

THE JOURNAL

OF THE SOCIETY OF AUTOMOTIVE HISTORIANS, INC.

March-April 1986

Issue Number 101

THE MIDWINTER BOARD MEETING

The midwinter meeting of the SAH Board of Directors was called to order at 11:15 a.m. on Friday, February 7, 1986, at the Franklin Plaza Hotel in Philadelphia by President Keith Marvin, who welcomed everyone who had managed to make it in spite of the snowstorm. Present were Charles Betts, George Ward, Shelby Applegate, Perry Zavitz. Tom Bonsall and Beverly Rae Kimes.

George Ward passed out copies of a detailed, seven-page Treasurer's Report which showed that the Society is in good shape. A motion was made by Charles Betts and seconded by Tom Bonsall that the report be accepted without objection.

Charles Betts, membership chairman, reported that renewals were coming in well, but that about 100 members still had not renewed their membership. New members are being received at a regular rate. Although recruitment at Hershey was minimal, as a result of several newspaper articles we did get a number of new members. Our attrition rate is dropping. At the moment we have about 550 members.

Keith Marvin gave the report of the Awards Committee. Jim Wren is in charge of the Jim Bradley Award. Matt Joseph has not yet appointed a third member of the committee to serve with him and Bill Cameron. Nominations for the Friends of Automotive History Award will be solicited by mail by the president.

The president reported that he has been working with Kit Foster, Chairman of the Publicity/Public Relations Committee, to increase visibility of the society. Press releases were sent to hometown papers of the Cugnot Award winner. We have also had good coverage recently in the automotive press.

The Annual Meeting was discussed. Howard Applegate and Lowell Paddock have notified the board that they do not wish to run the auction in 1986. There was some discussion of having the auction every other year. Beverly Rae Kimes observed that the membership seems to prefer the annual meeting to be a social and informal event rather than a serious event with an after-dinner speaker. A short, informal fun event seems to be desirable.

Since the auction makes about \$1,000 each year, there was a discussion of how we could raise the same amount to cover expenses of the Annual Meeting without having the auction. Tom Bonsall suggested that since publishers and distributors contributed heavily to the auction they might be willing to contribute money in lieu of books. He volunteered to solicit contributions from publishers, distributors and vendors. George Ward suggested that we have a sit-down dinner instead of a buffet, which would help to keep the price down for members.

Under old business it was reported that John Conde has suggested that a brief history of SAH be included in the new directory. It was agreed that this was a good idea, and that John was highly qualified to prepare it.

Perry Zavitz reported on a proposed SAH International Meeting at Oshawa, Ontario, on May 2 and 3. The meeting

will include a tour of the General Motors of Canada car plant and a tour of the Canadian Automotive Museum. He will see that a mailing is prepared for Dick Brigham to send out inviting all members to attend.

The new business portion of the meeting began with a discussion of chapter liaison. The board discussed the different types of chapters and how they perceive their purpose. The sense of the board was that a chapter's reason for being should be based on the needs and desires of the local chapter. The society acts as a conduit for information exchange among members. Tom Bonsall expects to be in California on business and hopes to visit with some members of our very active Southern California Chapter.

The membership secretary reported that he is continuing to send names and addresses of new members directly to Dick Brigham so that they can be printed in every issue of the *Journal*, in order for members to keep their directories up to date. The only limitation is available space in the *Journal*.

The president will give Beverly Kimes a list of editors and museums to whom to send complimentary copies of our publications, in order to give the society more exposure.

Among the board members caught in the snowstorm en route was Tom Warth, but he had submitted by mail a proposal to the board to jointly sponsor with Classic Motorbooks a Literature Swap Meet the first Sunday after Labor Day at Osceola, Wisconsin. After a discussion of the geographical problems, the board concluded it was not feasible for the widely scattered board to organize this. The president will contact Matt Joseph to determine if the Wisconsin Chapter might organize the meet on our behalf.

The meeting was adjourned at 4:00 p.m.

Respectfully submitted,
Shelby C. Applegate,
Secretary

THE FRIEND OF AUTOMOTIVE HISTORY AWARD

The Friend of Automotive History Award was inaugurated several years ago. It is the highest award that the Society of Automotive Historians can bestow upon an individual, recognizing lifetime achievement and dedication to the cause of automotive history. No further explanation is needed than to say that the first three Friend of Automotive History Awards were presented to Henry Austin Clark, Jr., Charles L. Betts, Jr., and Richard and Grace Brigham. Although the award is not necessarily an annual one, the SAH Board of Directors began preliminary discussions regarding an award this year at its February board meeting.

