in 1950, that magazine soon being combined with *Motor und Sport*. He began publishing his remarkably thorough and precise model histories of passenger and military vehicles in 1960. Among his best-known titles, all published by Motor Buch Verlag, are the marvelously detailed *Deutsches Autos: 1920-1945* (1979), *Deutsches Autos: 1945-1975* (1983), and *Mercedes-Benz Personenwagen: 1886-1984* (1985).

- Griffith Borgeson

Editor's note: As we prepare to go to press, word has come down that Griffith Borgeson had passed away on June 29. A more fitting memorial will follow in the next issue.

SAH MEMBERS ON THE MOVE:

JOHN PECKHAM

SAH founding member, *John M. Peckham*, of East Arlington, Vermont, has been hired by the American LaFrance Corporation of Cleveland, North Carolina, to set up the company's archives. American LaFrance, the world's oldest fire apparatus manufacturer, traces its history back to John F. Rogers, in Waterford, New York, who started building hand pumped apparatus in 1832.

The collection consists, primarily, of many thousands of documents from as early as 1873; approximately 3000 glass and 10,000 film negatives from 1903; motion picture films; a large quantity of engineering drawings; and other materials associated with the company's products, up to the present time.

The archives material will be sorted, indexed on computer, placed in the latest archival quality storage containers, and stored on state-of-the-art high-density shelving and cabinets, in a climate-controlled facility at the company's offices in North Carolina. In addition, a museum of approximately 20 pieces of restored fire apparatus from 1857 to the 1960s, adjoins the archives. Both units will be open by appointment only. For further information, write to American LaFrance, P.O. Box 39, Cleveland, NC 27013, or phone (704)278-6200.

American LaFrance is a subsidiary of Freightliner Corporation of Portland, Ore., which, in turn, is a subsidiary of Daimler-Benz AG, of Stuttgart, Germany.

ADDITIONAL NEWS:

THE HISTORY TENT RETURNS TO WAY 11-12

This year at Hershey, "The History Tent" returns to the White Field at spaces **WAY 11-12**. SAH merchandise and publications will be on sale and light refreshments will be offered. Come visit to chat with old friends, meet new ones, to get out of the sun (or rain), or just rest your feet.

This year we are promised a directory listing and will have a new sign to make us more visible. Come see us.

**VIENNA TECHNICAL MUSEUM:
WHAT GOES?**

Visitors to Vienna since 1993 have been disappointed to find that its Technical Museum is closed for renovations, with reopening scheduled for 1996.

Well, 1996 has come and gone and the Museum is still closed. *Ferdy Hediger* has provided us with translations from the 2/97 issue of *Austro Classic* which reflects the distress of the Austrian motoring community over the possibility that the Museum may split up its collection of historical vehicles, which remain dispersed and not publicly accessible, while its ancient locomotives sit rusting in the open.

Renovations are completed but politics are intervening in determining whether the State should present the history of transportation in Austria and provide funds for it. Rumors are that the motorcycles will go to Eggenburg, and the cars to Aspang or perhaps to Steiermark where Kröpfl, the Mercedes dealer, has acquired the Lutzky collection.

A consolation is that the Austrian Motor Vehicle Association has reclaimed its Siegfried Marcus car previously lent to the Museum (the second made), and put it on display in its rooms on the Schubertring.

- Taylor Vinson, with the aid of Griffith Borgeson and Ferdinand Hediger

**MARMON PRODUCTION
COMES TO AN END**

The past couple of years have not been good to long-standing heavy truck marques. First Volvo Truck stopped production of the White and Autocar brands (although Autocar continues as a model line), then Ford sold its AeroMax and Louisville truck models to Freightliner. Now comes word that Marmon has stopped production.

In 1904, Marmon produced its first cars. The famed Marmon Wasp won the initial running of the Indianapolis 500 race. Through the years, the company became one of the more prestigious manufacturers of cars. Engines grew in size as the years progressed, peaking with the depression-era V16s. By 1933, production of Marmon automobiles had come to an end.

Truck production continued with the Marmon-Herrington just in time for World War II. The Herrington name was dropped in 1963, when the Indianapolis-based company was purchased by Space, Inc. and moved to Garland, Texas.

According to the June issue of *rpm Magazine*, Ken and Carol Matuszak of Green Bay, Wisconsin, watched the final Marmon roll off of the assembly line. The Matuszaks couldn't wait to become the owners of the final 1997 model 125 DH R Marmon. That truck emerged from the factory during the morning of February 5, 1997, and the Matuszaks took possession around 11:30 am the magazine stated.

A fitting and personal tribute is painted on the side of the Matuszaks' truck; "Extinction of Excellence: The Last MARMON, Quality Hand Built with Sweat, Tears, Heartache and PRIDE. Garland, Texas 2-5-97."

JAGUAR BRINGS AN END TO V12 PRODUCTION

Jaguar introduced its first V12 engine in March of 1971. The 5.3L SOHC unit was used to power the E-type. On April 17, 1997, Jaguar built its last V12 engine. The 6.0L SOHC engine was installed into a 1997 Jaguar XJ12 sedan, which has been donated to the Jaguar museum. In the intervening 26 years, the company has produced 161,996 of the twelve-cylinder engines, making Jaguar the world's largest producer of V12 automotive engines. The company is now advertising that the plant and equipment to produce the engine (along with the inline six cylinder engine) are for sale. If you're in the market...

THE STEAM CAR FESTIVAL OF THE CENTURY

Following last year's event, the directors of the great annual Concours d'Elégance at Pebble Beach, California, decided to render special homage to the steam-powered automobile in its 1997 edition, to take place on August 17. Such an initiative is likely to surprise observers in many parts of the world. The once ever-so-promising steam car vanished from the European scene around the beginning of this century, while the fact that it once thrived is barely known in many countries. But in the USA, some 137 makes of steam car are known to have existed between 1897 and 1960, most of them prototypes or little more than that. The great makes, however, were less ephemeral, Stanley and White producing around 10,000 vehicles each. The most highly evolved of all—the brilliant, legendary Doble—remained in production from 1912 through 1930, with just 48 perfectionist pieces to show for its inspired labors. Of the grand maximum of steam cars which existed in the USA—say 25,000—fewer than one percent of that figure survive today.

The steam-car field today is thus one of extremely rare and refined specialization. In their wisdom born of decades of experience, the directors of the Concours turned the logistics of their planned steam conclave over the man who probably is the world expert in that field. He is a hefty, retired aerospace engineer named *James D. Crank*. Under his direction over 30 operational Stanley, Whites, and Dobles are scheduled to participate in August's steam spectacular, to be followed by a three-day reliability run through the splendid natural setting of the Monterey Peninsula.

This will be the most important concentration of steam-powered vehicles in the world for nigh onto a century, and nothing quite like it will ever take place again. Thus, anyone with a desire to acquire or add to his existing first-hand knowledge of the still-promising alternative of steam should be making his travel plans to Northern California now.

- Griffith Borgeson

ANNUAL BANQUET, OCTOBER 10th

As is our custom, the annual SAH banquet and awards ceremony will be held the Friday evening of Hershey weekend, October 10th. The event will again be held at the Country Club of Hershey, and will feature our traditional buffet menu.

