



THE SPARK

No. 5

A LETTER FROM THE EDITOR

According to my new plan for a bi-monthly Spark, the last one fell just a couple days short of being right on. This issue is on time as promised. I don't know for sure if I can stick to my schedule, but I'm sure going to try. Wish me luck. Help me out by writing something. It doesn't have to be Wisconsin oriented. We're interested in all automotive history!

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In this issue, with the help of Gary Busha as Associate Editor, I've done something I wanted to do for some time. That is, to run Gary's article on roads, which ran in an abbreviated version a couple of months back in Car Exchange, and Wally Wray's article, which ran in expanded form a couple of years ago in Old Cars. Many of you missed one or both of these articles when they first appeared, so it is a real pleasure to present them together here. Both are strong historical pieces that we as SAH members can be proud to have come out of our group.

Wally is a sort of gentleman farmer with all sorts of strange collecting habits, including the building of a replica of Captain Nemo's Nautilus. He hasn't done a lot of writing, but he promises to do more in the future. He should be a big help in putting together our encyclopedia of Wisconsin-built vehicles.

Gary is an editor of children's books at Western Publishing Company in Racine. He has had automotive material published in Old Cars, Car Exchange and Car Collector, and his poetry, fiction and criticism has appeared all over creation.

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I've pestered almost all of you about writing something for The Spark. Sadly, very few of you have sent me anything yet. Well, here's another angle. How about designing a cover for our publication? What I need is a piece of art 8-1/2 X 5-1/2" in black and white. So how about it? Put your artistic talents to work and see what you can come up with. I can't promise to use everything that comes in, but if it works, I'll use it.

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I'm still waiting to hear from volunteers to work our car show booth at Iola on July 12 and 13. Hello . . . Are you there?

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Director's Message

By the time that this issue of The Spark is off the press and in the hands of our members, it will be July and we will be meeting in Iola. This meeting will mark the first year of operation of the Wisconsin Chapter of the Society of Automotive Historians, Inc. under our by-laws. It has been an exciting year and one of considerable accomplishment. This includes: the adoption of by-laws and articles of incorporation, completion of affiliation with the SAH national, completion of affiliation with the Wisconsin State Historical Society, work on the topics of archives and awards, and a very successful mid-winter meeting. Not bad for only one candle on the cake.

And lest you think that these accomplishments seem awfully bureaucratic and unrelated to the real purpose of having a Wisconsin Chapter of the SAH, I hasten to assure you that we are not "all dressed up with no place to go." The place that we have charted for our next stop is the compilation of a comprehensive history of the automobile in Wisconsin. Appropriately, this is the theme of the Iola show this year, and it will be

the major focus of the Wisconsin SAH attention for the next several years. That is the decision that we made as a group several months ago, and I have heard nothing but enthusiastic response to it ever since. Let's see if we can begin to put together a structure that will carry this project through and will involve as many of our members as possible. Our Iola meeting is a good place to begin.

Of course, the on-going purpose of our group is less dramatic than the History of the Automobile in Wisconsin, but not less important. That is, to facilitate research into automotive history and to promote fellowship among those who write it or have an interest in it. I want to stress this last point. Some members and potential members suspect that our group is somehow only for professional historians. This simply is not so and is a notion that should be discouraged. Some of our members are professionals in the field of automotive history and they enrich the efforts of the group as a whole. However, the majority of our members are simply people with an interest or interests in the field of automotive history. The Wisconsin Chapter of the Society of Automotive Historians, Inc. will always enjoy the benefit of members with a broad range of interests and at different levels of involvement. It is not, and will not become, a narrow cadre for a few professional historians.

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In the past few months the domestic automobile industry has been in a state of turmoil that probably represents a "watershed" in its development. Some have predicted that the compounding of mistakes in the past has produced an industry that is no longer viable. They suggest that the domestic automobile industry will be liquidated except for a few specialty areas. This pattern would be analogous to what happened to the once mighty light electronics industry in the United States. Others suggest that there are basic strengths in the industry that will

allow it to overcome its late start in producing small, efficient, high quality automobiles. They suggest that the United States will remain competitive in the domestic market without resort to such devices as higher tariffs and parts-origin-quotas.