Your participation is invited. Keith Marvin would be happy to receive your nomination for consideration for this important SAH award. Simply write to him at Apartment A-13, The Village One Apartments, 587 Broadway, Menands, New York 12204.



Editor		Editorial Office: SAH Journal	
Richard B. Brigham		1616 Park Lane, N. E. Marietta, Georgia 30066	
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Beverly Rae Kimes, Chairperson		John A. Conde	
George B. P. Ward, Jr.		Frederick D. Roe	
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SOCIETY OF AUTOMOTIVE HISTORIANS' OFFICERS, 1986			
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Charles L. Betts, Jr. 2105 Stackhouse Drive Yardley, PA 19067		George B. P. Ward, Jr. c/o Maryland National Bank P. O. Box 987 Baltimore, MD 21203	

STATEMENT OF INCOME AND EXPENSE FOR THE YEAR ENDED
DECEMBER 31, 1985
(UNAUDITED)

GENERAL FUND

<u>Income</u>			
Dues		\$ 9,771.98	
Interest		481.98	
Sale of publications		226.20	
Contributions		137.35	
Annual meeting receipts		<u>2,030.00</u>	\$ 12,647.51
<u>Expense</u>			
Printing		\$ 2,629.55	
Typesetting and layout		2,105.00	
Postage		1,671.49	
Mail service/supplies		584.78	
Telephone		204.60	
Advance a/c Secretary's expense		98.10	
Directors' meeting expense—Philadelphia		179.50	
Annual meeting expense		2,380.94	
Corporate expense		10.00	
Office supplies		28.61	
Xerox		38.13	
Refund of dues		20.00	
Liability insurance premium		462.00	
Advance a/c 1986 banquet		250.00	
Advance a/c publication expense		15.57	
Other		<u>198.93</u>	<u>10,877.20</u>
Excess of Income over Expense			<u>\$ 1,770.31</u>

STATEMENT OF FINANCIAL POSITION AS OF DECEMBER 31, 1986
(UNAUDITED)

ASSETS

<u>General Fund</u>			
Maryland National Bank—Commercial Growth Account	\$ 7,969.84		
T. Rowe Price Prime Reserve Fund	207.44		
Advance a/c Secretary's expense	123.50		
Advance a/c Publication expense	15.57		
Deposit a/c 1986 Board meeting	79.50		
Deposit a/c 1986 Banquet	<u>250.00</u>	\$ 8,645.85	
Awards Endowment Fund:			
T. Rowe Price Prime Reserve Fund		3,909.84	
Publications Endowment Fund:			
T. Rowe Price Prime Reserve Fund	\$8,048.50		
Vanguard Money Market Trust:			
Prime Portfolio	5,490.00		
Federal Portfolio	<u>5,478.77</u>	19,017.27	
James J. Bradley Memorial Fund:			
T. Rowe Price Prime Reserve Fund		<u>2,658.63</u>	
TOTAL ASSETS			<u>\$34,231.59</u>

LIABILITIES and NET WORTH

<u>Current Liabilities</u>		\$ -0-	
<u>Net Worth (Fund Equities)</u>			
General Fund		8,645.85	
Awards Endowment Fund		3,909.84	
Publications Endowment Fund		19,017.27	
Bradley Memorial Fund		<u>2,658.63</u>	
TOTAL LIABILITIES and NET WORTH			<u>\$34,231.59</u>

AWARDS ENDOWMENT FUND

Income: Interest	\$ 255.33		
Expense: Award plaques		1,043.33	
<u>Excess of Expense over Income</u>			<u>(\$ 788.00)</u>
Note: Auction proceeds added to fund for years 82, 83, &85			<u>\$ 3,310.00</u>

PUBLICATIONS ENDOWMENT FUND

Income: Interest	\$ 1,398.03		
Expense: Awards plaques		-0-	
<u>Excess of Expense over Income</u>			<u>\$ 1,398.03</u>

JAMES J. BRADLEY MEMORIAL FUND

Income: Interest	\$ 222.22		
Expense: Award plaques		\$ 470.60	
<u>Excess of Expense over Income</u>			<u>(\$ 248.35)</u>

THE NEW MEMBERSHIP DIRECTORY

The new 1986-1987 SAH Membership Directory is in the hands of the printer, and your copy should reach you shortly. It is being sent to all members whose dues (due January 1, 1986) are now paid for the forthcoming year. Two notices have already been sent, and all members who have responded are listed by name, address, telephone number(s), and special interest.

Further renewals, additions and corrections will continue to be listed in each issue of the Journal.

CONCERNING THE ZUST RACING CAR OF 1908

This letter, and the accompanying item which follows it, were contributed by Bruce R. Ledingham, 1716 Beach Grove Road, Delta, B.C., Canada V4L 1P3. These pose interesting questions as to what ever became of the Zust car which participated in the New York to Paris Race in 1908, and if indeed the car still exists.

