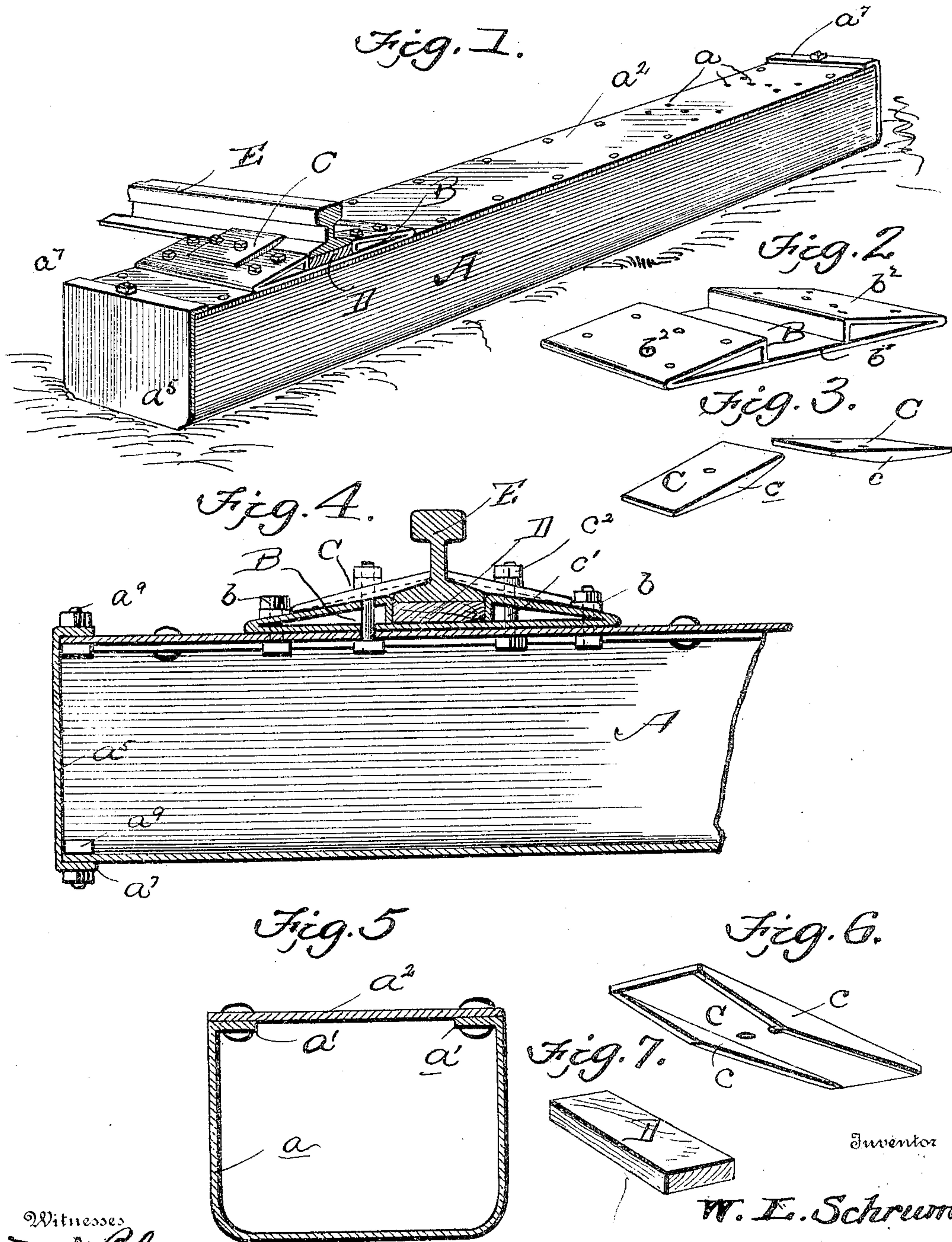


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RAIL TIE.

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Witnesses  
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# UNITED STATES PATENT OFFICE.

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## RAIL-TIE.

No. 804,346.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, WILLIAM L. SCHRUM, a citizen of the United States, residing at Windber, in the county of Somerset and State of Pennsylvania, have invented a new and useful Rail-Tie, of which the following is a specification.

My invention relates to certain new and useful improvements in metallic cross-ties, and has for its object to provide a simple, cheap, and durable tie and detachable means carried by the tie for securing the rail to the same.

My invention consists in the construction and novel combination of parts hereinafter more fully described, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved tie, showing my improved means for locking the rail to the tie. Fig. 2 is a perspective view of my improved chair. Fig. 3 is a perspective view of the two clamping members used in connection with the chair. Fig. 4 is a longitudinal sectional view of Fig. 1, partly broken away. Fig. 5 is a cross-section of my improved tie. Fig. 6 is a perspective view of one of the clamping members as seen from below. Fig. 7 is a perspective view of the wooden bed-plate used in the chair.

Referring to the drawings, A indicates the metallic cross-tie constructed of rolled or cast steel or other suitable material and is composed of the shell or body portion *a*, which is of a U shape in cross-section, the sides of the shell being provided with inwardly-projecting longitudinal flanges *a'*. A top plate *a<sup>2</sup>* is secured on the flanges *a'* by rivets, said plate being provided with perforations *a<sup>4</sup>* near its ends. The ends of the cross-tie A are closed by end plates *a<sup>5</sup>*, which are the shape of the cross-tie in cross-section and are provided with flanges *a<sup>7</sup>* at the top and bottom, said flanges overlapping the tie and secured thereon by bolts *a<sup>9</sup>*.

To the top plate of the tie is secured by bolts *b* my improved chair B, which consists of the bottom plate *b'*, the ends *b<sup>2</sup>* of which are bent inwardly and downwardly upon itself, form a channel-way to receive the wooden bed-plate D and rail E, said ends and bottom being provided with perforations in alinement with each other. To the inclined faces of the

chair are secured the clamping members C, having perforations formed therein and provided with side flanges *c*, the edges of the flanges having oppositely-angled edges, one of said angles being longer than the other, the longest side of the clamping member being secured to the inclined face of the chair by bolts *c'*, which pass upwardly through the perforations in the top plate, chair, and clamping member and are locked by the nut *c<sup>2</sup>*, the other side being clamped against the flange of the rail, as clearly shown in Fig. 4.

It will be seen by constructing a cross-tie as described I not only provide a simple, cheap, and durable tie, but I also provide means for securing the rail to the tie and a wooden bed-plate which forms a cushion which relieves the shock of the rail and takes all strain off the bolts.

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

1. In a device of the kind described, comprising a cross-tie, composed of a body portion having flanges projecting from its sides, a top plate secured on the flanges of the body-plate, and end plates provided with flanges adapted to fit over the top plate and body portion of the cross-tie, for the purpose described.

2. In a device of the kind described comprising a cross-tie composing a U-shaped body portion, the sides of which are flanged, a top plate secured on said flanges, and end plates provided with flanges at their tops and bottom, for the purpose described.

3. In a device of the kind described, the combination with a cross-tie, of a chair mounted thereon, a wooden block seated in the channel of the chair, and clamping members carried by the said chair, and adapted to clamp the rail down on said wooden block, for the purpose described.

4. In a device of the kind described, the combination with a cross-tie, of a chair mounted thereon, said chair being provided with a channel-way, a wooden block secured in said channel, and clamping members carried by the chair, for the purpose described.

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