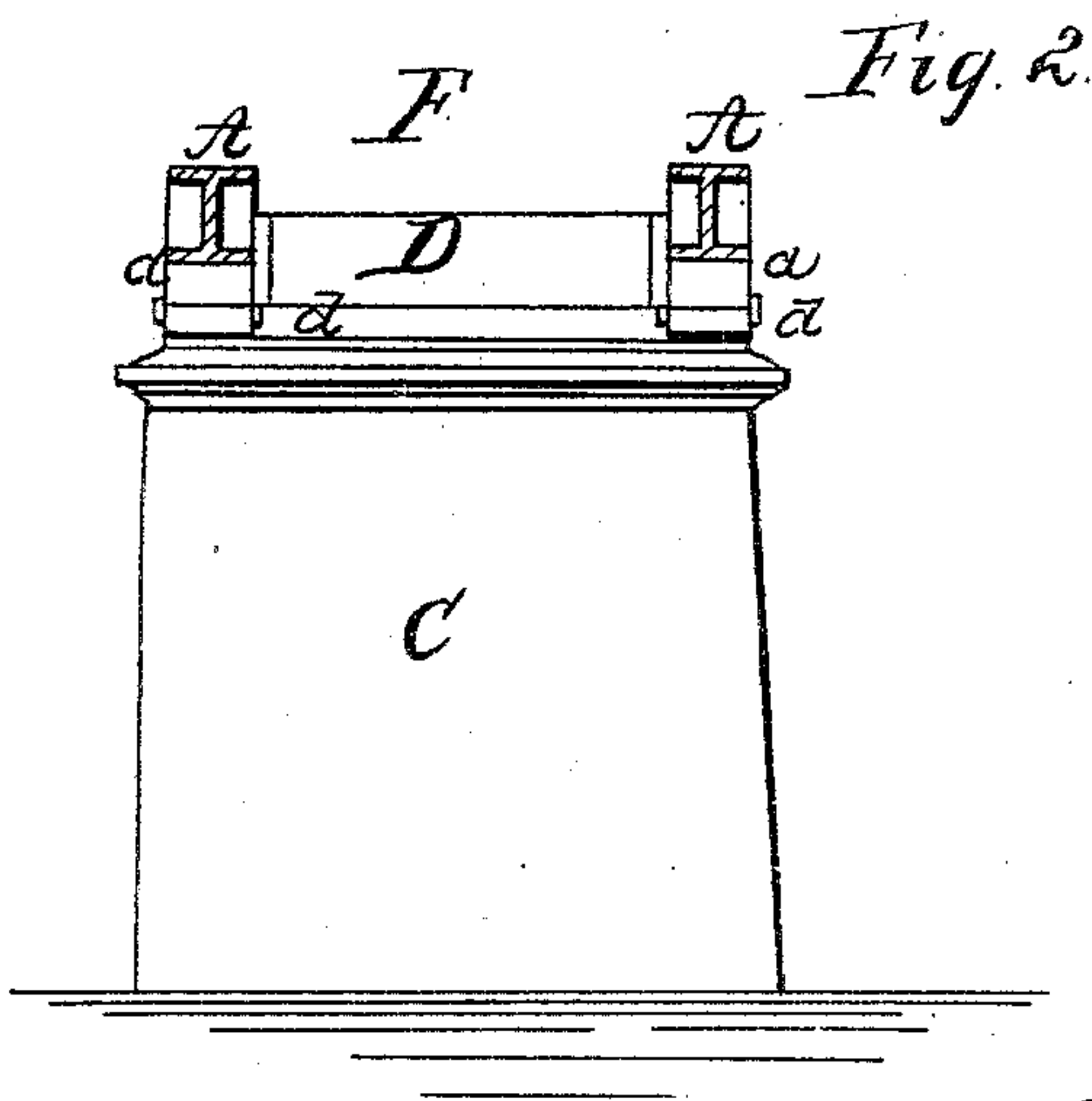
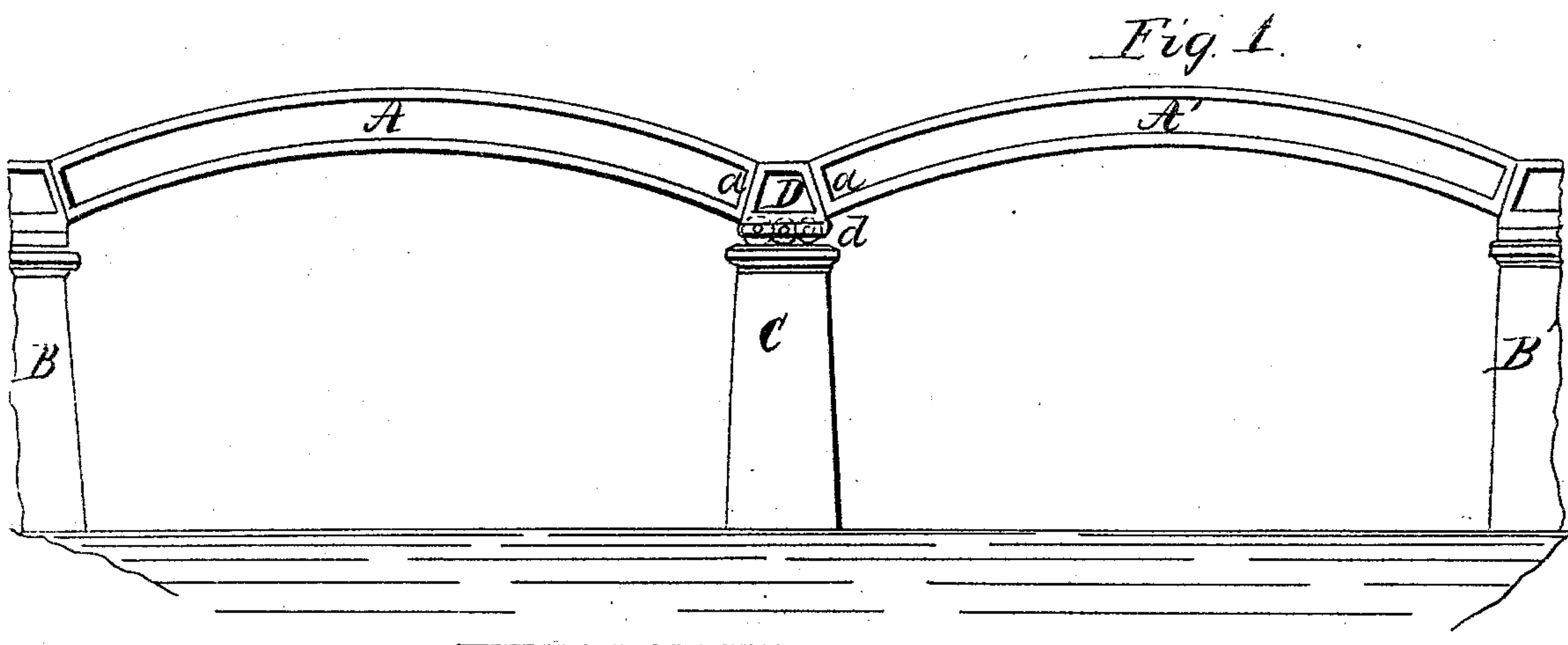


