(No Model.)

M. C. FRITS.

TRUSS BRIDGE.

No. 294,606. Patented Mar. 4, 1884.

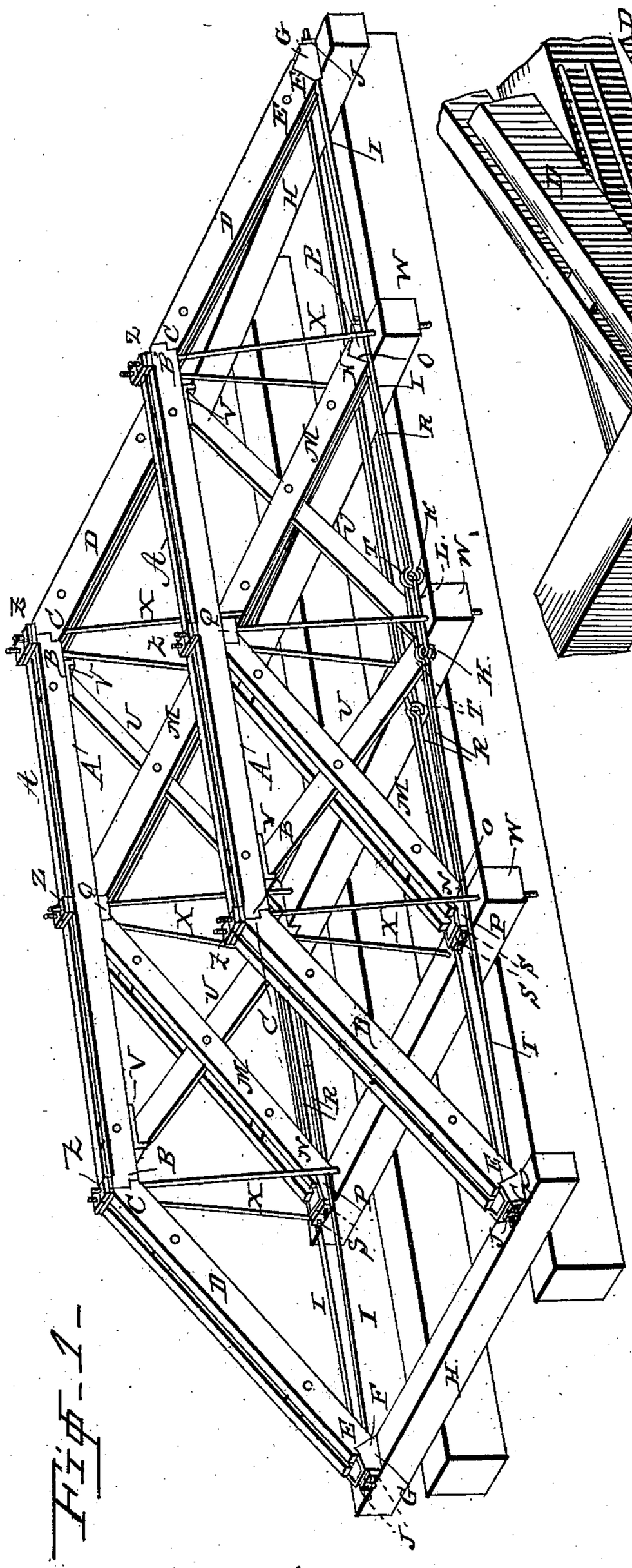
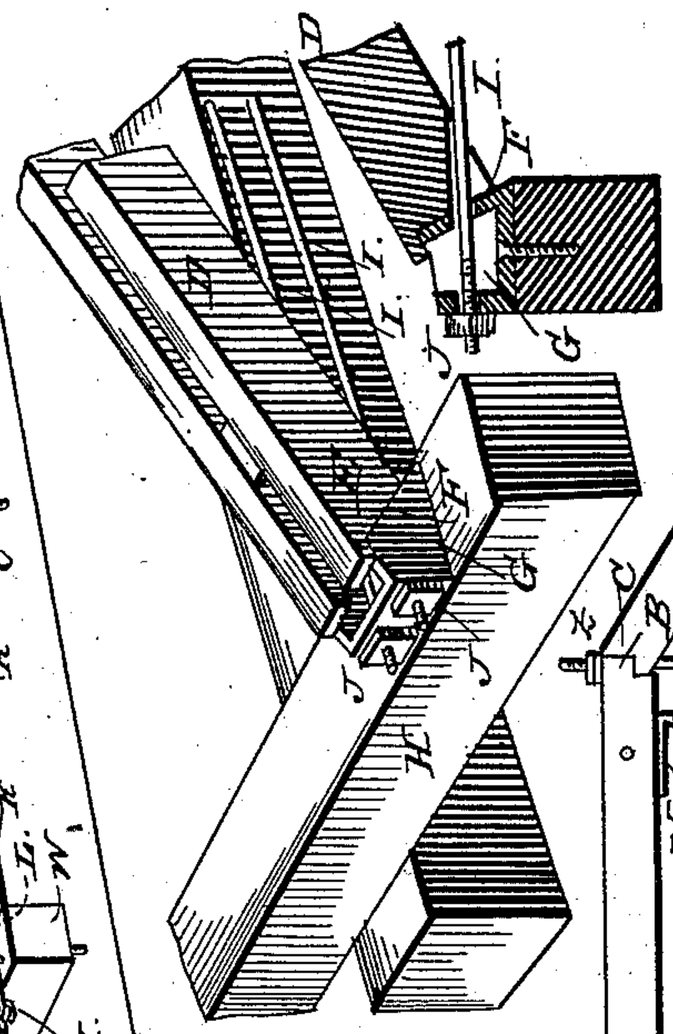


Fig. 1.



