

1883 traveled with George Disman of Lima Locomotive Works through the southern states promoting and selling the locomotives. In May and June of 1883 Shay was in Chicago for the National Exposition of Railway Appliances as an exhibitor with a model of his Shay engine. In July he was in Santa Fe NM for the completion of the A.T. & S.F. line through AZ. In the fall he was attending the Wexford County Fair in Cadillac Michigan.

William Crippen was not out of the picture yet. He had built several locomotives since the first engine for Shay and in 1882 Crippen filed his own patent [266,103 dated 10-17-1882] for a geared locomotive. His patent showed a locomotive similar the Henderson Shay however it differed in several key areas. Only one of these was ever built as Crippen failed to draw customers for further orders. After 1883, history fails to reveal any record of William Crippen.

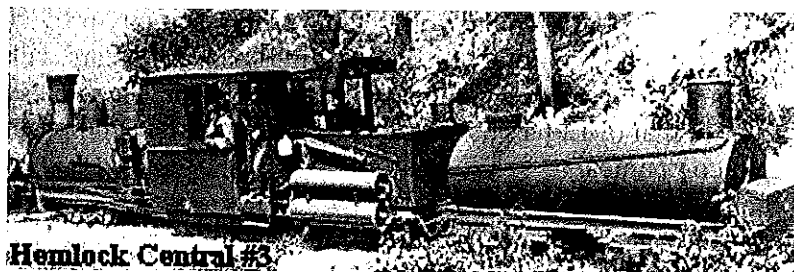
Shay's arrangement with Michigan Iron Works ended in 1883 when the company went bankrupt. They had produced only 6 locomotives in their short history. James Henderson left for work with Lima Machine Works as soon as they were out of business. Why the Henderson style Shay was not more popular is somewhat another mystery since Ephraim was promoting both. The fact that Ephraim made road trips with Lima employees in the early 1880's and that Henderson became a Lima employee himself may clear some of the mystery. Lima on the other hand was doing quite well with Shay Patent Locomotives.

Coming out on top of the "1883 Gear Wars" was the 'Carnes design' of the Shay Patent Locomotive. This proved more popular than Ephraim's original patent design, the more powerful Henderson style Shay and Crippen's own geared engine design.

Shay spent time and his own money promoting his locomotives until the late 1800's. Interesting is that Ephraim Shay was considered by the Partners of Lima Machine Works to have been too involved with Shay improvements. They depended on James Henderson as a Lima Machine Works employee to be the driving force behind the Shay Locomotives improvements over the next few years. Henderson's major improvements on the Shay included the addition of the third piston and then the third truck. On March 6th, 1901, at the age of 62, Ephraim Shay sold all of his stock in Lima, thereby completely ending links with the company that made him famous in the logging and railroad industries.

In 1888 Shay moved to Harbor Spring Michigan bringing his lumbering operations and railroad along. Here Shay's well-known Hemlock Central railroad ran north out of the town. Although his Railway was primarily constructed for logging, in the summer, vacationers were hauled for 25 cents a trip. This is the 1909 description of Harbor Springs Railroad from Poor's Manual of Railroads.

**HARBOR SPRINGS RY.-Harbor Springs to Carter's Mill, Mich., 8 m.; branches, 4.75 m.-total, 12.75 miles. Gauge, 2 ft. 6 in. Rail (steel) 16 lbs. Chartered Feb. 2, 1902. Road put in operation in 1902, doing a logging, freight and passenger business; extended two miles in 1904. Capital stock, \$30,000. No bonded debt. Cost of road and equipment, \$51,346. Locomotives, 3. Cars (passenger, 6; flat, 60; other, 6), 72. OFFICERS: EPHRAIM SHAY, Pres. & Gen. Mgr.; L. Shay, Sec. & Treas., Harbor Springs, Mich. The railroad was chartered on Feb 2, 1902, and opened on July 1, 1902.**



**Hemlock Central #3**