

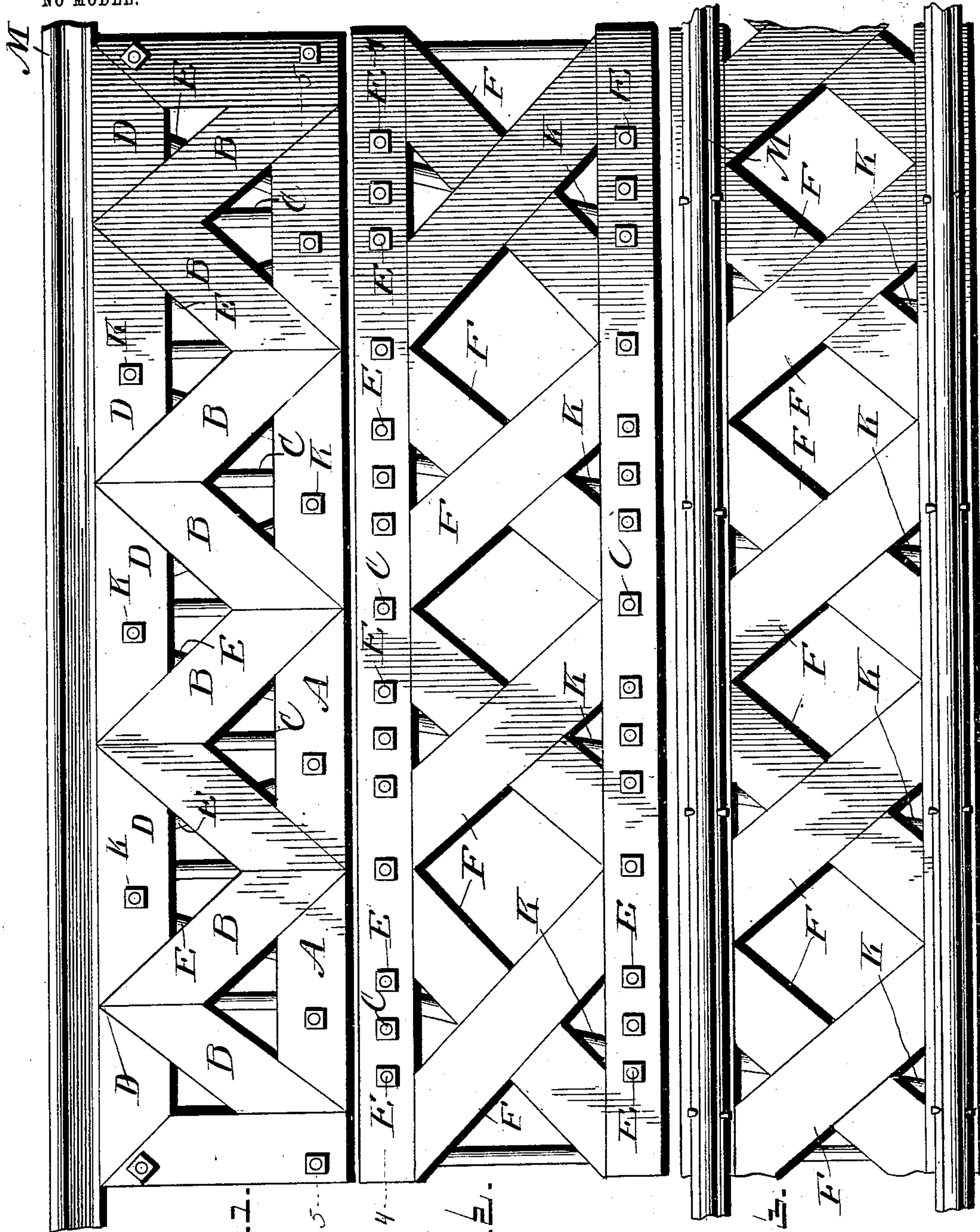
No. 725,753.

PATENTED APR. 21, 1903.

