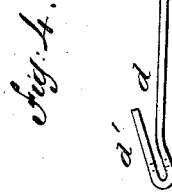
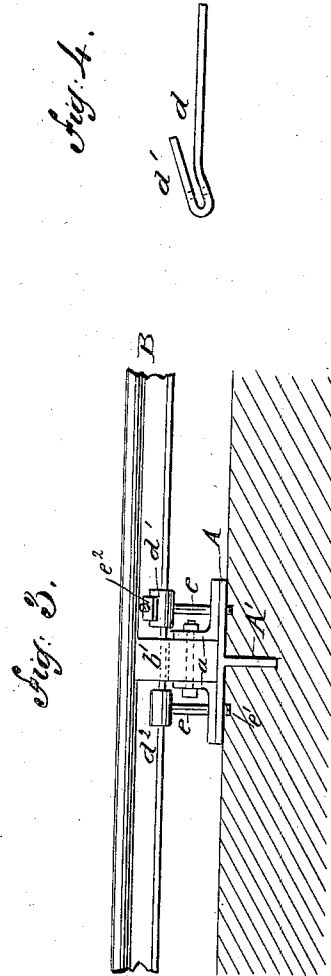
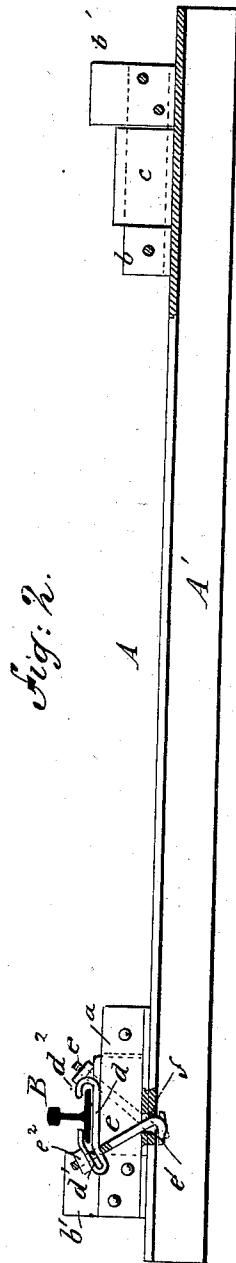
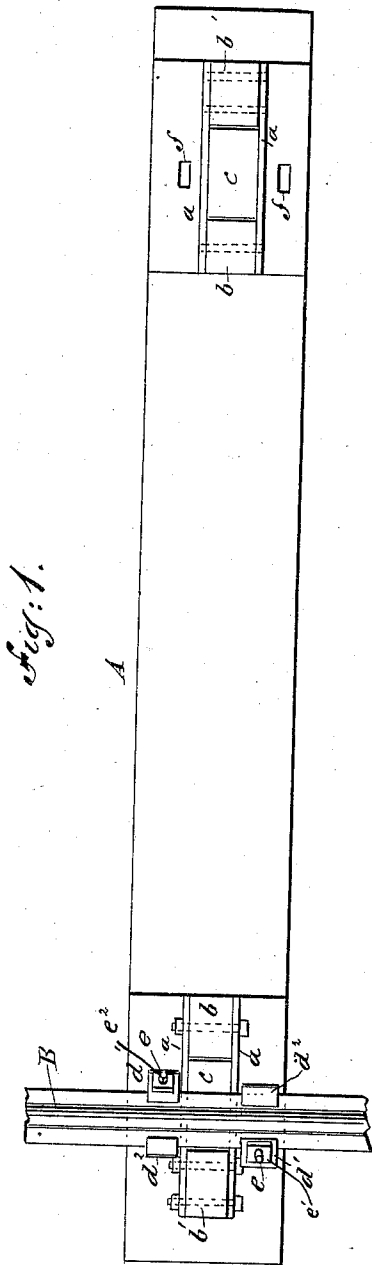


(No Model.)

C. H. VAN ORDEN.
METALLIC RAILROAD TIE.

No. 314,757.

Patented Mar. 31, 1885.



WITNESSES:

Chas. Nida
C. Sedgwick

INVENTOR:

C. H. Van Orden

BY

Munnell
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES H. VAN ORDEN, OF CATSKILL, NEW YORK.

METALLIC RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 314,757, dated March 31, 1885.

Application filed August 4, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. VAN ORDEN, of Catskill, in the county of Greene and State of New York, have invented a new and Improved Metallic Railroad-Tie, of which the following is a full, clear, and exact description.

This invention relates to an improved metallic railroad-tie and to the means for supporting and holding the rail thereon; and the invention consists of the construction, arrangement, and combination of parts, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my new railroad tie having a rail secured upon one end thereof. Fig. 2 is a broken side elevation of the same. Fig. 3 is an end elevation of the tie and showing the rail in side elevation, and Fig. 4 is an edge view of one of the holding-plates for the rail.

The tie A is made of wrought or cast iron, and is made of considerable width, to prevent it from being pressed down into the road-bed, and it is formed with the rib A' along its under surface, which strengthens the tie and enters the road-bed, so as to prevent all lateral movement of the tie. Upon its upper surface, and near its ends, the tie A is formed or provided with the short flanges a a, between which are held, by suitable bolts or other means, the blocks b b', which hold in place between the said flanges the blocks or cushions c, of wood, paper, or other suitable material, for supporting the rails B and for preventing the rails from resting upon the flanges a a. The blocks b' are made somewhat higher than the flanges a, so that they form abutments to hold the rails from spreading and to permit the rail to be raised with thin blocks of wood "shimed," as it is termed. The blocks b are secured detachably, so that they may be taken out and the cushions c renewed without disturbing the rail or tie. The rails are held in place upon the block c by the plates d and the bolts e. The plates d, when placed upon the rails, are folded, as shown at d' d'', to clasp the base of the rail at both edges, and the plates receive but one bolt

each, which passes through a suitable hole made in the fold d', and is attached to the tie, preferably by the hook e' of the bolt entering a suitable hole or slot, f, made in the tie, the bolts being removable by unhooking without disturbing the tie, the holes f being, by preference, made in line with the center of the rail B, so that the bolts e will stand at angles, as shown in said Fig. 2. The plates d are of wrought-iron, and before they are put in place to hold the rail lack the fold d'', which is put in with a sledge at the time of laying the track.

In applying the plates and bolts d e to the rail and tie A B they should be placed in reverse position to each other, so that the bolts e will stand at opposite inclinations, for holding the rail from moving sidewise, as well as for holding it snugly down upon the block or cushion c. With this construction by removing the nuts e' from the bolts and straightening out the fold d'' of the plates the rails may be removed from the tie and replaced or new rails put down without disturbing the tie, and the bolts unhooked rapidly and longer ones used when necessary to use "shims," and the rails being supported upon a higher level than the ties is of great advantage in clearing the track of snow.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The tie A, formed with the short flanges a, between which are held the blocks b b' c, the outer block, b', being made to project above the flanges, substantially as and for the purposes set forth.

2. The rail B, held upon the tie by the plates d, and the inclined and hooked bolts e, substantially as set forth.

3. The bolts e, formed with the hooks e', in combination with the tie A, having the holes f, and the plates d, for holding the rail, substantially as described.

4. The tie A, formed with the holes f, and supporting the rails upon blocks, in combination with the plates d, and hooked bolts e, the holes f being made below the center of the rail, substantially as described.

C. H. VAN ORDEN.

Witnesses:

P. G. COFFIN,
P. V. VAN ORDEN.