Cost of the banquet will be \$28 per person—guests are welcome. Make your reservation early; send your check to SAH, 1102 Long Cove Road, Gales Ferry, CT 06335-1812.

BUGATTI GOES ON THE AUCTION BLOCK

In the late 1980s, Romano Artioli purchased the rights to the Bugatti name and decided to build a car to carry on the nameplate. His grand plan ran a long way with backing from such great organizations as Elf and Aerospatiale, as well as some anonymous sources. The car that emerged was a heroic attempt to make Ettore proud. Whether the car was a true continuation of the brand or not is still being debated. Something that cannot be debated is that the second coming of the Bugatti brand emerged during a tough market for ultra-expensive automobiles and the company went into receivership.

According to published reports in two major magazines, Artioli's automobile manufacturing plant went up for sale. The Bugatti nameplate remains in Artioli's possession, but nearly everything else has been sold.

The beautiful plant in Campogalliano, Italy was closed September 22, 1995. There it sat for nearly a year and a half before the doors were again opened to auction everything off. *Automobile* magazine offered photographs taken from the inside of the building; an area untouched (and uncleaned) for eighteen months. Both *Automobile* and *Car and Driver* reported a light coat of dust on everything in the building.

Car and Driver reported "office staff desks are littered with holiday postcards, inboxes now contain fading faxes, cigarette butts fill ashtrays, and rubbish bins carry the last day's detritus. Search, and you'll find poignant lists of 'things to do tomorrow,' phone calls that were never returned. Only Artioli's desk is free of debris, but then it was always like that."

Five unfinished EB110s remained on the assembly line. Four finished coupes sat ready to ship. Even the blue model first displayed at the Paris introduction in 1991 was there.

To repay the estimated \$60 million owed by the company, the first of a series of auctions was held on April 4 of this year. Since no one wanted to buy everything, the first EB110, the last coupes (*C&D* reported three GTs and one SS), and an unfinished model were sold for \$788,000 to a Luxembourg-based company (isn't Artioli's company based in Luxembourg?). The spare parts and machinery to build the chassis, along with some other equipment, sold for \$774,000, while the equipment and tools to build the V12 engines sold for \$1,212,000, according to the *C&D*. The building is all that remains for a later auction.

FRENCH INDUSTRY EXHIBIT

The French government and an anthropological foundation have come up with a unique concept to recognize the country's industrial patrimony: a general exhibit that travels around the country using local industries to illustrate its point.

Co-sponsored by the Ministry of Culture and the Maison Fondation des Sciences de l'Homme, the first application of this idea will be an exhibition in Lyon from September 11 to October 26, 1997. The purpose is to afford a better understanding of the world of industry and its past. The general exhibit will present the emergence of the notion of industrial heritage and the actions taken by the authorities to safeguard it, together with a history of the evolution of work conditions and social history.

The local enterprise that encompasses these ideas will be the Berliet Fondation, which is dedicated to the preservation of the history of all French commercial vehicles and that of the automobiles of the Rhone-Alps region. A number of the Fondation's more than 240 vehicles will be on display, together with individual engines. This will afford a unique occasion to experience "metallic memory" as the Fondation's president, Paul Berliet, puts it.

- Taylor Vinson

AREA CODES, AREA CODES!

The trickle of new telephone area codes, which was beginning when we published our last SAH Membership Directory, has become a torrent! Not a day seems to go by that we don't hear of some friend or relation whose phone number has been changed.

SAH will issue a new directory in late summer of this year, and we want it to be as up to date as possible. If your telephone area code has changed, or will change within the following few months, please let us know so that we may publish the correct number. We don't have maps of all the new code areas, so we have no means of updating unless you tell us. We're particularly concerned about codes which may have changed since the membership renewal period at the beginning of 1997.

Send notification to:

SAH Membership Records
1102 Long Cove Road
Gales Ferry, CT 06335-1812 USA

You may fax to (860) 464-2614 or email to foster@netbox.com if you prefer. Thanks!

- Kit Foster

SPANISH AUTO HISTORY FOUNDATION

Sometime ago, the Royal Automobile Club of Spain (Real Automovil Club de Espana) (RACE) established a "Cultural Foundation for Historical and Technical Study of the Automobile," known as "Fundacion RACE." The aim of the Fundacion is "to promote the worldwide culture of the car, and that of Spain in particular." To achieve that aim, "the publications, promote conferences, organize competitions and offer research prizes."

For the last four years, the Fundacion has awarded prizes for outstanding original and unpublished works pertaining "to the study of the automobile and motoring in Spain." The Fundacion reserves the right to publish an entry within a year of awarding a prize. We do not know if it has done so.

RACE was founded in 1903. The president of the Fundacion is Gustavo Saaverdra. The address is Jose Abascal 10, 28003 Madrid.

- Taylor Vinson

IT HAPPENED YEARS AGO...

One hundred years ago...

July 10, 17, and 24, 1897 - German magazine *Zeitschrift des Vereines Deutscher Ingenieure* outlined Rudolph Diesel's invention of a Rational Heat Motor.

August 21, 1897 - The Olds Motor Vehicle Company was founded. Olds was the first automobile company in Michigan.

Eighty years ago...

1917 - B.A. Mosling and William Besserdich founded the Oshkosh Truck Corporation.

Fifty-five years ago...

July 3, 1942 - Ford built its first supercharger (for the war effort).

Fifty years ago...

August 21, 1947 - Ettore Bugatti died.

Forty-five years ago...

July 1952 - General Tire and Rubber Company purchased Crosley Motors. Production of the Crosley car came to an end.

July 14, 1952 - General Motors debuted air conditioning.

Forty years ago...

August 26, 1957 - Ford Motor Company debuted the Edsel.

Thirty-five years ago...

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

Twenty years ago...

August 30, 1977 - Volkswagen began phasing the Beetle out of production in Germany.

Ten years ago...

August 4, 1987 - Chrysler Corporation purchased the American Motors Corporation. The carmaker reorganized AMC as the Jeep/Eagle division.

Five years ago...

August 1992 - English carmaker Jensen filed for bankruptcy.

AHR #31 DELAYED

Kit Foster reported that *Automotive History Review* No. 29 took four months to produce. That's not the kind of record his successor as editor wants to break.

Nevertheless, there has been a slight delay in No. 31. I deposited diskette, copy, and photographs on April 11 with the printer in Alexandria, Va., who had done us proud last year with the Duesenberg issue, hoping to have the magazine in hand by June 1. When the printer had done no more than transcribe the diskette into text galleys by June 9, I mulled it over then pulled the job on the 16th and gave it to a print shop in Washington, D.C. that same day. Progress since then has been reasonable. The issue will be the same size as No. 29, 28 pages plus covers. To the contents previously announced, we've added *Don Keefe's* article on Corvette's first V-8, not the production '55 covered by the current *Special Interest Autos*, but the virtually unknown experimental one of '53. It's a good story.

Optimistically, No. 31 now bears the date "Summer 1997."

