October-November 2013

THE BATTLE CREEK GRUDGE MATCH

By Robert T. Rhode

This story begins quietly with small, friendly shops in the 1840s in Battle Creek, Michigan, and ends with a grudge match pitting two factories against a gigantic manufacturing firm. John Nichols (1814-1891), a blacksmith and millwright, walked from Detroit to Battle Creek in search of a suitable location for his work. He soon brought his family there. In 1851, David Booth Shepard (1820-1904) bought out his brother's interest in Nichols' company almost as soon as Nichols had formed the business. In 1858, Nichols and Shepard built a vibrating thresher, which they greatly improved in 1861. With the success of the thresher, which Nichols and Shepard licensed to Cornelius Aultman and Henry H. Taylor for simultaneous production in Mansfield, Ohio, what had been a small shop with a foundry in Battle Creek became a booming manufacturing plant.

Page 51 of the Threshermen's Review for July of 1911 reported that Nichols and Shepard moved their factory to a new location in 1868. Other citizens of Battle Creek built machines to compete with Nichols and Shepard's machines. Merritt & Kellogg, which did general job work in brass and iron castings, occupied the old shops of Nichols and Shepard and produced traction engines that predated those of the latter firm. While the Merritt & Kellogg traction engine was a relatively early one, it was by no means the first in the nation, as has been erroneously reported in several encyclopedias, books, and articles. Jack Alexander found that Merritt & Kellogg were importing chain-drive traction engines into California as early as 1872. Richard Barnes Merritt (1822-1892) was the son of a well-known Battle Creek pioneer, Joseph Merritt, who was one of several Quaker brothers and brothers-in-law that purchased a half interest in the city of Battle Creek in 1835. Anti-slavery advocates William Lloyd Garrison and Sojourner Truth frequently visited Joseph Merritt's home. Richard's wife was Julia Frances Kellogg, who was born in 1837. Dan W. Kellogg (1823-1902) appears to have been Julia Frances' brother. He held patents for improvements in traction engines (number 135,128 issued January 21, 1873) and for a pump cylinder and valve (number 183,806 issued October 31, 1876). Dan and Iulia were fifth cousins of the founders of the cornflake business.

Traction engines were on the minds of



Battle Creek residents in the early 1870s. Zebedee Macomber (1834–1913) had one constructed in Battle Creek in 1873. Zebedee's grandfather, also named Zebedee, owned Macomber & Company's menagerie, also known as the Macomber Circus, and one of the younger Zebedee's sons, Walter Glenn Macomber, invented and patented a rotary engine that made head-



David Booth Shepard was John Nichols' partner in the business that became an industry leader in the production of threshers built on the vibrating principle.

lines in the early years of aviation and was used in a short-lived line of automobiles. Another son, Lynn W. Macomber, worked as a traveling machinist for the Advance Thresher Company during that firm's halcyon years. Back in 1873, Zebedee had a machine shop convert an old stationary



For threshing in Battle Creek in 1873, Zebedee Macomber had this one-of-a-kind traction engine constructed from an old Columbus Machine Shop stationary engine. When Zebedee's contraption scared Jerome E. Nichols' horse, a series of court cases gradually established who has rights on public roads. Courtesy the Willard Library of Battle Creek



Surrounded by sons, including rotary-engine inventor Walter and Advance machinist Lynn at the left, Zebedee Macomber sits near a threshing machine. Back in 1873, he had an old engine converted into a traction engine to power a thresher built by Nichols and Shepard. Courtesy Cynthia's Hi-Desert Blog

engine, which had been built by the Columbus Machine Company, into a geared traction engine. Among aficionados of the history of the law, Zebedee is well known because his engine scared Jerome E. Nichols' horse, triggering a series of court cases about who has rights on roadways. Zebedee threshed with his one-of-a-kind traction engine.

Page 11 in Charles K. Hyde's The Dodge Brothers: The Men, the Motor Cars, and the Legacy (2005) says, "William Brown began manufacturing threshers in Battle Creek in 1851, but in 1858 the firm became Upton, Brown & Company, with James Stephen Upton as the controlling partner." According to his obituary on pages 39-40 in Proceedings of the Grand Council of Royal and Select Masters of the State of Michigan (1880), Brown (1811-1880) initiated the manufacturing of threshers in 1853. Page 355 of Volume I of History of Calhoun County, Michigan (1913) states that Brown assumed control of his father-in-law Roswell T. Merrill's thresher business in 1856 and that, in 1859, Brown began to produce a machine so similar to the Joseph Hall thresher that Brown lost an infringement case.

