

SPARK

May, 1995

Number 42

Featured in this Issue!

The History
of the
**OSHKOSH
TRUCK
CORPORATION**



Nash
HARD SHELL TURTLE

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SPARK

April, 1995 Number 42

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*Some back issues of Spark are available.
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Editor's Notes

You will undoubtedly immediately notice a dramatic change in the appearance of this issue of SPARK. This new professional look is the result of a course project for some students in the Marketing Communications program at Northeast Wisconsin Technical College in Green Bay.

I have always been satisfied with the contents of our publication, thanks to the efforts of those who supply me with articles and material, but I was sure there must be a somewhat simple way to greatly improve its appearance. Kind of like an old car that runs just fine, but has some rust and primer spots. That car has just come out of the paint booth!

Using the latest high-tech desktop publishing techniques and equipment, students Tammi Boerschinger, Larry Peterson and Brian Lison with the supervision of instructors Mary Sue Fenner and Chuck Noll, have put together a very nice looking publication. I am sure I can speak for our entire organization when I say, "Thank you for a job well done!"

Ken Nimocks

President's Message

It's time to officially nominate and elect officers and directors for WSAH. This should be done soon, any new Officers or Directors can be introduced and installed at our annual lola meeting. Any of the four Officer positions or three Director positions are up for grabs if you are interested. Please contact Doc or me to get your name on the ballot!

One position that we need to fill is that of Vice President. Gene Wendt regretfully expressed to me some time ago that he felt he could not do justice to the position with the commitment he has to his growing business. I saw no urgency to make a change right then, but we are now overdue for a general election.

Let me take this opportunity to commend Gene for his effort, for his continued long-standing membership, and for his candor in letting me know that he would not hold the position if he could not give it his best.

Since we have strayed a bit from our constitution as far as having elections on a regular basis, maybe it's time to set up an easy and efficient format to follow for this process. I propose we look to our constitution for direction since it worked well when followed in the past, but we should make amendments if some methods are no longer applicable. Please offer your suggestions and opinions.

Speaking of the annual lola meeting, last year it didn't work out too well, to say the least! It went so well in '93, with the bus ride to the Thorson House and a good turnout, that we wanted to repeat the scenario in '94. Without the bus and with weather problems, we never did all get to the same place at the same time. We'll see if we can hold the meeting inside Krause Publications this year to make things a little easier.

You saw from the addendum to minutes of the March 4 meeting that the book project is progressing quite well. In fact, it's beginning to look like getting manuscripts is no longer our primary concern. Instead, we must now concern ourselves with getting money! Even though our treasury is in great shape, we may need anywhere from \$10,000 to \$20,000 to get our book published.

For those of you who were not at the meeting, I would like you to know of an idea brought forth by Dale Anderson. Dale suggested that the best way for our organization to solicit financial support may be to try to get many small contributions, rather than a few large ones. With that in mind, let's start thinking about who might be potential contributors.

If each member were to get just one contribution, ranging from say, \$100 to \$500, we would be well on our way. Where to start? What about your employer? O.K., I know, you're self-employed. What about your customers or clients? Do you have any ties to automotive related businesses in Wisconsin?

I'm thinking of, for example, a certain member that might have the inside track with a certain major Wisconsin tool manufacturer (are you reading this Dave?). What about some major auto parts store chains, any of several parts manufacturers, truck/firetruck manufacturers, etc.

Do any of you know someone who might even give us a little boost over the airwaves, say someone with his own radio show where he talks about cars (or, "About Cars")? Do any of our members have connections with automotive related magazine or book publishers? (For those of you who are not familiar with our membership, I apologize for these "inside" comments. I don't normally care to write something that everyone can't have fun with, but it's really hard for me to pass up a chance to be facetious.)

Until we have a manuscript that is nearly ready to publish, it may be difficult to ask someone to actually write out a check, so consider this: ask for a pledge instead of the money. Then, when we have something to show, go back and collect!