- Taylor Vinson

DESIGN GURU'S LAST ASSIGNMENT WAS A SCANIA

by Conny Hetting

Editor's note: This article first appeared in Scania World Bulletin in the No. 2-1997 edition. It is with the kind permission of that publication and editor-in-chief Conny Hetting that it appears here.

Nuccio Bertone passed away in March at the age of 83. But his description of the significance of form to vehicle design still serves as the guiding principle for those men and women who work at his world-famous design studio outside Turin:

"A car is the result of a sensation, or rather, of a series of sensation. The most important of these is the sensations of surprise, prompted by the shape of the vehicle. If a car does not succeed in imparting this feeling to me, this feeling of 'wonder at first sight,' I'm almost sure that it will never become a success."

Work on Scania's 4-series turned out to be the last major project which Nuccio Bertone was involved in personally. Throughout his life he never designed a car himself, but like a superb conductor, he always had full control over his artists. Every drawing and model had to be stamped with his personal correction or adjustment.

Scania's new truck cab was shaped in an environment which was selected with immense care. Outside the world-famous design centre in the Susa Valley, an alpine brook babbles on its way down to the Po river. This is a smell of mountain air and fir trees and at the very top nearest the peak lies the cloister of Sacra di St. Michele, keeping a watchful eye over the world at its feet.

"Signore Bertone wanted it this way. For reasons of security the design department had to have a separate location. But in the bargain we benefited from a far more pleasant

working environment than we used to have in the suburb of Turin where Bertone's car factory is located," explains Stile Bertone's vice president and current head designer, Eugenio Pagliano.

When Scania came to the Susa Valley in the summer of 1988, Bertone had never developed anything bigger than vans and pickup trucks. But the step from small, fast sports cars to huge, heavy trucks was neither big nor complex. One of Bertone's basic ideas has always been that his company's designers should never specialize in car or industrial design. They should be able to work across the entire field and preferably blend impulses from the various disciplines.

Scania imposed a number of overriding parameters, for instance as regards functionality, shapes which must be able to be pressed in four stages, the ability to weld by robot, a lower air resistance and a smaller number of parts per cab. All the dimensions were fixed. The new truck should have a fairly futuristic and modern design but it should exude an aura of cleanness, strength and quality and still be clearly recognized as a Scania.

Scania's specifications naturally imposed a limitation for Bertone's designers. But this huge project started off with the studio receiving a free hand. This can be clearly seen when Pagliano shows us the initial free-roaming sketches.

"Naturally Scania had a more traditional set of requirements than these. Out on the roads the company's vehicles have a reputation for being extremely robust and reliable.

"We really felt Nuccio Bertone's involvement in this project. He always participated personally in all the shows. He always had views and opinions. He regarded it as a major challenge to design his first truck," remembers Kaj Holmelius, Senior Vice President and head of development and production for Scania's chassis and cabs.

In November 1989 Bertone was ready with the design of the 4-series and he began working on the quarter-scale model, which soon grew into a full-scale replica which could be built in modules—exactly like the finished truck was intended to be.

"Bertone and his design team really understood our modular system," says Kaj Holmelius.

But a lot of new thinking was necessary in the Susa Valley.

"The Scania assignment is without doubt the most difficult we have ever tackled here at Bertone. A modern truck is a kind of giant Meccano set where the components can be combined with each other in a huge number of variants. The designer has to bear in mind all the time. You can also compare today's trucks with a kitchen where a given number of components can be combined in virtually any way imaginable," says Pagliano.

Bertone also built a series of prototype cabs using provisional tooling, of which the first was delivered at the end of 1991. In autumn 1995 the new 4-series was ready for introduction. Three months later it received the accolade of the 'International Truck of the Year' and the Bertone-designed cab received immense praise by the jury.

"The Scania assignment has given us at Bertone a taste for this kind of job and we are more than pleased to continue designing trucks," says Eugenio Pagliano.

TRUCK BUILDERS OF POLAND 1945-1995

by Albert Mroz

Among post-war collectible Eastern European trucks and commercial vehicles still cluttering the back lots, sheds and side streets of longitude 15 to 30 east and latitude 40 to 60 north, the Fiat, Jelcz, Lublin, Nysa, San, Star, Syrena, Warszawa and Zubr have all been manufactured in Poland. During the 1950s when the Soviet regime greatly expanded industry in Poland, most vehicle design activity took place at BKPMOT, an acronym which translates to mean Bureau of Motor Vehicle Design. Indirectly, it has been the continuation of the pre-war PZInz motor vehicle design offices.



FSO was the first large automobile manufacturing plant built after World War II in Poland. To date, it is located in Warsaw, and although FSO translates to mean "Factory of Passenger Automobiles," pickups under the name Fiat, Syrena and Warszawa, each of them quite different, were also built there.

A smaller FSO R&D facility is located just outside Warsaw in Falenice where Deputy Directory W. Musz was kind enough to show me the museum in September of 1996. The collection includes numerous old prototypes, including an unusual 4x4 light truck, vans and pickups, but it is not open to the public, and since FSO is now in partnership with the Korean firm of Daewoo as of March 1996, I had to get special permission from the Company Director, Jin-Chul Suka, which was arranged by Marian Karwas, president of Auto Technika Publications. Even after these complicated arrangements, photography was not permitted, and I was not allowed to see the assembly plant. It was impossible to tell whether the atmosphere of secrecy is a hangover from the socialist era or the policy of the new Asian investors. Probably both. Visiting the GM plant was no problem.

FSO was originally organized in 1948 when the Soviet-controlled Polish government signed an agreement with Fiat to build cars in Warsaw. Such an arrangement had worked very well before the war, so it was logical to turn to Italy for licensing agreements, but Italy joined NATO and "strategic technology transfer" was disallowed. The Polish government soon found another partner for the license it was seeking. The new cooperation was to be with GAZ (Gorkovskij Awtomobilnyj Zavod) located in Gorki, U.S.S.R.

In 1956 my father travelled to the GAZ factory on business from FSO. The GAZ plant was established in 1932 when the Ford factory, first built in Berlin-Plotensee, Germany in 1926, was sold to the Soviet government, making room for a whole new Ford factory that Henry Ford was more than glad to sell to the German industry. (Henry Ford later accepted the Iron Cross from the Nazi regime).

GAZ trucks and passenger cars were entirely derived from Ford designs of the 1920s. The Gorki plant used Ford drawings with original logos for many GAZ component blueprints through the 1950s. This was nearly twenty-five years after the factory was moved there. Also, dimensions were still shown in inches on the drawings despite the fact that the U.S.S.R. had adopted the metric system.

The first GAZ trucks were called the GAZ-A and the second the GAZ-AA, the latter being 4x4 versions of the 1929 Ford Model AA truck. The twin bogie Model AAA was also built using a 50hp four-cylinder M-1 side-valve engine. These later became the GAZ-MM, which were squared-off military versions rolling off the assembly plant in 1938 until 1950. The GAZ-M1 got its start in 1936 and was based more on Russian design. The Ford-based GAZ chassis were used to build ambulances, dump truck, half-tracks and armored cars, among other applications. Several other larger GAZ trucks were built during and after World War II.