Some years ago a good friend of ours, Buck Rogers, was visiting in Dawson City, Yukon Territory, an early gold mining area which was a center of a gold rush in 1898. Buck found the remains of a Zust car in Dawson City and had the bits and pieces shipped to his home in Vancouver.

The parts have been in storage for years. However, at the prompting of some of the other members of the local Antique Car Club, he has turned them over to a well-qualified restoration member of the club, Harry Blackstaff.

Harry went to work immediately and contacted several people living in Dawson, with the result that other parts have been located—amazing, after all these years. The car is a 1906 model Zust, four-cylinder Model (25/45?).

It is an interesting project, and certainly a coincidence if the Dawson car is actually the race car of 1908.

REGARDING THE NEW YORK TO PARIS RACE IN 1908

The race started in New York on February 12, 1908. Six entries started but two dropped out soon after starting. The four remaining entries included the Thomas Flyer (USA) and the Zust (Italy) along with a German and a French car.

It is a matter of record that the Thomas Flyer won the race July 30, 1908. Sometime in August, 1908, the Zust arrived in Paris and was awarded second place. The Zust was then taken to England to be displayed for a short time.



The burned-out remains of the Zust at Bromley Station, England, 1908

SOUTHERN CALIFORNIA CHAPTER TO MEET JULY 9th

The Southern California Chapter will get together at 7:30 p.m. on July 9th for a program entitled "Record Books to History Books: Hudson 1932-1954" to be presented by Wayne Graefen. Wayne is a long-time member of the Hudson-Essex-Terraplane Club and recently joined the Southern California Chapter of SAH.

If you would like to attend, contact Steve Richmond, 9677 East Las Tunas Drive, Temple City, CA 91780, or call (818) 285-3102 or (818) 445-6429.

In the fall of 1908, while fuel was being drained at Bromley Station in England, the Zust caught fire and was badly burned. It was deemed repairable and was supposed to be returned to the factory in Italy, after which the Zust was to be displayed at a Paris show.

The Zust never made it to the Paris show; however there is mention of it leaving England, but no destination is indicated.

There is also record of a repaired Zust being raced in America.

Does anyone know what happened to the burned Zust from the New York to Paris race?

The remains of a 1906 Zust, an identical model to that of the race car, have been found in northern Canada. Could this car have been connected in any way to the New York to Paris racer?

Anyone with theories, facts, pictures or related information is asked to contact one of the following:

Harry Blackstaff
R. R. 2

Ladysmith, B.C., Canada
VOR 2E0

Phone 604-245-3075

Bruce R. Ledingham
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Delta, B.C., Canada
V4L 1P3

Phone 604-943-7712

MARMON-HERRINGTON RESEARCH IN PROGRESS

Don Chew, 15201 Havana Street, Brighton, Colorado 80601, has a formidable task in the works: a 50-year history of Marmon-Herrington vehicles and Marmon trucks entitled *Everywhere Wheels Can Turn*. How formidable it is the following excerpts from a recent letter will indicate.

"Marmon-Herrington did so much—the first 6x6 trucks manufactured, the first mass-produced (Ford) vehicles converted to 4x4, 6x4, and 6x6. By 1938 they had over fifty-four models of Ford alone! Plus all the military trucks/tanks/tractors, each of them unique and special. Not to mention the Desert Coach and "Big Trucks" for the Damascus-to-Bagdad run and the Imperial Petroleum Company. The gigantic expansion of the old Duesenberg factory, all the war business and special projects, balloon winches and air-borne tanks is part of it too. After the war there were the fantastic trackless trolley coaches and the company's rise to third place among worldwide builders, producing over 1500 units in nine years. Scenicruiser project, as well as the one-of-a-kinds with all-wheel drive. Over the road truck development came in the Sixties, and remember that all this time the company never slowed down the Ford Conversions.

"Moreover, during the Fifties there were thousands of airport crash trucks of all sizes. Reconstructing events around the 1963 sale and split-up of the company divisions is a delicate subject and difficult to get anyone to speculate about or relate facts on, even to this day. Then the project splits to

cover the present M-H company from 1963 to the present, and the parallel development of the Marmon truck of today. It's all most interesting and technically stimulating. I never tire of it. It's just getting the whole thing shaped to a book of reasonable size and not leaving anything out that takes a bit of finesse. Slowly I advance with all early 4x4 development around Art Herrington's history now totally completed in substantial detail. To reference every place Art Herrington worked and all projects and developments in which he was involved consumed the better part of three years. He was always at the right place at the right time. He had all "the right stuff" fifty years before the phrase was born. The vastness of this project about a virtually unknown company is incredible; 2500 pictures is what I wanted to include in the book to tell the story. Realistically, I am now down to 950, with 750 being a goal. It hurts everytime I pull one out. Several members of SAH have unselfishly shared their homes and their time to help me research, and they even educated me on just how to do the project correctly. I'll never be able to say just how much that has meant to me, and this work. I am slowly but steadily making it to the completion."

