SPARK #40

WISCONSIN SOCIETY OF AUTOMOTIVE HISTORIANS

October, 1994

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Some back issues of SPARK are available. Address inquiries to Val Quandt.

EDITORIAL NOTES

Does anyone out there have extra copies of early SPARK issues?

We would like to have a complete collection of the SPARK publication kept at the Hartford Heritage Museum. So far, we have at least been able to borrow a nearly complete set from Bill Cameron, and could photocopy those if we can't locate more.

Missing originals include issues 1 through 11, and 13,14,15,17,18,19,22. There is only one copy of issue 16, but there are multiple copies of all the others through issue 39.

It looks like issues 1,2, and 3 might be quite scarce. Right now we don't even have these available for photocopying. If no extra issues are donated, would you be willing to loan yours for photocopying? If you can help, please contact Doc Quandt or Ken Nimocks or just send the extra issues to one of us.

Does anyone out there have anything they would like to have published in the SPARK?

Actually, getting material to publish has not been a problem; getting it in print has! But, that's something that can be fixed.

If you have an article you have written, a copy or excerpt of someone else's article or book (with permission, if needed) that our members might be interested in, photos, items wanted (such as books, ads, articles, films, or other information related to automotive history), news about you or whatever else seems appropriate, send it to Ken or Doc.

THE WISCONSIN VEHICLES PROJECT

The first meeting of the newly formed Wisconsin society of Automotive Historians was held on July 8, 1979. In the December/January 1982 No.12 issue of the Spark newsletter mention was made that "a Wisconsin automobile history book is in the works."

Some early activists in the society were Terry Boyce, Ken Buttolph, Bob Lemke, Bob Lichty, Chris Halla, Gary Busha, Tim Tilton, Matt Joseph, Chet Krause, Wally Wray, Phil Hall, Ray Scroggins, Bill Cameron and others.

In the spring/summer of 1987 issue of Spark there was a listing of some 186 Wisconsin manufactured vehicles. Still another article in another issue listed some of the ingredients thought essential for a book. Another allied article by Halla and Busha was a scholarly dissertation on the copyright process.

The book effort got a push in 1991 when it was decided to start collecting essays on the topic of Wisconsin manufactured vehicles, cars and trucks. Matt Joseph suggested a survey asking each society member to list his or her idea of a contribution to the book. This was done, and hopefully other members now will feel a desire to contribute.

These essays are being collected at the Hartford Museum c/o Val Quandt. Presently the accumulation has 25 stories by eight different authors. These cover 98 single-spaced typed pages. Virtually all the past important vehicle manufacturers in the state of Wisconsin are covered. Remaining to be completed is the largest story, that of Jeffery, Nash, and American Motors. I have

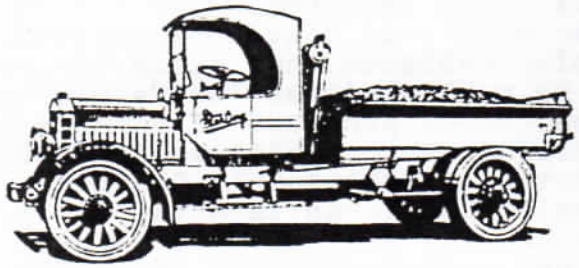
had sent to Ken Nimocks 700 pages of research materials on these marques, all from the archives of Ralph Dunwoodie, of Sun Valley, Nevada. Dunwoodie worked for the Harrah Automobile Collection at Reno, Nevada, from 1962 to 1975, many years as the manager. Those of our members wanting to write could get useful information from his collections. The present automobile, truck, and component manufacturers are also getting our attention. My wife and I have personally visited the following plants for their stories, now written up: Brooks Stevens in Mequon for the Excaliburs; the existing Excalibur and Cobra manufacturing plant in West Allis; Roger Smith in Milwaukee for the A.O. Smith auto frame production; the G.M. Assembly Plant in Janesville; and, Dick Braund and his Duesenberg II plant in Elroy.