The 1889 Upton catalog presents this history:

1851 Wm. Brown ... in 1851, began in a very small way, building Threshing Machines at Battle Creek, Michigan, the first factory of the kind in Michigan. 1859 A partnership was formed between Wm. Brown and Jas. S. Upton and others in 1859, the firm name being Upton, Brown & Co.

1861 The Threshing Machine built was called the "Michigan Sweepstakes," it was an "Apron" machine and; as many old threshermen will call to mind; it was one of the best, if not the best to be found up to the seventies. The increasing demand for the "Michigan Sweepstakes" made more capital advisable and in 1861 the firm of J. S. Upton & Co. was formed.

1874 The Upton Mf'g. Co. was incorporated in 1874. The growing business and number of partners making the forming of a stock company advisable.

1878 This Company was always sharply on the lookout for improvements. They thought they saw in the so called Vibrator family of Threshing Machines some advantages the "Michigan Sweepstakes" lacked. They felt sure from experience that the "Sweepstakes" had good points the "Vibrators" lacked.

In the seventies the Upton M'fg. Co. began experimenting and the President of the Co., then James S. Upton took out patents on the "Combination."

It was intended as indicated to be a combination of the good; doing away with the bad qualities of both the "Apron" and the "Vibrator" families of Threshing Machines.

1881 Seeing in some localities ... the coming demand from threshermen for more capacity, Upton M'fg. Co. in 1881



Famed Hoosier artist Theodore Clement Steele (1847–1926) painted this portrait of financier and attorney James Stephen Upton in 1871. Collection of the Indiana State Museum



Described as an energetic red-haired Irishman, Elon A. Marsh patented the Marsh valve gear.

decided to build a 36 inch cylinder, 52 inch separator "Combination," and decided to build Engines.

To find and use ideas of value possible to be gotten from other makes of farm engines and ideas possible to defraud some inventor out of by getting without compensation his ideas and then using them, it considered then, as it now considers ... entirely beneath this Company.

The precise meaning of the last sentence above will soon become clear.

James Stephen Upton (1831–1899)

Upton also served as a postmaster and alderman. He became a wealthy financier and was known for his shrewd business decisions. His brother Parley (1824–1893) held a patent for a threshing machine (number 121,220 issued November 21, 1871).

In December of 1879, Constantius G. Case (1828-1888, according to Oak Hill Cemetery), an employee of Nichols and Shepard, applied for a patent that represented an improvement over existing threshing machines including the Vibrator, the popular threshing machine of Nichols and Shepard's firm. Constantius was granted the patent in 1880. In that same year, Elon Augustus Marsh (1854-1923), also an employee of Nichols and Shepard, applied for a patent for his valve gear. In December of 1880, Marsh received his patent, which was issued under the number 236,052. (Marsh would go on to patent several useful inventions.) Even before he received his valve gear patent, Marsh assigned half of it to fellow employee Minard "Old Judge" LaFever (1847-1921); in turn, Marsh and LaFever assigned an interest to Battle Creek resident James Scott, who was not related to William G. Scott of the Gaar firm in Richmond, Indiana. As Lucius C. Sweet described in his article entitled "Marsh Reverse Gear" on pages 10 and 11 in The Iron-Men Album Magazine for May and June of 1951, and as online court and commission records amply show, a ten-year legal battle ensued when Marsh and LaFever demanded that Nichols and Shepard pay them a licensing fee for the Marsh valve gear. (See particularly 140 U.S. 345.)

Sweet summarized the dramatic events: "This gave rise to a bitterly contested law suit requiring a special act of Congress to legalize the Marsh patent which was faulty in the issue. [When the patent was first issued, an oversight caused it to lack the signature of the Secretary of the Interior. The signature was supplied after Marsh, LaFever, and Scott filed their suit.] Afterwards, a special



Page 51 in Paul C. Johnson's *Farm Power in the Making of America* (1978) includes this cut of the earliest Nichols and Shepard engine to feature the Marsh valve gear, as displayed in the drawings that accompanied Elon A. Marsh's patent 236,052.

Commission was appointed by Congress to decide on the infringement suit brought by the owners of the patent against the Nichols and Shepard Co. who claimed rights under the patent as their own because Mr. Marsh was working for them at the time and put the first reverse on their engines. The Commission, after listening for over three hours to highly paid counsel for the defendant, was about to adjourn for rest and noonday lunch saying they would hear Mr. Marsh after dinner, whereupon Mr. Marsh, a red headed youth full of 'live wires,' who was appearing in his own behalf, jumped up and said, 'Gentlemen, I have right on my side and I only want ten minutes to prove it.' They gave him the time, also the verdict in his behalf, which was afterwards reversed by a higher court, giving Nichols and Shepard Co. the right to use the invention on their own engines. After the 'smoke' of this legal battle had cleared away, the relationship existing between Mr. Marsh and the Nichols and Shepard Co. was no longer of a friendly nature."