For now, at the very least, each one of us should think of one or more sources for a contribution. Their name will, of course, be listed in the book as a contributor. If you don't feel comfortable asking for money, just let Doc Quandt or me know the source and we will see that someone follows up on the lead. If you get a pledge, let us know. If you get a check, you could send it directly to Treasurer Bob Gary, but let Doc or me know for the records who contributed and how much.

Ken Nimocks

“...Anywhere the Wheels can Touch the Ground”

by Ray Scroggins

In the early days of motoring, when paved roads were rare, and mud and rust were the rule rather than the exception, William R. Besserdich and Bernard A. Mosling founded the Wisconsin Duplex Auto Company at Clintonville, Wisconsin, in 1917. Some years earlier, Besserdich had helped develop the FWD truck and was a firm believer in the need to deliver power to all four wheels to cope with the poor road conditions of the time.

Later that year, the new company moved to Oshkosh, where it still exists as the Oshkosh Truck Corporation. The firm added the name of its new home town in 1918, when it became Oshkosh Motor Truck Mfg. Co., a name that was changed to Oshkosh Motor Truck, Inc. as part of a Depression-era reorganization in 1930. The company's identity took its current form in 1967.

The prototype Oshkosh truck, built in late 1917 by a Milwaukee machine shop, was a stake-bodied unit of 1-ton capacity. Known affectionately as “Old Betsy,” the 3,280 lb. truck is owned by the company today and is still operational. Among its features are a LeRoi gasoline engine driving through a three-speed transmission, and standard 32” x 4” pneumatic tires. As a prototype, it helped sell stock in the company by demonstrating the advantages of all-wheel drive and patented components that included an automatic, positive-locking center differential, as well as front-axle steering pivots equipped with roller bearings.

The Model A

The first production Oshkosh truck was the 2-ton Model A, introduced in 1918. It used a 72 hp Herschell-Spillman 4-cylinder engine that heated the fuel at three different points before ignition to get better performance from the

era's low-grade fuels. Other features included thermo-siphon cooling, a Brown Lipe 4-speed transmission, and a cab that had a door on each side, rather than just the passenger's side entry found in most trucks then. Built on a frame fabricated by Milwaukee's A.O. Smith Company, the Model A used 36” x 6” pneumatic tires on demountable rims and included an electric generator and starter for a price of about \$3,500. In 1921, according to a report in the *Oshkosh Daily Northwestern*, a local woman drove a Model A up the steps of the local high school as part of an advertising film. The newspaper reported, “Miss Blanche Rahr of this city at the wheel piloted the big machine. ...in a fashion that won the applause of spectators who had gathered to witness the stunts.” At the time, the company advertised with the slogan that an Oshkosh truck “Goes anywhere the Wheels Can Touch the Ground.”

More Early Models

In 1920, Oshkosh expanded its line with the 3-1/2 ton Model B, followed by the 5-ton Model F in 1924. These had the same setback axles and artillery wheels as the Model A and played an important role in building and maintaining the nation's growing system of roads after World War I. Production began in 1925 on the Model H, a 6-cylinder truck with double-reduction axles.

About this time, Oshkosh trucks started to gain popularity for the emerging municipal service of snow removal. Earlier, cars often spent the winter on blocks due to poor roads and ineffective alcohol anti-freeze. Improved road surfaces brought increased winter traffic, and with it, the need to keep roads passable.

For a short time, the company attempted to compete in the mass-produced rear-wheel drive market with its Express models, including a 1-1/2 ton Model R available with a 4-cylinder Hercules or 6-cylinder Wisconsin engine. The experiment was short-lived, however, and it soon returned to concentrating on its primary focus of all-wheel drive vehicles.

During 1932, at the bottom of the Depression, Oshkosh Truck introduced its FC and FB trucks. Powered by 6-cylinder Hercules engines rated at from 102 hp to 200 hp, they had GVW (gross vehicle weight) capacities up to 44,000 lb. Double-reduction axles were standard, with transmissions from four to 12 speeds available. A Cummins diesel engine, the first diesel in an Oshkosh truck, was offered in 1935.

