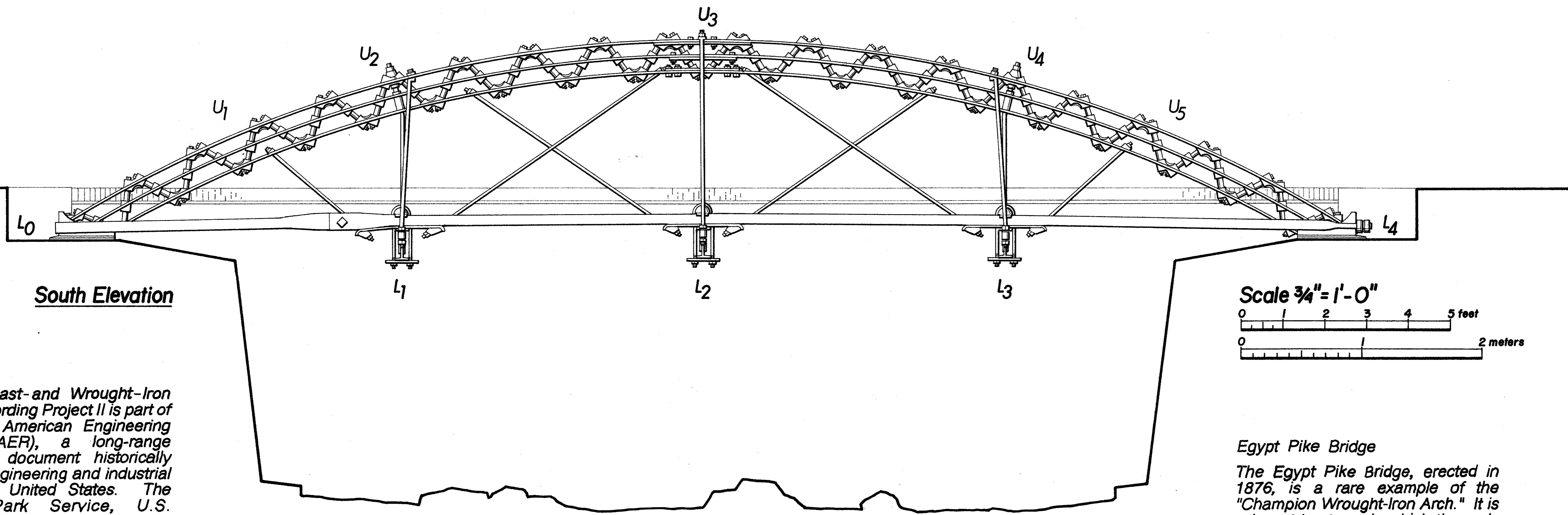


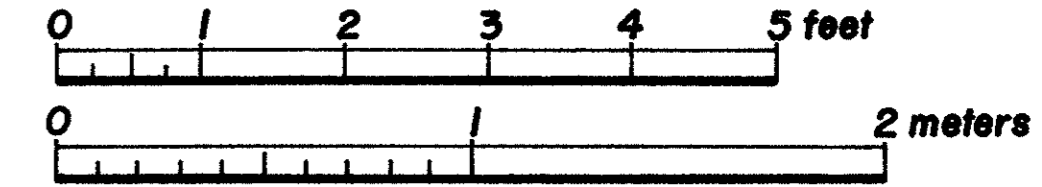
EGYPT PIKE BRIDGE • 1876

NEW HOLLAND, OHIO

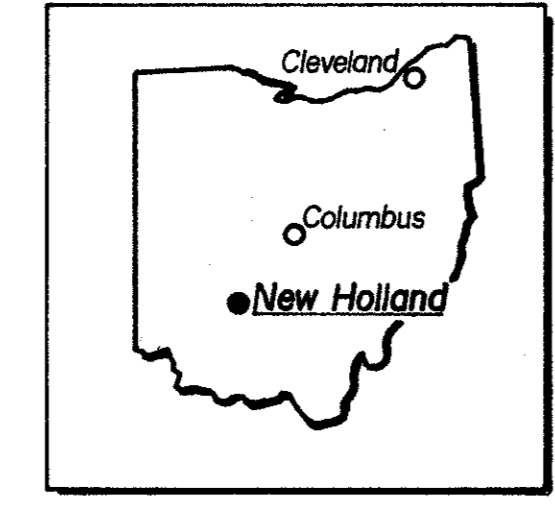


South Elevation

Scale 3/4" = 1' - 0"

