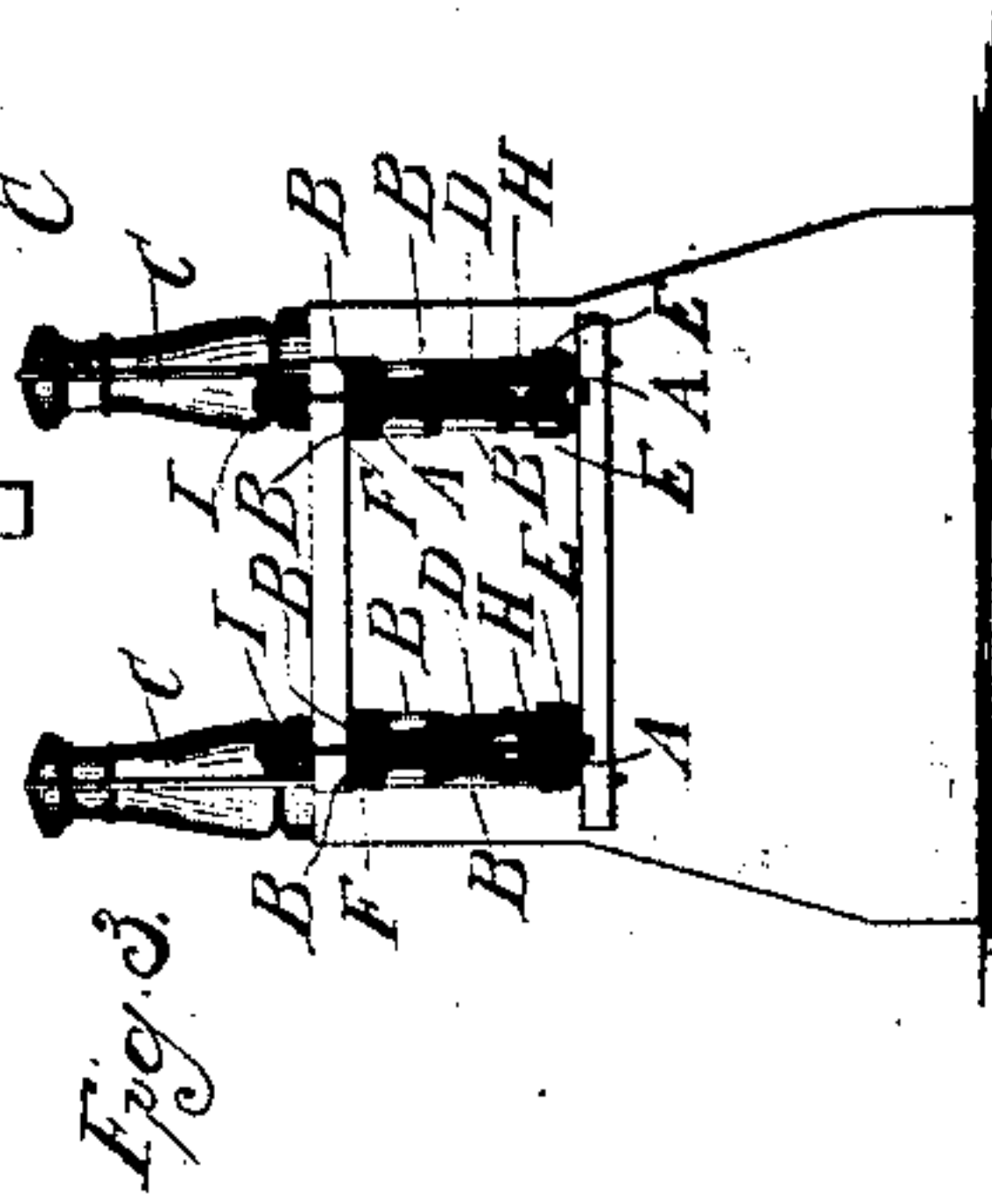
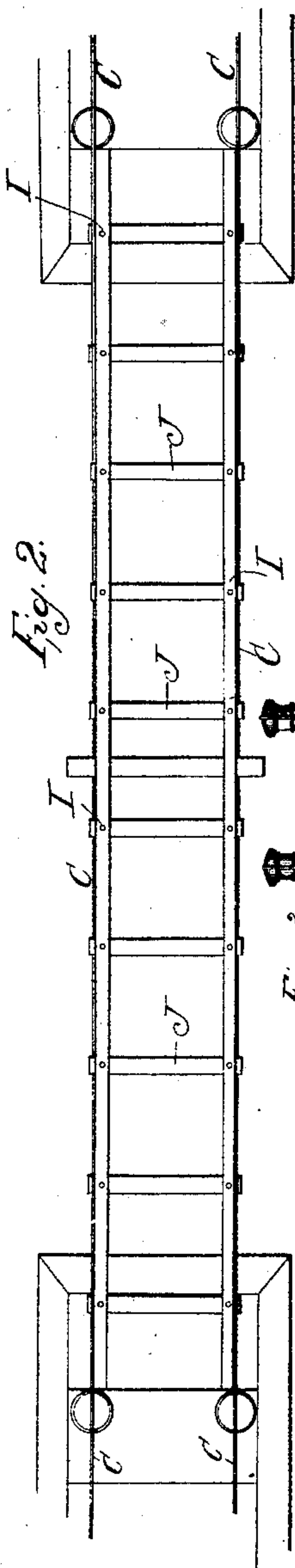
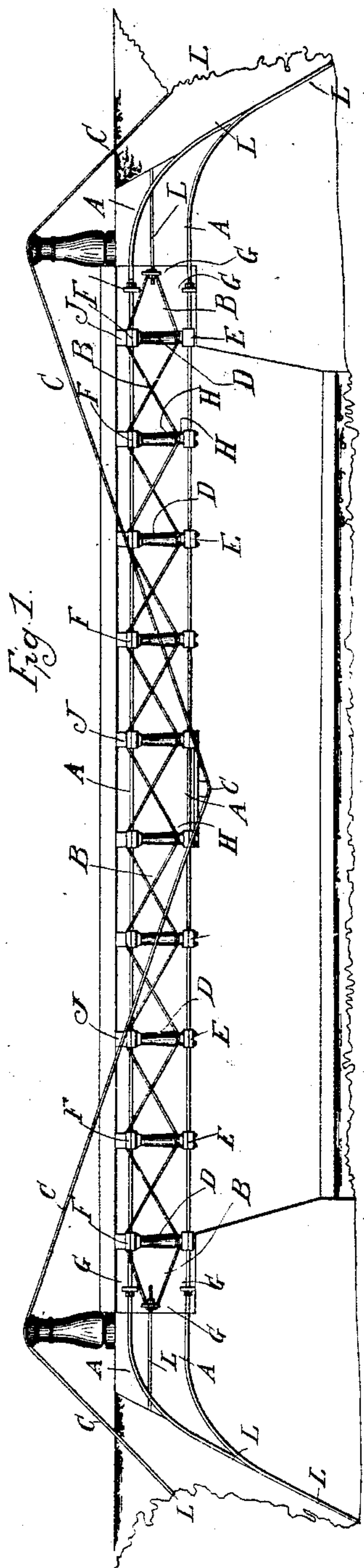