Diversifying into markets other than snow removal and municipal uses, the company introduced the first-ever rubber-tired earth-mover in 1933. Known as the Model TR, it was a large four-wheel-drive vehicle designed for use with bottom-dump semi-trailers and self-loading scraper bodies. With four-wheel drive and steering, the big rigs had a turning circle diameter of only 31.5 ft. and soon became popular on the nation's big dam, airport and canal projects.

In 1935, Oshkosh broadened its truck line with the J-Series, with 1930s automotive styling that included a one-piece windshield and slight rounding of the V-type grille and fender lines. J-Series capacities ranged from 2 to 3-1/2 tons.

World War II and the Military Market

The introduction of the W-Series in 1939 proved to be fortuitous as the country soon entered World War II. These trucks featured increased power, greater capacity, better driver comfort and better styling. Gasoline or diesel power choices were now available on all models, with GVW ratings from 18,000 to 44,000 lbs. After the U.S. entered the war, the W-Series trucks were in demand by the military for use with dump bodies and snowplows.

The war experience also set the scene for the company's growing presence in the military and airport markets that continues to the present. Through the 1980s and much of the 1990s, contracts for military vehicles and airport crash trucks still made up a major part of the company's business.

Runway snow removal was a big job for the W-Series trucks, which were often equipped with rotary snow blowers powered by 175 hp Climax engines mounted on the back, in addition to their standard 112 hp Hercules engines. Snow removal was also an important assignment for Oshkosh trucks on the home front, where they kept roads open so that wartime production schedules could be met.

Postwar Growth and the Ready-Mix Market

As World War II drew to a close, the company was able to move its W-1600 into production. These 6 x 6 vehicles were designed for off-road service in oil fields and for heavy hauling. In 1947, the W-2200 was introduced as a larger, faster, more powerful 4 x 4 than offered by the competition. They were available with 6-cylinder Hercules, Cummins, Buda, and Hall-Scott engines ranging from 139 to 295 hp. In addition to snow plowing, these units were popular for hauling sugar cane to processors and iron ore at mines.

After the war, the large-scale influx of returning troops settled down to jobs and families. The demand for housing and streets fueled a building boom that led Oshkosh to introduce the gasoline-powered Model 50-50 concrete carrier. With its 4 x 4 configuration, it could be counted on to deliver ready-mix concrete to the job site without getting stuck. As the first truck created specifically for concrete delivery, it featured a set-back front axle that enabled it to carry 50 percent of the weight on each axle, thus its model designation. Following the success of the 50-50, the company introduced the Model 45-55, a similar diesel-powered truck that used a rear axle rated at 23,000 lb. instead of the 50-50's 18,000 lb. capacity.

The following year, 1956, saw the introduction of the Model 1832, a tandem-axle 6 x 6 based on the 50-50 design with an 18,000 lb. front axle rating and 32,000 lb. on the tandem. All of the 50-50 derivatives were recognizable by their extreme front axle setback that put the front wheels directly under the cab. These became known as the C-Series when the Model F was introduced in the early 1960s.

The front axles on the Model F were moved slightly forward to achieve maximum payloads in states where certain weight distribution requirements were in effect. As the demand for larger concrete carriers grew in the 1960s, larger front axles were added, with capacities that eventually grew to 23,000 lb. Other factors also favored the Model F design. A revised mixer design changed the weight distribution and made the extreme front axle setback less advantageous. Federal braking standards also were tightened, which added to the benefit of moving the axle forward where it could accept more weight transfer during braking.

F-Series trucks were available in configurations that included 6 x 6, 8 x 6, 10 x 6, and 10 x 8 drives, which were popular for delivering both ready-mix and concrete blocks. The design also evolved into the D-Series, with tandem driving front axles and 16 cubic-yard capacity.

More diverse markets were the target of the heavy-duty R-Series introduced during the 1960s. These 6 x 4 trucks and tractors were designed to stand up under marginal road conditions in places like Australia, Africa, and the Middle East.

