

The First Cable Suspension Bridge Built in Ohio

Preserving the Past

On the 12th of December (2014), Leland Hite and Robert T. Rhode, acting on behalf of the Mt. Healthy Historical Society, recovered the last remaining component of the first cable suspension bridge built in Ohio. The 167-year-old iron tripod was one of four that had supported the cables of the 42' bridge crossing the West Branch of Mill Creek near Mt. Healthy. Built in 1847, the footbridge on the Lane family farm was the brainchild of William Lane, brother of Clark Lane, the noted



In 1847, William Lane built this suspension bridge on the Lane farm north of Mt. Healthy, Ohio.

industrialist whose company of Owens, Lane & Dyer manufactured steam engines and sawmills in Hamilton, Ohio. The ingenious bridge was one of the first suspension bridges in the United States.

The Lanes' bridge design used 9 suspender irons of ½" diameter on a spacing of 40" attached to the catenary cable for support of the 54" wide wood deck that was laid upon 12" high timber beams resting on dry-stacked flat fieldstone abutments measuring 6' square and 8' high. Eighteen strands of Number 8 wrought iron wire were laced straight (not twisted in the traditional wire rope configuration used today) into a ¾" bundle to form the suspension cable. At each end of the bridge, the cable fit into a saddle, or groove, in the top of one of the 64" high metal tripod firmly anchored into the stone abutment and attached to deadman anchors. Each cable end was attached to a chain that connected to an iron hook on the end of the deadman staybolt. Precise side-to-side leveling of the bridge was accomplished by adjusting the length of each chain.

Leland and Robert discovered that the Lanes had fit the tripod legs into precise holes drilled to a depth of 6" in a thick fossiliferous limestone plate quarried from the abundant limestone and shale layers of Mill Creek.

You can read more about the bridge in Robert and Leland's article entitled "Obed Hussey and His Ohio Test of the First Successful Reaper" here:

http://roberttrhode.org/Recent_Articles.html

... and, on the same webpage, you can read more about the Lane family in "Surprises in Hamilton, Ohio," by Mark Ohlde, Neal Simpson, and Robert T. Rhode.

See pictures below:

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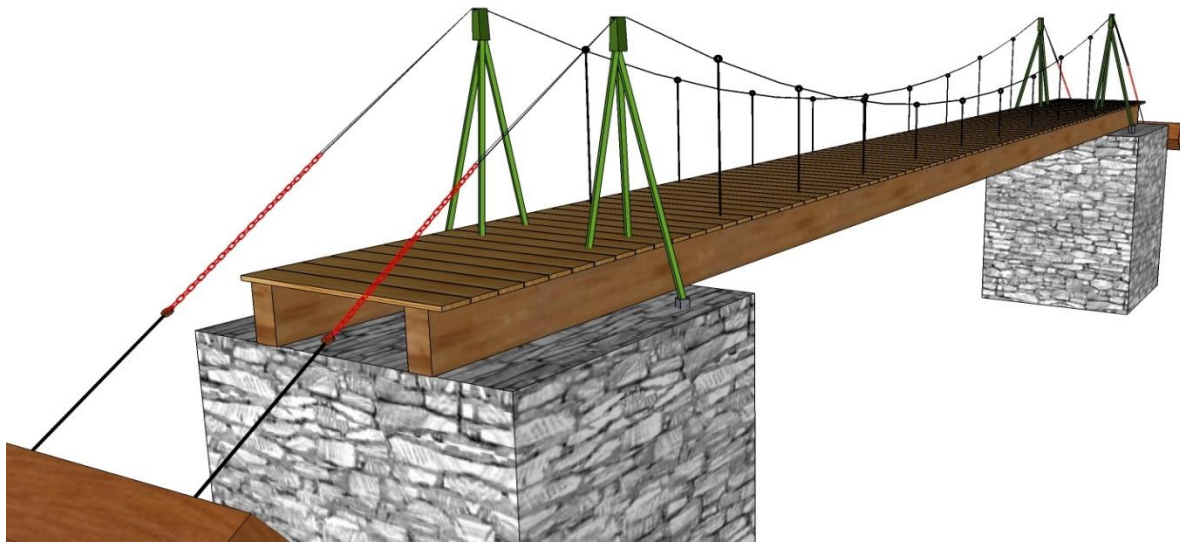


Robert (top) and Leland examine the 64" high suspension cable support tripod. Originally one of four, the iron artifact is the only one extant.

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This newspaper clipping from the third page of the Art Gravure Section of *The Cincinnati Enquirer* for Sunday May 19, 1940, displays one of the tripods in the upper right corner. In the upper left corner is one leg of the recovered tripod.



The original bridge would have looked similar to this drawing where you can see two legs of the cable support tripods traveling through the wooden deck.

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Here is the upstream pier corner.



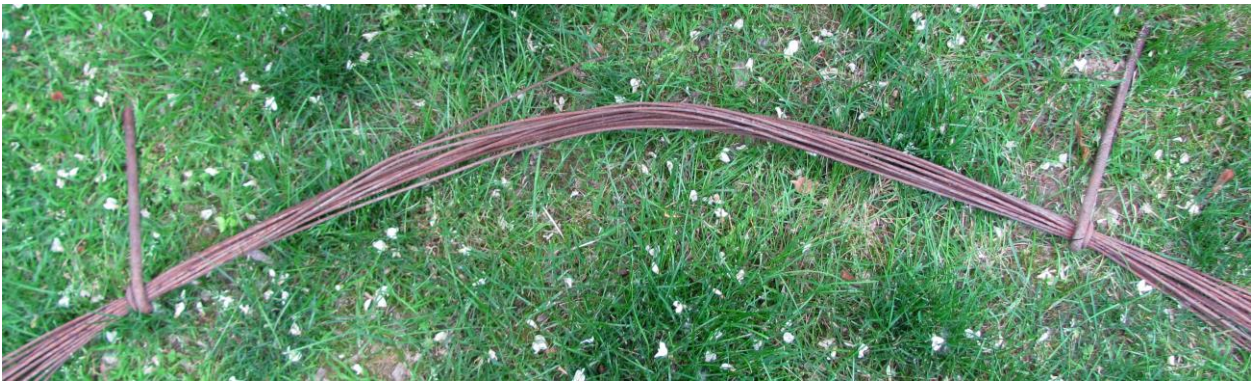
Here is the downstream pier corner.



This tripod was rescued for the Mt. Healthy Historical Society on the 12th of December in 2014.

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Also recovered were the deadman staybolt with wrought iron adjustment chain and the wrought iron straight laced wire cable with suspender irons attached.



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Build-Out

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SIDE

TOP

BOTTOM

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