There are still a number of GAZ trucks in Poland, most of them acquired as military surplus, and some are being restored by dedicated new owners. The connection between GAZ and FSO became inextricable when the FSO factory was opened in Warsaw in 1951.

The Warszawa was actually a GAZ 20 Pobieda (meaning "Victory"), and when production plans were delayed at FSO, a few Pobiedas were brought from Gorki and the emblems were switched with "Warszawa" chrome plates. Some say that the 1951 M-20 Warszawa closely resembles the American Ford of that era. The Soviet government did not recognize Western European or American patents, and much technology was simply adapted without any authorization from the West; a policy that had the effect of really heating up the Cold War.

The Russians signed an agreement to help develop the factory in Warsaw so that it could be capable of a production number of 25,000 units per year. That number was not reached until 1965 when the combined production of the Warszawa and Syrena for the year was 27,000 vehicles. Parts were imported from the U.S.S.R. until 1956 when all components were manufactured at FSO.

By 1955, a pickup version of the Warszawa was introduced. It was powered by the same 50hp four-cylinder 2120cc side-valve engine and used the three-speed manual transmission that the sedan version used. Production of the Warszawa was 4,015 for 1955 and 6,105 for 1956, but these numbers were not broken down between pickups and sedans, both of which were interspersed on the same assembly line as can be seen from old photos.

In 1957, FSO introduced the Syrena ("Mermaid," which is also the emblem of the city of Warsaw), and this passenger car was also built as a pickup. The Syrena was entirely an FSO design. Models 101 and 102 were powered by a 27hp 746cc two-cylinder two-stroke engine and had a four-speed transmission. Production amounted to 200 of the front-wheel-drive Syrena from the first year. A three-cylinder two-stroke engine was introduced for the Model 103. Commercial versions were called the Syrena R20 pickup or Model 105 Bosto van.

By 1960, production of the Syrena jumped up to 4,025 while 14,825 Warszawa vehicles were built, including ambulances, taxis and police cars. Both Warszawa passenger cars and pickups were exported to Eastern Bloc countries as well as Thailand, Vietnam and Indonesia, among other Far East countries. Photos show barges carrying both sedans and pickups down the Vistula River to be later loaded onto ships at Gdansk where Lech Welesa and Solidarity got their start.



In 1964, the Warszawa was updated as Model 223 and Model 224. Thus far, only the grille and interior had changed over the years, but that year the entire rear section of the car was redesigned to a "notch back" from the earlier "torpedo back," also allowing for a station wagon configuration, both with a four-cylinder overhead-valve engine designated as S-21. The station wagon version was used for commercial cars including ambulances and police cars. Most of the Warszawa and Syrena pickups were furnished with a canvas canopy, reflecting the weather conditions of Northern Europe.

The Polish government continued to look West for its partners, and in 1968 another agreement was reached with Fiat to produce vehicles under license at FSO. For 1968, the Fiat Model 125p production in Warsaw was 7,101. A unique pickup version was also introduced with either a four-cylinder 1300cc engine or a more powerful 1500cc unit. The Fiat 132p was also produced at FSO. The year 1972 was the last year the Syrena was produced (with 22,134 as the production number), and the Warszawa's production ended a year later with only 4,266 units for that year.

Star trucks began production in 1947 in Starochowice, a city in central Poland. The first Star trucks were designed in Warsaw and built nearby, and the very first 2-ton Model 20 was powered by an 85hp four-cylinder engine. The truck was quickly upgraded for heavier hauling and a 100hp gasoline engine was adapted until 1961, when a diesel engine was also available. The Jelcz and Lublin marques were also built in Poland, but these have been heavier trucks with capacity up to 32 tons by 1978.

The year 1958 was the year two light truck makes began production in Poland. From 1951 in Lublin, the 2-ton GAZ-51 was built (with a Lublin emblem) at the location of the earlier MW LRL factory. A multi-purpose quarter-ton covered express by the name of Zuk came off the assembly line seven years later. It was designated as the Model A-03, and soon a whole list of iterations (including vans, pickups, ambulances) under the model numbers A-05, A-06, A-07, A-13, A-14 and A-15 went into production. They were powered by the S-21 four-cylinder engine.

The other new make of 1958 was the Nysa, named after the city of Nysa in Poland. At first, the factory built bodies for other makes in Poland. Then the Nysa light commercial van and microbus, with similar applications as the IHC Travelall and GMC Suburban, began production in 1968. A variety of Nysa half-ton capacity vehicles were built under designations C-521, F-521, M-521, S-521 and T-521, again powered by the four-cylinder S-21 engine. These older Zuk and Nysa models are now out of production, but many are still on the road taking care of business.

In recent years, Poland has become a hotbed of auto and truck production. The Jelcz factory assembles Volvo heavy trucks which are marketed throughout the European continent. The Polonez has been built at FSO as well as the tiny Fiat two-cylinder 600, and General Motors has an assembly plant next door to FSO in Warsaw.

Presently, GM is building a one-million square foot factory in Gliwice in Eastern Poland. Star has modernized its design and production and continues manufacturing. Mercedes-Benz Vito light commercial vehicles will be assembled at Jelcz according to the latest licensing agreement, and the Korean Daewoo firm has made an enormous investment. Under free enterprise, modernization and commerce is moving forward at an amazing pace in Poland, leaving behind, among other things, old cars and trucks for the historians and true vehicle enthusiasts.

CAR SPOTTING IN MEXICO

by Michael MacSems

Have you ever seen a 1997 Dodge 6500, a 1985 Valiant Volare or a 1983 Ford Elite II? All these and more await the alert car spotter who travels south of the tortilla curtain. Like Canada, the Mexican branches of the US Big Three often offered unique national models to their local lineups. It is interesting to note that creation of unique Canadian and Mexican models often came about for opposite reasons. In Canada the Big Three each operated dual dealerships (GM's Chevrolet-Oldsmobile and Pontiac-Buick; Ford's Ford and Mercury; Chrysler's Chrysler-Plymouth and Chrysler-Dodge), and had to clone similar models for both sets of dealers. In Mexico, US manufacturers had to distill a large range of models to meet the needs of a single dealership program. When I visited central Mexico this past January I knew that I wanted to catalog as much of Mexico's unique automobile history as possible. As free trade policies begin to internationalize the Mexican motoring scene, I feel that it is important that some record be preserved of the unique vehicles built during the "golden years" of import substitution (early 60's to early 90's). The following is a condensed version of my notes based on personal observation, ads found in old magazines and Mexican used car guides. I am sure that there are many nuances that I have missed.