Also from the 1960s into the 1980s, Oshkosh sold its A-Series chassis to fire apparatus manufacturers such as Pierce, Ladder Tower, Inc., Snorkel, and Van Pelt. This 5-man, cab-forward design was built on a 6 x 4 chassis and supplied to these customers, who often marketed the outfitted truck under their own tradename. Except for the A-Series and a series of conventional trucks built between 1956 and 1966 using International cabs, Oshkosh trucks have always used flat glass all around.

In 1975 the company introduced the B-Series, a forward placement concrete carrier that eliminated the need for a driver to back into a congested job site. With a one-person cab located over the front axle and the engine in the rear, the driver could now discharge the concrete exactly where it was wanted. The chute was controlled from inside the cab, eliminating the need for wheelbarrow and permitting safer and more exact placement.

An improved forward-placement vehicle, the S-Series, came out in 1982. It was a complete package that included both an Oshkosh-designed mixer, for single-source delivery and field support.

Expansion into Broader Markets

New and unusual markets that began to develop in the 1970s and 1980s often called for innovative designs. In 1974, the J-Series was developed, based loosely on the F-Series. These large vehicles were used in desert oil field applications, particularly in the Middle East and China. Two monstrous six-wheel drive trucks, the Desert Prince and the Desert Knight, had diesel engines of 325 hp to 485 hp, with 2,000 sq. ft. radiators and huge balloon tires for the desert environment. An unusual feature on some models was a tubular front bumper that held fresh drinking water.

A departure in style and mission was the cab-over-engine E-Series introduced in the 1970s. Designed primarily for use with semi-trailers, the flat-fronted, tilt-cab truck had a full-width grille and was available in 4 x 2 and 6 x 4 versions. It was assembled in kit form in Australia for a time, and was manufactured at the company's South African Plant into the early 1980s.

The H-Series, of about the same vintage, was designed for heavy-duty snow plowing. It had a forward-slanting windshield and was powered by a 225 hp Caterpillar diesel, with a second Cat diesel providing 425 hp to a 2-stage spiral ribbon rotary plow.

Snow plowing was one of the major areas where Oshkosh shined in the military market as well. Since the early 1960s, military and governmental customers were a significant factor in driving the company's growth and product development.

One example is found in the WT-2206 that was developed in the 1950s to keep runways open at the Air Force's Strategic Air Command (SAC) bases. Located solidly in the snow belt, these bases had to be ready for action at all times, no matter how heavy the snowfall. These innovative trucks, with 325 hp Hall-Scott engines and Allison automatic transmissions, featured a unique

rollover plow design that allowed the driver to roll it over to the other side and plow the snow in the same direction on the return pass back up the runway. Formerly, it was necessary to lift the plow and return to the starting point to keep the plowed snow moving the same way, so the new plow doubled the efficiency of the operation. Teams of the trucks operating in tandem at 55 mph made quick work of keeping the runways open.

After these vehicles had seen 10 to 20 years of service, the company worked with the Air Force to develop a remanufacturing program that would upgrade the trucks for less than 60 percent of the cost of a new unit. While the rugged vehicles had long service lives and needed few repairs, the program provided an opportunity to upgrade from gasoline to diesel power and obtain a new warranty while producing considerable savings for the taxpayer. The program was extended to other vehicles, some built as long ago as the 1940s, which were remanufactured and upgraded several times over a thirty-year period.

All Wheels Driving into the Future

In the 1970s and 1980s, military vehicles continued to make up a substantial portion of the Oshkosh product mix. The US Navy MB-5 was one of the vehicles that launched the company into its leadership position in this field. Aluminum bodied aircraft rescue and firefighting (ARFF) truck, the MB-5 carried 400 gallons of water that expanded to 5,000 gallons of extinguishing foam when mixed with a foam concentrate. The foam was delivered from a roof turret, making it quick and easy to aim at a fire. Hundreds of units were built for the Navy, including a dozen that saw service on the flight decks of aircraft carriers. Similar versions, known as the M-Series, were available for civilian service as well.