Now the reality is that book publishing is an expensive business, and being business the book to be published must be deemed to have some reasonable prospect of financial success. This hinges on chances of success at selling. This is not a John Grisham or Danielle Steele novel. It is still early, but we do not have a committed publisher. I got a price estimate from Chuck Spanbauer, president of Palmer Publishing Company for a privately done book by his company, 225 pages, 8 1/2 inch by 12 inch size, hardbound with a jacket and high quality of paper and page and picture presentations as in my privately published book by them in 1990. His price is $32,500 for 2000 copies, or about $16 a copy. If one were to print, say 10,000 copies, the price would be more in the $10 range or less.

From my viewpoint there are two aspects of looking at this. The immediate is the

satisfaction and worth of writing these very interesting stories for our State of Wisconsin even if they spend some time in our museum archives. The other is that things may happen that we do not foresee just today, that might see these works published. Who knows, when adjoining states get some of their histories published, there might be a renewed enthusiasm in our state for a book on our exciting automotive history.

Val V. Quandt, M.D. (ret.)
WSAH Secretary



STERLING
MOTOR TRUCK CO.,
MILWAUKEE, WIS.

Sterling

BROOKS STEVENS' AUTOMOTIVE CONTRIBUTIONS

by

Val V. Quandt

The Writer had the privilege of interviewing Mr. Brooks Stevens at his auto museum in Mequon, Wisconsin in August of 1993. The content of this account is the result of this interview and written materials furnished by Brooks Stevens.

Stevens credits his father, William C. Stevens, executive vice-president and director of design and development with the Cutler Hammer Company in Milwaukee, with interesting him in the automobile. The senior Stevens was the inventor of the preselective steering wheel gear shift in 1916.

In the late 1930's Stevens designed land yachts which functioned as mobile homes and sales offices for William Plankinton, the Western Printing Company of Racine, Wisconsin, and the Johnson Wax Company of Racine.

The Volume One, Issue One of the Automobile Quarterly in the spring of 1962 had a two page spread of a sketch by Brooks Stevens of a huge and luxurious land cruiser, a motor home called the "Gondola Terra." It advertised 101 built-in features for the comfort and convenience of the sportsman and executive. It was intended to be a futuristic and "tomorrow" vehicle.

In 1946 Stevens designed the Jeep station wagon and the Jeepster phaeton for Willys Motors. Between 1948 and 1955 he collaborated with Kaiser and Frazer with their line of passenger automobiles.

In 1951 Stevens designed a race car using a Henry J chassis and a Willys F-head engine. These cars were raced for several years on the tracks at Road America at Elkhart Lake, Wisconsin, at Janesville, Wisconsin, at Sebring, Florida, and throughout the United States.

Stevens saw the need for a new kind of racing car against the only racing car existing in America at the time, the Cunningham car, which was an expensive one. The first two of these Stevens designed cars were called Excalibur J, with one having a Henry J, L-head engine of 2 1/2 liter displacement and the other being a Willys F-head engine. These cars raced in competition against more exotic vehicles and competed well in races across America.

In 1952 through 1954, using the F-head engine, they won thirteen first place trophies, nine second place, and seven third place trophies. There were further racing events annually through 1957 with yearly Sebring race participation.

Brooks Stevens and his Excalibur J cars received their strongest accolades for their performance in the Sebring twelve hour endurance race on March 7, 1954.

As Stevens noted, the demise of the Kaiser automobile ended their participation in the Excalibur development. But these cars reappeared on the racing circuits in 1983 as vintage racing became "de rigueur." They were driven by his son David, grandson Tony, and friend Robert Shaw.

Between 1953 and 1956 Stevens designed a succession of cars which had a limited production of some three to six vehicles of each design. These were the Valkyrie in 1953, the Gaylord in 1956, and Scimitar in 1956.

Stevens traced his interest in the Mercedes Benz SS 180 phaeton to when he acquired one from the estate of singer Al Jolson. He was then an engineering consultant to the Kaiser-Frazer Corporation. In 1966, while a consultant to Studebaker, he used the Mercedes radiator appearance for his redesign of the Studebaker Hawk.