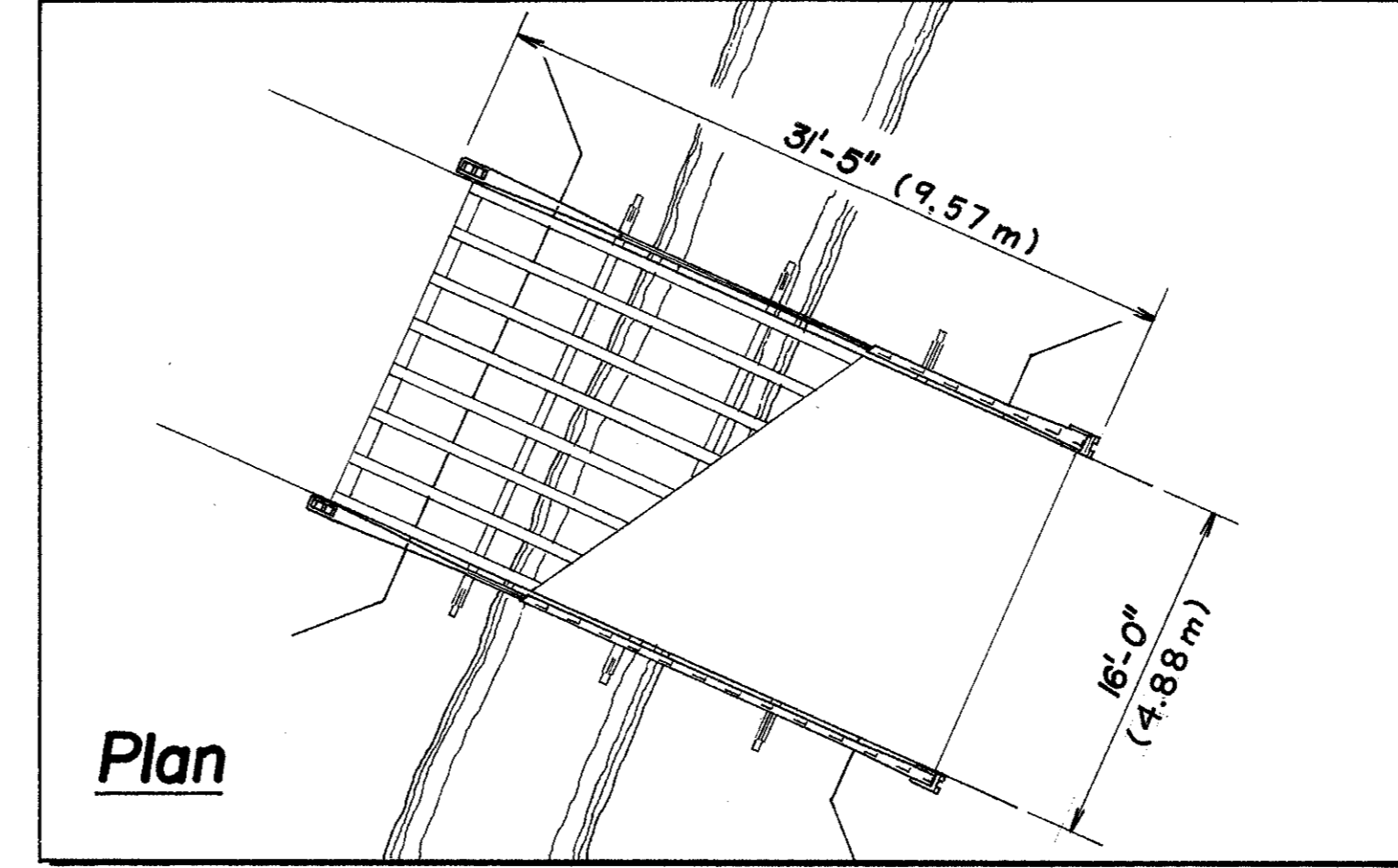
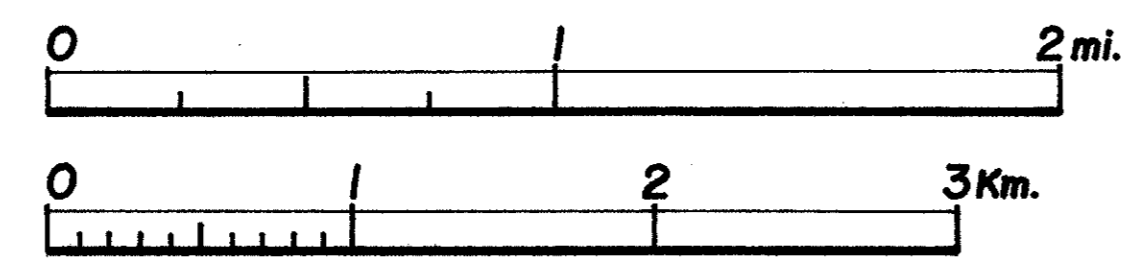