Eads & Flad

Truss Bridge.

N^o 95,784.

Patented Oct. 12, 1869.



Witnesses,
William A. Hertel

Robert Burns

Inventors
James B. Eads
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United States Patent Office.

JAMES B. EADS AND HENRY FLAD, OF ST. LOUIS, MISSOURI.

Letters Patent No. 95,784, dated October 12, 1869.

IMPROVEMENT IN ARCHED 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 we, JAMES B. EADS and HENRY FLAD, of St. Louis, in the county of St. Louis, and State of Missouri, have made certain new and useful Improvements in Arched Bridges; and we do hereby declare that the following is a full and correct description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to the manner of supporting the arches upon piers, in such wise that said piers shall be relieved of the lateral thrust usually arising thereon, thus permitting a light construction of such piers, in accordance with vertical pressure thereon, and with only such additional pressure or thrust as the friction caused by the devices here employed may exercise.

For said purposes, the adjoining ends of the arches at any pier will be connected with a proper joint-piece, and this will rest upon rollers, moving upon a rest-plate upon the pier.

To enable those herein skilled to make and use our said invention, we will now more fully describe the same, referring herein to the accompanying

Figure 1 as an elevation; to

Figure 2 as a sectional view near the pier.

We construct the arches A and A' of the usual materials, and in the usual forms, abutting against the abutments B B', and being connected therewith in proper manner.

On the pier C we support said arches, in accordance with the nature of this invention, in the manner following:

The ends *a* of the said arches abut against the joint-piece D, of suitable form to furnish a bearing.

Said piece D will be arranged with rollers *d*.

These move upon a suitable bearing or foundation-plate, secured in the pier C.

We form the arches A and A' of such strength and stiffness that they may be able to resist and transmit the thrust from one to the other arch, and pass the said thrust to the abutments; and, more especially, we make the said arches of such strength and stiffness that they will not be unduly distorted, and thus cause an excessive movement of the piece D upon the pier C.

It is apparent that the pier C receives merely the vertical pressure caused by the load on said arches, and such friction-thrusts as the movement of the rollers *d* may cause. The strains upon said pier are therefore made a minimum, and an economical construction of the pier may be achieved.

Having thus fully described our said invention,

What we claim, and desire to secure by Letters Patent, is—

The arches A A', connected by a joint-piece, and supported by rollers on the piers C, substantially as and for the purposes set forth.

The above specification of our invention signed by us, this 21st day of January, 1869.

JAS. B. EADS.
HENRY FLAD.

Witnesses:

THO. SADLER,
THOS. SADLER HESLOP.