No matter which side you take, it's a striking debate because the very question would have been inconceivable ten years ago. The impact of a healthy automobile industry in this country is incalculable -- particularly if the alternative is a chronically depressed one.

I mention all of this because I think that as historians and historically minded automobilists, we are uniquely qualified to add a perspective to this debate. We know something about the development of this industry -- its historic strengths and weaknesses. If others have an interest in this topic, I think that it would be interesting to see their opinions in the next few issues of The Spark.

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Finally, as we close the first year of our promising operation, I would like to extend my thanks to the other Director-Officers who helped so greatly in making this a successful year. A particular note of appreciation to our Secretary, Chris Halla, who has done many things for us and particularly who has given us a really first-class publication. I am sure that many of you have had some experience in editing a publication like this and you know how difficult it can be. Chris has simply done a superb job. He is hereby forgiven for the hokey cover of the last issue.

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WISCONSIN ROADS

by Gary C. Busha

A mere 20 years ago, the road was still highly extolled as a sign of progress for busy Americans, industry and tourism. Few questioned too many roads, roads leading nowhere, unnecessary roads. Today some of that has changed. Recent studies call into question the more is better idea of road building. Poorly planned roads contribute to congestion, rather than relieve it; roads poorly located destroy public lands and create bypasses that harm business and tourism. Without a doubt, we need roads for transportation, to deliver essential goods and cut down time between destinations. But there are trade-offs to consider, and that's important to everyone.

The road in Wisconsin has had a remarkable history. To come to terms with its development, we need to look at a general history of roads in the United States, from the first trodden paths in the early 1700s to the present multi-lane highways. Looking back in history always leaves me with a sense of wonder at how men were able to find their way around in the dark, let alone the wilderness of America. The first roads were simply paths hacked out of the brush to get from one place to another. Common usage established routes. When I was a barefooted kid, I remember Sunday drives with my grandparents. We would drive around Wisconsin backroads looking at farms. I remember being particularly impressed with the well-worn paths that led from the farmhouse to the outhouse. Now that's common usage.

So, the first roads were simply walkways for people and animals. But in another sense, the road is much more. The road is a symbol of life. It is also a manifestation of majority rule, of common good, of the need to follow in the footsteps of another, either for profit or ease. In the largest sense, movement is what roads are all about. One takes a road to get from one point to another. Yet the road can be taken for its promise of mystery,

the unknown 'round the bend. Robert Frost used this idea in "The Road Not Taken." In it, the traveller purposely takes the less traveled road -- a choice in life and profession. Common usage is profuse with cliches concerning this theme: The road of life, the path to wisdom, the long and rocky road, etc. John Jerome, in The Death of the Automobile, sees the road as a "form of knowledge" that organizes and classifies. A knowledge that reveals, tames, civilizes. The road represents man's hopes and joys, but also his dark and distrustful feelings for the unknown.

Literature is abundant with allusions to the road. We see roads to ruin, and roads to riches; there are roads to nowhere and the famous yellow brick road of The Wizard of Oz. Kerouac's On the Road is a classic example of the road as savior, as a means to an end, a way to utopia or the Elysian fields of contentment and joy. The symbolism of the road would fill several volumes, and all because the road is such a basic and fundamental symbol of life.

Governments early on saw the need for adequate roads, but so did merchants in need of a solid, flat surface for hauling their goods. It was the soldier who needed the road to advance or retreat. Trade routes were established and through common usage, were eventually improved. Obviously, the early roads were not level. A solid bed surface of sand and gravel was not always available, and then there was the constant erosion problem. Therefore, early roads needed continuous care in a time when an individual's interest was slack and often divided between working on his patch of road and firing a musket at the British or Indians.

