

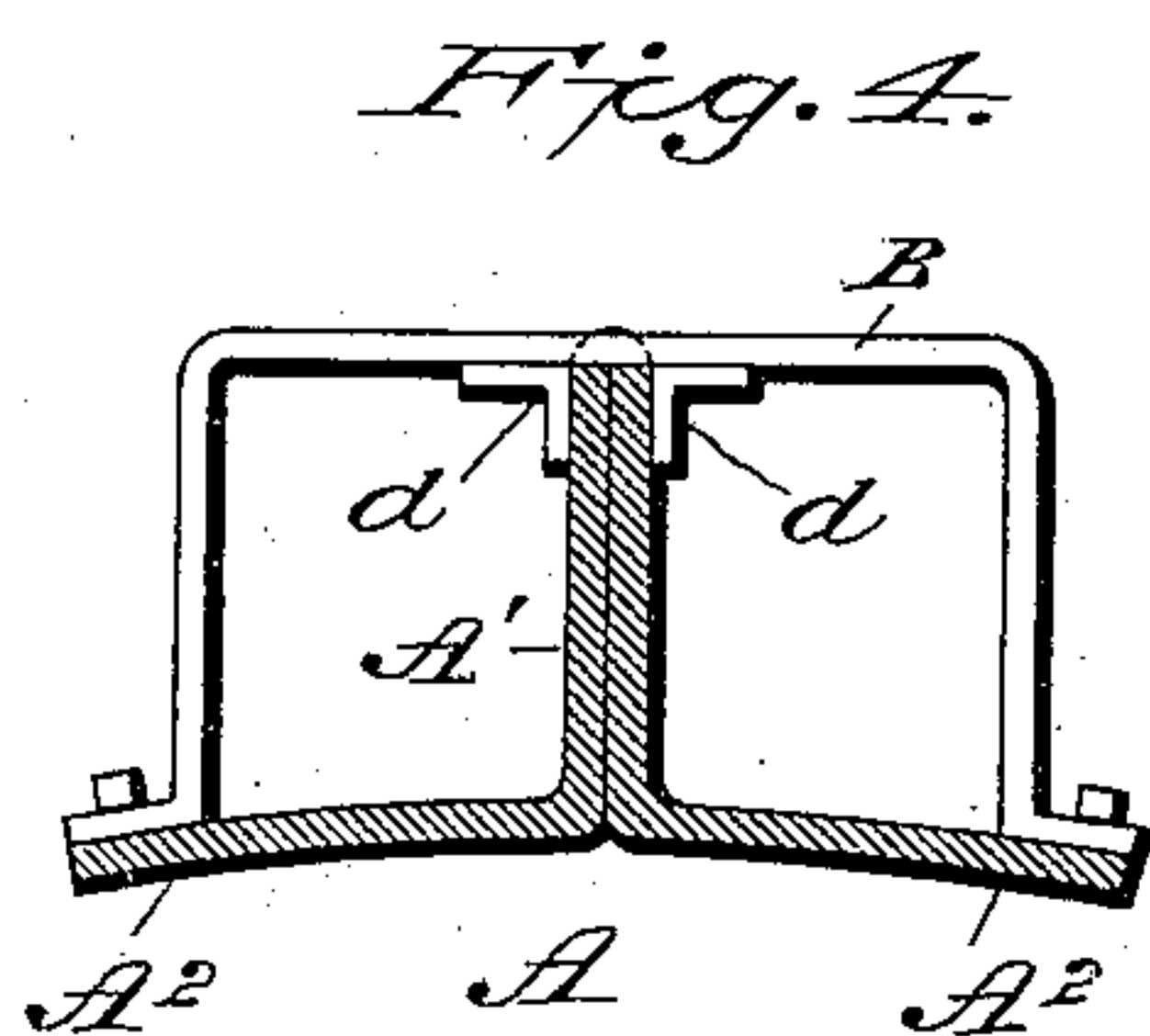
