

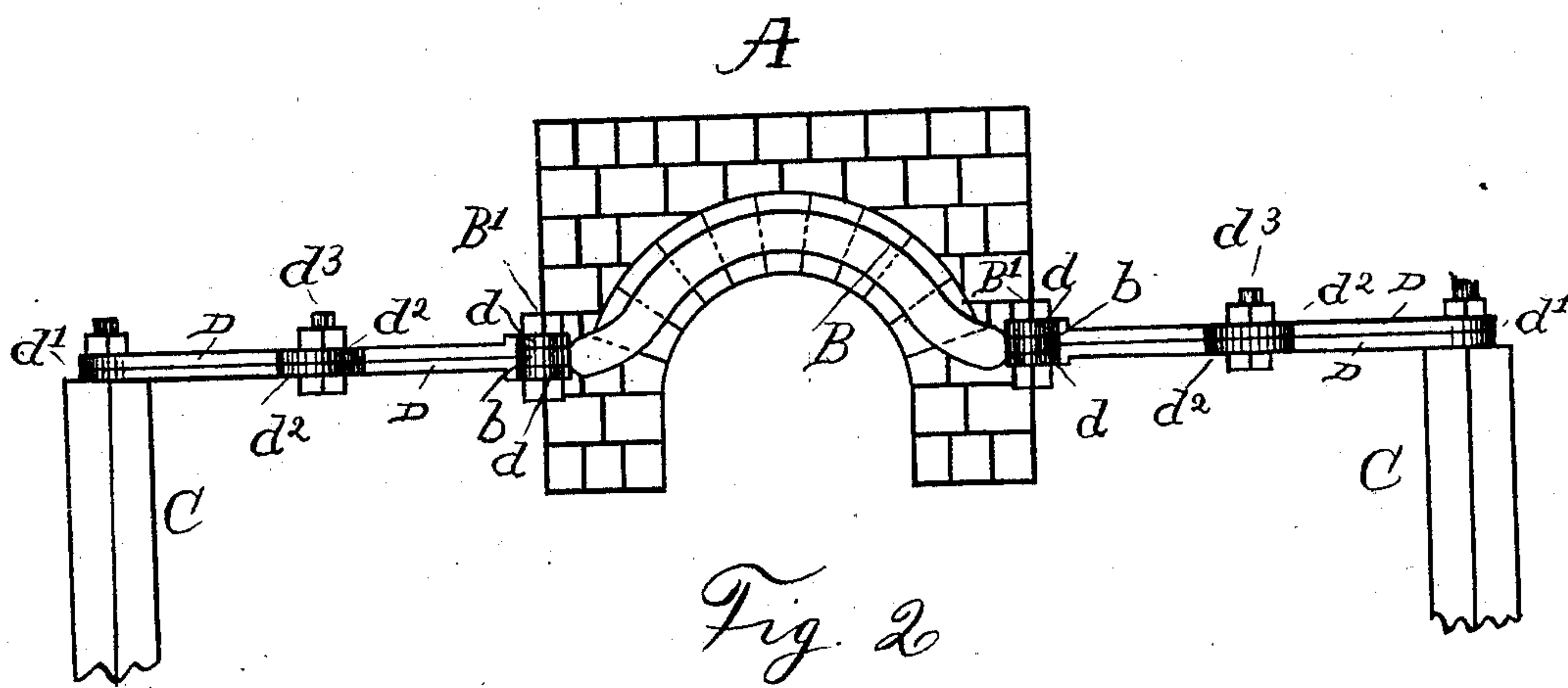
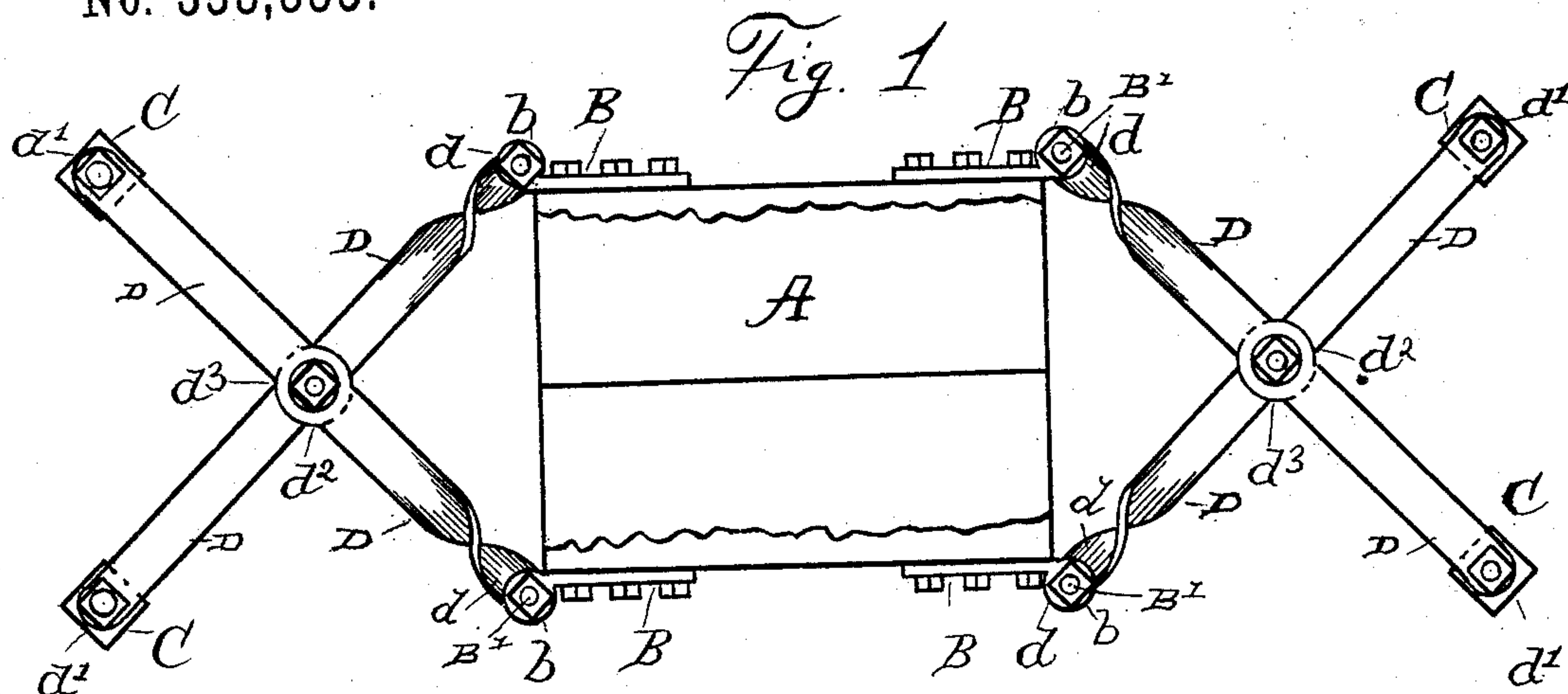
(No Model.)