In America, the first trails were mainly through dense forests. The famous trails -- Cumberland, Overland, Oregon, Santa Fe and the Chisolm -- are examples of routes carved out by hand by rugged pioneers heading west through hostile Indian lands. It wasn't until 1806 that federal money went into the construction of roads, and that was a mere \$30,000 for a road to the Ohio Valley. Nonetheless, it was a start. Wisconsin road development, up until 1829, consisted almost entirely of Indian trails and paths. The common usage paths were bearable in dry weather, but when it rained, both man

and beast were better off taking to the woods. Among Wisconsin residents, common complaints were that one had to wear high rubber boots to wade through the deep mud of the road. Carts and wagons would become mired down; people were often stranded. The year 1829 saw inhabitants of the Green Bay area petition Congress for a road from Green Bay to Chicago. Congress mulled over the request for a year, and in 1830, it granted the first appropriation for a road from Ft. Howard to Lake Winnebago on to Ft. Winnebago at Portage, on the Fox and Wisconsin rivers. This was a military road with an appropriation of \$2,000. From this humble beginning, a steady flow of additional road funding continued.

By the 1850s, another factor slowed the progress of road building. That factor was the railroads. In the decade from 1850-1860, only 900 miles of road was laid despite the fact that the Macadame roadbed process was made practical, and the steam roller (1860) came into use. The period from 1870-1900, is considered the dark ages for road development in the United States. This was because of the railroad. What traveller would prefer a muddy, rocky and unsure road to the smooth, reliable comfort of a railroad coach? Not many except the most rugged of individuals. But something happened in the 1890s that would push the railroad out of the picture and change the face of America. That was a marvelous invention called the bicycle. Begun as a fad, bicycling soon caught on throughout the east and central parts of the country. Bicyclists began to petition Congress for better roads. The bicycle was, to a large degree, responsible for directing attention to the need for more and better roads.

An even more important event happened in 1895.

Although steam-driven machines appeared on American roads as early as 1871, it took some encouragement to keep them going. The Wisconsin State Government, in 1878, offered \$10,000 to the man who invented a self-propelled vehicle that would successfully run over 200 miles on public highways. This was no small task. The Oshkosh, a steam-driven marvel, turned out the winner. It had made the trip with an average speed of six miles per hour, and had

covered the 201 miles in 33 hours and 27 minutes. The fact was clear: Wisconsin was the first state government in America to indirectly subsidize what would eventually become the automobile.

The year 1895 is an important milestone in the development of roads, not only in Wisconsin, but in the entire country. That year is generally regarded as the year of the first American gasoline driven automobile. Gasoline driven buggies had actually appeared on U.S. roads as early as 1889. Gottfried Schloemer of Milwaukee reputedly drove a gasoline buggy in 1890. However, the honors go to J. Frank Duryea of Springfield, Massachusetts, for the first gasoline driven mechanized vehicle. In other words, automobile. His brother Charles is given credit for the original idea of a horseless carriage. The emergence of the gasoline driven vehicle was to have profound and lasting effect on American road building.

By 1895, the National Highway movement, begun in New Jersey, reached Wisconsin. The movement is the one that was given impetus by the bicyclists. Although horseless carriages were greeted with guffaws and "Get a horse" from locals, far-sighted men of the times saw that it was the horse that was on the way out.

In Wisconsin, from 1903 to 1911, laws were passed to provide for highway construction and improvement. By 1911, the State Highway Commission was created to handle planning and funding of road projects. The following year, a Wisconsin Road School was established by the commission to inform planners and engineers about highway routing and construction. The school, one of the first of its kind in the country, was eventually discontinued in 1945.

The Federal Road Act was passed in 1916. This law allowed federal funds to assist states with road programs. This legislation was vitally needed for Wisconsin highways. County organizations for state and trunk highway systems were formed in 1918. These organizations handled planning and construction of secondary roads.

From 1920 to 1940, the automobile ascended to dominance in American life. At the same time, the railroad continued its decline. Clearly the automobile had a firm rooting in business and culture. The need for more reliable roads became more apparent as mass

production put more autos on the road. In 1956 the Highway Trust Fund was established by Congress to plan, design and develop roads. That same year, the Highway Trust Fund launched the Interstate Highway System construction plan, a plan that would comprise over 41,000 miles of interstate roads. To fund this vast project and other projects, a 3-4¢ per gallon tax was levied on gasoline. That tax was later, in the Sixties, increased to 4¢ per gallon. The Highway Trust Fund was backed by strong lobbyists in the construction and trucking industries. The philosophy was to build highways in a network of nonstop roads across the country. Much of this plan has been accomplished, but often with little regard for aesthetics or community regard. By 1971, the interstate system was halted in 15 major cities by local action groups opposed to thoroughfares. Clearly, other issues were involved that would call to question the wisdom of building roads into the infinite.