In the late 1950's and early 1960's Stevens designed for Willys, including some vehicles for the Brazilian market, and from 1963 to 1967 for Studebaker. For 1969 and 1970 Stevens contributed designs for American Motors Corporation for their Hornet, Gremlin, AMX, Javelin Landau, and Ambassador.

Stevens and his sons, David Brooks and William C. (known as Steve) developed the Excalibur I in 1964. This was based on a 4/5 scale of the Mercedes Benz 1927/1930 SS doorless roadster. The SS Automobile Company was born in August of 1964 for the manufacture of these cars. It became the sixth largest manufacturer of automobiles in America at that time. By 1966 some one-hundred Excaliburs had been built. Stevens was searching for some variation of the word "sword" and came up with the Arthurian legend sword, the "Excalibur." The vehicle used a Chevrolet Corvette engine and a Studebaker Daytona chassis. By 1970, approximately one-thousand vehicles had been manufactured. The models prior to 1970 were the Excalibur I cars together with the original Excalibur racing cars.

In its first two years the Excalibur was offered only in the two passenger roadster. Then, starting the third year, both a roadster and a four passenger phaeton were offered. Series II existed from 1969 through 1974 and the series III was built

from 1975 through 1979. Then there was a change with the series IV which came out in 1980 and was styled after the larger 1937/1938 Mercedes 500/540K and ran through 1984. The series V ran from 1985 to 1988 and was offered in a four door sedan. The total produced from 1965 through 1988 was 3,608 automobiles.

In mid-1986 the company filed chapter eleven bankruptcy. Later that year Henry A. Warner became president of the acquisition company that purchased the assets. The company management has gone through several German interests since that time.

The Stevens brothers also were responsible for the development of the Excalibur Jr. all-aluminum go-cart put out by the Gilson Manufacturing Company from 1960 to 1968.

Briggs and Stratton in Milwaukee, Wisconsin in the early 1980's devised an experimental car utilizing gasoline and electric battery power. This was called the Briggs and Stratton Gasoline/Electric Hybrid as an energy saving design concept. It was developed with the assistance of the automotive craftsmen of Brooks Stevens Design Associates. In a descriptive and pictorial leaflet it shows a handsome vehicle which could seat two adults, two children, and some luggage. An additional two wheels in the vehicle rear supported the added weight of the twelve batteries.

Briggs and Stratton clearly stated that they were not intending with this to get into the manufacture of automobiles but rather to demonstrate an alternative to the standard gasoline driven automobile.

The gasoline engine in this vehicle was an 18 horsepower model 42 of the Briggs and Stratton line. It was small for the job but

adequate when amplified with the battery power for low speed travel and low to intermediate distances of travel.

Stevens also did the design work for AMC with their 1980 XJ100 Wagoneer, and the Cherokee station wagons.

The foregoing is a compendium of the activities of Brooks Stevens and his sons in the automotive field. For the former, this spans more than 40 years.

The design work of Mr. Stevens goes much beyond the automotive field. His fertile mind designed Steam-O-Matic irons, the Petipoint iron, the Hamilton clothes dryer, outboard motors including Outboard Marine, lawn and garden equipment including Lawn-Boy rotary mowers, for the Milwaukee Road the Hiawatha and Olympian trains for 1941 to 1946, Allis Chalmers farm tractors in 1934, machine tools, furniture, office buildings, sales and show rooms, and a myriad of other designs for industry including the medical fields.

Mr. Stevens lists having had 585 clients during his career. The examples of his work outside of the automotive field gives a measure of the design influence of Brooks Stevens through a long career.

WHO INVENTED THE DIFFERENTIAL?

(Editor's note: At a dinner meeting of just a few people for the early planning stages of the Iola '96 car show, I mentioned that I was fascinated with trying to imagine how someone ever came up with the idea of the automotive differential. I said also that I did not recall ever reading who invented the device, or who was even given some sort of credit for developing it.

Well, as you might guess when even a handful of old car fanatics get together, someone had an answer for me. Gary Hoonsbeen, one of three HCCA members at the meeting, a Wisconsin native, and now a member of WSAH, sent me a copy of the following newspaper article which I have copied verbatim. K.E.N.)