LETTERS

THE BACKUS WATER MOTOR COMPANY

From Max Gregory, RMB 8825, Drouin South, Victoria 3818, Australia:— The item "The Peculiar Cars of the Backus Water Motor Company" in *Journal No. 100* attracted my attention as I have recently been making a study of a large (584 p.p.) work, *American Gasoline Engines since 1872*, by Charles H. Wendel, published in 1983 by Crestline. In this the Backus Water concern is shown as having been a builder of stationary engines since 1891. Their fading away after 1900 could well have had much to do with their foray into motor vehicles. The comment about the standard of construction also ties in with the aim of simplicity of construction in the engines.

As I have not seen this book mentioned in the SAH *Journal* I would draw attention to the fact that a great many early automotive concerns and personalities are featured in connection with gas engines, and the development of the internal combustion engine is traced via Wendel's continued reference to a complete run of the *Patent Office Gazette*.

Apart from the Backus Water, some other connections relating to matters raised in recent issues of the *Journal* include Tunison of Los Angeles, the Valley Boat and Engine Company, and the Port Huron and Upton concerns.

This letter is prompted by the thought that many threads of automotive history in the United States could be found amongst the hundreds of references in this book, and probably would be best not to leave this book solely to the old engines, tractors, and machinery brigade.

THE HUPP-YEATS ELECTRIC

From V. F. Elliott, Reynolds-Alberta Museum, Wetaskiwin, Alberta, Canada T9A 0R8:—It was indeed a pleasant surprise to see our 1911 Hupp-Yeats on the back cover of Issue No. 100. For your information, the Hupp-Yeats is one of 860 major artifacts acquired by the Reynolds-Alberta Museum from the Stan Reynolds collection. 190 of these artifacts are cars and trucks.

The Hupp-Yeats is in original condition, with less than 400 recorded miles since it was purchased new in Victoria, British Columbia, in 1911. We are shipping it to Expo 86 in Vancouver, British Columbia, where it will be on display in the transportation theme roundhouse from May 2 to October, 1986.

WILLYS-OVERLAND IN MINNESOTA

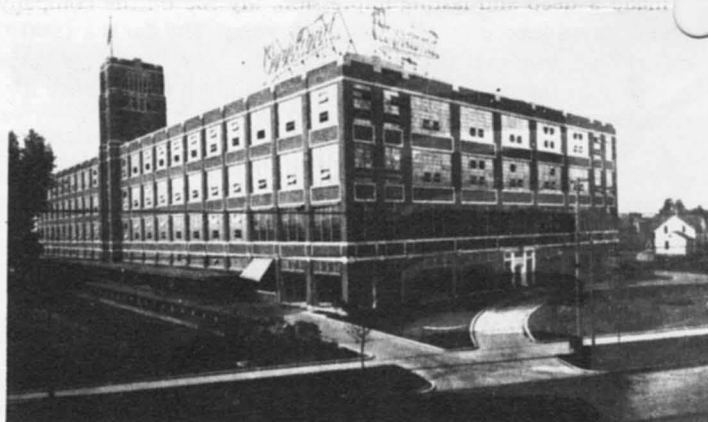
A follow-up of a 1977 article

Back in 1977 *Automotive History Review* published a list of cars and trucks made or assembled in the State of Minnesota, based on "A Catalog of Minnesota-Made Cars and Trucks," by Alan Ominsky, which appeared in the fall issue of *Minnesota History*. The list included the names of 48 makes of vehicles, and included the names of Overland and International.

These inclusions prompted a lengthy letter from our favorite nit-picker and pygalgia, who, over the years, has called attention to more than a few of our errors, and in some (but far from all) cases we had to concede that he was right. In this case, however, he questioned the presence of the names of two brands: ". . . but Overland and International? I can find no indication that either of [these] firms ever built a truck, bus or car in the State of Minnesota. Maybe someone will inform me when this event happened, if it did."

We responded with an Editor's Note, quoting some very substantial references which pretty well confirmed Ominsky's list. Now, through the courtesy of the Willys-Overland-Knight Registry, we have a photograph of the former Overland plant at 2572 University Avenue, St. Paul, Minnesota, as it appeared at the time that the Willys-Overland Company was producing automobiles there.