So, despite Marsh's assertion that "the right" was on his side, a higher court gave Nichols and Shepard "the right" to use the Marsh valve gear without paying Marsh, LaFever, and Scott a royalty. To add insult to injury, Nichols and Shepard no longer called the invention a "Marsh" valve gear. Marsh might be described as the victim of bad timing. The decision of the higher court coincided with the time in American history when courts were gradually shifting ownership of ideas from inventors to the corporations that employed them. This shift accompanied the time when the



Clark Davidson of Gordon, Ohio, contributed this photograph of a Case & Willard Advance for the cover of *The Iron-Men Album Magazine* for September and October of 1966. It is not difficult to imagine that the man in back is Elon A. Marsh. Is the man in front Minard "Old Judge" LaFever?

small shop became a thing of the past and sprawling factories became incorporated.

Meanwhile, in 1881, Constantius decided to abandon Nichols and Shepard and to found a small shop for the purpose of building his improved thresher. For the first year, Constantius struggled. He managed to take orders for no more than perhaps ten threshing machines, and he had no power source to sell along with the threshers. In about his second year, he managed to obtain horse powers to market with his threshing machines, but the future of his small company appeared bleak. (See page 61 in Volume 9, Number 12, of the Michigan Manufacturer and Financial Record for 1912.) He turned to his friend, farmer Lovett J. Willard (about 1833-1887), for financial backing. By 1884, Constantius sought advice from his brother, Thurlow W. Case (1838-1920, according to Aspen Grove Cemetery in Des Moines County, Iowa), who was a proverbial mover and shaker in Battle Creek society. Thurlow was a leading machinist for the Upton Manufacturing Company, as Brown and Upton's business was then named.

In March of that same year, several cities were negotiating with James Stephen Upton to acquire his threshing works. In the fall of 1884, Upton accepted Port Huron's bid to move his factory to Port Huron. The patterns and machines were loaded up and hauled away. Several workers and officers of the company moved to Port Huron; others did not. Incidentally, the engines that were built in Port Huron were referred to as Uptons through Upton's death in 1899, even though the name Port Huron Engine & Thresher Company was coined in 1890 when Frank A. Peavy restructured the company so that it would not go belly up.

The special significance of Port Huron's brown thrasher bird trademark probably was not lost on customers who remembered that William "Brown" had begun the "thrasher" business that led through Upton to Port Huron.

Not content to let his brother lose his shirt, Thurlow approached two employees at the Upton firm, none other than Marsh and LaFever, who had abandoned Nichols and Shepard and had been hired by the canny Upton to design the Upton steam engines. The relationship between the newly minted Case & Willard Thresher Company and the Upton Manufacturing Company was



The 1889 Upton catalog featured this cut of the firm's traction engine. The Case & Willard Advance engine bore a striking resemblance to the Upton partly because Minard "Old Judge" LaFever designed both.

as close as the brotherhood between Constantius and Thurlow! The Case brothers were motivated to compete with Nichols and Shepard's company, and Marsh and LaFever were all too willing to contribute their talents in the grudge match with the industrial giant.

The 1889 Upton catalog describes the advent of the Upton engine in 1881:

The Co. employed by the year a man whom they knew to be in every way a good practical as well [as] a theoretical engineer [probably LaFever]. ... This Company early became satisfied that Tractions would entirely take the place of plain engines, that researches must thoroughly include the traction part, for it was found that there was good cause for complaint, made ... regarding all Tractions i.e. that they were too light forward, the front wheels too likely to leave the ground, consequently difficult to handle and steer on slippery or sandy roads

Some threshermen were so far advanced in their ideas, as far back in the history of Tractions as 1881, that they wanted it made easier to line the engine's band wheel with the separator pulley. ... Some threshermen were inclined to be esthetic, complained that the "artistic effect" of the average traction engine with its monumental smokestack pouring out its volume of smoke and sparks, towering above a big box or tank, which towered above a tea-kettle looking or a scrap heap, scare-crow looking mass of iron and black, was enough together with its infernal sounds of clanking chains

Case & Willard Advance Separator

Page 171, "Report of the Committee on the Special Merits of Unpremiumed Articles Entered in Book F, Exhibited at the Indiana State Fair, September, 1884," published in the *Thirty-Fourth Annual Report of the Indiana State Board of Agriculture*, Volume XXVI, 1884

