

(No Model.)

E. CRONIN & H. P. SHIELDS.
METALLIC TIE.

No. 570,005.

Patented Oct. 27, 1896.

Fig. 1.

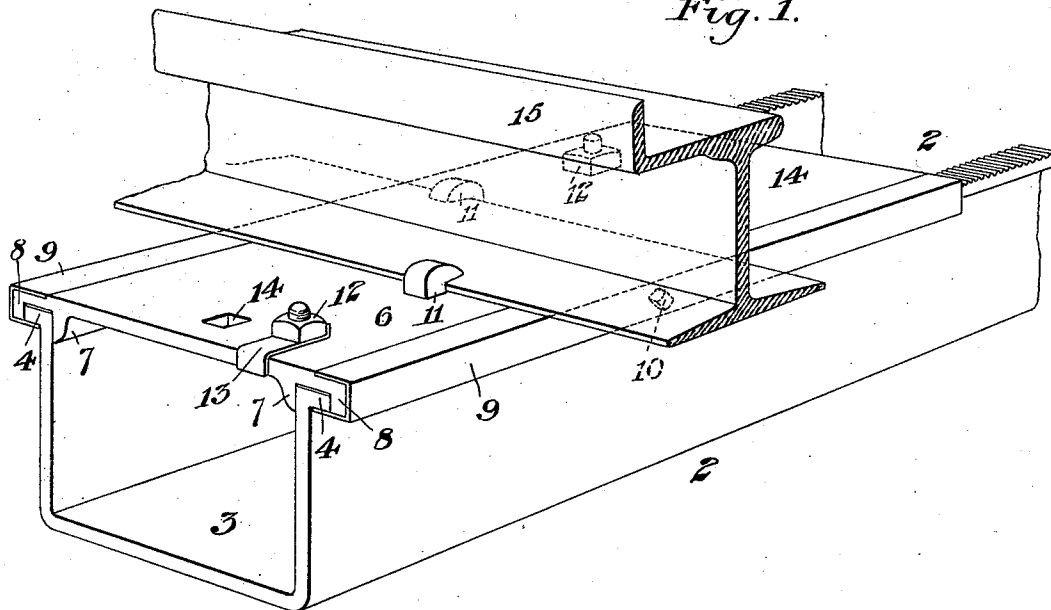
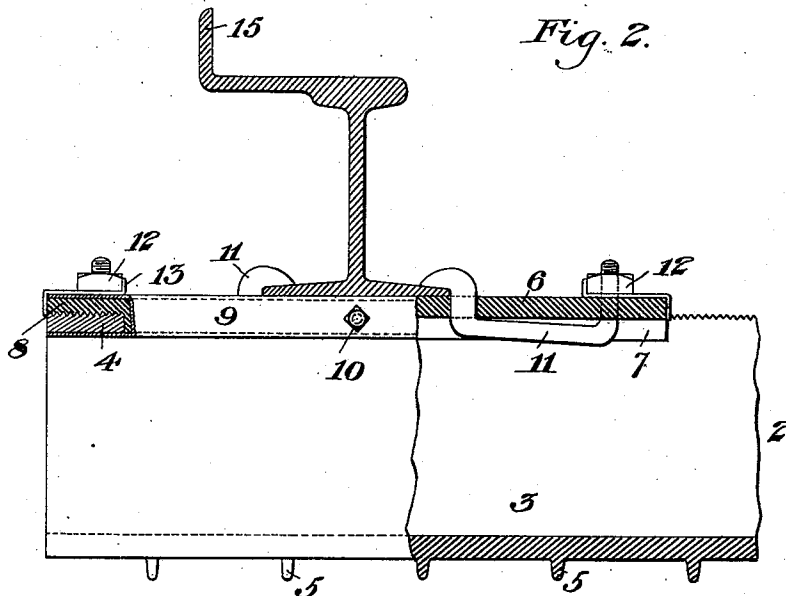


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

EDWARD CRONIN AND HENRY P. SHIELDS, OF HOMESTEAD, PENNSYLVANIA.

METALLIC TIE.

SPECIFICATION forming part of Letters Patent No. 570,005, dated October 27, 1896.

Application filed February 6, 1896. Serial No. 578,182. (No model.)

To all whom it may concern:

Be it known that we, EDWARD CRONIN and HENRY P. SHIELDS, of Homestead, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Metallic Ties, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view showing the end portion of one of our improved metallic ties with the rail secured thereto. Fig. 2 is a side elevation of the same, partly broken away.

Our invention relates to the metallic ties employed for supporting railroad-rails, and is designed to provide a simple, cheap, and effective device of this character which can be readily made from rolled shapes, and is provided with simple and effective means for securing the rail thereto.

In the drawings, in which similar numerals indicate corresponding parts, 2 is the tie, which consists of a body portion 3 in the form of a channel-beam, having oppositely-projecting upper flanges 4. The web portion of this beam rests upon the bed of the road and is preferably provided with transverse ribs or projections 5, which enter the ballast and prevent longitudinal movement of the tie. To the tie is secured a cover-plate 6, one plate being provided at each end of the tie or, if desired, the plate extending the entire length of the tie. This plate is provided with depending ribs or flanges 7 and 8, arranged in pairs at each side of the plate and arranged to inclose the vertical edge portions of the flanges 4 upon the channels. Between these ribs the plate is serrated, these serrations interfitting with corresponding serrations upon the upper face of the flanges 4, and when the plate is laid in the proper position it is secured in place by the trough or channel shaped pieces 9, whose horizontally-extending flanges pass over the upper face of the plate and the lower face of the flange upon the channel-beam, respectively, thus causing the serrations to engage each other securely and preventing any movement of the cover-plate.

To secure each trough-shaped piece 9 in place, we employ a lag-screw 10 or similar device,

which passes through the base of the trough into the rib or flange 8 of the cover-plate. To secure the rail to the metallic cover-plate, we provide the U-shaped bolts 11, having at one end heads which bear upon the base of the rail, while with the other end, which projects up through the cover-plate, engages a nut 12. The inner leg of the U is shorter than the outer leg, and upon screwing the nut downwardly the outer leg is raised and the inner leg swung downwardly, the bolt fulcruming upon the lower edge of the hole through the cover-plate.

We preferably employ a nut-lock 13 to hold the nut in place, this lock consisting of a flat strip of metal bent upwardly at one end to engage the side of the nut and downwardly at the other to engage the end of the cover-plate.

To provide for the securing of a wooden tie or beam in the channel, which wooden tie may extend outwardly beyond the end of the metallic tie and form a support for a side switch, planking, &c., we form in the top plate suitable holes 14, through which spikes may be driven into the wooden tie lying within the channel-beam, so as to hold it securely in position.

Many changes may be made in the form and arrangement of the parts without departing from our invention, since

We claim—

A metallic railway-tie comprising a channel-beam having oppositely-extending upper flanges, said flanges having serrated upper faces, a cover-plate having downwardly-extending ribs arranged to fit over said flanges, and provided between the ribs with serrations adapted to interfit with those upon the flanges, and a trough-shaped clamp arranged to slide over the cover-plate and channel-flange and secure the cover-plate in position; substantially as described.

In testimony whereof we have hereunto set our hands.

EDWARD CRONIN.
HENRY P. SHIELDS.

Witnesses:

F. E. GAITHER,
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