Additional crash truck versions ranged from the smaller MB-1, a 1,000-gallon ARFF truck, to the huge 66-ton P-15, a 6,000-lb. capacity, eight-wheeled unit powered by two 492 hp Detroit Diesel V-8s and able to deliver 60,000 gallons of foam. Expertise in manufacturing vehicles for the military soon led the company to introduce several other vehicles. These included an

articulated 8 x 8 DA airport rescue and firefighting vehicle, derived from an articulated, high-mobility tactical cargo truck originally built for the U.S. Marines. Other military vehicles included a series of aircraft tow tractors for the US Air Force, the M-911 Heavy Equipment Transporter (HET) used to pull heavily loaded equipment trailers, and the Air Force 40K aircraft loader.

When the company won its largest government contract to date in 1981, it had no idea of the critical role its trucks would play in Operation Desert Storm 10 years later. More than 13,000 of the 8 x 8 Heavy Expanded Mobility Tactical Trucks (HEMTT) were built in the first 10 years, in five models: two cargo trucks, a tanker, a tractor, and a recovery vehicle. These are powered by a 445 hp Detroit Diesel V-8, driving through a four-speed Allison automatic transmission.

As this is written in the mid-1990s, the company continues to supply the military market with a diverse range of heavy-duty transport and service vehicles, as well as serving commercial markets for ready-mix transit, snow removal, road maintenance, recycling and refuse collection, motorhome chassis, and transport trailers.

Voyage of the Hard Shell Turtle

by Bill Cameron

Written some time in the mid-50s by a cruising sailboat skipper, who happened to be in love with antique cars as well as sailboats.

This is a routine report on a "land cruise" from the Port of Thompson, Connecticut to Key West, Florida. For brevity's sake it will be referred to as "The voyage of the cruiser, HARD SHELL TURTLE* via the Inland Super-Waterway" or "In the spring, even a hard shell turtle gets hungry for some sun."

A business commitment required the Skipper to be in Philadelphia for two days prior to the scheduled day of departure. It was, therefore, decided that the First Mate would provision the vessel and terminate the varied and rigid ties-to-the-land, without assistance, viz: cat to the vets, horse to a neighbor, house and dog to the loving care of hired man, collect camping equipment, dig out summer clothes, pack car and pilot the vehicle the first 150 miles single handed (very clever of the Skipper).

The rendezvous was established as "Camden Exit of the New Jersey Turnpike at 2:00p.m. Friday, March 12th." The First Mate made landfall at 1:40, relinquished helm to Skipper who guided HST (no! NOT Harry S. Truman - *Hard Shell Turtle*) back into mid-stream and headed south by 1:45.

First important decision: should we stop in Washington, see some relatives and perhaps spend a night? Good idea - - we'd like to, but the timing is bad - Baltimore late afternoon, Washington rush hour, heavy traffic next morning and Florida still 800 miles away! Rand McNally made the decision: "Avoid Baltimore, stick to the eastern shore of Maryland, use the new Chesapeake Bay Bridge, use new by-pass around Annapolis, around Washington and on to Richmond." The map won.

**Hard Shell Turtle* is a 1953 Nash Ambassador with fully reclining seats which, when placed horizontally, joined with the back seat to make into a full-sized bed.

Anchor down at 8:30, moored in mid-stream at a Richmond, VA motel, then dinner, 25 cents worth of T.V. and in berth at 10 pm. Some Day!!

On every cruise, there are routes and areas, scenery and towns that are quite important at the time, but by comparison with what precedes or follows it, fade into nothingness when it comes time to prepare the log. Virginia, North and South Carolina, parts of Georgia, a kaleidoscope of scrub oak and pine, cross-road towns, cotton gins, unpainted and often windowless negro shanties, an occasional ultra-modern textile mill (sucking away New England's life blood), intermittent showers, humid warmth, sand, tobacco fields, cigarette factories, truck farms and windmills. You notice with a start that you've gone from March to April to May to June - from snow to pussywillows and forsythia, to trees in full leaf, roses and dogwood.