The Case & Willard Manufacturing Company, of Battle Creek, Mich., exhibited one of their Advance separators. This machine has some points worthy of especial note. It embraces a combination of principles somewhat different from any other machine on exhibition at the Indiana State Fair this year. The cylinder is about one foot nearer the ground than in the average of threshers, thus affording the convenience of lower tables. The cylinder has two center supports for the bars. The heads are solid. The shaft is of steel, one and three-fourths inches in diameter. The teeth are made of steel. The sides of the cylinder frame are of iron. The separator being wider than the length of cylinder enables all pulleys for belts on the cylinder shaft to be on one end. The pulleys for the main belt to the engine run inside of the yoke and box. This yoke is bolted to the posts. The belts which drive the separator are outside of the yoke and box and close to the side of the machine. This novel arrangement of the belts, pulling in opposite directions, saves a large amount of friction on the bearings and boxes of the cylinder shaft. By a simple device both ends of the concave are raised and lowered at the same time by one motion. This machine has folding tables, which are not removed when moving the machine from place to place. The cylinder teeth, instead of being at right angles with bar, are bent at the shoulder so that they incline backward, thus tending, it is claimed, to feed easily without bunching or choking. The machine is strong, steady and durable, possessing a wonderful capacity for rapid and efficient work.

and grinding gearing and general Niagara roar! to scare a human being, and enough to scare a horse to death. ...

... Upton M'fg Co. obtained ideas from other manufacturers' engines and profited by others' experience, but the reader will agree if posted on what was offered threshermen then, and if posted on what "the Upton" 1882 engine was, that this Company did not, could not!! have profited much from other builders' productions or experience, further than to find out before experimenting themselves, some of the great difficulties to be overcome and get some idea of how to overcome some of the difficulties then attending the production of a perfect traction engine.

As before remarked the Upton Company employed a theoretical and practical engineer; he had already had as much experience in Tractions, was as bright in this line as any man; they made extended researches in self-propelling engines; finding the difficulties of greatest importance to overcome. ...

This Co. had the former experiments of its engineer and their examinations of the experiments of other builders to profit by; they made drawings; they built a traction engine, built a fire, opened the throttle! She moved!! She started off!!! ... [A]way she went, -four six-miles an hour, a complete success!!!!

... The Upton Engine was in 1882 the best (considerably) Traction Engine in the market, this is History!! A number of Companies afterward, in one way and another used the ideas original with this Company, imitated, have followed Upton Mf'g Company but they never excelled, never beat the Upton engine in the seasons that followed!!



Here is Upton's Combination thresher from the 1889 catalog.



This cutaway view of Upton's Combination thresher reveals the inner workings of the machine.

Upton Manufacturing Company Thresher

Page 157 in the Twenty-Ninth Annual Report of the Indiana State Board of Agriculture, Vol. XXI, 1879

The Combined Thresher, Separator and Seed Saver, made at Battle Creek, Mich., by the Upton Manufacturing Company, was exhibited by P. T. Baker, Huntington, Ind. This machine claims a saving of grain besides numerous other skillful devices, altogether making an almost perfect combination to thresh and clean at one operation.

Page 176 in the Thirtieth Annual Report of the Indiana State Board of Agriculture, Vol. XXII, 1880 (Printed in 1881)

The Combination Grain Separator, Manufactured by Upton Manufacturing company, Battle Creek, Mich., exhibited one thresher and separator. The vibrator carries the straw in bunches. By the aid of one picker and open slot-rattling chain it is carried in an evenly distributed screen. The machine is very simple in construction. Something novel in this machine is a combined cylinder shield and comb, which prevents all back lashing and wrapping of straw round the cylinder. The stacker is easily adjusted and folded over the top of the machine while moving. With the appliance of a long elevator it empties the chaffing and grain without shake spout in front of the feed board.

Page 144 in the Thirty-First Annual Report of the Indiana State Board of Agriculture, Vol. XXIII, 1881 (Printed in 1882)

The Upton Manufacturing Company, of Battle Creek, Mich.; thresher is provided with a comb and shield back of the cylinder, which prevents wrapping of straw when damp, and also guards against the throwing of grain and straw in front of the apron. It has a vibrating shoe, and a balancing pendulum. A large overblast fan makes a light current of air on top of the riddle, which is large. The fender board is hung on hinges, and can be regulated at will in any kind of grain to prevent grain being blown out onto the stack. The elevaters [sic] discharge at the bottoms instead of the top, thus preventing clogging. The agitating floor has three sets of rakes, and back of them is a beater. The machine has large capacity and is of good workmanship.

