

(No Model.)

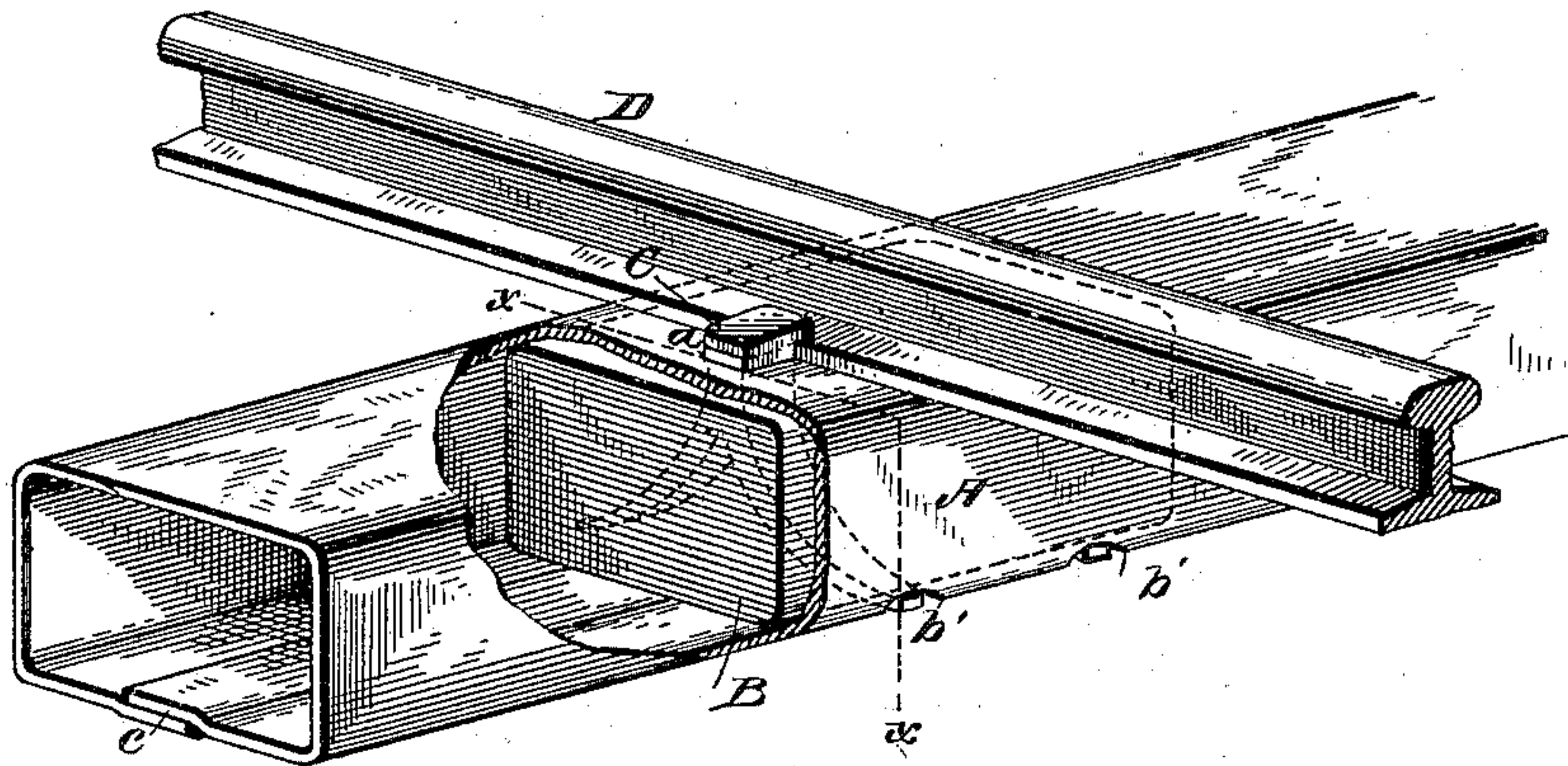
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RAILWAY TIE AND RAIL FASTENING.