Built by Willys in 1915, the building was used by the United States Government for aircraft training in 1917. Willys-Overland reoccupied the premises in 1919 and assembled cars there. Later, from January to October 1929, International Harvester built about 30 Six-Speed-Special trucks a day at this facility.



Overland cars were assembled in this St. Paul, Minnesota, factory

ADDITIONS AND CORRECTIONS FOR YOUR NEW MEMBERSHIP DIRECTORY

Since your new membership directory was printed there have already been some changes. New memberships have been received, and many of those whose membership had lapsed have renewed and been reinstated. It is also probable that there have been some last-minute address changes.

Therefore, included with your copy of the directory you will find an extra loose page on which these new or renewed memberships are listed, along with any changes of address received by April 15, 1986.

This extra page will make your directory as up-to-date and accurate as it is possible to make it.

Also, if you change your address, please notify Charles L. Betts, 2105 Stackhouse Drive, Yardley, PA 19067, as promptly as possible. This will help us to make sure that you don't miss any issues of your SAH publications.

STEAMING TO A LAND SPEED RECORD

by James D. Crank

Jim Crank, of Redwood City, California, is a new member of the Society of Automotive Historians, but an old hand at automobile history, steam car lore specifically. Though absolutes are tricky business, one might say absolutely and with scant fear of contradiction, that Jim is unique among SAH members in two particulars. He owns a steam automobile company. And he designed the car that currently holds the steam land speed record.. Obviously Jim Crank has a great story to tell, but he didn't want to tell it at first. "Quite honestly, I find this sort of thing embarrassing," said he. Jim prefers remaining in the background. By profession he is a mechanical engineer for Lockheed, responsible for dynamic satellite electric power systems with both nuclear and solar heat sources. His steam car work is strictly an avocation, the sort of design exercise one does simply to prove that it can be done. When the margin of design error is less than five percent, as it was in the Crank-designed steam record car, the challenge is irresistible.. Having Jim tell us his story was irresistible to us too. Finally we persuaded him to put embarrassment aside by appealing to the historian in him. This is history, said we, and should be told. The results of our persuasion follow.

My steam cars activities go back to 1949 or so, and I owe my education to Barney Becker who took a wet-nosed kid under his wing and taught him all about Doble steam cars (and his Doble E-14), and steam in general. That wonderful education continued right up to Barney's death in early 1986.

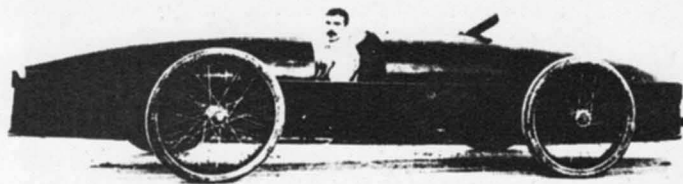
I am absolutely devoted to the Doble. From the beginning, the quality and silent, powerful majesty of these cars made a deep and lasting impression. My file on the company and its vehicles is large: a negative collection of well over two hundred 4 x 5's of the cars, factory and people, a lot of Doble company file material, original drawings and all the remaining lab notes in Abner and Warren Doble's handwriting. I am now writing what I hope will be the definitive history of Doble. I also own Doble Steam Motors Corporation, having bought the old firm and its name simply out of love and respect for the cars.

The steam car I own, however, is a White, a 1910 Model O-O touring. I came very close to owning a Doble a few years ago, which brings us to the record car part of the story, in sort of a roundabout way.

As is well known, Fred Marriott in a Stanley steam car set the land speed record in 1906 by traveling 127.659 mph over the sands of Ormond-Daytona. It was the first time any automobile had traveled at the rate of more than two miles a minute, and eclipsed the previous record made less than a month earlier by a gasoline car on Arles-Salon road in France (Victor Hemery driving a Darracq at 109.65 mph). The Stanley used the King-Kong hemi of its day: a Model K 30 hp engine, 30-inch boiler, 34-inch wheels and 1:1 $\frac{3}{4}$ overdrive in a semi-racer body.

A year later the Stanleys decided to raise their own record, but the beach was rough and Marriott crashed, though miraculously he escaped death. That was enough for the Stanleys. They eschewed any further attempts.

No doubt either White or Doble could have broken the Stanley record, but chose not to. The Stanley run in 1906 effectively advertised what a steam car could do, which was enough for the Stanleys who didn't care to pay for advertising at all. And White went over to gasoline cars exclusively in January 1911. As for the Dobles, financial problems plagued their venture prior to the First World War, and didn't improve much



This is the Stanley steam car which in January 1906 established a world's speed record of 127.659 miles per hour, shown here with its driver, Fred Marriott, at the wheel. The car was powered by a 2-cylinder double-acting steam engine with a bore and stroke of 4 $\frac{1}{2}$ x6 $\frac{1}{2}$ inches which developed 250 horsepower.