IRON TRUSS BRIDGE.

No. 11,818.

Patented Oct. 17, 1854.



UNITED STATES PATENT OFFICE.

JNO. YANDELL AND JOS. H. JOHNSON, OF ST. LOUIS, MISSOURI.

IRON BRIDGE.

Specification of Letters Patent No. 11,818, dated October 17, 1854.

To all whom it may concern:

Be it known that we, JOHN YANDELL and JOSEPH H. JOHNSON, both of St. Louis, State of Missouri, have invented a new and Improved Mode of Constructing Wire-Tress Suspension-Bridges; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of our invention consists, in the peculiar mode of combining together of all the several parts as they are employed in the tension tress work, and attaching the same to anchor chains in the manner hereafter described, and also the peculiar mode of combining the tress work, with the suspension cables in the manner, and for the purposes hereafter set forth.

To enable others skilled in the art to construct and use our invention, we will now proceed to describe its construction.

Figure 1, is a side view of an elevation; Fig. 2, is a plan of the same; Fig. 3, is a transverse section of the same.

The anchor chains L, are made and secured into the abutments by any well known mode. The horizontal cords A, are wire cables prepared in the usual way, or may be made of round bar iron, in sections of any convenient length, and then coupled together by knuckle joints of the usual form; and are attached to the anchor chains in pairs, by inserting the ends of the cords through the coupling plates G, and drawn to a proper flexibility and secured by nuts and screws formed on their ends for that purpose. The pillars D, are cast iron columns, having a flange on each end, and rest on the lower cords, at regular intervals, and receives both the upper and the lower cords, into grooves formed for that purpose on the ends of the pillars. The caps F, and plates E have similar grooves formed thereon, and thereby forming two full circles, or holes through which the cords A, pass. The diagonal tension braces may be made either of common wire, or, round-bar iron, with an eye formed on each end, rest with their centers in grooves formed on the caps for that purpose, and pass diagonally to the base of each contiguous pillar, and secured

by inserting the legs of the strips H, through each alternate eye on the braces, and also through the bottom plates E and drawn tight by nuts and screws formed on the strips. The braces are attached to the anchor chains by the means of coupling plate G in like manner as the horizontal cords A, are secured. The cross-ties J, and string-pieces K, rest on the caps at right angles with each other, and are secured to the tress work, by inserting the bolt I, through the timbers and also through the pillars and drawn tight by nuts and screws formed thereon for that purpose. The main suspension cables C, are attached to the anchor chains in like manner as the other cords are attached, and rest on cast iron columns, and receives the tress work at the center of the span, on a transverse girder O, and also may be attached at as many points to the tress work, as may be required, according to the span of the bridge. When the bridge is intended for rail-roads, the iron railing is secured to the string pieces, or if intended for county purposes, then the sheeting and banisters may be attached by any well known mode, or, the banisters may be tress-work similar to that already described; the slight depression in the tress work may be easily remedied by giving proper depth to the timbers, the depth being equal to the depression.

We do not claim as new the use of anchor-chains, or suspension cords, as they have long been known and employed for bridging purposes, neither do we claim as our invention, any one of the several parts, when they are considered as separate and apart from the other parts, but,

We do claim, and desire to secure by Letters Patent—

The peculiar mode of connecting together of all the several parts as they are employed in the tension tress-work, and also the mode of combining the same with suspension cables, in the manner, and for the purposes set forth.

JOHN YANDELL.
JOSEPH H. JOHNSON.

In presence of—

EDWD. E. ALLEN,
JOHN T. ANDREWS.