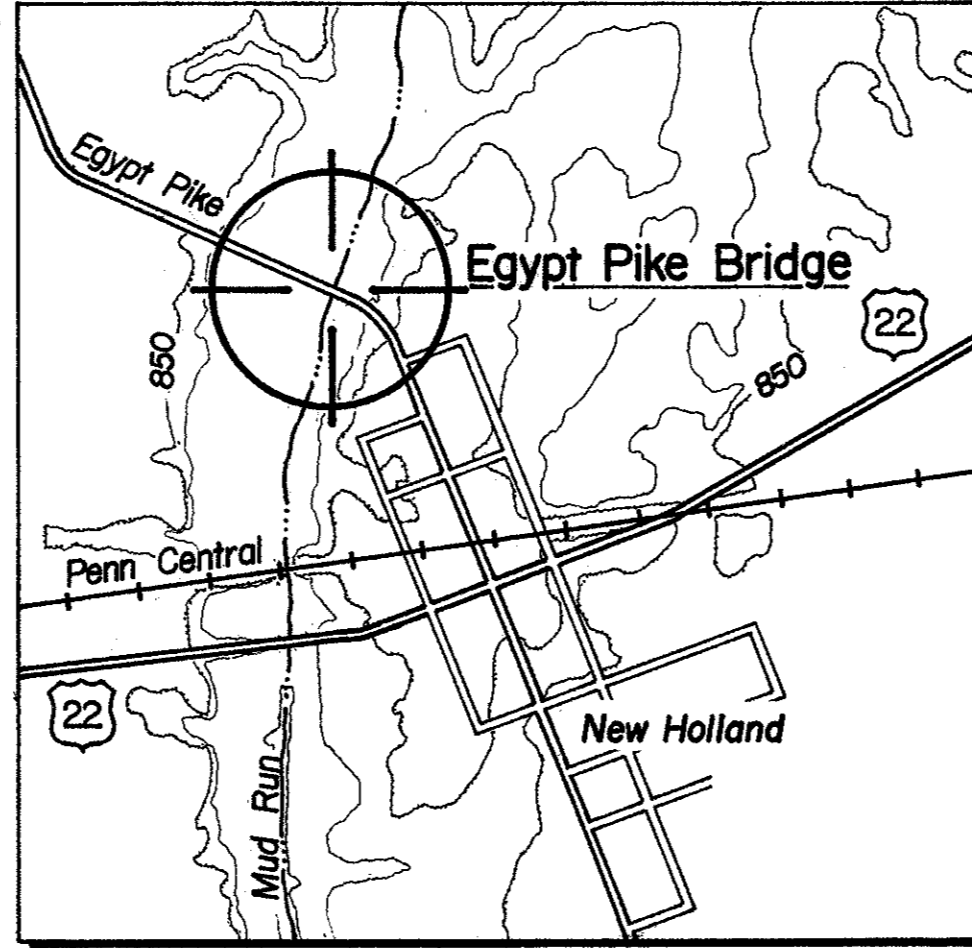