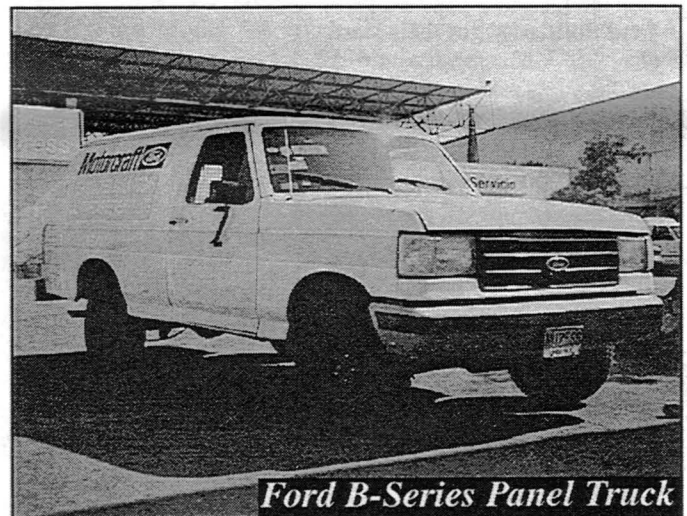
GENERAL MOTORS

In the early 1960's GM offered the Chevrolet Impala and the Opel Rekord. The Chevelle was added in 1964. The Chevrolet Nova did not replace the Opel Rekord until circa 1973. The Chevrolet Caprice was introduced in 1974, and replaced the Impala for 1976. The Chevelle was dropped for 1977. The unique 1978 Chevrolet Concours was a Nova with a Buick Skylark front clip, the Nova line was dropped in favor of the Malibu for 1979. The Chevrolet Monte Carlo was offered between 1981 and 1984. Chevrolet Citation and Celebrity were introduced for 1982. The Caprice and Malibu were dropped around 1982. The Buick Century was added in 1983. The Citation departed after 1986. The Celebrity was replaced by the Oldsmobile Cutlass circa 1989. The Chevrolet Cavalier was introduced in 1990, some models, including a Z-24, used Pontiac Sunbird trim. Based on the German/Brazilian Opel/Chevrolet Corsa, the tiny Chevy Swing was introduced for 1994 and a notchback sedan version called the Monza has been added for 1997.

In the realm of trucks, Mexican Chevrolet pickups are distinguished by short wheelbase models (an industry standard) and, until the late '80's, a simpler taillight and tailgate design than that seen in the US. The new style Chevrolet trucks were not introduced in Mexico until 1992. Current model Chevrolet trucks use a GMC grille with a Chevrolet emblem, similar styling ideas were offered in the 1980's. Some DINA trucks use Chevrolet bodies. Through 1991 a light duty C- Series Panel was available. US style Suburbans were introduced circa 1986. The current Silverado is similar to the US Tahoe. GM offers no trucks larger than medium duty.

FORD

In the early 1960's Ford offered the Galaxie, the 200 (which was a Falcon by another name) and German Taunus 17M. The Taunus was gone by 1964. The Mustang was introduced for 1965. By 1966 the 200 had become the Falcon and was eventually replaced by the Maverick. Ford LTDs, circa 1977-78, sported a unique Lincoln-Mercury style grille. The LTD was replaced by the Ford Grand Marquis circa 1983. The Fairmont replaced the Maverick in 1978. The 1981 Fairmont Elite wore a Mercury Zephyr front clip; eventually all Fairmonts did this. Circa 1982-83 the Ford Elite II was offered. The Elite II was a Fairmont with a Granada (Fox generation) front clip. Fox generation Mustangs ceased production after 1984, but not before integrating a number of Mercury Capri body panels and styling bits. Thunderbird and Cougar were both introduced as Ford models for 1985. Ford Topaz was introduced for 1984. The Topaz was a hybrid of Ford Tempo and Mercury Topaz styling. The 1992-94 Ford Ghia was a Mercury Topaz in all but name. The 1986-89 Ford Taurus was a Mercury Sable. The Escort was introduced for 1994. The Contour and Mystique are built in Mexico for North American consumption. Late model imports such as the Grand Marquis and Sable carry Mercury logos but not badges; blue ovals grace the trunks of all Ford built cars.



Ford B-Series Panel Truck

Ford Pickups used 1957-60 style boxes through 1966. Tailgates and taillights of the 1967-72 period ran through 1979. Production of Panel trucks and Carry-All type wagons lasted until the mid 1990s. The new style F-Series pickups have not been introduced yet; US F-350s now come from Mexico. In recent years imported Rangers, Econolines, Aerostars, and Windstars have become available.

CHRYSLER

By the mid 1960s Chrysler was building Valiants and Darts as well as midsize Plymouths and Dodges in Mexico. Of particular interest are the 1965-67 Valiant Acapulco (including a 1967 Hardtop), and a deluxe version of the 1967 Dodge Coronet which sported a Dodge Charger front clip. The Barracuda was offered for 1967-69. The Plymouth name

was dropped for 1970 with the focus on Dodge and Valiant vehicles. The 1970-76 Dodge Dart Hardtops used a unique, flying buttress type, C-pillar. The full-size Dodge Monaco was introduced in 1970 and ran until about 1977. The Valiant name would hang on in Mexico until 1985 and the Dart until 1990. The rear wheel drive version of the Dodge Dart and the Valiant Volare lasted through 1982. An interesting model from that period is the Volare Coupe which mated a Volare front clip to a LeBaron body. The "K" car period is confusing, with the early Darts and Volares using the opposite grilles and trim from their US Aries and Reliant counterparts. For 1986 the Dodge and Valiant marques were dropped in favor of the Chrysler badge. However the Chrysler badge had already been available on LeBarons since the late 1970s. Between 1986 and 1992 the Mexican version of the LeBaron coupe was sold as the Chrysler Phantom. During the late 1980s the two door version of the Dodge 400 was sold as the Chrysler Magnum, and Dodge 600 was sold as the Dodge Dart. The Chrysler Shadow was introduced for 1989, the Spirit for 1990, and the Stratus/Cirrus for 1995. A wide range of imported Chrysler cars, including the Neon, Intrepid, Concorde LHS and Voyager, are now available.

In addition to the standard short wheelbase Dodge pickups, a extra long version was offered, through the 1980s, using what appears to be the 1957-60 style Ford beds. Ramcharger production continued in Mexico until 1995, and was very popular in 2WD form. A popular current pickup is the sporty Ram Runner. Unlike in the US, medium duty truck production never ceased in Mexico. The current Ram 6500 is based on the new Dodge truck cab design.

VAM

Vehículos Automotores Mexicanos began building AMC vehicles under license around 1965 (earlier Ramblers had been sold in Mexico by Willys Mexicana). Ambassadors were not available, but nearly every other AMC model was. The Rambler marque was to continue in Mexico through 1974. The Classic nameplate hung around until at least 1976, and the American and Gremlin monikers through the end of production in 1983. Unique styling bits began to appear towards the end of the 1970's. Of particular interest is the rare 1981-82 Lerma which was a stretched version of the US Spirit Liftback. A diehard AMC fan is needed to discover and catalog all of the unique vehicles built by VAM in its last five years of operation. There are still a lot of VAM cars to be seen on the streets of Mexico City. VAM also built Jeep vehicles, which are now offered by Chrysler. VAM's disappearance seems to be due to the Renault takeover in 1984 (which introduced the Alliance and Encore) rather than the later takeover of AMC by Chrysler.

OTHERS

The two other major players in the Mexican auto industry are Volkswagen and Nissan. In addition to the modern cars that it exports to the US, Volkswagen still builds the Bug and a version of the 1968-79 Van. Nissan began building Bluebirds in Mexico in the early 1960s and now concentrates on a popular version of the Sentra called the

Tsuru and light pickups. Renault left Mexico after the Chrysler takeover. Large Borgward sedans made a brief, but noteworthy, appearance in Mexico in the late 1960s.

