

I. H. Wheeler,

Truss Bridge.

No. 107,570.

Patented, Sep. 20, 1870.

Fig. 1.

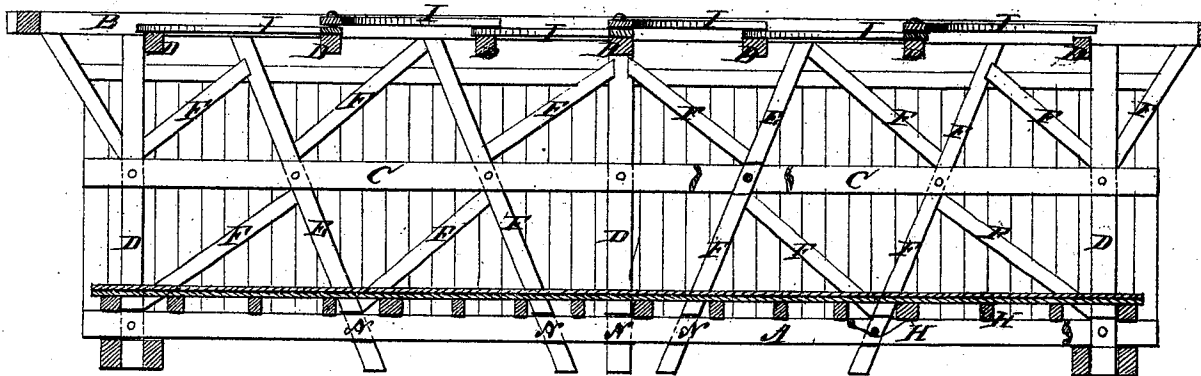


Fig. 2.

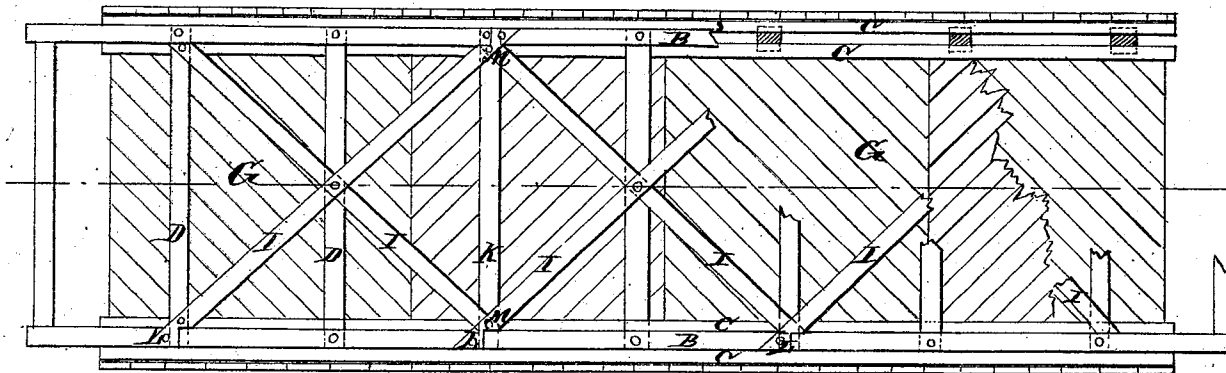
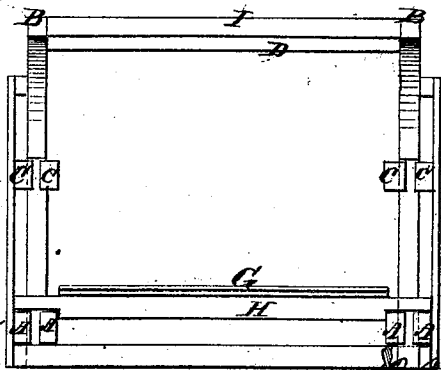


Fig. 3.



Witnesses:

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United States Patent Office.

ISAAC H. WHEELER, OF SCIOTOVILLE, OHIO.

Letters Patent No. 107,576, dated September 20, 1870.

IMPROVEMENT IN BRIDGES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ISAAC H. WHEELER, of Scioto-ville, in the county of Scioto and State of Ohio, have invented a new and useful Improvement in Bridges; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention relates to wooden bridges, and has for its object to render unnecessary a large amount of the material now used, to remove from the bridge a great deal of dead weight, and to reduce the cost of construction.

My invention consists in combining with the upper, lower, and middle chords, diagonal truss and short braces, as hereinafter specified.

Figure 1 represents a longitudinal sectional elevation of a bridge constructed according to my improved plan;

Figure 2 is a plan view, partly broken out; and

Figure 3 is a transverse sectional elevation of the same.

A represents the lower chords;

B, the upper chords; and

C, the intermediate chords, which I propose to introduce.

D represents the posts;

E, the diagonal truss-braces; and

F, the short braces, which I introduce between the lower and middle chords and the middle and upper chords.

The top laterals, I, cross each other above the ties K and at the sides of the chords, and one of each of the crossing-braces is gained into the top of the chord, as shown in the plan view at L.

The braces are also bolted down to the cross-ties by braces, M, all making a very strong connection.

The posts D and trusses E are gained into the sides of the lower and middle chords, and bolted together by bolts, N, in a way to make the labor of construction very simple, and much less than in other bridges.

The span may be made very much larger by this improved arrangement, the single truss having a capacity to sustain spans of one hundred and seventy-five to two hundred feet, while two hundred and fifty to three hundred feet may be safely spanned with the double truss. There is no dead or useless timber in it. Every piece of timber used is a brace or support to the whole, in some material way, and the heaviest iron used in common road-bridges are three-quarter inch bolts, and but few of these.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

In wooden bridges, the combination of chords A B C and posts D, with the diagonal truss-braces E and short braces F, each relatively arranged, as shown and described.

ISAAC H. WHEELER.

Witnesses:

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