No. 615,971. Patented Dec. 13, 1898.

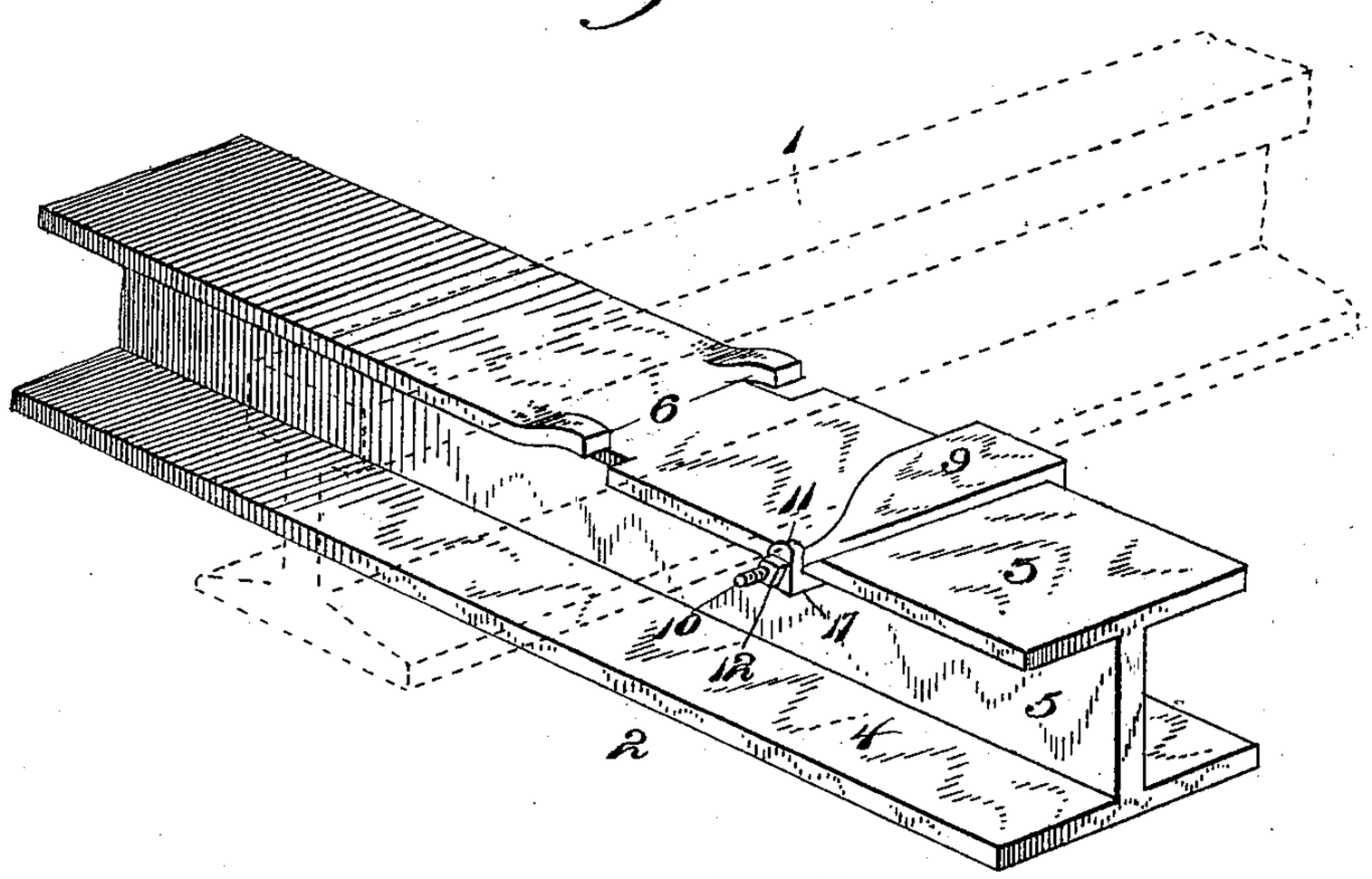
R. F. ELLIS.

METALLIC TIE FOR RAILROADS.

(Application filed May 26, 1898.)