Rand McNally comes to the rescue by placing a small red inverted "v" on the map at sundown. This symbol (and the navigator is quite adept at spotting them) means a campground, a county, state or national park or recreation area. Sometimes RMcN or the pertinent political subdivision is delinquent in supplying the magic symbol at the right place at the right time — then you keep turning up side roads and create a red inverted "v" of your own. But we were lucky, in South Carolina Saturday night, it was the Lee County Park (near Sumpter) and we found a fishing cabin with fireplace, bunk beds, outdoor facilities and complete privacy at \$1.00 a night.

Warm and humid with howling winds, thunder and lightning; at midnight rain.

Sunday night it was Georgia's Crooked River State Park just on the wrong side of the Saint Mary's River. Over there was Florida. But you'd never know it for the brisk winds, October chill and three blankets on the bed. Here we had a one-room house-keeping cabin (dirty) with stove and no fireplace. All this was prologue, for the next day was Monday and Florida.

Up 'till now, and for the rest of the trip, we were forever expressing our gratitude for that new innovation in highway construction, the BY-PASS. Except for Richmond, which we visited intentionally, we had successfully by-passed every major city on the east coast from Connecticut to Florida. And today, our RMcN showed a new by-pass around Jacksonville, the Buccaneer Highway, a succession of sand dunes, bridges and a car ferry across the St. John River. This was really cruising - almost as much water as land.

But fortunately, a HST is a versatile creature, equally at home on land or at sea. Our cruise, up to this point, had been either in, near or under water of various densities from Atlantic Ocean salt to rain pellets, fog and 95% humidity. But, now we headed overland from the coast to the north central Florida lake country and on to Winter park and Rollins College, where daughter Sue is a student. Hook down at 4 p.m. in a landsman's version of a snug harbor - a parking lot, in this case across the street from Mayflower Hall, Sue's sorority house. And shortly along came Sue, tan, healthy, with a smile of welcome on her face.

Took our departure on course for our next port of call, Fort Meyers Beach. The HST - once she got a good whiff of the Gulf of Mexico—lost no time and “hit the beach” at 7 p.m. The reader may have gained the impression earlier that this was intended to be a rough and ready camp-type cruise. Sorry to disappoint you, but relatives had engaged a lush, fully equipped cottage not far from theirs, so that for the next three nights we dressed, ate and lived the way city-folks-spending-the-winter-in-Florida do.

Somewhat more in character, we spent one afternoon swimming, beach combing and bird watching, and the next day piloting of a friend's 28 foot cruiser from the slip at their back door to its summer mooring where we found a fascinating boat yard some 10 miles up the Caloosahatchee River, after ten miles of open water cruising on the Gulf.

Determined to unfurl some canvas (tent), fill some air mattresses, build some campfires and go native, we bade our farewells the night before and got an early start Friday morning - destination: the Florida Keys. So over-country - almost, but not quite to Miami

(heaven forbid!) then south to the point where you can stand in one spot and spit first in the Atlantic Ocean and then into the Gulf of Mexico.

By this time the temperature had reached 75 to 80 degrees and we really began to thaw out and peel off. The Keys are mostly built of coral with miles of white beaches and multi-colored expanses of jade green, turquoise, emerald and deep-sea blue salt-heavy water, topped, far out, with scoops of whipped cream and tufts of rabbit fur. A swim and lunch beside a “coral-quarry” - a midnight blue hole in the emerald setting, deep and cold.

As we swung on south under full sail, we passed a harbor with an ominous flag flying and later picked up a weather advisory on the radio - “Full S.E. storm warnings.” So we reefed down a point or two but were soon diverted by a mammoth nautical zoo, a typical Florida institution, featuring all the denizens of the deep, plus “the most highly trained porpoises in captivity.” It was really worth the time (and admittance fee) especially to watch the two performing porpoises, one of which - jumped 18 feet into the air for a piece of fish.