THE MILWAUKEE JOURNAL
FRIDAY, AUGUST 21, 1931

Won a 200-Mile Race With
Threshing Machine Engine

Alexander Gallinger, Who Still Lives at Oshkosh, Invented Differential Gears Which Made "Horseless Buggy" Possible; His Only Reward Was $5,000

Ray E. Peterson in the Oshkosh (Wis.) Northwestern.

If Alexander Gallinger had let mechanical genius take preference over his interest in the lumber business, Oshkosh today might have been the center of the automobile industry.

It was Alexander Gallinger - a resident of Oshkosh who, at 84, still resides at the

home of his son, George Gallinger, on the Elmwood road - who invented the differential, a mechanism which has been essential to the development of the automobile.

Mechanical power of motivation, for vehicles intended for roads and highways, did not become practical until after Mr. Gallinger produced his differential. At the time, Henry Ford and several others were just pioneering in the automobile field.

The basic idea for the differential designed by Mr. Gallinger was never patented, for he did not realize the importance of his invention, but the idea was immediately accepted by the pioneers of the auto industry, and they capitalized on the mechanism.

The differential in a car, or any other motivated vehicle, is the apparatus which regulates the varying speeds of the wheels, when the vehicle is turning a corner. In rounding a curve, the wheels on the side toward which the turn is being made naturally have a shorter distance to travel than the wheels on the other side.

Accordingly, there is a difference in the speed of the wheels on a turn, and successful motivation by mechanical power depended upon co-ordinating the revolutions of the wheels on either side. Such an invention was evolved by Mr. Gallinger.

But - as said before - he was interested in logging, and to be interested in logging in those days was considered good business. Everyone said the forests were inexhaustible and it seemed impossible that the industry would ever come to a stand-still.

So Alexander Gallinger stayed in the lumber business, while his differential idea

was taken up by others who pioneered in the automobile industry.

* * *

Mr. Gallinger's idea for the differential was not originated for automobiles. It was produced for the operation of a mechanical steam tractor, with which Mr. Gallinger and two or three other comrades earned an award of $5,000 from the state legislature, for a machine which could move under its own power and climb hills.

The offer of a cash reward for the first practical self-propelled machine stood for several years before the Oshkosh group claimed it. "In the summer of 1876," Mr. Gallinger said, "I built an engine for threshing, and the next spring John Morse, who had a foundry here, and I determined to build another and make a claim for the award."

The state offer required that the machine had to make a 200-mile trip across the state, ending at Madison. The Oshkosh contender was built in 60 days, and on July 15, 1877, left Oshkosh for Green Bay, the place selected as the starting point of the run to Madison.

There were a number of machines entered for the contest, but only two actually got started - the Oshkosh machine and one which was built at Green Bay.

A dinner was planned for the contenders at De Pere. The Oshkosh men reached there and had the meal on time, but the other crew got stalled and did not get any dinner.

Proceeding on the trip, the tractor operated by Mr. Gallinger went through Oshkosh, and followed a route through Waupun, Juneau, Watertown, Fort Atkinson and Janesville, returning by way of Evanston to

Madison. The trip was over 200 miles in total, and was made at the average speed of 15 miles an hour.

The roads in those days were not hard surfaced and the tractor had to push its way on mud roads, some of which were not in good condition.

The other contender for the award was shipped to Oshkosh on a flat car, where the Oshkosh men generously offered the equipment of the Morse foundry so that repairs could be made. The contraption started out again, and made a fair run toward Madison, but it broke down again on the way and never did reach the Capital City.

The Oshkosh machine - in contrast -made its entire trip without a breakdown and without the necessity of any repairs. All along the route, because the event had been advertised far and near, throngs of people gathered to watch; women left their kitchens, and children played hooky from school.

* * *

At Fort Atkinson, the people had arranged to give the new tractor a hard test. A string of nine wagons, each loaded with people, was attached for a four mile ride into the country, to a farm where the tractor was to demonstrate in plowing a field.