J. GOODNIGHT.

FASTENING FOR BRIDGES AND CULVERTS.

No. 353,355.

Patented Nov. 30, 1886.



Witnesses

John C. Miller,
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UNITED STATES PATENT OFFICE.

JACOB GOODNIGHT, OF MONTEVALLO, MISSOURI.

FASTENING FOR BRIDGES AND CULVERTS.

SPECIFICATION forming part of Letters Patent No. 353,355, dated November 30, 1886.

Application filed July 30, 1886. Serial No. 209,519. (No model.)

To all whom it may concern:

Be it known that I, JACOB GOODNIGHT, a citizen of the United States, residing at Montevallo, in the county of Vernon and State of Missouri, have invented certain new and useful Improvements in Fastenings for Bridges and Culverts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this improvement is an economically-constructed and efficient fastening for securing the position of bridges and culverts against displacement by winds or floods. These results are attained by means illustrated in the drawings herewith filed as part hereof, in which the same letters of reference denote the same parts in the different views.

Figure 1 represents a plan view of a bridge and culvert fastening embodying the features of my improvement. Fig. 2 represents an end elevation of a culvert provided with my improved fastening, partly modified.

A indicates a bridge or culvert of any suitable construction.

B B are suitable plates fixed to the ends of the structure and provided with eyes projecting beyond the corners of the structure, as shown at *b b*.

C C are posts or studs set into the ground at a suitable distance from the bridge or culvert for a purpose hereinafter explained.

D D are metal plates provided with eyes *d*, corresponding to eyes *b* of the plates B, for connecting the same to the latter by means of bolts B', and with eyes *d'* at their ends, for connecting the same to the posts or studs C C,

substantially as shown, and with eyes *d'*, intermediate of their ends, for the reception of connecting-bolts *d'*.

In the application of the fastening to culverts, a single plate, B, extending from one side to the other, as shown in Fig. 2, may be used, and if deemed advisable the same mode of connecting the plate D D may be applied to bridges. The plates B B are to be secured to the bridge or culvert in positions to allow the transverse plates D D to be suitably embedded in the ground under the road crossing the bridge or culvert.

By reason of the angular connection of the bridge or culvert with the studs C C the position will be secured against flood, and also against wind from either direction. The efficiency of the connection will be increased and additional security obtained by the connection of the plates D D intermediate of their ends, as shown, as the position of the parts are thereby made more rigid.

Having explained the features of my improvement, what I claim as new, and desire to secure by Letters Patent, is—

The plates fixed to the bridge or culvert, the studs, the plates secured to each other intermediate of their ends and at one end with the studs, and at the other end with plates fixed to the bridge or culvert, in combination with a bridge or culvert, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB GOODNIGHT.

Witnesses:

T. J. PIERCE,

C. W. BULLOCK.