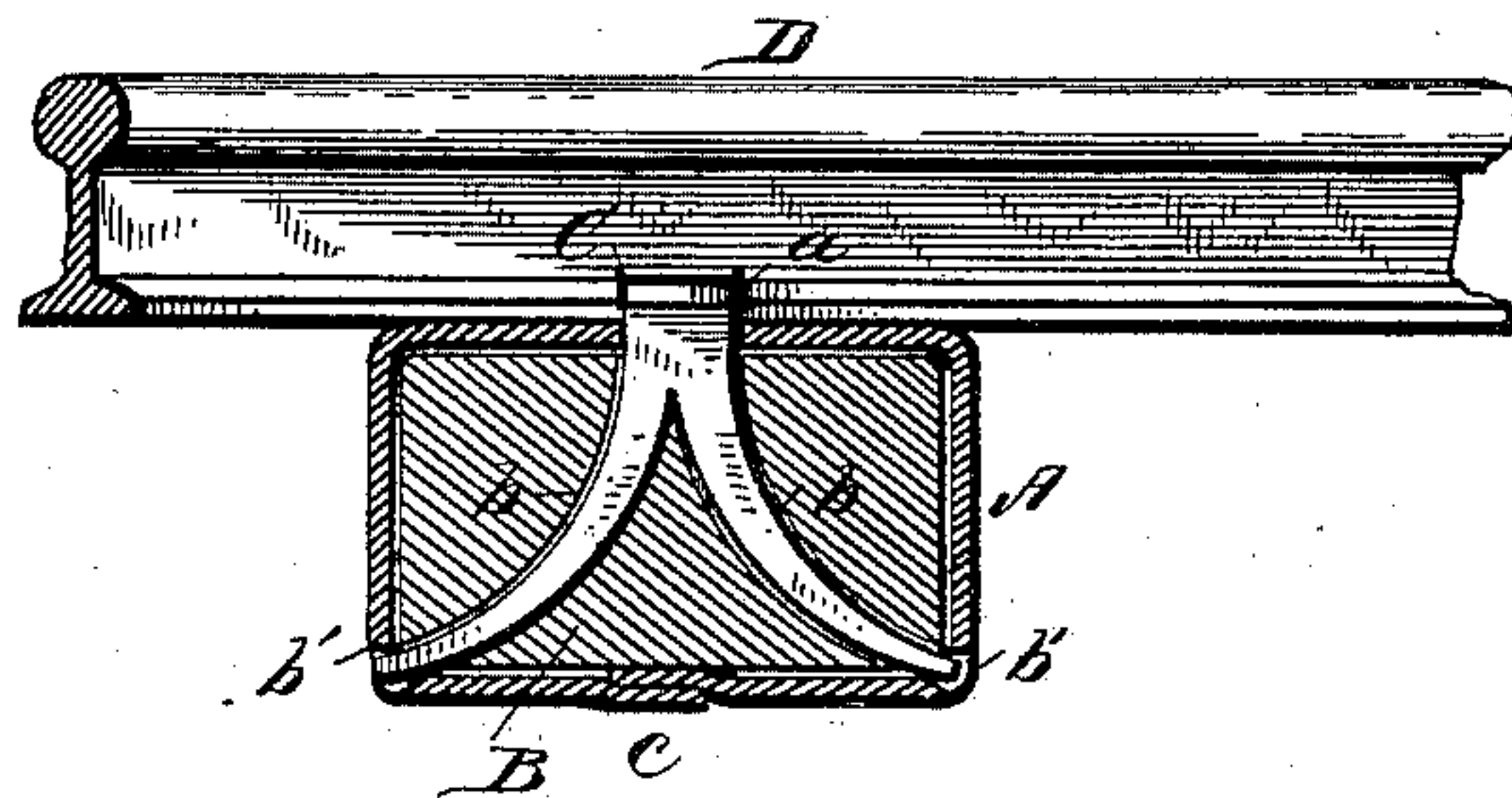
No. 335,805.

Patented Feb. 9, 1886.

*Fig. 1.*



*Fig. 2.*



Witnesses  
*W. F. Steider.*  
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# UNITED STATES PATENT OFFICE.

EDWIN P. J. FREEMAN, OF ROSLYN, NEW YORK.

## RAILWAY-TIE AND RAIL-FASTENING.

SPECIFICATION forming part of Letters Patent No. 335,805, dated February 9, 1886.

Application filed November 18, 1885. Serial No. 183,201. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN P. J. FREEMAN, a citizen of the United States, residing at Roslyn, in the county of Queens and State of New York, have invented certain new and useful Improvements in Railway-Ties and Rail-Fastenings; 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, reference being had to the accompanying drawings and letters of reference marked thereon, which form a part of this specification.

Like letters refer to similar parts throughout the several views.

My invention relates to metallic railway-ties and the means of securing rails thereto; and it has for its object to improve the construction of metallic ties and the means heretofore adopted for securing the rails.

To this end the invention consists in the construction and arrangement and combinations of parts hereinafter more fully pointed out and afterward defined by the claims.

Referring to the drawings, Figure 1 is a perspective view of the tie with rail attached, having parts broken away to show the construction. Fig. 2 is a transverse section of the same, taken upon the line *xx* of Fig. 1.

A is a hollow metallic railway-tie, which may be constructed of a single sheet of malleable iron, bent so as to form a hollow case or cylinder having open ends, the opposite edges of the metal being overlapped, as shown at *c*, upon the under side of the tie.

B is a block or cushion, which is placed within the hollow case or tie and directly beneath the rail.

The rail D is secured to the tie by means of bifurcated spikes C, one of which is driven through the holes *a* upon either side of the rail, the branches or bifurcated portions of the spike entering the passages *b b*, which extend diagonally through the block, as shown, and

terminate at the holes *b' b'*, at the opposite lower angles or corners of the tie.

The bifurcated spike C, when used as shown, serves the double purpose of securing the rail firmly in place, and also of preventing the block from becoming laterally displaced.

If desired, a fish-plate may be used upon either side of the rail, and the spike C placed at a sufficient distance from the rail to permit its head to overlap or engage the outer edge of the fish-plate, instead of the flange of the rail, as shown.

It is at once evident that the construction described may be subject to many slight modifications without departing from the spirit of my invention. For instance, the tie, instead of being constructed in the form shown, may, if desired, be cylindrical, or the place in which it is to be used may render some other form more convenient.

Having thus described my invention and set forth its merits, what I claim to be new, and desire to secure by Letters Patent, is—

1. The combination, with a hollow metallic tie, a rail, and a block within said tie beneath the rail, and provided with inclined openings, of a bifurcated spike, the forks of which engage said openings, thus securing said rail, block, and tie rigidly together, as set forth.

2. The combination, with a hollow metallic tie having hole *a* and holes *b'*, a rail, and a block within said tie beneath the rail and provided with inclined openings, as shown, of a bifurcated spike passed through said hole *a*, with its head bearing against the flange of said rail, and its branches passing through the openings in the block and into the holes *b'* of the tie, substantially as and for the purposes set forth.

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

EDWIN P. J. FREEMAN.

Witnesses:

JOSEPH H. BOGART,  
WILLIAM H. WOOD.