On the way, a large hill was encountered. Mr. Gallinger, driving the tractor, knew that the 12-horsepower vehicle could never make the pull with the nine wagons. It was a predicament, but he didn't like to admit the problem to the people in the wagons. He thought of a way out.

He noticed, first, that one-inch rope was being used to fasten the wagons together in the line. So stopping at the foot of the

hill, he made believe the tractor needed some adjustments. Getting back into the driver's seat, he put the tractor in operation swiftly, snapping the inch rope.

He repeated this performance several times and finally casually suggested that the people had better walk up the hill so that the load on the rope would not be so heavy. The people obligingly walked up the hill and the tractor, with only the empty wagons to pull, made a triumphant climb.

The required test had been successfully made, but "politics" prevented the Oshkosh group from receiving their prize at that time. Politicians wanted the local men to divide their money with the unsuccessful Green Bay contender. That plan was refused.

The offer of $5,000 was still open next year, and, with another machine - not as good as the one which made the triumphant run - the Oshkosh men went to Madison and all members of the legislature were given a ride three or four times around the square. The Oshkosh men got their $5,000, but they had to give $1,000 of their prize to the Green Bay outfit. "It galled us like thunder," Mr. Gallinger said.

There were four men principally interested in the machine. In addition to Mr. Gallinger, who was the inventive genius, the others were J.F. Morse, M.T. Battis, who made the boilers, and A.W. (Ans) Farrand, fire department chief. All except Mr. Gallinger have passed away.

Mr. Gallinger's inventive genius showed itself in other things. At one time he built a locomotive and some cars here at Oshkosh and moved them into the woods where a track had been laid out for logging.

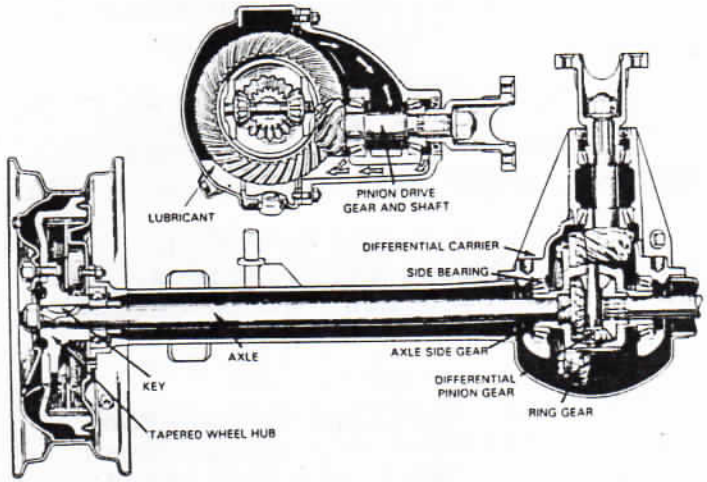
The train never hauled a load. Mr. Gallinger put steam into the boilers one day

and then went in to dinner. While he was away the boiler burst and that was the last of the logging locomotive. Three men were killed in the explosion.

Mr. Gallinger, although the fact is not so well known, built the first iceboat to cross Lake Winnebago. Among other things, he dabbled in selling farm machinery, and one winter had to make trips to the east shore of the lake to deliver parts.

He thought it was too far to skate, so he went to the Morse shop, where a crew of men helped him in assembling an iceboat. The first boat was built in a single afternoon. The sails were borrowed from Cook & Brown.

He built other iceboats after that, one of which made a time trial across the lake in 17 minutes.



EXCALIBUR S·S SPECIFICATIONS

DIMENSIONS —	Wheelbase	109"
	Length overall	167.5"
	Height to top of windshield	47"
	Cowl height to ground	39"
	Road clearance	4½"
	Overall width	67"
	Tread — Front	57.4"
	Rear	56.6"

ENGINE — Make — Chevrolet Corvette
Size — 327 cubic inches
Bore — 3.25
Stroke — 4.00

TRANSMISSION — 1st — 2.20
2nd — 1.64
3rd — 1.28
4th — 1.00
Reverse — 2.27

BRAKES — Front — Discs — 11.5" diameter
Rear — Drums — 10" diameter x 2" width
Power Assisted

EXCALIBUR S·S LIST PRICE—$6,800.00 (F.O.B. MILWAUKEE, WIS.)

