

P. L. WEIMER.
Improvement in Arched Trusses for Bridges.
No. 118,566.

Patented Aug. 29, 1871.

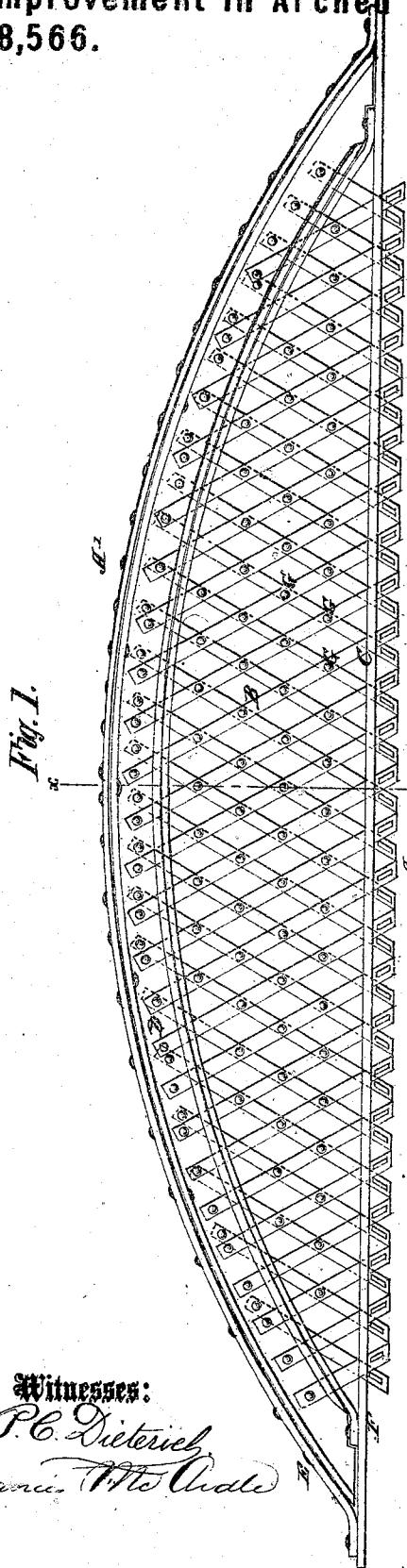


Fig. 1.

Fig. 2.



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PETER L. WEIMER, OF LEBANON, PENNSYLVANIA, ASSIGNOR TO HIMSELF, J. A. WEIMER, AND L. E. WEIMER, OF SAME PLACE.

IMPROVEMENT IN ARCHED TRUSSES FOR BRIDGES.

Specification forming part of Letters Patent No. 118,566, dated August 29, 1871.

To all whom it may concern:

Be it known that I, PETER L. WEIMER, of Lebanon, in the county of Lebanon and State of Pennsylvania, have invented a new and useful Improvement in Arched Trusses for Bridges, &c.; 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 consists in the improvement of bow-string bridges, as hereinafter fully described and subsequently pointed out in the claim.

In the accompanying drawing, Figure 1 is an elevation of an arched truss constructed according to my invention. Fig. 2 is a vertical cross-section of Fig. 1 taken on the line *x x*.

Similar letters of reference indicate corresponding parts.

A is the arch-truss. A' is the arch proper. B is the lattice-work connecting the arch A' and the chord. C is the chord. The arch A' is formed of a series of cast-iron flanged segments, marked D, seen plainly in Fig. 2. E is a broad plate of boiler or wrought-iron, which is firmly riveted over the top of the segments D and to the ends of the chord C, as represented in the drawing. F is another broad wrought-iron plate, secured to the under sides of the segments, and also to the chord C, by rivets. The chord C, it will be seen, is thus firmly connected with the ends of

the arch A'. The chord-plate may be broader than the arch-plates, and all the plates may be broader in the middle than at the ends. These broad plates (especially the broad chord) allow the bridge or truss to resist lateral pressure, and add materially to the strength of the structure. The lattice-slats B pass through mortises in the lower flanges of the segments and the lower plate F, and are securely riveted or bolted to the segments, as seen in Fig. 1. The lower ends of these slats pass through mortises in the chord, beneath which they are confined by keys, as represented, or in any other suitable manner. The lattice-slats are riveted together where they intersect each other, as seen at G.

This arched truss is more particularly designed to be employed in bridge-building, but is not necessarily confined thereto, as it may be used for various other purposes.

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

As an improvement in bow-string bridges, the combination, with an upper chord formed of a central web of cast-iron stiffened laterally by wrought-iron plates, of a lower chord formed of a wide plate of boiler-iron placed horizontally, to give lateral strength to the truss, as described.

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