Environmentalists deplored the destruction of public and private lands for what they considered monstrous interchanges and concrete nightmares. Consumer groups were formed to oppose routes that were believed to cause more congestion than to relieve it. Someone suddenly said: "Hey, maybe were overdoing it on road construction. Maybe the answer is to improve the roads we've got!"

In comparison to many other states, Wisconsin is lucky not to have a great number of large, major cities with populations over 100,000. Such huge cities as Chicago and New York create the need for gigantic interchange systems. Highways in Wisconsin occupy approximately 2% of a total of 35 million acres. We can still look at a Wisconsin roadmap and find areas untouched by roads. According to A.O. Mowbray in his book, Road to Ruin, one out of every four dollars spent in the United States is spent on the automobile or automobile related products. One out of six people in the country are employed in auto production, service or related products. Such figures illustrate America's love affair and dependence on the automobile.

The psychology behind the phenomenon is complex. We should ask the question if more automobiles mean the end of the need for more and better roads. Is it

necessary to be able to drive anywhere in the country in a car? The full impact of the interstate is not yet known. A recent study, however, of a portion of I-94, from Eau Claire to Minneapolis-St. Paul, provides the following data:

- A section of I-94, completed in 1959 through Dunn and St. Croix counties, separated through and local traffic, resulting in less congestion at the time, but since then has gradually worsened.
- Trade centers in Eau Claire and smaller towns along I-94 declined in ability to hold local residents. However, business in general increased because out-of-town shoppers were attracted.
- Land along the interstate increased in value, primarily due to rezoning and reclassification.
- There was an increase of through traffic on this portion of I-94.
- Local economies were not substantially improved. In other words, shoppers were not attracted to small communities along the route. The cities of Eau Claire and Minneapolis-St. Paul, however, benefited from increase business.
- The land adjacent to the interstate was steadily being used for commercial and non-farming use.

The study concludes that economic benefit occurred in some areas due to the increase of traffic. Local communities did not benefit except for access to the interstate for destinations in Eau Claire and Minneapolis. Environmentalists noted negative improvements.

Wisconsin's highway management includes the Wisconsin Highway Fund, which is within the Wisconsin Department of Transportation. The State Highway Commission and its agencies are located in Madison. A number of helpful bulletins are available regarding road surfacing, highway planning and traffic congestion. The interested reader would also enjoy a History of Wisconsin Highway Development: 1835-1945. Readers concerned with the aesthetic values of a road system can gain additional information about Wisconsin roads from a citizens group: The Wisconsin Roadside Council (3464 N. Murrar Ave., Milwaukee, WI 53211).

A final note about a successful Wisconsin road program. Called "Scenic Easements," the program was authorized in 1939 by the Highway Commission to acquire easements of private and public lands for the preservation of scenic beauty on national parkways. In 1961, the program was broadened and written into State law as part of the Outdoor Recreation Act program. This law allows the state to procure land through the power of "eminent domain" for the public good. Some examples of these scenic easements are rest areas, historical markers and numerous drive easements along the Mississippi River south of La Crosse to Illinois. The program has had success despite a few lawsuits over fair compensation to private owners.

The development of the road has made travel and movement possible over a vast range of this country. At first, road building was essential to transport goods and armies. As population and auto production increased, planners began to question unrestricted road building. Reason demanded moderation and careful planning. Without a doubt, there are tradeoffs. What the future will bring depends on reason and common sense with both the automobile and road building. One thing, though, seems certain -- the road, in some form or other, will continue on and on and on.

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THE GREAT STEAM WAGON RACE

by Wally Wray

Most historians will tell you that the world's second auto race, and the first one held in the U.S. was the *Times-Herald* Chicago to Evanston and return of Thanksgiving Day, 1895. In a sense, they are correct, as most of the vehicles competing in the event were of the personal transportation variety. If we but slightly bend the rules as to what constitutes an automobile, however, we can point to Wisconsin's

"Great Steam Wagon Race" of 1878 as the predecessor not only of future racing, but of the practical use of mechanized vehicles on the highways of the world. Nor is it insignificant that it was the first time that the motor vehicle was not only recognized, but accepted, encouraged, and promoted by government.