This is the end of my condensed notes on the cars and trucks available in Mexico during that country's three decades of "import substitution" laws. Certainly there is a lot more to the story of the Mexican auto industry than simply a list of models available. If others have details or insight to add, it would be most welcome.

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CYLINDER BLOCKS

by Jan P. Norbye

All due credit to Henry Ford for choosing to give his Model T a one-piece four-cylinder block with detachable head, although that was not a Ford invention. Ford was the first mass-producer of such engines, however, dwarfing the numbers turned out by any other manufacturer. Moreover, Ford's example served as a real trend setter, for after 1908, the one-piece four-cylinder block was soon adopted by auto makers that formerly preferred their cylinders cast separately or in pairs.

Thomas Flyer beat Ford into production with its four-cylinder one-piece block on the Model 4-20 of 1908, and the same construction principle spilled over into the 1909 Chalmers-Detroit. The Regal Underslung, Hudson Model 33, and the EMF-built Flanders 20 followed in 1911.

The 1912 Hupmobile Model 32 and the 1913 Oakland Model 35, Studebaker 25 and 35 had new four-cylinder engines, cast-en-bloc, showing the way for the 1914 Chevrolet Royal Mail. On the other hand, Packard, Buick, and Cadillac dropped four-cylinder engines in favor of in-line sixes or V-8s before adopting one-piece block construction.

European precursors include the 1907 Clement-Bayard 1.6 liter 10-12hp model and the 1907 Laurin & Klement 16hp Type F. Eager followers include Fiat in 1908; Loreley, Benz and Opel in 1909; Mathis and Waverly in 1910. But the prior art turns out to be even richer in both substance and chronology.

Renault had an experimental four-cylinder engine with a one-piece block on trial as early as 1903. But that's not where it all began. From 1902 through 1904, Panhard-Levassor produced several sizes of cast-en-bloc four-cylinder engines for its cars, but reverted to individually cast cylinders in 1905. It would be interesting to learn why.

Napier of London, never a mass-producer, chose a different metallurgical path for its 16hp (RAC rating) car of 1902, whose four-cylinder engine had cast-iron liners in a one-piece cast aluminum block, with a detachable head. Two years later, Napier extended this type of construction to its new six-cylinder model.

Continuing our search further back in time, we find that Amedée Bollée, Jr. had made a gray-iron cast-en-bloc four-cylinder unit for a new car in 1899. He was, of course, the elder son of steam vehicle pioneer Amedée Bollée, Sr. And since the Bolleé family's bell-foundry at Le Mans dated back to 1842, what more logical source could there be for the advances in casting techniques that made one-piece engine blocks of any size applicable to automobiles a practical proposition. I would be surprised if any prior art from another source could be unearthed.

SCANNING THE WEB

Here's an automotive web page to peruse.

Hudson History Site:

www.classicar.com/clubs/hudson/hethome.htm

HISTORIC ENGINEERING DRAWINGS COMPUTERIZED RESTORATION IN THE ALFA ROMEO ARCHIVES

The structural drawings of ALFA and Alfa Romeo racing and passenger cars for the period 1910-1950 number about 30,000 pieces and they still are consulted occasionally for purposes of historical reference, including the restoration of vintage machines.

This collection recently has been organized and inventoried within a larger project, promoted by the Fiat Group, for the safekeeping and valorization of all the documentation of the Companies of the Group.

After studying different proposals, Alfa Romeo decided upon computer restoration and the possibility of having a digital catalog of the entire collection. A Milanese specialist firm named Telesma was appointed to design the project and, as a start, to apply it to a selection of 500 drawings.

This pilot project provides for the classification and computerized restoration of all drawings of first ALFA car, the 24 HP, plus a selection of drawings of Alfa Romeo's immortal and first Grand Prix racing car, the Tipo P2 of 1924. Three months were allotted for the completion of this task.

The basic classification was made, starting from analysis of the documents. A new database architecture was then designed, establishing all of the categories essential to the description of ancient technical drawings and their state of conservation.

The electronic acquisition of this material presented many difficulties due to the physical characteristics and condition of the original drawings. They were extremely fragile and had to be handled with great care. Some were in pieces, which had to be painstakingly fitted together. Overall dimensions varied from 200 x 840 mm to 1350 x 1000 mm, although most were 750 x 550mm.

Damage to be dealt with included humidity stains, deterioration due to light or dust, fading and creases. Tears, holes, and unacceptable previous efforts at restoration then were rectified by reconstruction: the addition of missing portions by computer enhancement where possible. Great care was taken to include all notations which might be of importance, not excluding those made by pencil.

All of the restored drawings now are classified in a digital catalog.

The authors of this project, Sara Calubro and Giorgio Menzio of Telesma Srl. and Edoardo Rovida, a professor at the Milan Polytechnic, state: "We are very happy to have participated in the restoration and preservation of this cultural heritage for future generations. This was complicated, although by the capabilities of electronic media and their integrated parts it became possible. This work required the integration of intellectual resources and skills normally related to different fields of knowledge. The application of technical, graphic, and archival disciplines was fundamental to the completion of this project. Their concurrent action enhanced the pursuit and creation of alternate solutions. It underlies the critical success which, for this kind of activity, will grow very much in the future."



- Griffith Borgeson

HISPANO-SUIZA, by Ernest Schmid d'Andrès. 1997. 208 pages with hundreds of illustrations, many in full color. Hardbound with slip-case, 12 x 9 1/2 in., text in French and English. ISBN 2-909413-23-2. Published by Editions d'Art J.P. Barthélémy, Paris-Besançon, France. Price (in France) FF450.

Hispano-Suiza is certainly one of the most respected names in automotive history. Whereas plenty of articles on single models or cars and brief histories of the company have been published over the years, there is definitely a lack of Hispano-Suiza books compared with other makes. The now rare and expensive book by Jonnie Green, published in 1977 by Dalton Watson, the two profiles on the Alfonso XIII and the J12, and rather detailed chapters in various books for a long time was about all that was printed in English. Then came, three years ago, the magnificent first volume *La Hispano-Suiza* by Emilio Polo covering the period of 1899-1915 from Spain. In France, there was a rather limited edition of *Les Automobiles Hispano-Suiza des origines à 1949* by Paul Badré and the neat little booklet *Toute l'histoire Hispano-Suiza* by the same author. An even more elusive thin volume on the Hispano-Suiza company by Michel Polacco covering also the important aviation field and the late activities was published in 1993.

Ernest Schmid has aimed at a complete automotive history of the famous marque for the historian but also for the generally interested amateur of fine cars. The book by Green contains an impressive collection of various body styles with only little text and technical details. The Spanish book by Polo is very detailed and a dream for any historian but probably too scholarly and too expensive for the casual reader. It also covers the history only until 1915. (The second volume is expected but has not yet been announced.)