The Ohio Cast-and Wrought-Iron Bridges Recording Project II is part of the Historic American Engineering Record (HAER), a long-range program to document historically significant engineering and industrial sites in the United States. The National Park Service, U.S. Department of the Interior, administers the HAER program. The Institute for the History of Technology and Industrial Archaeology, Dr. Emory L. Kemp, Director, sponsored the project with the assistance of the Ohio Historical Society, Gary Ness, Director, and David A. Simmons, historic bridge specialist, and the Department of Architecture at the Ohio State University, Jose Oubriere, Chairman. The field team under the direction of Eric DeLony, Chief and Principal Architect, HAER, consisted of Chris Payne, (Columbia University), architectural supervisor, Joseph Boquiren (University of Maryland) and Attila Kovacs (Technical University of Budapest, ICOMOS), architects; Wm. Michael Lawrence (University of Illinois at U-C), historian; and Joseph Elliott (Muhlenberg College, Pennsylvania), photographer.

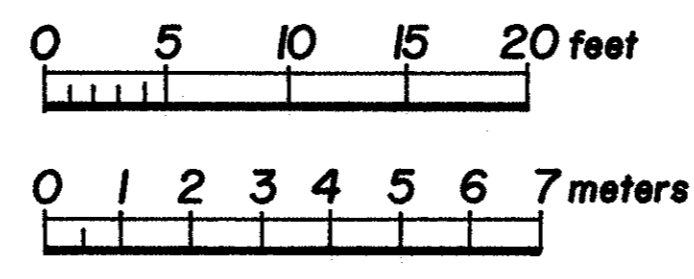


Location Maps

Based on U.S.G.S. 7.5 x 15 min. series topographic map, New Holland quadrangle, 1960 (revised 1974)
UTM: 17.305900.4380840



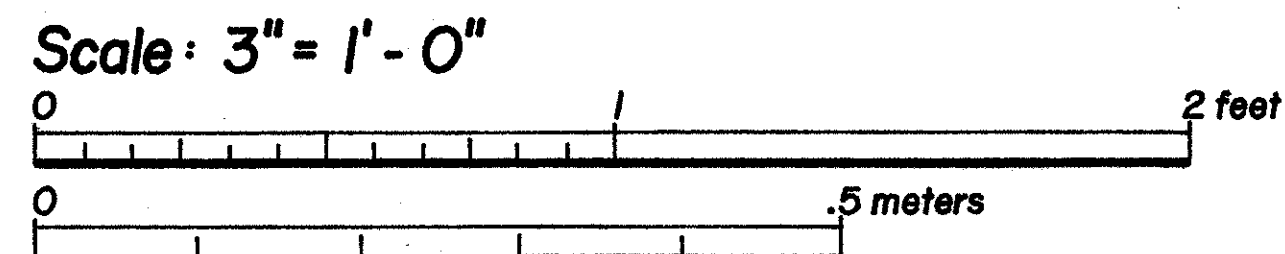
Plan



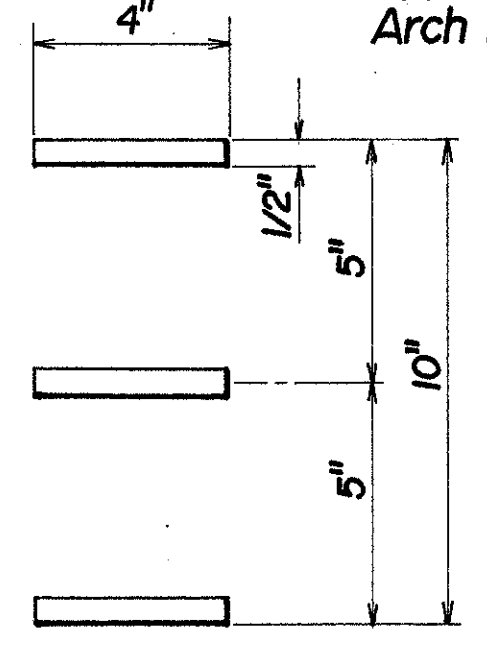
Egypt Pike Bridge

The Egypt Pike Bridge, erected in 1876, is a rare example of the "Champion Wrought-Iron Arch." It is a bowstring truss in which the main compression member consists of three plates held together by a zigzag arrangement of braces fabricated from bolts, gas pipe, and blocks. The complicated arch was constructed of materials readily available or manufactured without expensive machinery. Zimri and Jonathan Wall, of Wilmington, Ohio, developed the design which was patented in 1874. The use of blocks, introduced by Jonathan, was patented the following year. The arch played a key role in the early success of the Champion Iron Bridge Company, which the Wall brothers and Albert Bailey founded c. 1872. Their company, renamed the Champion Bridge Company in 1882, became one of Ohio's leading bridge building companies. It is the only Ohio bridge company founded during the 19th century still in business.