The immediate story began when George McIntyre Marshall, machinist, mechanic, and miller, and a Wisconsin State Representative from Adams and Wood Counties, introduced a bill into the Wisconsin Assembly in 1875. He proposed an incentive of \$10,000 be offered to the inventor and builder of a cheap and economical self-propelled vehicle to replace the horse and other animals on the roads in the state.

Marshall's bill, "Steam on Highways," was introduced in February of 1875, largely as a result of his own thinking on the subject, but no doubt also influenced by the successful steam buggy of Rev. John W. Carhart -- the "Spark" -- built in Racine in 1873. Briefly, his proposition was to offer \$10,000 to any citizen of Wisconsin of the "invention and production of a machine propelled by steam or other motive agent, which shall be a cheap and practical substitute for the horse and other animals on the highways . . ." The statute, as passed, required that all machines entering the contest "shall perform a journey of at least 200 on common road or roads," that they be capable of ascending grades of 200 feet per mile, that they must be able to reverse and turn off the road, and they should successfully demonstrate ability to haul loads and pull plows. The prescribed contest had a time limit of 10 days, and set forth a minimum speed of five mph working time. The entrants were to demonstrate an ability to perform as specified, and their machine had to be practical for general farm and road use.

Apparently none of the legislators believed that anyone in the State would take the matter sufficiently serious to actually waste time on such a project, even though some of them were likely acquainted with Dr. Carhart's success. How wrong they turned out to be became rapidly apparent as inquiries poured into Madison.

Governmental bodies are renown for passing the buck, so when confusion began to mount resultant to

Marshall's bill, the legislature appointed at the session of 1877, a commission to oversee, organize, and referee the impending contest. The commission would determine the winner. In what today seems an effort to return the problem to its source, they named Marshall as one of its members. It is also possible that the Assembly felt a little sorry for him, for he had in the interim, been voted from public office -- the common fate of politicians who sponsor bills that waste public funds. The other commissioners named were John M. Smith of Green Bay, and D.C. Olin of Jefferson County. Marshall was subsequently voted chairman.

By the following year, six prospective participants signified they were ready, and the official starting date was set for July 15, 1878. The six entrants, all steam-powered, included a Mr. Baker of Madison, the Wisconsin, owned by Dr. Karouse of Sun Prairie, the Oshkosh, owned by Anson Farrand and partners, and the Green Bay, of E.P. Cowles of Wequiock, near Green Bay. Mr. Baker's machine developed sundry mechanical delays while enroute to the Green Bay starting point, and failed to arrive. Dr. Karouse also experienced mechanical difficulties -- his machine having been built in a two-week period and assembled in two days. Road testing demonstrated that the chief problem was the sticking of the single cylinder on centers, and it was withdrawn as another cylinder could not be added on time. Information on tow of the entrants remains elusive, so the Oshkosh and Green Bay were the only two to appear for the start.

Much was written about these two competing machines in the contemporary press, and in later reminiscences, as well as of the competition itself. All who witnessed the trials agreed that the Oshkosh was the more attractive of the two. It had been in operation for some two years, having been built for threshing and other work. It was of balanced design, and was well painted, etc. She was described as having the appearance of a steam fire engine, with a vertical coal-burning boiler. She was equipped with 150 1-3/4" flues, between the rear wheels. At the boiler's bottom was a box heater extending forward, to which was attached the front axle king bolt cast-

ing. To this was mounted the pivoting wagon type axle via a coil spring. On top of the heater were the two horizontal engine cylinders with the crankshaft toward the rear, near the boiler. Drive was by flat chain, from crank to a large sprocket containing differential gears, thus providing one-speed forward and reverse.