The speed record for steam-powered cars established by this car remained unbroken until 1985.

after. Moreover, knowing Abner Doble, merely breaking the Stanley record would not have been sufficient. It would have had to be the land speed record or nothing. And the British had it rather well in hand, Malcolm Campbell breaking 150 mph in 1925, Major Seagrave breaking 200 mph in 1927.

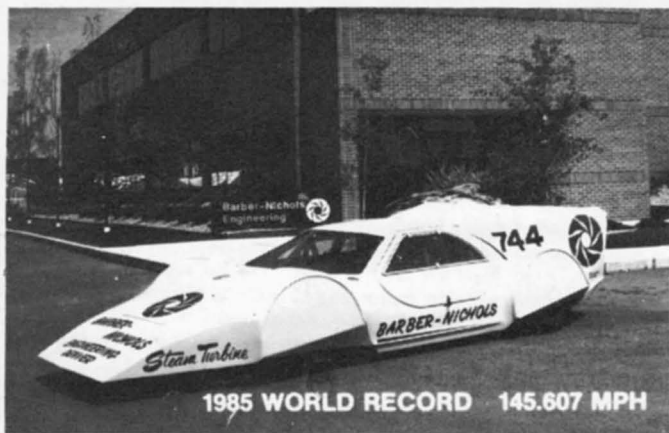
So the Stanley run of 1906 stood as a steam car record for decades, as the world moved with resolution and seeming irrevocability to gasoline cars exclusively.

There were those who tried to revive interest in steam as a road car motive force, of course, the Williams Engineering Company of Ambler, Pennsylvania, in the early Sixties, and later Bill Lear who had plans for both a steam car and a steam bus, though ultimately he abandoned them.

When Bill Lear dropped Lear Motors Corporation, one of his vice-presidents picked up the pieces and formed L.M.C. Corporation in Reno, Nevada, primarily to pursue a deep well high-temperature pump for hot brine recovery in geothermal power production and the use of flywheel energy storage for mine vehicles. Since I was then development and test engineer for Lockheed's flywheel bus project, I was able to consult with L.M.C. on market potential in various applications. When Del ran into fatal financial problems, he called me and offered all the remaining steam hardware. I bought it—about three tons of goodies—and trucked it home just one day before L.M.C. went bankrupt and its door was locked by the local sheriff.

Until that Lear hardware came along, there had been nothing light enough or powerful enough to even contemplate breaking the old Stanley record. But now I had it. And also the enthusiasm of Rick Fugueroa, production manager of Fiberfab Corporation, who thought a record car might be an effective way to advertise his company's product. So I got to work.

Two pieces of the Lear hardware were vital: a 5000 lb/hr (pounds of water evaporated per hour) steam generator and a 250 hp turbine (the Barber-Nichols spare from the Lear steam bus project). Fiberfab contributed its Aztec chassis and body (of which I used only the center section) and sponsored me for a while, until the people in the executive offices realized that such projects require long development and lots of money—and dropped out. I continued with my own funds. There were problems, of course. I never could get the Lear Motors' recirculating hot gas vaporizing-type burner to work properly or dependably, so after many trials and tribulations it was removed from the car. Then I designed a more conventional air-jacketed type of tangential nozzle burner. Since it showed a reluctance to light when cold, my method was to use one nozzle as a continuously burning pilot light, cutting the other three in or out by means of the controls. We frequently had to hold a piece of sheet metal over the blower intake and slowly pull it away when lighting up. The blower motor drew 260 amps at 24 volts, put out 8.25 hp, pumped 1400 cubic feet a minute at 8-inch pressure, and screamed like a siren. But



This is the car that broke the Stanley's record which had stood for 79 years, by averaging 145.607 miles per hour over an officially timed two-way run on August 19, 1985.

it was a complete success.

The feedwater pump had three cylinders, overspeeded about twelve percent. In order to match the consumption characteristics of the turbine, it was driven by a Salisbury variable speed transmission, 16 hp, 3:1 ratio, working backwards. This accelerated the water pump when starting from rest, but by about 60 mph the ratio changed back to 1:1. It worked just fine. A small Hypro pump with its own DC motor was used to prime the boiler when cold.

The car had no transmission. Instead, power was taken directly to a 1974 Cadillac Eldorado front-wheel-drive differential with a ratio of 2.73:11. Since the turbine output shaft and the differential input shaft could not be directly connected because of space limitation, the turbine was arranged to drive the pinion gear via a Reynolds 2½ inch silent chain, the ratio mismatch corrected by making the chain drive an overdrive.