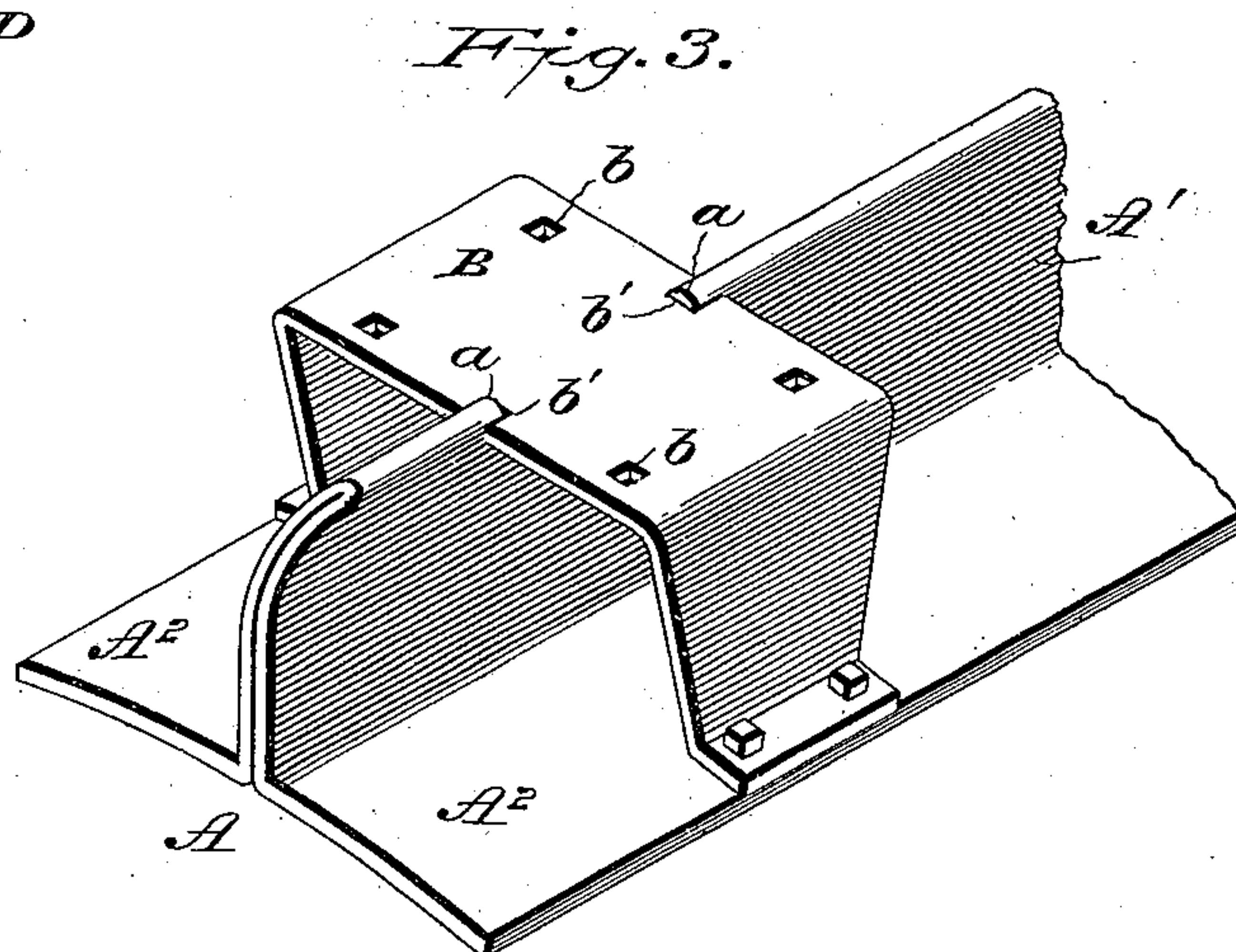
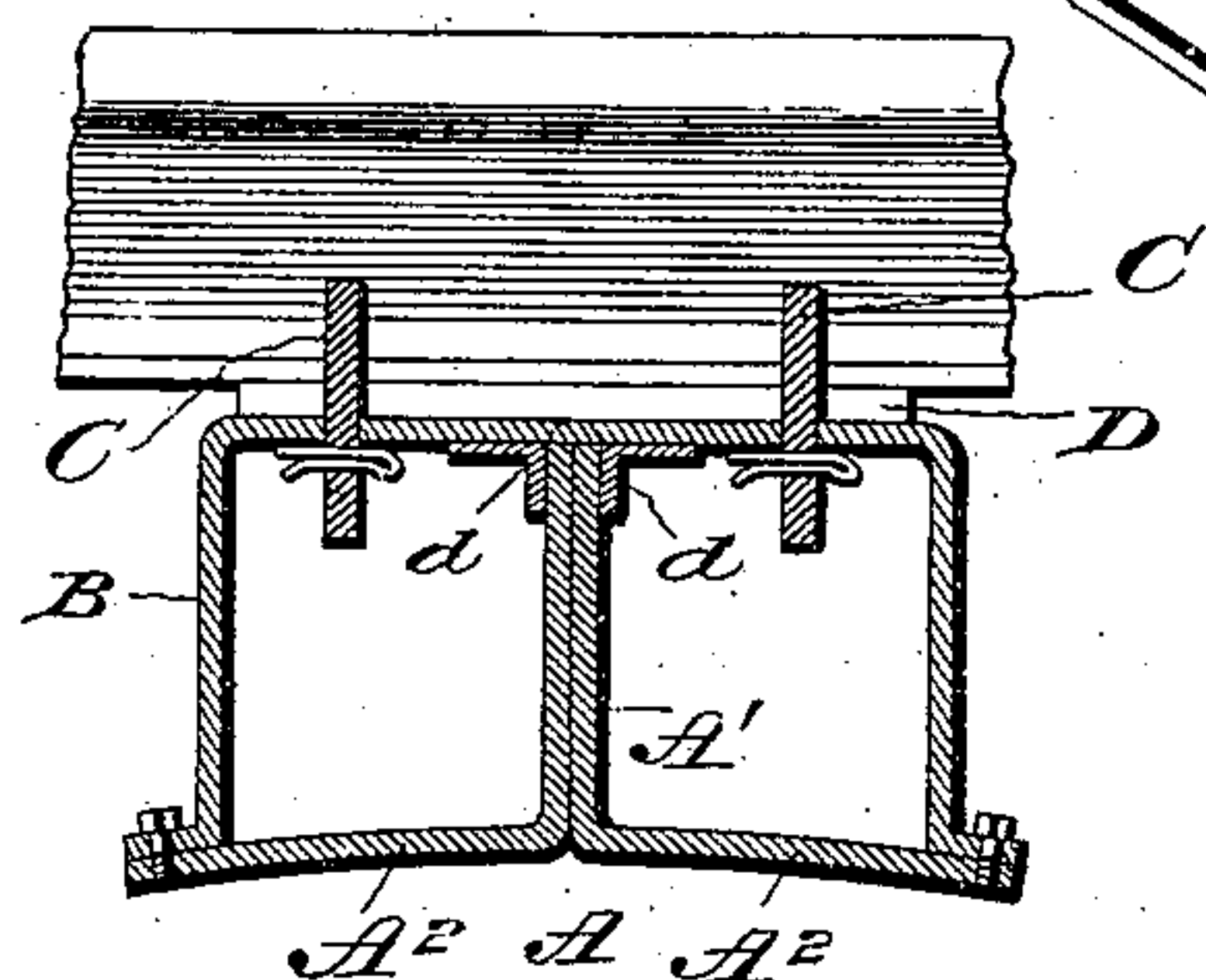