J. F. MORTON.
CONSTRUCTION OF BRIDGES.
APPLICATION FILED NOV. 10, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

Wm. F. Doyle.
A. L. Hough

INVENTOR

Jno. F. Morton.
By *Franklin W. Hough*
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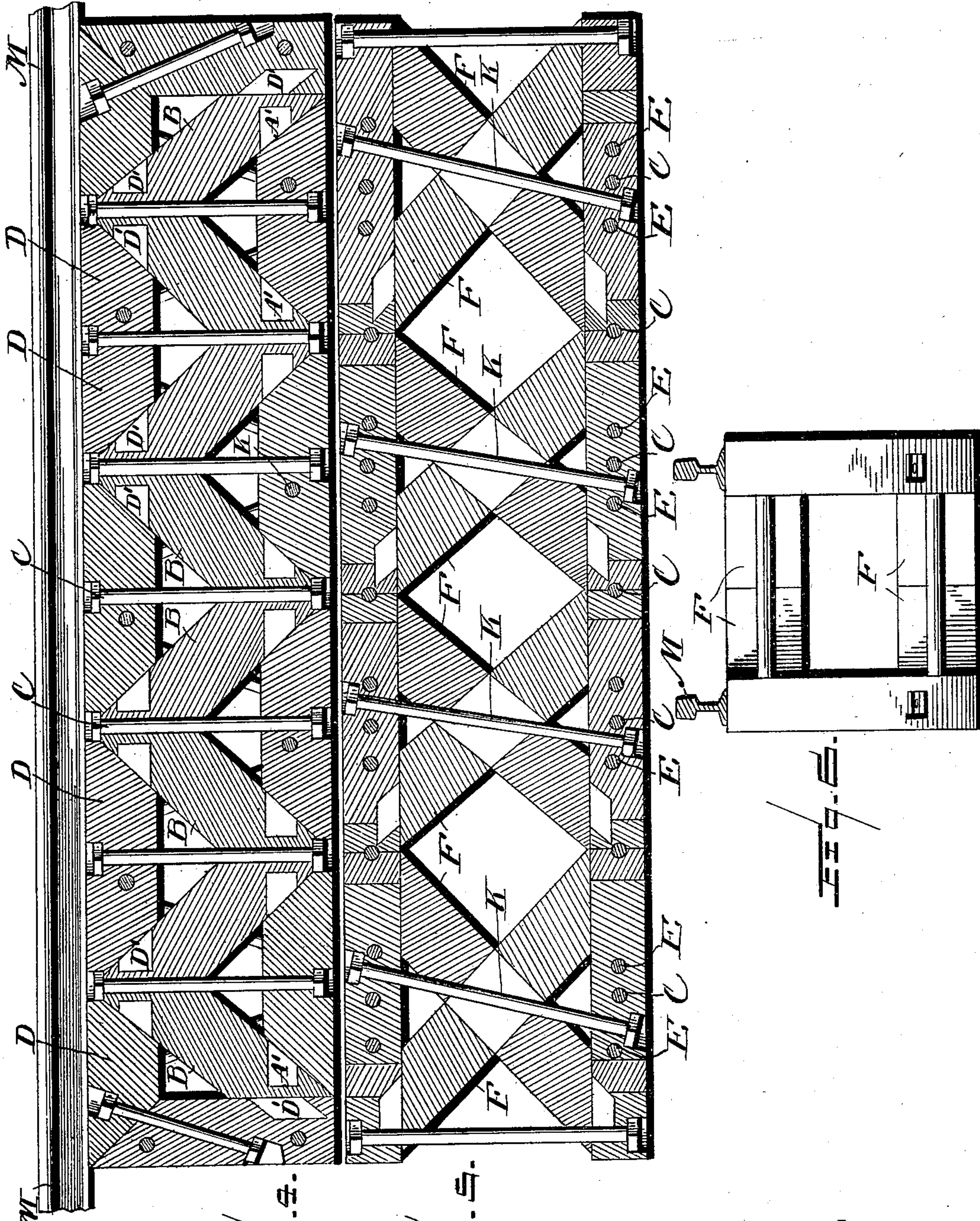
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2 SHEETS—SHEET 2.

NO MODEL.



WITNESSES:

Wm. F. Doyle
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UNITED STATES PATENT OFFICE.

JOHN F. MORTON, OF ST. LOUIS, MISSOURI.

CONSTRUCTION OF BRIDGES.

SPECIFICATION forming part of Letters Patent No. 725,753, dated April 21, 1903.

Application filed November 10, 1902. Serial No. 130,796. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. MORTON, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in the Construction of Bridges; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in the construction of bridges, and especially to a bridge which is made up entirely of braces which are mortised together and securely held by means of bolts or tie-rods in such a manner as to equally distribute the strain and form a secure and substantial structure.

My invention consists, further, in various details of construction and combinations of parts, which will be hereinafter fully described, and then specifically defined in the appended claim.

My invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which drawings similar letters of reference indicate like parts in the several views, in which—

Figure 1 is a side elevation of my improved bridge. Fig. 2 is a bottom plan view. Fig. 3 is a top plan view. Fig. 4 is a vertical sectional view on line 4 4 of Fig. 2 through the bridge, showing the manner of mortising the braces together. Fig. 5 is a horizontal section on line 5 5 of Fig. 1 through the lower portion of the bridge, and Fig. 6 is an end view.

Reference now being had to the details of the drawings by letter, A A designate a series of brace-blocks which are mortised at A' to the diagonally-disposed braces B B, which latter are in turn mortised, as at D', to the horizontally-disposed braces D, and to the ends of the series of braces B and D are securely fastened the vertical pieces. The braces D are mortised in the upper inclined faces of the braces B, and bolts E pass through the braces D, B, and A, securely holding the

same together. Each side of the bridge is made up of an arrangement of braces, as described, and the braces forming the bottom of the bridge comprise diagonal pieces F, the ends of which are mortised to the braces A. Said braces F are recessed at their middle portions on opposite faces, so that they will intersect each other in pairs, and when thus placed with their intersecting portions in said recesses their opposite faces will be flush and by means of the diagonally-disposed headed bolts K the bottom braces are securely held to the braces forming the sides of the bridge. The top of the bridge is formed in a similar manner as the bottom by means of the intersecting braces, which have their ends mortised in braces A, B, and D. The end vertical pieces are adapted to rest on a substantial pier or abutment to receive the weight of the entire structure.

From the foregoing it will be observed that by the construction of a bridge embodying the details of my invention all of the beams coöperate as braces, being securely held together by mortising and headed bolts, thus equally distributing the strain upon the various parts of the bridge.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A bridge having its sides made up of inclined braces, and a parallel series of side braces horizontally disposed and mortised to the meeting ends of said inclined braces, headed bolts engaging the meeting ends of the latter, intersecting braces arranged in parallel series intermediate said side braces and mortised thereto forming the top and bottom of the bridge, diagonally-disposed headed bolts passing through the intersecting portions of said braces and having their heads countersunk in the parallel side braces, and vertical end braces to which the top, bottom, and side braces are mortised and bolted, as set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JOHN F. MORTON.

Witnesses:

FREDERICK T. SHORE,
EDW. ROBB.