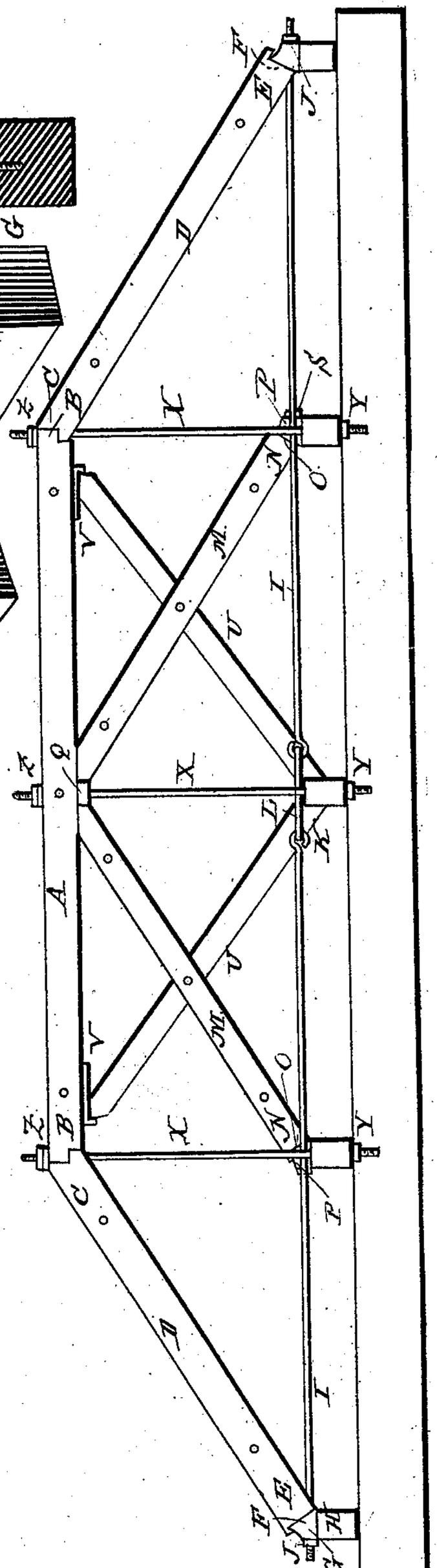


Fig. 2.

WITNESSES:

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MILTON C. FRITS, OF LA HARPE, ILLINOIS.

TRUSS-BRIDGE.

SPECIFICATION forming part of Letters Patent No. 294,606, dated March 4, 1884.

Application filed December 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, MILTON C. FRITS, of La Harpe, in the county of Hancock and State of Illinois, have invented certain new and useful Improvements in Truss-Bridges; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of a span of my improved truss-bridge. Fig. 2 is a side view of the same, and Fig. 3 is a detail view.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to truss-bridges; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letters A A indicate two beams placed side by side and united, with a narrow space between them, by means of bolts, the two beams forming the truss-beam, and the ends of these beams are notched or shouldered, as shown at B, from their lower edges, and the upper ends, C, of the inclined end struts, D, are notched correspondingly and fit and bear against the shouldered ends of the truss-beams, supporting them. The lower ends of the struts are notched or shouldered from the lower edges, as shown at E, and bear against the inclined sides F of shoes G, secured upon the upper sides of the cross-beams H at the abutments, and two metallic rods, I, pass with their ends, which are screw-threaded and provided with nuts J, through each of the said shoes, and the inner ends of these rods, which form eyes K, are connected at the middle of the bridge by means of links L, which thus serve, with the rods, to draw and hold together the shoes and the ends of the end struts.

Two pairs of struts, M, bear with their lower shouldered ends, N, against the inclined faces O of two shoes, P, secured upon the upper sides of two of the cross-beams, upon which the bridge-decking is placed, and bear with their upper ends, which converge, against a block, Q, secured to the under side of the truss-beams at their middle, the struts supporting the center of the truss-beam.

Two rods, R, pass with their outer screw-threaded ends through each of the shoes P, and are provided with nuts S at their outer ends, and the inner ends of these rods form eyes T, which fit upon the links holding the ends of the longer rods together, the links in this manner holding the ends of the end struts and of the inner struts together. Two outwardly-inclined struts, U, pass between each pair of inner struts, bearing with their lower converging ends against the central cross-beam, and bearing with their upper diverging ends against shoulders or blocks V, secured upon the under sides of the truss-beam, near their ends.

The cross-beams W, upon which the bridge-decking is laid, are supported by vertical rods X, having nuts Y at their lower screw-threaded ends, which bear against the under sides of the beams, the lower ends of the rods passing through the beams, and the upper threaded ends of the rods passing through the truss-beams, and secured in them by nuts Z, bearing against the upper side of the said beams. At the center of the truss-beams the ends of the vertical rods secure the block, against which the ends of the inner struts bear, and at the ends of the truss-beam the ends of the rods pass through the shouldered ends of the truss-beams and of the struts, securing them together. It will thus be seen that all the weight falling upon the decking of the bridge and upon the cross-beams will be brought to bear upon the truss-beams through the vertical rods, which strain, being divided by the two sets of struts, will be converted into an endwise strain or longitudinal strain upon the longitudinal rods.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination of the truss-beams having shoulder ends, the end struts having shouldered ends, the shoes, the longitudinal rods, the inner struts, the shoes bearing against their ends, the shorter longitudinal rods, and the links connecting the inner ends of the longitudinal rods, the vertical rods having nuts at both ends, and the cross-beams, all constructed as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

MILTON C. FRITS.

Witnesses:
CALVIN JAMES,
THOMAS WALKER.