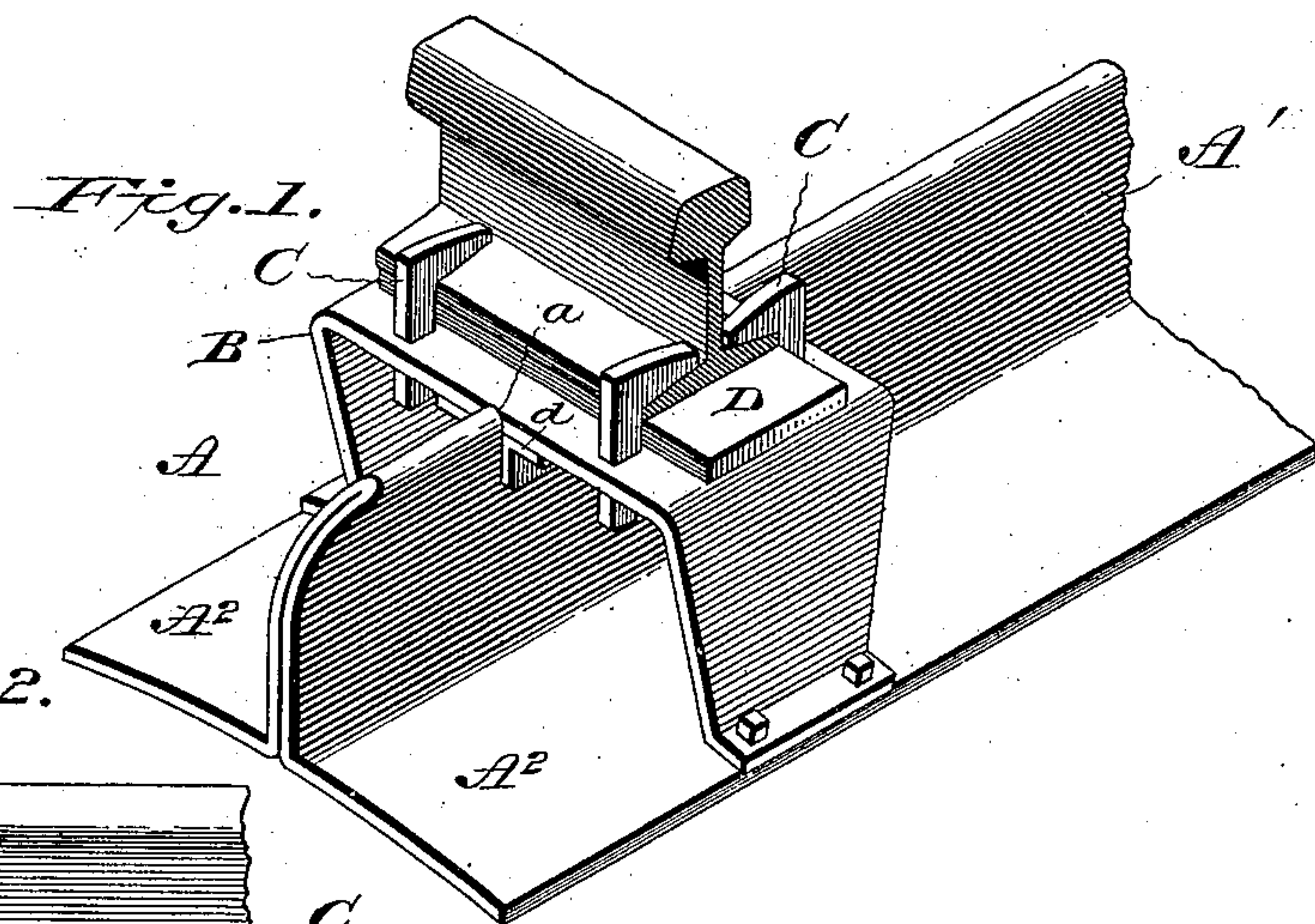
No. 618,567.