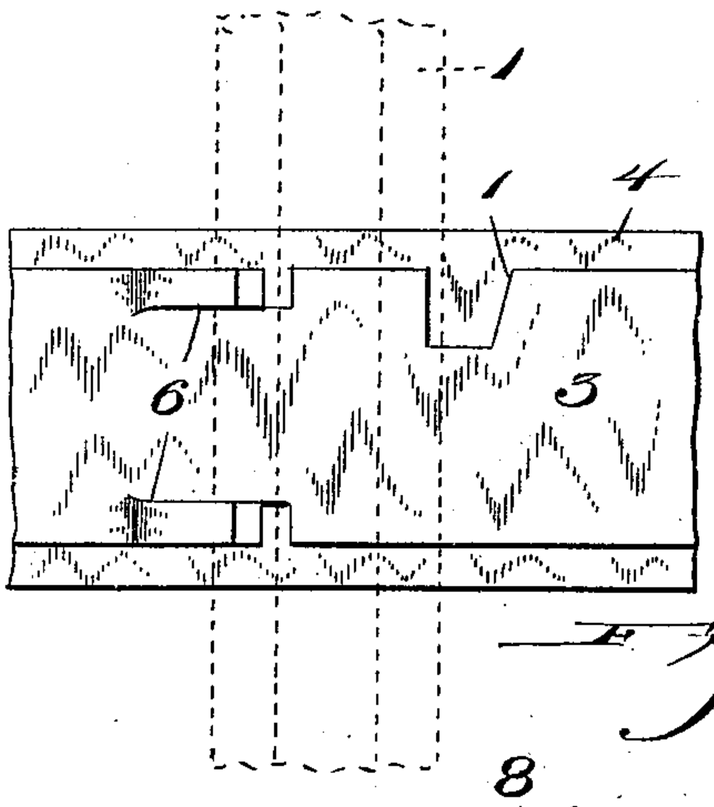
(No Model.)

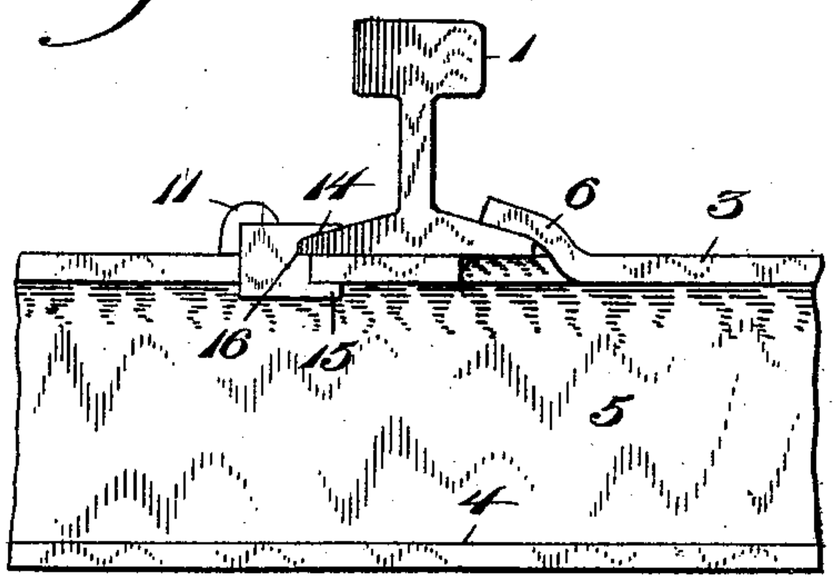
F fig. 1.



F fig. 3.

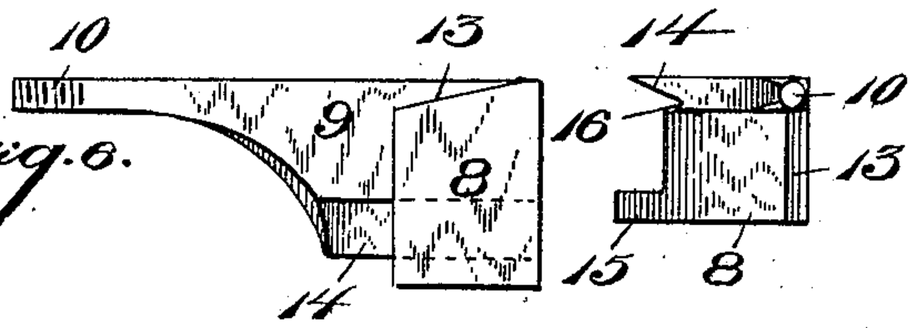
F fig. 2.



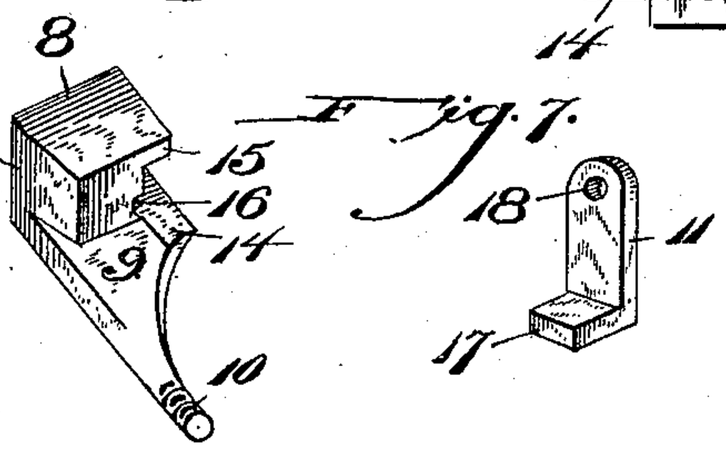


F fig. 4.

F fig. 5.



F fig. 6.



F fig. 7.

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ROLON FAY ELLIS, OF SHERIDAN, PENNSYLVANIA.

METALLIC TIE FOR RAILROADS.