The new book holds enough historical and technical information to please the serious student and plenty of black and white and color photographs, some by undisputed masters of the trade, to provide pure enjoyment to the connoisseur and lover of fine old cars. In addition, there are many fine reproductions of paintings and drawings by Geo Ham and others, some of them especially made by the artist Vaclav Zapadlik, and of posters, advertisements, catalogues, etc. It can be considered to come very close to perfect conversation piece in the field.

Assuming now that there is only little fresh information in the new book would be wrong. Ernest Schmid has conducted a

thorough research on the early years of the professional education of Marc Birkigt, the co-founder and technical director of Hispano-Suiza. He then gives a good insight into the early operations in Barcelona, the development of new models, the factory, the racing, and the market. The activities in France follow with the famous models H6, J12 and K6, which truly made Hispano-Suiza one of the greats in automotive history.

These last twenty years, many fine Hispano-Suiza, which had escaped the breaker's yard and survived the second World War, came to light and were restored. A so far unparalleled selection of such cars is shown in superb color pictures. The fine *Automobile Quarterly* comes to mind with which the book not only shares the broadside size but also the quality of printing and the choice of detail pictures and full page photographs of complete cars.

Are there no blemishes at all? I think only few, indeed. Once more the register, which should be rather easy to establish in times of computers, is missing. There are minor errors, some of them typographical, some due to translation and the lack of time, but I could not find any serious ones at first reading. The author welcomes any documented corrections. He lists all the people who have helped and the picture sources but it would not have been wrong to also add a bibliography. (The sources are sometimes mentioned in footnotes)

A very well produced, handsome, and fine book—strongly recommended to all readers and amateurs interested in Classic Cars (in any of the multiple meanings the term has acquired over the years.)

- Ferdinand Hediger

ALL CORVETTES ARE RED: The Rebirth of an American Legend, by James L. Schefter. 1996. 384 pages plus 8 color plates, 21 color photographs. Hardbound, 6 1/2 x 9 1/2 in., ISBN 0-684-80854-4. Published Simon & Schuster, New York. Price: \$24.95.

The fifth-generation Corvette, or C5, was conceived in 1988. Around the same time, James Schefter approached Bob Stempel, then chairman of General Motors, about following the product development of an automobile from concept to production. When Mr. Stempel returned Schefter's message, the subject of such a project had been narrowed down to one car, the new Corvette.

Projects like a new Corvette don't come along every day. Since the early 1950s, only five all-new models have worn the Corvette badge; the most recent being introduced in the spring of 1983. Since the C4 (fourth-generation Corvette) was already six years old when work began on this book and the C5 project, Schefter jumped at this once-in-a-lifetime chance.

Schefter was given open access to all offices and meetings having to do with the progress of the C5. He had access to parts of GM that some corporate vice-presidents weren't allowed to enter.

The attitude presented in *All Corvettes* is decidedly pro-Corvette and anti-corporate structure. Constant shifts in personnel and focus force the core Corvette team become a tight-knit group, while the higher-levels of GM's executive structure seem to constantly work against the team's progress.

With the Corvette as the star, people like Cardy Davis, Joe Spielman, John Cafaro, Russ McLean, and Dave Hill become the heroes.

The C5 is on the road and on sale at dealers across the United States. This fact gives away the ending of the book, but the events between 1988 and 1997 make for a very interesting read. What began as a thirty-month research project turned into a eight-year career.

Schefter shows the reader what is wrong with American automotive corporate structure and that there are people within that structure who want to build great cars. Those people should be proud of the effort that they put forward. The people who make up the bureaucracy that stands in the way of these efforts should read this book and allow the engineers and designers do their work.

- Sam Fiorani

AMAZING PATENTED INVENTIONS, by Will Hanna. 1997. 612 pages, 200+ black and white illustrations. Softbound, 8 1/2 x 11 in. Published by Jack William Hanna Enterprises, Inc., 320 East Maple, Suite 244, Birmingham, Michigan 48009. Price: \$119.95.

Improving transportation has become the desire of Man ever since he created the wheel. Wheels led to carts. Carts were harnessed by oxen and horses. Carts were improved by the use of better axles and wheels. Power was improved by internal and external combustion engines.

But Man has never been satisfied.

The cover of this book illustrates the great distances that people have gone to to improve our modes of transportation. Or, at least, attempted to improve it.

From the "Vertical Flying Machine" and "Gravity Propelled Vehicle" to the "Ground Effect Vehicle" and the "Plasmatron-Internal Combustion Engine System," Will Hanna's book covers the patents of many a person's idea on how to improve our modes of transport.

Each section covers one patent, in complete detail. All "unedited drawings and specifications as approved by the United States Patent Office" are here. Some of the patents date back to the late 1800s, but many are from the 1950s through the 1990s. More than 70 patents are included in this book.

The self-published book is printed on 8 1/2 x 11 in. paper and velo-bound with clear plastic covers for protection. This is not a multi-billion dollar outfit with their leather-bound editions. But the relatively simple format showcases these inventions in a format that fits the topic very well. Mr. Hanna's Patentbook collection also includes "What's New in Airbag Designs" as well as four books on knife and cutlery patents.

This is by no means a book for everyone. Mr. Hanna has compiled an interesting collection of odd and interesting inventions. Many of these will never see production on a grand scale, this compilation will not allow these inventions to die. If you are interested in automotive (and general transportation) oddities, check out this book.

- Sam Fiorani



A Few Words of Thanks

I love being overwhelmed! And I can't recall being quite so overwhelmed as I've been in the past two months by the outpouring of good wishes from my friends in SAH.

Would that I could reply to all of the cards and letters individually, but to do that would mean that I couldn't return ardently to the cause of automotive history, which I've been away from for too long—or do much of anything else for that matter.

So I hope all of you will accept this thank you for your thoughtfulness, which means a lot to me. It's just nice to know that I have so many friends. Camaraderie is what our Society is all about.

My recovery continues apace. My sister Sharon gave me a perfect kidney, and I haven't had a whisper of rejection to date. It really feels good to feel good; I'd almost forgotten what it was like. I have this euphoric feeling of well being which is just wonderful—and I truly believe I'm on the threshold of a new life.

Here's to the joy of automotive history. **Beverly Rae Kimes, 215 East 80th Street, New York, NY 10021.**

Editor's note: While attending the Concours d'Elegance of the Eastern United States one month to the day of Bev's operation, I heard a voice. It was the unmistakable voice of Beverly herself. I was shocked. I went to greet her and she looked wonderful. I am still in awe of this lady. When I told her that her health should come before hosting a car show, she told me, "My surgeon said that it was okay." Bev, our thoughts and prayers are with you for continued health and happiness.

-Sam Fiorani

About Undated Newsletters

Taylor Vinson's item in the latest *SAH Journal* mentions that *Newsletters* No. 26 through 29 were not dated. It had been (and still is) my habit to note the date of receipt on all literature sent to me. If it's any help to the Society, the *Newsletters* in question were received as follows:

No. 26 - September 28, 1972

No. 27 - November 30, 1972

No. 28 - February 12, 1973

No. 29 - May 23, 1973

Bernard J. Weis, 135 Edgerton Street, Rochester, NY 14607-2945.