Patented Jan. 31, 1899.

L. W. GERECKEY.  
METALLIC RAILROAD TIE AND SUPPORT.

(Application filed Oct. 17, 1898.)

(No Model.)



WITNESSES

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# UNITED STATES PATENT OFFICE.

LOUIS W. GERECKEY, OF PUEBLO, COLORADO, ASSIGNOR OF TWO-FIFTHS  
TO ANDREW C. SCHAFER, OF SAME PLACE.

## METALLIC RAILROAD-TIE AND SUPPORT.

SPECIFICATION forming part of Letters Patent No. 618,567, dated January 31, 1899.

Application filed October 17, 1898. Serial No. 693,772. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS W. GERECKEY, a citizen of the United States, residing at Pueblo, in the county of Pueblo and State of Colorado, have invented new and useful Improvements in Metallic Railroad-Ties and Supports, of which the following is a specification.

This invention relates to an improvement in metallic railroad-ties, and has for its object to provide a cheap and effective tie which is adapted to receive rail-supporting plates which engage with the base-flanges of the tie and with the vertical web thereof, said rail-supporting plates being held against side and longitudinal movement, as will be hereinafter set forth.

The invention consists in the construction and combination of the several parts, as specified in the claims.

In the accompanying drawings, Figure 1 is a perspective view showing an end portion of the tie, a rail-supporting plate attached thereto, and means for fastening the rail to the plate. Fig. 2 is a vertical sectional view, taken to one side of the rail, through the tie, rail-supporting plate, and clamps which engage with the rail. Fig. 3 is a perspective view of a modification, in which modification the rail-supporting plate is of a greater width than the recess in the vertical web or flange of the tie. Fig. 4 is a sectional view of a similar construction to that shown in Fig. 3, the rail-supporting plate having in this instance angle-bars which engage with the vertical web or flange of the tie adjacent to the recess therein.