Table of Member Sections



Upper Chord Arch Plates



Tubular Casing
1-5/8" ϕ

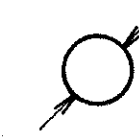


1-1/4" ϕ



Vertical Rods
U₂L₁, U₃L₂, U₄L₃

1-1/4" ϕ

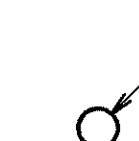


Diagonal Rods
U₁L₁, U₂L₂, U₃L₃
(U₅L₃, U₄L₂, U₃L₁)

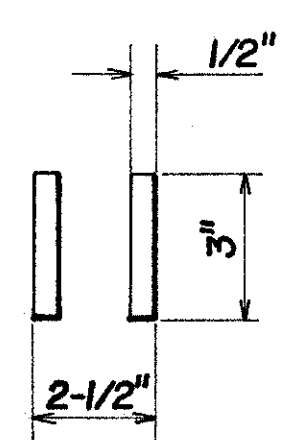
1" ϕ



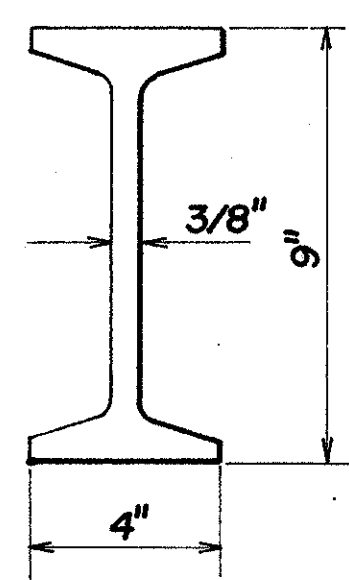
Lateral
Brace Rods
3/4" ϕ



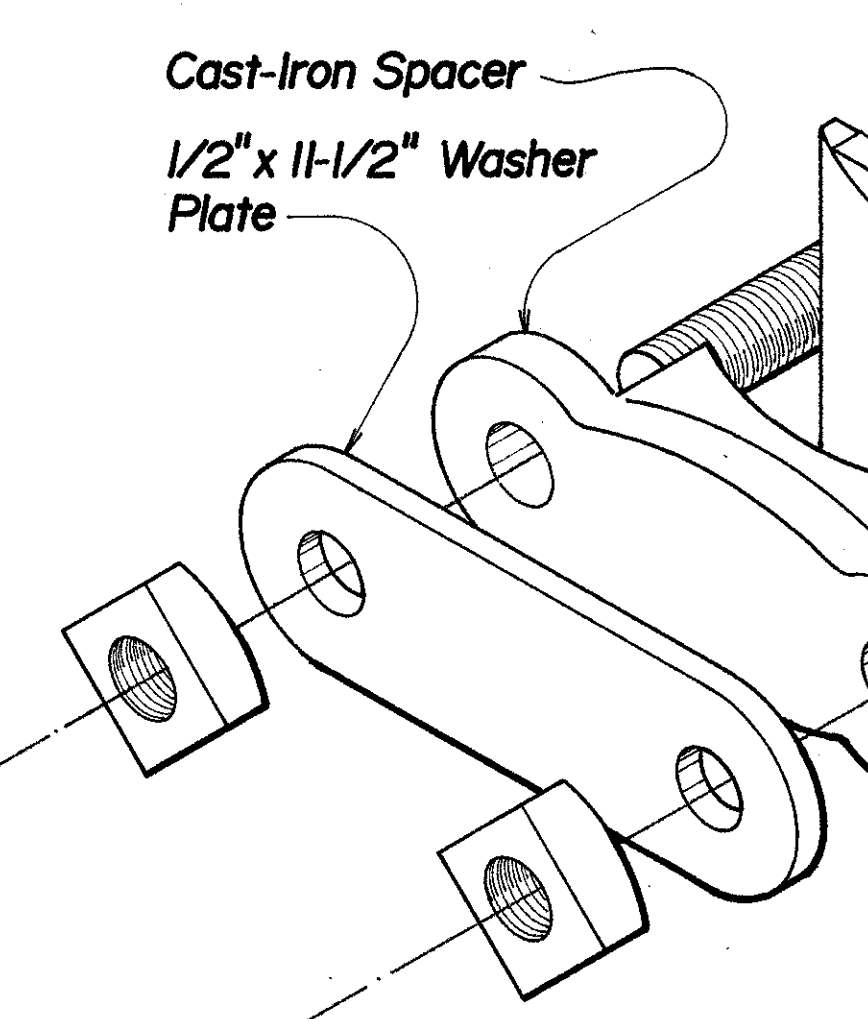
Lower Chord
Ties



Cross Beam



Cast-Iron Spacer
1/2" x 11-1/2" Washer