STANDARD EQUIPMENT —
- Chevrolet Corvette — 300 hp
- Power brakes — discs front, drums rear
- Hi-performance steering ratio
- Bumpers
- Turn signals
- Full instrumentation
- Bucket seats
- Top and side curtains
- Wire wheels
- Muffler inserts in side pipes
- 4-speed transmission
- Exhaust headers
- Alternator
- 3.54 Twin traction
- Choice of color with exceptions
- Black interior

OPTIONS — Engines —
- 365 hp
- 375 hp Fuel Injected
- 400 hp Supercharged

Rear Axles — Ratios —
- 3:31 Twin traction
- 3:73 Twin traction

Rear Wheel Disc Brakes

Heater
Radio, Corvette AM-FM
Luggage Rack
Fitted Luggage
Tonneau Cover
Anti-Smog Device

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AN ADJUNCT TO A SPORT

Private individuals in America and all over the world have for the last several decades performed in a hobby-like manner a service to the history of the automobile. Something which the automobile industry has not had time to do or has not seen fit to do. The discovery and restoration of antique or classic automobiles has now become a most colorful and fabulous historical record of one of the world's largest industries.

Many an enthusiast has longed to find, acquire, and restore certain species of famous sports cars of the classic period. Perhaps the most famous European car of the period 1927-30 was the fabulous Mercedes SSK, a close coupled competition-type sports car built in Stuttgart with Teutonic elegance and functional superiority.

The German team drivers played havoc with the English Bentleys, the Italian Alfa Romeos, the French Bugattis, etc., on the circuits of Le Mans, Brooklands and many others with the "Great White Cars."

The supercharged SSK not only delivered startling performance, but its wailing blower was virtually a harbinger in sound of today's jet aircraft's ear-splitting wail.

It is said that it was a fantastic experience to place one's foot down hard on the accelerator both from the standpoint of acceleration and a sound warning described as the "wail of a banshee."

Brooks Stevens, internationally-known industrial designer and for 30 years an avid collector and restorer of princely classic sports cars, has created in "retrospect" a contemporary classic: the Studebaker SS. This car, designed by Brooks Stevens especially for the New York International Automobile Show, consists of a standard Studebaker Daytona Chassis powered by a supercharged R-2 engine, disc brakes, four-speed gearbox, and modified close-ratio steering. The only change from the normal Studebaker chassis was to re-locate the engine 28 inches toward the rear. This car was built to be a replica in modern, low-dimensional proportions of the famous SSK.

Brooks Stevens, designer of the 1964 Studebaker regular passenger lines, hopes that enthusiasts unable to afford a $20 to $30 thousand restoration of an authentic classic Mercedes SSK, would consider the Contemporary Classic as a modern-day operational vehicle with the flavor of an elegant era in the sport. It is possible that if multiples of this car were built, a class racing group could be established for very colorful events on road circuits such as Watkins Glen, Road America at Elkhart Lake and even in endurance runs at Sebring.

This car is not a pseudo-sports car or purely an exhibition piece. Its performance abilities would be highly respectable. It weighs less than 1800 pounds and its horsepower to weight ratio, its low center of gravity, and disc brakes would provide excitement in truly competitive performance. Imagine a dozen of these cars with the "wailing" of their Paxton blowers shrieking through the natural countryside beauty of Road America. This could be the glamorous re-birth of the hairy sports car driving era with all of its color and grandeur. The winner to be toasted in a trophy full of the best vintage champagne.

An important factor in this proposed "adjunct to a sport" would be the reliable and modern components that would insure the Contemporary Classic owner a safe, spirited ride on any highway without fear of expensive restored parts failures as sometimes experienced in operational restored cars.

Many an aspiring car buff might get permission from his "Secretary of War" to buy one of these cars instead of a mink stole.

Viva the wail of the banshee!

Brooks Stevens