The clouds were beginning to roll in from the ocean side and the water was turning grey where it had previously been so green and blue. We then knew the time had come to seek a safe anchorage. RMcN had long since run out of inverted v's so we began exploring side roads and, after two or three misses, found a strip of beach surrounded by pine trees and coconut palms, plus many evidences that others had camped there before. In rapid sequence - an open fire, beef stew, the Skipper's campfire coffee, tent up, car seats down, screens on, cot up, air mattresses blown up, lights out - and “the wind she blew like hurricane.” The wind bent the trees, whipped up salt spray, swayed the car and filled the tent: like a kite, like a sail, like a balloon! Then it picked up hands full of sand and hurled it at Sue who was sleeping? (occupying) the tent. HST was designed by Mr. Nash to sleep two, but he should know how comfortably it will sleep three in full gale on Long Key, Florida.

Next day the wind, content with the havoc it had wrought, blew itself out. After a swim and breakfast, we again headed south the scenery improving by the minute, i.e. - more water, less land.

By now we had reached the southern most city in the United States - Key West. It also turned out to be about the most heavily populated city, for its size, in the U.S.A. The storm warnings had brought the entire fishing and shrimp fleets into safe harbor. The Navy has fleet operating bases, air stations and communication centers all over the island and, added to this, is a large native population and an even larger tourist influx. Our activities included a seafood dinner at Fisherman's Wharf, a visit to the city's marine museum and a quick tour of the more interesting attractions - Ernest Hemingway's home, old Spanish houses and, best of all, the docks, moorings, wharves and shipyards.

If you think you are tired, (having read this far) so were we! So, out of the hurly-burly and back on the bridges - one is seven miles long. For variety, we spent Saturday night on the Gulf side. This time the State furnished a roadside rustic table and primitive powder room - also bugs, mosquitoes, gnats, nits and other varieties small enough to fly right through screens without bending a wing. Also heat of the mid-summer, mid-August, mid-hell variety. But these inconveniences were offset by a wood fire, dinner, swim and breakfast and, most of all, by clearing skies, soft winds and sensuous scenery.

The rest is anti-climax - return trip successful and uneventful, taking the shortest possible routes in order to get home quickly.

Thus ends the saga of the good ship "Hard Shell Turtle."

Sure wish I still owned it. 🐢

The Spark

The Steam Automobile Invention of DR. J. W. CARHART

(The SPARK has been the name of our WSAH publication since its inception around 1979. Instrumental in creating this name were Matt Joseph and Chris Halla, its first editor.

The name "Spark" was an adaptation from its use in describing the steam driven vehicle invented by Dr. J.W. Carhart of Racine, Wisconsin in 1871. This was such a crude and noisy contraption that, with a spark, it was thought likely to explode.

Bob Lichty came up with the WSAH logo, using a drawing of Dr. Carhart's vehicle surrounded by an outline of the state of Wisconsin. V.V.Q.)

In September of 1871 Dr. J.W. Carhart drove his steam propelled vehicle on the streets of Racine, Wisconsin. He was then 37 years old, and a pastor of a Methodist Episcopal church in Racine. His steam driven vehicle had a boiler of 20 gallons capacity and with an engine for each of the large four foot driving wheels. It had a long steering tiller. This vehicle was made with the assistance of his brother, H.C. Carhart, a physics professor at Michigan State University, who made all the working drawings. Hard coal was used to feed the boilers. The boiler was made by the Button Fire Engine Works of Waterford, New York. Dr. Carhart had moved shortly before from Saratoga County, New York. Much of the machine work on this steam engine was done by the J. I. Case Company in Racine, Wisconsin.