Diesel Data Desired

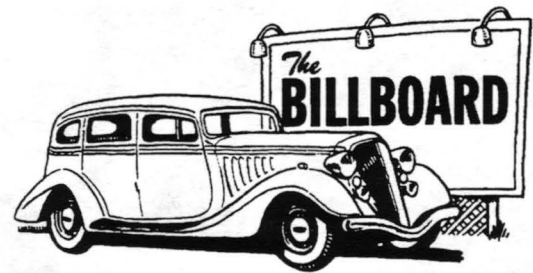
The repair of diesel engines is my job, and diesels are also my hobby. I am trying to make an inventory of all the diesel engine factories (former or present) in the world. It is very hard work.

Do you know where in USA I could find diesel information (books, repair manuals, technical information, periodicals)? I am interested in engines for cars, trucks, boats, and industrial uses, old and new. Is there some book in the USA, like the French *Revue Technique*, which each month or two presents a repair manual of a new engine, truck, or agricultural tractor? Is there a periodical on old trucks and agricultural tractors?

Do you know how many factories have produced diesel engines in America, and perhaps their names and locations? Is there some source who can tell me?

I hope you have some answers to my questions. Thank you very much. **Yanick Saunier, rue du Tureau, 63200 Malauzat, France**

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 ad manager Sam Fiorani, P.O. Box 7073, St. Davids, PA 19087-7073 for display ad rates.



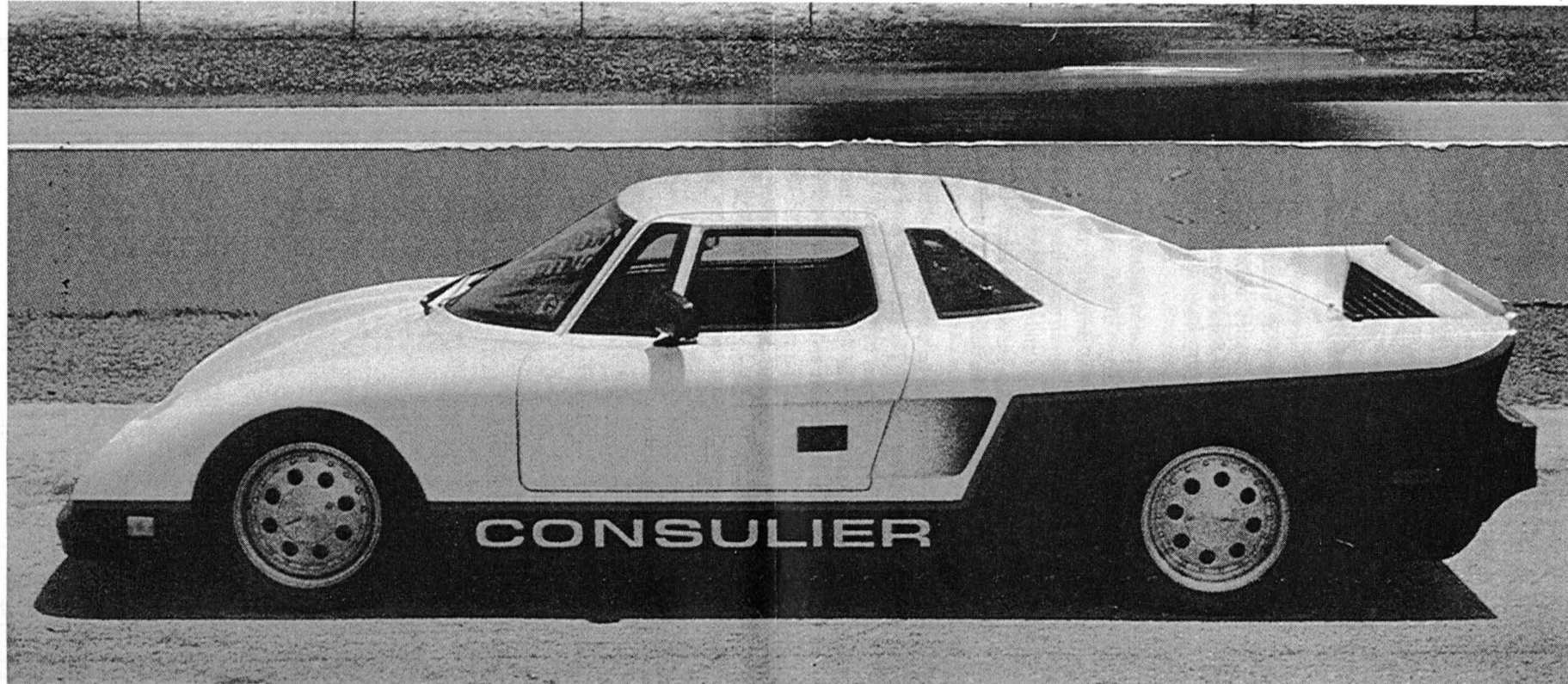
WANTED: Photocopies of detailed photographs or drawings of Nicholas Cugnot's 1769 Steam Tractor. Any material that could provide detailed information on this vehicle would be appreciated. **Sam Fiorani, P.O. Box 7073, St. Davids, PA 19087-7073. Fax: (610)277-2505.**

WANTED: To share information about highway smudge pots, the kerosene-burning flares used to mark road construction projects as early as ?? and as late as the 1970s in some locales. I'd specifically like to learn more about the number of makers and various styles of smudge pots. Does anyone besides me collect them? **Curt McConnell, 921 "E" St., Lincoln, NE 68508. Phone: (402)475-2234.**

WANTED: Information on the Comet V-8 racing car and the Leland Scott Special. The cars may have been built during the 1910-1912 period by Elbert J. Hall. Leland Scott, of Hall-Scott Motor Car Company, may have owned both cars. Are the Comet and the Special the same car or are they different cars entirely? When and where were they made? Also, specific details about them. **John Perala, 1407 South 59th Street, Richmond, CA 94804-5005.**



This photograph was taken at the Greenwich (Connecticut) Concours d'Elegance in May. This car, on display by Road & Track magazine, is a 1971 Momo Mirage. I was told that this red car was powered by a Ford V8 and is one of only 5 four-passenger coupes produced. Georgano's book stated that it had a 5.7L Chevrolet V8, Stanguellini-built, Frua-designed body and a GM automatic or ZF manual transmission. Apparently, plans for this Italian car stopped when American certification became too difficult. - from the editor's collection



CONSULIER

2391 Old Dixie Highway
(407) 842-2492

Riviera Beach, Florida 33404
(407) 845-3237 FAX

Not known for the car's good looks, the Consulier was noted for its prowess on the track. A racing-inspired monocoque chassis gave the car an extremely low curb weight (1950 lbs. according to this postcard. Power came from a 175hp Chrysler 2.2L Turbo II engine giving the vehicle a quoted 0-60 mph time of 5.3 seconds. Mosler Industries, the car's manufacturer, later changed its name to Consulier. This model's successor was powered by a 300hp version of the Chevrolet Corvette's LT1 5.7L V8. Mosler (and Consulier) advertised that the Consulier and the later Intruder were banned from certain racing series.

- From the editor's collection, special thanks to Elliot Kahn