SPECIFICATION forming part of Letters Patent No. 615,971, dated December 13, 1898.

Application filed May 26, 1898. Serial No. 681,783. (No model.)

To all whom it may concern:

Be it known that I, ROLON FAY ELLIS, a citizen of the United States of America, residing at Sheridan, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Ties for Railroads, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in metallic ties.

The object of my invention consists in securely fastening the rail to the tie, so that when it is once secured in position it will remain firm and solid without any additional tightening.

My invention further consists in making a metallic tie of this class having the edge near the center of the top of the tie pressed outwardly and upwardly, forming a pair of flanges or extensions to receive one side of the base-plate of the rail to be secured therein.

My invention further consists in providing a fastening-plate for the tie, said fastening-plate being suitably grooved, as will be hereinafter described, and having a key to be attached thereto, which is secured in place by a suitable nut and will, in connection with the flange or extensions, hold the rail in position.

My invention further consists in the novel construction and arrangement of parts to be hereinafter more specifically described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereunto appended.

In the drawings, Figure 1 is a perspective view of my improved tie, showing the rail secured thereto in dotted lines. Fig. 2 is a top view of the tie without the locking-plate. Fig. 3 is a side view thereof. Fig. 4 is a bottom view of the fastening-plate. Fig. 5 is an end view of the fastening-plate. Fig. 6 is a perspective view of the locking-plate, showing the wedge portion. Fig. 7 is a perspective view of the key-plate.

Like numerals of reference indicate corresponding parts throughout the several views of the drawings, in which—

1 indicates the rail, (shown in dotted lines,) and 2 the tie, cast of one piece of metal, having a top 3, bottom 4, and web 5. The edge of the top 3 on both sides thereof and near the center is pressed outwardly, and flanges or extensions 6 are formed thereby. These flanges or extensions may be cast integral with the top edge of the tie and are adapted to receive one side of the base-plate of the rail. Formed in one side of the top rail of the tie, adjacent to one of the flanges or extensions, is a wedge-slot 7, which is adapted to receive the wedge 8, formed integral on one end of the fastening-plate 9. The opposite end of the fastening-plate is tapered and screw-threaded, as at 10, and is adapted to receive the key-plate 11, which is secured thereto by a suitable nut 12. The wedge portion of the fastening-plate is adapted to secure one side of the base-plate of the rail to the tie, owing to its peculiar shape, the outer side of the wedge being inclined inwardly, as at 13, and the inner side thereof having extensions 14 and 15 at its top and bottom. The extension 14 extends inwardly and downwardly, and the extension 15 extends inwardly. The extension 14 extends inwardly farther than the extension 15, thereby forming a ridge 16, on which the edge of the base-plate of the rail is adapted to be secured. The extension 15 extends beneath the top plate 3 of the tie and in connection with the extension 14 is adapted to secure the base-plate of the rail to the tie. The key-plate 11 has a lug 17 formed on its lower end, which abuts against the under face of the top plate 3 and is adapted to hold the fastening-plate in position by means of the nut 12. An opening 18 is formed in the upper end of the key-plate to allow the tapering end of the fastening-plate to pass therethrough to receive the nut.

The operation of my improved metallic tie can be readily understood from the foregoing description, taken in connection with the accompanying drawings.

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

1. In combination, a metallic tie having flanges or extensions formed integral with the top plate thereof, a wedge-opening formed in said top plate adjacent to the flanges or extensions, a fastening-plate having a wedge formed integral with one end thereof, said wedge adapted to be secured in said wedge-

opening, a key-plate engaging the opposite end of said fastening-plate, and means for securing said fastening-plate in position, substantially as shown and described.

2. In combination, a metallic tie, a pair of flanges or extensions formed on the top plate thereof, a wedge-opening formed in said top plate adjacent to the flanges or extensions and on one side thereof, a fastening-plate, a wedge formed on the under side of said fastening-plate and on one end thereof, said wedge and extensions being adapted to hold the rail in position, a key-plate engaging the opposite end of said fastening-plate and the underneath face of said top plate, and means for securing the key-plate in position, substantially as shown and described.

3. In combination, a metallic tie having lugs or extensions formed on the top plate, a fastening-plate having a wedge formed on its under face and on one end thereof, a wedge-opening formed in said top plate and adapted to receive the wedge formed on said fastening-plate to hold the rail in position, a key-plate engaging the opposite end of said fastening-plate, and means whereby said fastening-plate and key-plate are secured in position, substantially as shown and described.

4. In combination, a metallic tie having flanges or extensions formed integral with each side of the top plate thereof, said flanges or extensions being adapted to receive one side of the base-plate of the rail, a fastening-plate having a wedge formed integral with one end thereof, said wedge being adapted to engage a wedge-opening formed in one side of said top plate, a key-plate engaging the opposite end of said fastening-plate, and means for securing said fastening-plate and key-plate in position, substantially as shown and described.

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

ROLON FAY ELLIS.

Witnesses:
JOHN NOLAND,
WILLIAM E. MINOR.