Plate



L₀

4" x 9" Cross Beam
Shoe (moveable)
1/2" x 3" x 8-3/4" Washer Plate

L₂

1-1/4" x 3" Tubular
Casing
3/4" Brace Rod

1-5/8" Tubular
Casing

1-1/4" Vertical Rod

Cast-Iron Blocks
1/2" x 4" Arch Plates
1" Diameter Diagonal
Bracing

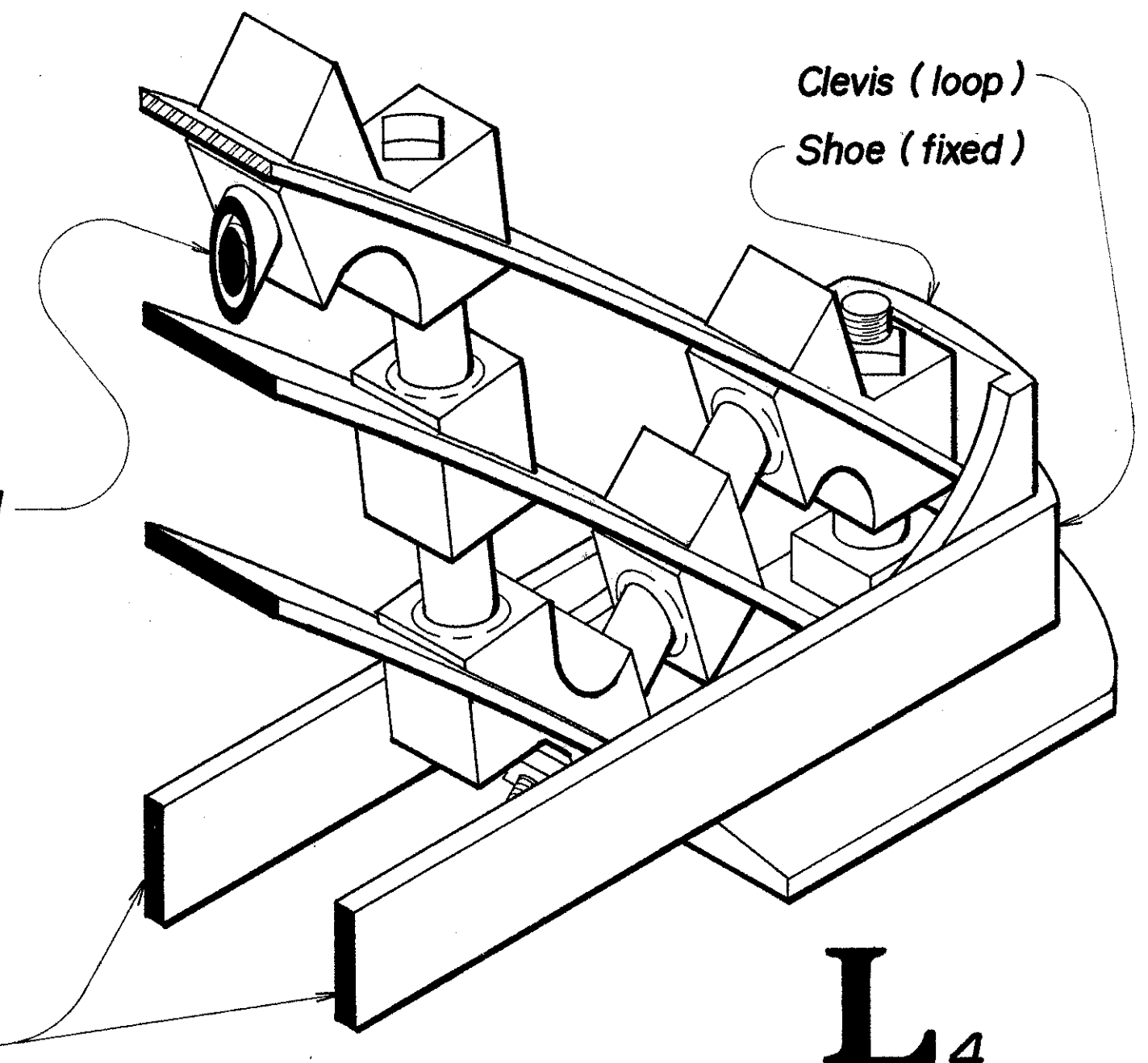
Section showing Brace Rod
within Tubular Casing
Arch Splice Plate
1-1/4" Diameter Brace

1/2" x 3" Lower Chord
Arch Ties
1" Diameter Diagonal
Bracing

Lower Chord Ties

U₃

Clevis (loop)
Shoe (fixed)



L₄

