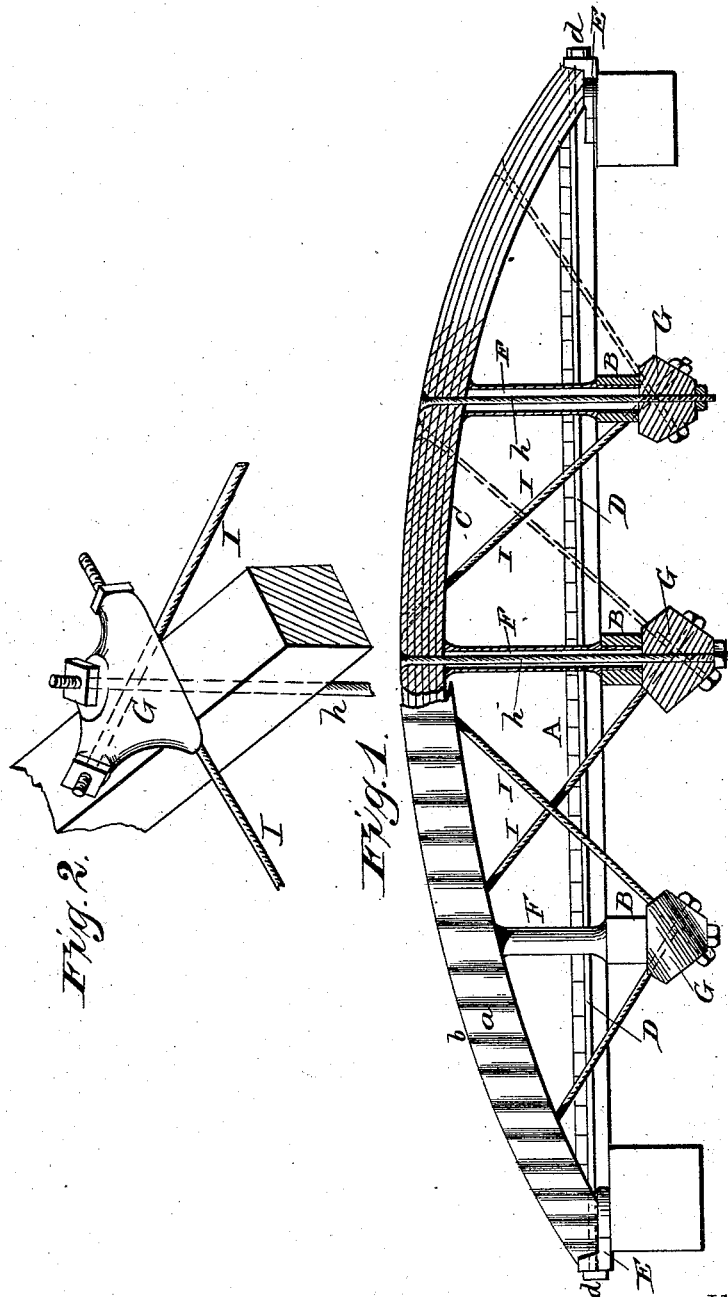


J. E. JAYNE.
Bridge.

No. 215,364.

Patented May 13, 1879.



WITNESSES
F. L. Oursaud,
J. J. McCarthy.

By

INVENTOR
John E. Jayne
Alexander Watson
ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN E. JAYNE, OF IOWA CITY, IOWA, ASSIGNOR OF ONE-HALF HIS RIGHT
TO REUBEN HOOVER, OF SAME PLACE.

IMPROVEMENT IN BRIDGES.

Specification forming part of Letters Patent No. **215,364**, dated May 13, 1879; application filed
February 10, 1879.

To all whom it may concern:

Be it known that I, JOHN E. JAYNE, of Iowa City, in the county of Johnson, and in the State of Iowa, have invented certain new and useful Improvements in Bridges; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a bridge, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation of my bridge. Fig. 2 is a detailed view of a part thereof.

A represents the flooring of the bridge, supported upon the joists B. C represents the arch, which may be made of series of planks bent and placed on top of each other, or of two beams placed side by side. The sides of the arch are provided with corrugated sheet-metal plates *a*, and the top covered by a sheet-metal cap, *b*, having projecting side flanges overlapping the upper edges of the side plates *a*. The ends of the arch C rest in shoes E E, and a tension-rod, D, with nuts *d* on its ends, connects the same, said rod passing over the joists B.

Upon each joist B is placed a hollow post, F, having flanges at both ends, bearing against the top of the joist and under side of the arch. Through this post is passed a perpen-

dicular rod, *h*, which is inserted from the top through the arch, post, and joist, and its lower end passes through a metal block or casting, G, placed against the under side of the joist, and a nut screwed up tightly on the end of the rod.

I I are lateral rods, which pass down through the arch from the upper end of one perpendicular rod *h* to the lower ends of the adjacent perpendicular rod on each side, the lower ends of said lateral rods also passing through the metal blocks G and fastened by nuts.

The metal blocks or castings G are constructed, as shown in Fig. 2, with a central vertical passage for the perpendicular rod *h* and two inclined passages (one on each side) for the lateral rods.

This bridge is simple and comparatively cheap in construction, and yet is strong and durable.

I am aware that hollow vertical posts and lateral rods have been used in bridges, and I do not claim such, broadly, as my invention.

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

The combination of the arch C, joist B, flanged hollow post F, block or casting G, perpendicular rod *h*, and lateral rods I, all constructed substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 31st day of January, 1879.

JOHN E. JAYNE.

Witnesses:

J. H. COOVER,
T. W. TOWNSEND.