

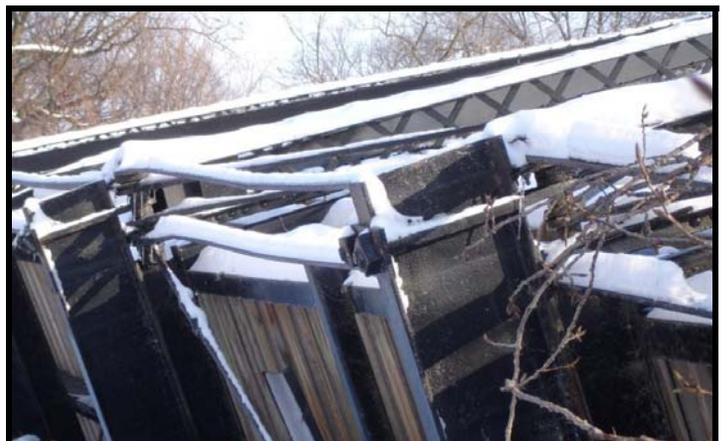
Chesaning Village, Parshallburg Bridge

Every day new structures are built, and the old are torn down. These old structures have a history not written in words but in the materials and tools that craftsmen used in their construction. Not all old or historic structures can be saved, but enough should be preserved with their original members intact to provide an understanding of the advances made in materials, tools, and the building techniques that were used to construct these historic structures.

The historic metal truss bridge in Chesaning, Michigan, is a historic structure that must be saved. Besides being a rare truss design during its service of over a hundred years, it was never subjected to rehabilitation for twentieth century vehicular traffic and its original design was never altered. Often, historically significant features of a historic metal truss bridge are replaced with new steel or modern materials when rehabbed; sometimes as much as eighty percent of the original historic features of a bridge can be replaced with new steel and the bridge still classified as historic. Not only does this diminish the overall historic appearance but it distorts the historical record of a bridge.

I'm often confronted with the argument that it's cheaper and more practical to replace original historic bridge members and I'm reminded of something J.A.L. Waddell, Bridge Engineer, wrote in 1908 about ornamentation: "any money so expended has evidently no utilitarian purpose, and consequently to the eye of the solely practical man appears to be entirely wasted." For the practical it would make sense to replace, for example, a historic I-beam with a new wide flange beam because they look the same or, as in the case of a historic bridge now being rehabilitated in southeast Michigan, replacing original riveted floor beams with modern wide flange beams. However, in doing so we are denying future generations an accurate record of a historic metal truss bridge.

The Chesaning Bridge, also know as the Parshallburg Bridge, was built by the Wrought Iron Bridge Co. of Canton, Ohio, in 1889 and moved to Chesaning, Michigan, in 1999. There it was painted, decked and set on new abutments with no alteration made to its original historic features. *The Secretary of the Interior's Standards for Rehabilitation* state that "deteriorated architectural features shall be repaired rather than replaced, wherever possible." These standards do not recommend "removing or radically changing architectural metal features which are important in defining the **overall historic character of the building so that, as a result, the character is diminished** (*emphasis mine*)." When the Chesaning Bridge is removed from the Shiawassee River and when future restoration begins, the original historic features and material will be preserved.



The bridge in Chesaning is made of a metal no longer produced, wrought iron, the product of the labor of an iron puddler. "When I became my father's helper he began teaching me to handle the machinery of the trade. The puddling furnace has a working door on a level with a man's stomach. the working door of a puddling furnace is the door through which the puddler does his work." (*The Iron Puddler*, James J. Davis, 1922)



Charging the puddling furnace with pig iron

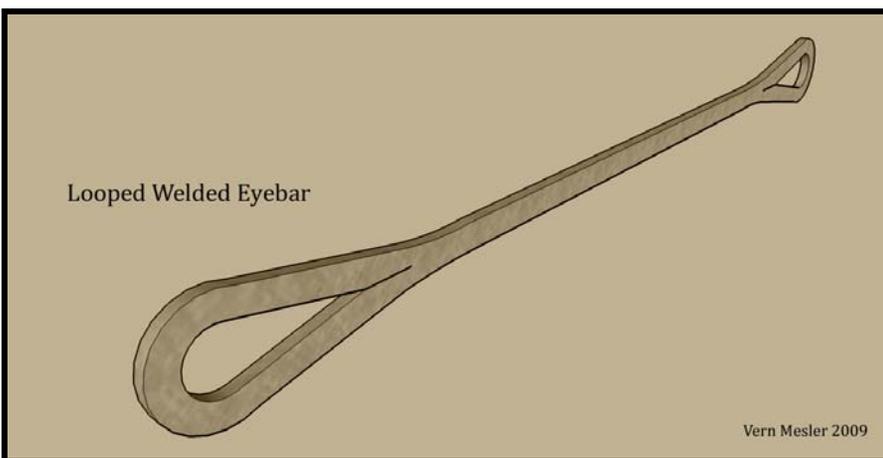


Removing wrought iron from the puddling furnace

Photos of the puddling furnace: *An Introduction to the Metallurgy of Iron and Steel*, H. M. Boylston, 1936

The black metal furniture one now sees in catalogs and home improvement stores as "wrought iron" is really wrought steel, "wrought" in the sense of being produced or shaped by beating with a hammer.

Many of the nineteenth century bridges were pin connected. One of the most significant members of a pin connected bridge is the eyebar, a tension member that was used as a diagonal and as a bottom chord. The Parshallburg Bridge is a pin connected Thacher truss with forge-welded looped wrought iron eyebars. The looped eyebar was made in the forge shop and required the most experienced craftsmen to make the forge weld.



The Parshallburg Bridge was fabricated in Canton, Ohio, at the Wrought Iron Bridge Co. with iron angles, channel, square bars and I-beams. The assemblies were riveted with wrought iron rivets; today the hot riveting process is rarely used in metal fabrication.

Besides wrought iron, eyebars, and riveted assemblies, the Parshallburg Bridge in Chesaning, Michigan, has many other original historic features. As more historic metal truss bridges disappear or are rehabbed with valuable original members replaced and destroyed, it is critical that the Parshallburg Bridge be saved for future historians, writers, engineers and the general public to have an accurate record of a historic metal truss bridge. Hidden in the metal of this bridge is the history of a craftsman, a history not written with words.



From left to right: Neil Pullman, Joe Sedlar, Jr., Todd M. Vondrasek, and Damion Frasier

Joe Sedlar, Jr. has asked Damion Frasier, Neil Pullman, and Todd M. Vondrasek to organize a fund raising campaign. They and the Village of Chesaning would appreciate any contributions or suggestions for funding from any organization in the country that could help finance the immediate removal of the Parshallburg Bridge from the river and its placement on the shore, ready for further inspection and planning. Please contact Joe Sedlar, Jr., Chesaning Village President, at 1-989-845-3800 or sedlars@centurytel.net

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