Steering was controlled by a worm gear operated drum roller, from which chains ran to either end of the front axle near the wheels. All four wheels were of wood with steel tires, the front set being four-foot diameter with a five-inch tire. The rears were four-foot eight inches with a six-inch tire. A second set of tires could be attached to the drivers in modern dual fashion for off-road use. She was equipped with a trailer for fuel and water. She was described as giving a "light, jaunty appearance" at 5900 lbs. She had already shown an ability to sustain 15 mph with 70 psi of steam. Ready for a trip of 10 miles, weight was raised to 9875 lbs. She was able to haul a load of 9000 lbs -- all at a cost of \$2 to \$6 per day! Initial cost was given in one newspaper account as being \$1,000, although the commissioners referred to a figure of \$1,900. Her builders and owners were A.M. Farrand, designer and holder of several of the Carhart plans, J.F. Morse, in whose shop she had been built, A. Gallagher (Gallinger), and F. Shomer. These four men acted as her crew during the contest as well.

Her competitor, the Green Bay, was a larger and even more powerful machine. The Green Bay was built by E.P. Cowles of Wequiock, a town some 10 miles from Green Bay. Undoubtedly, Cowles had intended to enter a thoroughly tested machine (built two years previously), but on account of the poor logging season, he had leased it to a logging company and had built another machine in a hurry for the contest. This machine was of the locomotive type, having a woodboring horizontal boiler with smokestack in the front, and firebox and cab at the rear, much like later steam traction engines. Unlike most American traction engines, however, she had two cylinders and a three speed transmission. She was also equipped with what was at that time a very novel steering system, a form of Ackerman gear with beam axle and steering knuckles. One source said that this system may have been applied to the rear axle as well. No complete description

of this engine survives. Perhaps the complicated mechanism was beyond the descriptive powers of the reporters of the day. Ready for the road test, she was reported to have weighed 14,225 lbs., and she had approximately the same pulling power, initial and maintenance costs as the Oshkosh. Due to the hurried construction, her transmission gave constant trouble, but when all was in working order, it would appear she could make upwards of 25 mph. Most who commented on her appearance were of the opinion that the mechanics were overly complicated. She was clumsy (at least in design), and she had an unfinished look, although she was obviously solidly and durably built.

Monday, July 15, 1878, in Green Bay it was hot. In the previous few days, temperatures had ranged between 98 and 102 in the shade. This day was not different. There was a holiday spirit -- like a circus day -- in the atmosphere, however, and all talk centered on the start of the race the next day. The Oshkosh arrived on the morning freight, and she was put to a drive around town immediately. At 4 p.m., the Green Bay steamed in from Mr. Cowles farm, and she too, put in an appearance on the city streets. Good-sized crowds were attracted by the sights. Neither of the out-of-town commissioners arrived until later in the evening.

Tuesday, July 16, was no cooler. But, not even the heat could prevent huge crowds from gathering to watch the start. The Oshkosh steamed around the city for an hour prior to the official time, then she crossed the Main St. bridge and went to the corner of Broadway and Dousman, the official starting line in Ft. Howard. Though the Green Bay had apparently passed her early road testing satisfactorily, her troubles began this morning when she broke through a Main St. culvert on her way to the starting line. The shock jarred the delicate machinery and broke the governor -- but damage was slight and repairs were made.

By prior arrangement, the 11 a.m. start saw the Oshkosh start south on the river's west bank, while the Green Bay kept to the east shore. Planning to meet at De Pere for dinner, they were intending to meet on the west bank and proceed in company, in-so-far as

possible along the C&NW railroad right of way to Oshkosh, Fond du Lac, Waupun, Watertown, and Ft. Atkinson to Janesville, then south to Beloit, and from there north to Madison. Each machine was permitted to pick its own route between the various communities along the way. Possibly this was done so that adequate bridges could be found. The Green Bay's experience with the culvert was seen as an indicator of possible troubles ahead for both machines, as the bridges had been designed only for regular wagons. No further mention of this was given in the press coverage, so apparently it had been an unnecessary fear.

Things began to go wrong for the Green Bay almost immediately. She had barely cleared the city limits when the injector broke and had to be replaced by a steam pump. This took the rest of the day, so before she even got started, she was half a day behind. The Oshkosh, meanwhile, received a spirited greeting in DePere, and after a community-sponsored dinner, had pushed off again for Appleton, which was reached in about four hours running time.