Page 146 in the *Thirty-Third Annual Report of the Indiana State Board of Agriculture*, Vol. XXV, 1883 (Printed in 1884)

Upton Manufacturing Co., Battle Creek, Michigan, by Russell & Merrifield, agents, Indianapolis, exhibit their Combination Separator. In this machine there is a combination of the vibrator and straw chain. The grain and straw are first thrown on a vibrating rack where the main part of the separation is done, and is then passed onto a straw chain where it is completed. The grain falling below is conducted to the riddles and cleaned in the usual way. It is a well built machine without much novelty.

1884 The demand for "Combinations" for "Upton" Powers and for "Upton" Engines made more room necessary by 1884, and the large and complete works ... two miles from Port Huron, Michigan, ... were built. ... During this season (1884) were tried two or three of the "Combinations" with the chaffer or perforated board attachment. It proved to be one of the notable improvements on the original machine.

1885 The Upton Manufacturing Company opened at, and first built Threshing Machinery at Port Huron in 1885.

And first built Engines with Return Flue Boilers, adapted to the use of straw, wood or coal for fuel in 1885. ...

1886 Regarding Engines in 1886: Some of the new features were as follows: Increase in size of drivers, slide in place of screw throttle, putting on both Cross-Head pump and an injector without extra charge.

The few Return Flue Plain "Upton" Engines put out in 1885 proved to be a complete success, excepting that it was found that Tractions were necessary. Traction Return Flue Engines were first built by this Company in 1886.

In the fall of 1884, LaFever and Marsh chose to remain in Battle Creek and not to move to Port Huron. They joined the Case & Willard Thresher Company. By the end of 1884, LaFever had designed the Advance engine, which, naturally, bore a strong resemblance to the Upton. As of the outset of 1885, Advance traction engines had come into being. In 1886, the Battle Creek Machinery Company employed Marsh "to develop a boiler feed pump for traction engines" (*History of Calhoun County Michigan*, Vol. I, page 357).

The Upton engines and early Port Huron engines continued to follow the majority of LaFever's designs through several years, even after the Grime reverse, along with a piston valve, was substituted for the Marsh valve gear.

It is up to readers to decide who won the grudge match, but perhaps all can agree that the Port Huron Engine and Thresher Company and the Advance Thresher Company gave the Nichols & Shepard Company a good run for the money.

Acknowledgment

I want to thank Mike McKnight for his suggestions, which helped me tremendously, and Mark Ohlde for his contributions, which brought accuracy to a complicated story.

Contact steam historian Robert T. Rhode at 990 W. Lower Springboro Rd., Springboro, OH 45066; e-mail: case65@earthlink.net

Nichols, Shepard & Co. Thresher

Page 457 in the Pacific Rural Press for May 10, 1884

Improved Grain-Saving and Time-Saving "Vibrator" Threshers

What is Claimed

Nichols, Shepard & Co.

"Vibrator" Threshers:

We claim on behalf of the Nichols, Shepard & Co. "Vibrator" Threshers that they have facilities and means for separating and saving grain that are not found in and cannot be applied to any other style of machines, and are adapted for a class of farmers who want to do their own threshing, and do it well. They will save grain, and it is also claimed and shown that these machines possess features bearing on principles of durability, cheapness of repairing, ease of management, ease of draft, and general adaptation to the wants of those farmers who do their own farm work, that entitle them to their patronage and preference.

Simplicity and Ease of Management.

The "Vibrator" at once commends itself to every intelligent observer as prominent in these particulars. It only needs to be examined, or even considered to convince one that a man who can run any kind of a machine can successfully run this.

The machine is so perfectly simple that about all there is to do is to start it off, keep the few belts properly tightened, and feed in the straw. The separating and cleaning facilities are in excess of any amount of grain that a feeder can handle. The lifting fingers have such a thorough action upon the straw that it is perfectly easy to shake the grain all out, and the manner of adjustment for different kinds and conditions is easily seen and done. We advise those farmers who wish to do their own threshing, to buy a "Vibrator."

I have at my factory the "Vibrator" Thresher of the following sizes, which I will sell at the following prices:

40-Inch Cylinder "Vibrator" Thresher \$550 36-Inch Cylinder "Vibrator" Thresher \$500

H. W. Rice, Sole Agent, Corner of Fifth and Bluxome Streets, San Francisco, Cal.



The *Pacific Rural Press* for May 10, 1884, carried this cut of a Nichols, Shepard & Co. Vibrator thresher.