Referring to the drawings, A indicates a metallic tie, made, preferably, from sheet metal which is rolled or otherwise formed so as to provide a vertical web or flange A' which is double the thickness of the other parts of the tie. From the lower portion of the web or flange A' extend the base-flanges A<sup>2</sup>, which are concavo-convex in cross-section or inclined downward away from the center web. The upper edge of the vertical web or flange A' of the tie is cut away, so as to provide therein recesses having vertical shoulders a, against which the tread portion of the rail-supporting plates which are carried by the tie will abut, so that the upper surfaces of

said plates will be flush with the upper portion of the tie. The outer edges of the base-flanges of the tie are provided with apertures for the passage therethrough of bolts or other fastening devices for connecting the lower outturned ends of the rail-supporting plates B to the tie.

The rail-supporting plates B have a horizontal portion the center of which is adapted to rest upon the vertical web A' of the tie, and through this horizontal portion of the rail-supporting plate are apertures for the passage therethrough of rail-clamps C, which are so constructed as to engage with the base-flange of the rail, the lower ends of said rail-clamps being adapted to receive locking-keys. From the horizontal portion of the rail-supporting plates extend downwardly-projecting portions having outturned ends with apertures through which pass the means for connecting the rail-supporting plates to the outer edges of the base-flanges of the tie. To the under side of the horizontal portion of the rail-supporting plates B may be attached angle-bars d d, the vertical members thereof impinging against the upper portion of the vertical web of the tie adjacent to the recess therein, and the shoulders a of the recess are adapted to abut against the edges of the rail-supporting plate.

In Figs. 3 and 4 the horizontal portion of the rail-supporting plate B is shown as being of a greater width than the length of the recess in the vertical web of the tie, and in order that the plate B may lie practically flush with the upper edge of the tie the plate is cut away centrally or provided with recesses b', this construction holding the plate B in engagement with the tie as to longitudinal and lateral movement.

The rail-supporting plate B may have attached thereto a rail-plate D, which can either be fastened to the horizontal portion of the plate B or formed integral therewith, and upon this part D the rail is adapted to rest. The part D may either be a metallic box or block or of a material different from the part B, the width of the same being practically the same as the base-flange of the rail.

A tie constructed as shown with a concavo-convex base-flange and a rail-supporting plate



which engages with the vertical web of the tie and with the outer edges of the base-flanges provides a structure which has a certain degree of resiliency, sufficient to meet the requirements of practical use, and the construction shown is cheap and can be applied not only upon the ordinary road-bed, but upon bridges. In ordinary use the ballast is packed about the tie, and the convex bottom tends to hold the packing about the same. Upon the passage of a train over the rail the rail-supporting plate and tie will give uniformly, the side pieces of the vertical web springing slightly away from each other, while the base-flange and vertical side supports of the plate move outwardly, thus providing a certain amount of resiliency and at the same time keeping the horizontal portion of the rail-supporting plate B in a true horizontal position. Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a metallic railroad-tie and rail-support, the combination with a metallic tie having a central vertical web and base-flanges which project therefrom outward and downward, the upper edge of the vertical web being cut away to provide a recess, of a rail-supporting plate which engages with the recessed portion of the tie, said plate having downwardly-extending side pieces connected to the outer edges of the base-flange of the tie, substantially as shown.

2. In combination with a metallic tie constructed substantially as shown, of a rail-supporting plate having a horizontal portion

which engages with a centrally-positioned vertical flange of the tie and downwardly-extending side pieces with outwardly-turned ends which are attached to the outer edges of the base-flanges of the tie, the tie and rail-supporting plates being in locked engagement with each other, substantially as shown.

3. In combination with a metallic tie and rail-supporting plate connected together and constructed substantially as shown, of the rail-supporting plates carrying on their undersides angle-bars, arranged parallel with each other and transversely to the rail-supporting plates so that the depending portions thereof will abut against the vertical web of the tie, substantially as shown and for the purpose set forth.

4. In combination with a metallic tie having a centrally-located vertical web formed by bending the tie upon itself, curved base-flanges which extend laterally from the vertical web, and a recess in the upper portion of the vertical web, of a rail-supporting plate B adapted to lie within the recess in the tie said rail-supporting plate having depending end portions will engage with the outer edges of the base-flange of the tie and means for connecting a rail to the rail-supporting plate, substantially as shown.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LOUIS W. GERECKEY.

Witnesses:

F. L. MIDDLETON,  
WILL. O. UNFUG.