Dr. J.W. Carhart was a Methodist minister who also later trained and practiced as a physician. He is credited with producing the first automobile in the state of Wisconsin, and possibly also in America in 1871. Assigning a primacy in time, however, is fraught with the possibility that other or less well known figures were doing the same thing at the same time. As Andrew J. Pierce noted in 1909, "The invention of the automobile was not the product of a single mind, or of a single country." As early as 1769, Nicholas Joseph Cugnot in France developed his cumbersome three wheeled steam vehicle. This was then 102 years before the invention by Dr. Carhart.

Reminiscing later in 1914, Dr. Carhart said, "It was in September of 1871 that my son and myself went out to the barn and fired the machine up for its trial trip. As we turned into the street, I steering and my son wielding the poker, which formed a very necessary part of our touring equipment, the entire town rushed out of doors to see what was happening. The noise of the exhaust, which escaped through the stack, and which shot smoke and cinders fully fifteen feet into the air was terrific and startling. Of course the steam whistle, with which it was equipped, did not tend to make matters any better. In fact, it was not long before we had the streets entirely to ourselves, for when they had seen it, the citizens were unanimous in predicting that this steam car, the Spark, would blow up."

This was in 1871, as mentioned and in June of 1878 the state of Wisconsin offered the prize money of \$10,000 for the invention and development of "a horseless vehicle that could successfully complete a 200 mile journey as nearly as possible in a north and south direction, within the confines of the state." This then occurred from Green Bay to Madison, Wisconsin.

The Spark inventor did not take out patents on his car nor did he participate in or drive in the 200 mile run. Several other of the participants did claim bounties of \$5,000 apiece among which was A. Frand of Oshkosh, Wisconsin. He was the builder of the famous Oshkosh steam carriage, and he was closely associated with the Methodist clergyman in the building of the Spark.


Dr. Carhart was born in 1834 at Coeyman, Albany County, New York, and completed his education in the ministry in schools of New York state and came west around 1870 to Racine, Wisconsin. He was a medical doctor also, with his training in medicine coming shortly after his arrival in Wisconsin. He spent the latter part of his life in Texas, in the practice of medicine combined with ministerial teaching.

Dr. Carhart kept his bias for the steam driven automobile. In 1905, in an interview, he remarked, "after 35 years of experience and observation, I am of the opinion still that steam will be the power of the future for motor cars."

Just months before his death in 1914, Dr. Carhart was interviewed in his office in San Antonio, Texas, for an article on his steam vehicle, the Spark. The doctor rummaged in his safe among piles of scrapbooks and clippings.

At length he produced a suitable picture of his steam car. He remained a firm believer that steam driven was the car of the future.

In June of 1914 John S. Donald, secretary of the state of Wisconsin, and interested in motor cars by reason of being the administrative officer of the law requiring the registration of motor vehicles, started a movement to honor publicly Dr. Carhart for his first motor propelled vehicle in America. It was planned to ask the legislature to appropriate funds for a medal and a purse of several thousand dollars in recognition of Dr. Carhart's contribution to humanity. Apparently nothing came of these plans. Several months later in this year of 1914, Dr. Carhart died at age 81.

The end of America's earliest motor car was quite unromantic, for soon it was dismantled and utilized as a power plant for a job printing establishment run by the inventor's sons. 

Obituary for Brooks Stevens

Brooks Stevens of Mequon, Wisconsin passed away at age 85 on January 4, 1995. He was a member of the Wisconsin Society of Automotive Historians. He and his auto museum in Mequon were the locus of a recent meeting of the national Society of Automotive Historians. He was recognized nationally and internationally for his expertise in design of useful products.

In the automotive field he contributed widely with designs for various vehicles, and in 1951 he produced his Excalibur J, a race-car. Later, in 1964, with his sons David and Steve he produced the Excalibur I, which ran a series through Excalibur II, III, IV and the V into the 1980's.

In the 1950's our member, Bob Gary, raced some of the early Excalibur J race cars for him.

He combined inventive genius with a personableness of manner, together with immaculate dress and appearance.

He appeared at the July 1994 Iola Car Show where he was a guest on Matt Joseph's Wisconsin Public Radio Show, "About Cars."