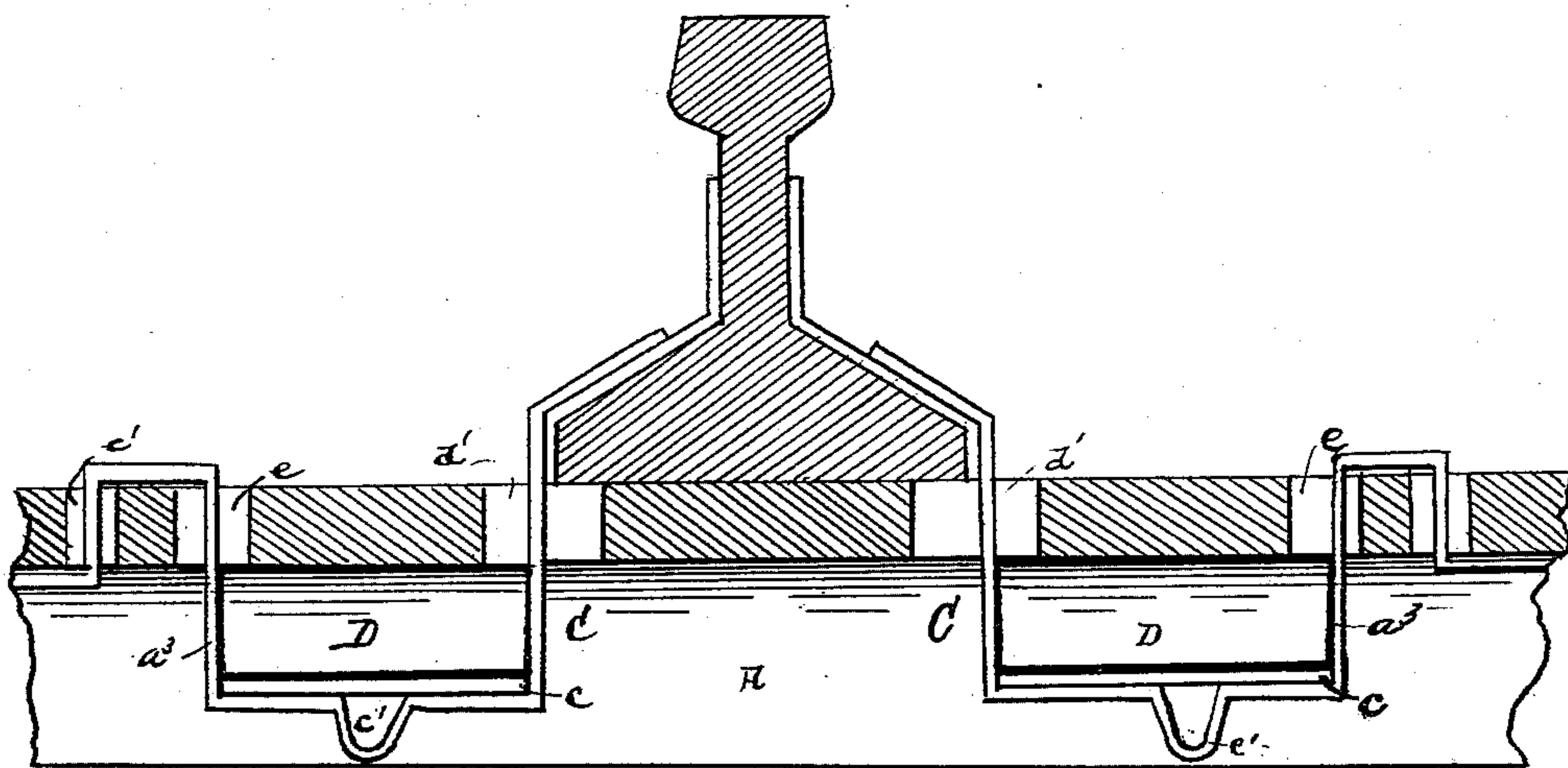


(No Model.)

L. HAAS.
RAILROAD TIE.

No. 420,299.

Patented Jan. 28, 1890.



Witnesses
Paul W. Stevens.
[Signature]

Inventor
Levi Haas
By his Attorneys *[Signature]*

UNITED STATES PATENT OFFICE.

LEVI HAAS, OF CHESTER, PENNSYLVANIA.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 420,299, dated January 28, 1890.

Application filed March 25, 1889. Serial No. 304,710. (No model.)

To all whom it may concern:

Be it known that I, LEVI HAAS, a citizen of the United States of America, residing at Chester, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Railroad-Ties, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention is directed to certain improvements in railroad-rail fastenings, having for its object the effective anchoring of the rail-chairs, and through them the rails, and the thorough ballasting of the ties or road-bed, as
15 also the deadening of sound or rattle from the rails and ties; and to these ends the nature of the invention consists of the detailed construction of the ties, and of the peculiar construction of the chairs and the fish-plates, as
20 will more fully appear from the following description and accompanying drawing, in which the figure illustrates a sectional elevation of my invention.

In the embodiment of my invention I employ a tie formed of a plate bent into a trough or tunnel like shape and having its lower side open and having pendants *a a*, the dirt filling in around said tie, thus anchoring the tie in the ground.

30 C C are the chairs, of which two are applied to each rail, one end or arm of each chair passing through an opening *d'* in the tie A and lapping the flange or base of the rail. The chair in its general outline or construction is

of approximate bail shape, and is arranged 35 below the tie, being keyed or clamped thereunder by plate D and key *c*, inserted in the loop of the chair, as shown. The opposite end of each chair is carried through an aperture *e* and then down through a second opening *e'*, 40 both openings being in the upper surface of the tie A, thus interlocking the chair at that end with the tie to secure it in place thereat. The intermediate portion of each chair is formed with a loop *c'* below its general lower 45 surface, both which loop and the said lower surface serve to firmly anchor the chair in place, the earth being solidly tamped in around the same.

Having thus fully described my invention, 50 what I claim, and desire to secure by Letters Patent, is—

The combination, with the rail and the plate-metal trough-shaped tie open at its lower side, of the chairs, each having one end or arm 55 passed through an opening in the tie and resting upon the rail base or flange and formed in an approximately bail shape, its opposite end or arm passed through a series of openings in the tie interlocking it therewith, and means 60 to secure the chair in place in said trough-shaped tie.

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

LEVI HAAS.

Witnesses:

MILTON WAUGH,
CHAS. C. LARKIN.