For the front end, I used Volkswagen suspension with torsion bar trailing ends. The Cadillac differential (used at the record car's rear end, as mentioned) was mounted unsprung upon the advice of several people who had run at Bonneville, the salt flats having already been decided upon for the record attempt. The car was fitted with Corvette disc brakes at the rear. Front brakes were not fitted, but a 14-foot parachute was.

Some of the development work was done at the old Doble factory in Emeryville, incidentally. And I will cheerfully admit that the long hours and occasional problems began to get me down after awhile. But then Bill Harrah heard about the car and asked if he could acquire it after the record to join the electric- and gasoline-piston-engined record holders in his collection. We negotiated a trade: his Doble E-23 for my race car. I was delighted, naturally, and returned to work with renewed vigor. But then, sadly, in 1978 Bill Harrah died, and the person subsequently charged with administering his estate would not honor Bill's commitment to me. I was devastated, stopped all work on the car and put it in storage. The incentive for continuing was gone.

For some time previous, however, Bob Barber of Barber-Nichols Engineering had made it plain to me that should I ever decide to abandon the car, he wanted to buy it. So I did just that—sold the car to Bob. He made a few improvements, including the installation of a propane pilot. And on August 19th, 1985, he got behind the wheel in Bonneville, Utah, and averaged 145.607 mph over an officially timed two-way run.

At last the Stanley record of 1906 had been broken. I was delighted to see it happen. The dream made reality, I could get back to working on my Doble book.

BOOK REVIEW

AMERICAN STEAM-CAR PIONEERS, by John H. Bacon. 131 pages. Profusely illustrated. Softbound, 6" x 9¼." The Newcomen Society, 412 Newcomen Road, Exton, PA 19341. \$13.95.

The Newcomen Society at Exton, Pennsylvania, named for Thomas Newcomen who invented the steam engine in 1712, operates the Thomas Newcomen Library and Museum in Steam Technology and Industrial History. This book is the story of a handful of steam-car pioneers in the earliest days of American steam-car development after the first experimental vehicles showed that horseless road transportation by steam power was a viable medium of transportation.

Its author was that rare combination—a crack researcher and a talented writer and, before his untimely death at 35 in a 1958 plane crash, he had amassed considerable material and recorded his findings in a scrapbook which was presented by his family to the Newcomen Society following his death.

There is a good deal of material here dealing with those fascinating days during which the steam automobile passed from the experimental stage to a successful product, and a good deal of it came from the horse's mouth, so to speak, for Bacon sought out a few surviving builders of early vehicles and got their recollections first hand.

Some of the names are more familiar than others: W. W. Austin, Sylvester Roper, George A. Long, George Eli Whitney and the Stanley twins, F. E. and F. O., to name a few. There might even have been a secret for longevity in fussing with steam car design, as Long and Whitney lived to 102 and 101 respectively.

The various accounts combine material taken from personal interviews to quotations from contemporary periodicals and magazines. This is an especially readable book, and combines concrete facts as known to a not-as-well-known insight of the challenges, accomplishments and setbacks of the times in the collective efforts of those visionaries who paved the way for everyday motor transportation.

Keith Marvin



Jim Crank with his 1910 White steam touring car, Model 0-0

FIRST NATIONAL AUTO MUSEUM IN BELGIUM TO OPEN IN BRUSSELS

In June 1986 the first national auto museum of Belgium will be opened in Brussels under the name "Autoworld." This museum will hold the complete collection of one man: Ghislain Mahy of Ghent, one of the old cities of Flanders. He started collecting in 1945, his first old-timer being a Ford T purchased for \$3.00. Today the collection totals 850 cars, of which about 25 pre-date 1904 and about 50 are of Belgian makes. Mr. Mahy, a very fine mechanic, restored most of the vehicles himself with the help of some retired mechanics from his garages. Some 400 cars remain to be worked on. As specialized restorers are hard to come by in Belgium, Mr. Mahy always dreamed about a school for young people to learn the restoration business. Now, at age 78, his dream will come true because the museum will also have a "European School" where young students can learn the fine craft of bringing old cars back to life.

The museum will be situated at the head of a park called "Cinquantenaire." A total of four buildings are located there, each housing a museum: army, airplanes, African art and now a motorcar museum. The collection of Mr. Mahy rivals Harrah's in its richness and scope. Cars from all over the world are represented, for instance: the Cadillac in which General Pershing toured the battlefield during World War I, several cars once belonging to Royal Houses in Europe; Minerva, Excelsior, Metallurgique, Hispano Suiza, Daimler; the Packard of Pope Pius; a Horch once used by Field Marshal Rommel, etc.