Next morning the Oshkosh started out again, while repairs to the Green Bay were being completed. As a result, she had barely reached DePere when the Oshkosh rolled into her home city, having sustained a speed of nearly 20 mph over part of the route. The commissioners, who followed the Oshkosh in a buggy, telegraphed Cowles, ordering him to ship the Green Bay by rail in order to make a real contest of the demonstration scheduled in Oshkosh. After complaining for a record, he complied, and further adjustments were performed after her arrival Thursday evening.

Saturday, July 20, saw the speed and hauling tests in Oshkosh. First held were speed trials at the fairgrounds racetrack, where the Oshkosh performed at a rate of one mile in four mins., 41 seconds (13.6 mph), with 130 psi. With 110 psi, the Green Bay trimmed one minute off the time, including a short stop to tend to an overheated bearing (17.6 mph). Hauling tests were next conducted at Foster & Jones mill, where four horses were required to haul a heavy wagon loaded with 3000 board ft. of green lumber into position. The Green Bay was hooked

on first, whereupon Mr. Cowles invited bystanders to climb on and have a ride. He then proceeded to pull them around town without difficulty. When the Oshkosh was hitched on, she was able to move the load successfully on smooth and level surfaces, but required the help of the passengers to negotiate less favorable stretches.

Back on the road again, the Oshkosh soon took the lead as the Green Bay continued to have difficulties with her gears and bearings. Just outside of Fond du Lac, the Oshkosh experienced a tight front wheel bearing and was delayed half an hour for repairs. This appears to have been her only mechanical troubles over the entire 200 mile run. When the Green Bay again broke down near Fond du Lac, the commissioners ordered her to again be shipped by rail in order to catch up.

While she was in transit, the Oshkosh gave a solo demonstration of her plowing abilities on commissioner member Olin's farm. Upon arrival in Ft. Atkinson, several wagons were hitched on. Then 72 men climbed aboard, and were hauled several miles into the country. Here several acres of tough prairie sod were successfully plowed with single and gang plows before a crowd of some five hundred curious onlookers.

Having successfully completed this phase of the contest, she again waited for her competition to catch up. Cowles had so much trouble with high speed that he was now driving in second, putting the pace somewhat less than the Oshkosh, which was several times ordered to wait. Orders were finally received to continue to Madison, where the Oshkosh triumphantly arrived on the afternoon of Tues., July 23. Official running time was 33 hours, 27 minutes, or an average road speed of six mph -- one better than specified. During the run she consumed 4500 lbs. of coal and 12 gallons of oil. In celebration, several wagons were hitched on, and the Governor, Secretary of State, Secretary of the Treasury, and the entire State Assembly climbed aboard for a victory parade around the Capitol Building.

Obviously, the Oshkosh had presented a superior performance, and in fact, was the only finisher.

Some twenty miles from Madison, the Green Bay broke down for the last time and was shipped home.

The Oshkosh's victory was somewhat undermined, though, when a split of opinion developed as to the awarding of the prize money. Marshall and a few others believed that the Oshkosh's owners deserved the prize, while the Governor and many others held that she did not live up totally to the provisions in that any vehicle costing in the vicinity of \$2000 and costing \$2 to \$6 a day to operate, could not be regarded as being cheap and economical. Therefore, the matter was postponed to the next legislative session, when it was voted to award half of the prize.

As previously stated, one must bend the rules defining an automobile to include the Oshkosh and the Green Bay. Weight and purpose of design would be factors to consider. Yet, the nucleus on the private motor vehicle was certainly in evidence, as well as the goal of an all-purpose vehicle -- which we have not yet achieved. Other vehicles equally less suited to the definition of an automobile appear in every roster of marques, and certainly most of them were capable of no more performance than the Oshkosh and Green Bay. In fact, many years had to pass before speeds and endurance were to match these smoke-belching steamers on Wisconsin roads.

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Associate Editor:	Gary Busha

A BUNCH OF THE GUYS.....

On a recent trip to Detroit, SAH President Walter F. (Frank) Robinson stopped on the Iolan frontier to chat with (reading clockwise) Bob Lichty, John Gunnell, Chris Halla and Tony Hossain. The truck is the Wisconsin built Sternberg, circa 1914.

