

CHARLES B. SREEVES.  
Improvement in Bridges.

No. 114,363.

Patented May 2, 1871.

Fig. 1.

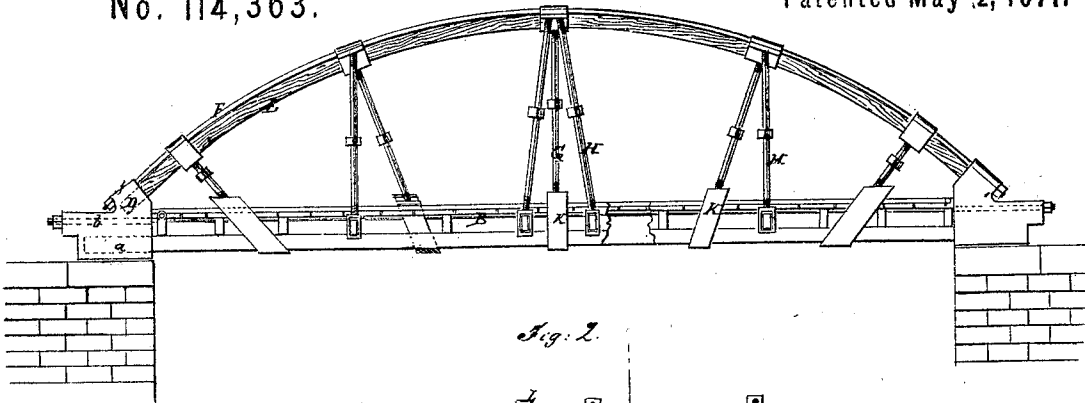


Fig. 2.

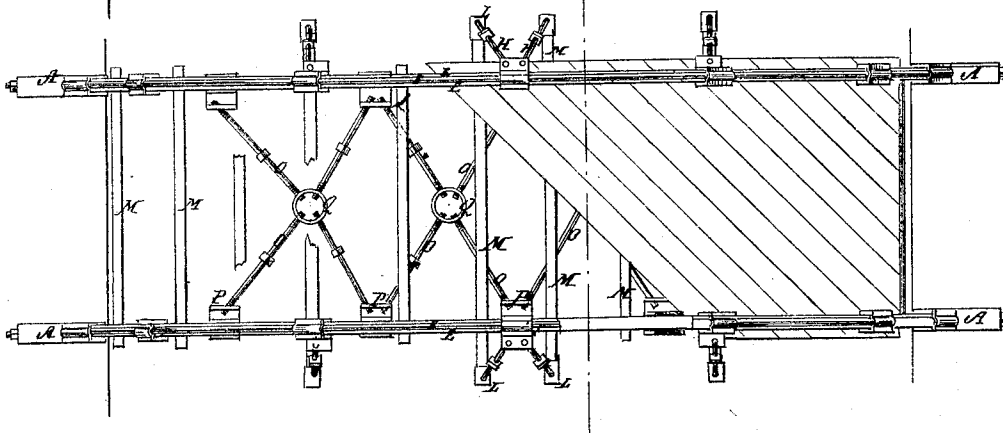
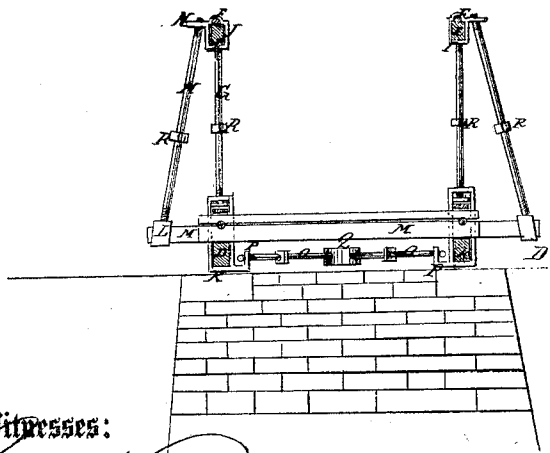


Fig. 3.



Witnesses:

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# UNITED STATES PATENT OFFICE.

CHARLES B. SREEVES, OF ATCHISON, KANSAS.

## IMPROVEMENT IN BRIDGES.

Specification forming part of Letters Patent No. **114,363**, dated May 2, 1871.

### *To all whom it may concern:*

Be it known that I, CHARLES B. SREEVES, of Atchison, in the county of Atchison and State of Kansas, 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.

This invention relates to improvements in bridges; and it consists in a novel combination, with the wood frame, of metal supports and connections applied in a way whereby it is not required to mortise, bore, or otherwise weaken the wood framing, all as hereinafter described.

Figure 1 is a side elevation of my improved bridge. Fig. 2 is a top view with a part of the floor removed, and Fig. 3 is a transverse section of the same.

Similar letters of reference indicate corresponding parts.

I propose to employ cast-metal end pieces, A, for the ends of the bottom and top chords, having a longitudinal socket, *a*, as shown in dotted lines, for the end of the bottom stringer A, a hole, *b*, for the binding-rod B, parallel with socket *a*, an oblique socket, D, for the arched timber E, and a hole, *f*, parallel with socket D, for the top binding-rod, F, which pieces, receiving the ends of the timbers A and E, and being bound to them by the rods B and F, constitute, together with said timbers and rods, a very simple and permanent structure.

When two or more spaces are to be used, the pieces A between said spaces will be made double or with duplicate sockets and holes at the outer end, with a space or recess at the center, to admit of applying the nuts to the rods B and F.

For attaching the suspending-rods G and braces H, I employ the cast-metal yokes or bands I on the upper chord, fitting thereto, as shown best in Fig. 3, the yokes K on the lower

chord for rods G, and the yokes L on the ends of the joist M for the braces H, to which yokes the said rods and braces are connected by right and left screw-threaded ends, screwing into them, as shown—that is, directly into the ends of said yokes, except in case of the upper ends of brace-rods H, which are screwed into flanges N on yokes I.

The lateral braces O, connecting each side, are screwed by right and left threaded ends, the one into a flange, P, on yokes K, and the other into a ring, Q, wherein four of the said braces converge.

All the suspending-rods and braces have enlargements R between the screw-threaded ends, for the application of a wrench for turning them.

It will be seen that this plan of construction does not require the cutting of the timber between the ends in any way calculated to weaken them, while it provides a most simple construction, requiring only the use of a wrench for putting up the frame.

I may, however, make the arch wholly of iron, using therefor, in place of the round rods and bent timbers, shaped pieces of rolled metal.

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

1. The end pieces, A, provided with the sockets and holes, as described, and combined with the timbers A E and binding-rods B F, all substantially as specified.

2. The connection of the right and left threaded rods and braces with the upper and lower chords, by means of the yokes fitted around the respective parts, all substantially as specified.

3. The connection of the sides by the lateral braces O, having the right and left threaded ends screwed into the yokes K, or flanges thereon, and the rings Q, all substantially as specified.

CHARLES B. SREEVES.

Witnesses:

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