Commercial vehicles also are part of the collection, and include several fire engines, trucks, buses and a very rare Citroen/Kegresse, the halftrack used for African and Asian treks in the twenties.

For American enthusiasts, this museum will be a must when travelling to Europe.

Raymond Vaes, Gebr. Van Raemdonckl. 46-B-2520
EDEGEM/Belgium

BOOK REVIEWS

THE STAR AND THE LAUREL: THE CENTENNIAL HISTORY OF DAIMLER, MERCEDES AND BENZ, 1886-1986, by Beverly Rae Kimes. 368 pages. Profusely illustrated with black and white photos, diagrams, ads and other promotional material. 32 pages in color. Hard covers, 9" x 12." ISBN 0-936573-01-5. Distributed by Motorbooks International, P. O. Box 2, Osceola, Wisconsin 54020, or order direct by calling 1-800-826-6600. \$80.00.

Although Mercedes-Benz has been abundantly covered by automotive historians over the last few years, and from nearly every aspect of its multi-faceted history at that, in *The Star and the Laurel* we find something quite different—the history of the company itself and the men who made it possible. This magnificent work was commissioned by Mercedes-Benz of North America to commemorate the 100th anniversary of the beginning of things—the century spanning the inventions and the first motor-propelled vehicles of Gottlieb Daimler and Carl Benz and their companies which, in 1926, were combined into Mercedes-Benz. This is the story of the men, their companies and their cars which have made up the centenary alpha-omega as a major entity in overall automotive history.

Unlike so many other books covering these or unrelated automobiles, the author has concentrated to write an articulate, factual and interesting story of the meager beginnings of the two German inventors, and if the purist looks askance of

an absence or seeming imbalance of matters mechanical, one must remember that this is a company history and not earmarked as an automotive treatise.

Not that details don't abound. They do indeed, and the coverage extends to every aspect of the companies and their products from the cars, trucks, and other vehicles to the racing exploits over the years right up to the present, as well as some of the owners of the cars.

For both Mercedes and Benz were adored and utilized by royalty, the nobility, the affluent, and just about everyone else with the desire to own and the price to acquire. "The Car of Emperors and Kings," proclaimed Mercedes, to which Benz countered, "The Car of Emperors, the Emperor of Cars." Each of them had their own clientele which of course doubled when the two firms joined forces sixty years ago. Things haven't changed either, and a casual glance at Mercedes-Benz owners the world over today has a Social-Register—Who's Who aura about it.

The outstanding quality about *The Star and the Laurel* is that it is so readable! With a subject as complex as this one, it must have been a terrific challenge to sift down the material and cull the wheat from the chaff—the important persons, material, dates and events—and put it together so it could be read and understood by both scholar and neophyte.

This has been done and done beautifully. This is the tale of a heritage; possibly the most significant heritage in automobile history. And a great book it is.

Keith Marvin

MOTOR PRESS NEWSLETTER, 42 pages, 8½ x 11 inches.
Robert E. Lee, P. O. Box JJ, Sun City, California 92381.
\$5.00 postpaid.

The current issue is dated November, 1985. It contains a listing of some 1900 titles of periodicals, newsletters and newspapers ever published worldwide dealing with automobiles, buses, trucks, motorcycles, etc. The titles are arranged in alphabetical order giving name and address of the publisher, how many issues published per year, coverage, (auto, truck, etc.), language (English, French, German, etc.), type of publication (club, company, etc.), and whether still in print or out of print.

All correspondence should be addressed directly to SAH member Robert E. Lee, given above—NOT to the Motor Press Newsletter.

Charles Betts

SORRY THIS ISSUE IS SO LATE, BUT—unexpected things do happen. I am at present recovering from major surgery which required almost three weeks in the hospital, and only now after a couple of weeks at home am I able to put in more than an hour or so a day setting up the SAH publications for printing. Recovery, I am happy to report, is coming along very nicely—a bit faster than predicted, and it shouldn't be too much longer before I'm back on schedule. (The next issue of *Automotive History Review* is just where it was when I went into the hospital—about half set up, but there is plenty of material on hand for the next *Journal*.)

To all who have sent in articles, letters, ads and pictures—so much has come in while I was away from the job that there wasn't nearly enough room for all of it in this issue, especially since this one contains the annual treasurer's report, as required by our by-laws. But do not despair—your contributions are appreciated and will be printed as space permits in future issues.

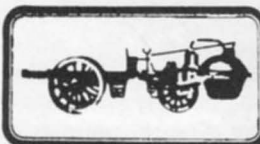
And thanks to one and all for your patience.

Dick Brigham



DOBLE STEAM CAR NO. E-24. (See comments on Doble cars in article on pages 5 and 6).

Photo courtesy of James D. Crank



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