

(No Model.)

H. C. DRAPER.
RAILROAD CROSS TIE.

No. 359,854.

Patented Mar. 22, 1887.

Fig. 1.

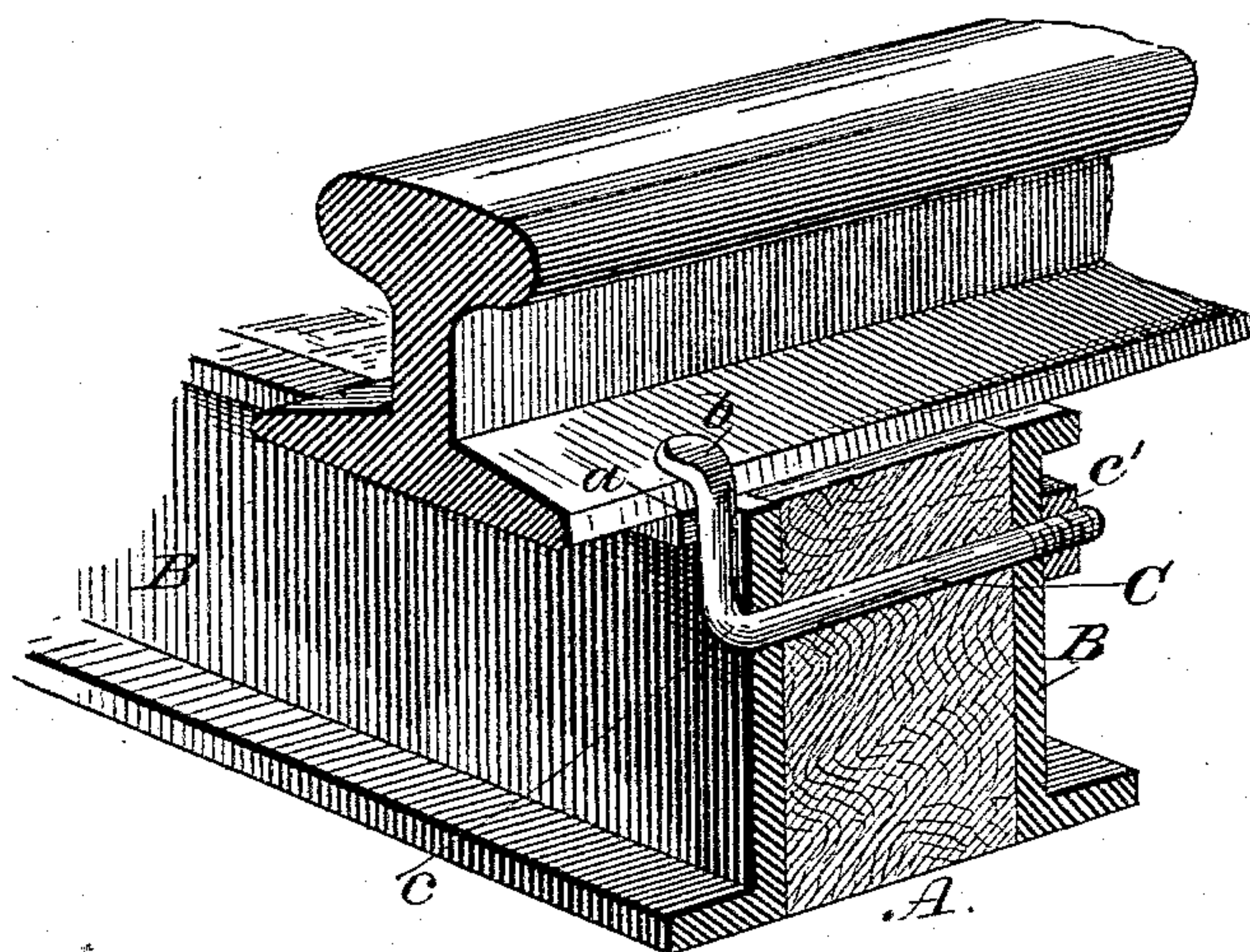
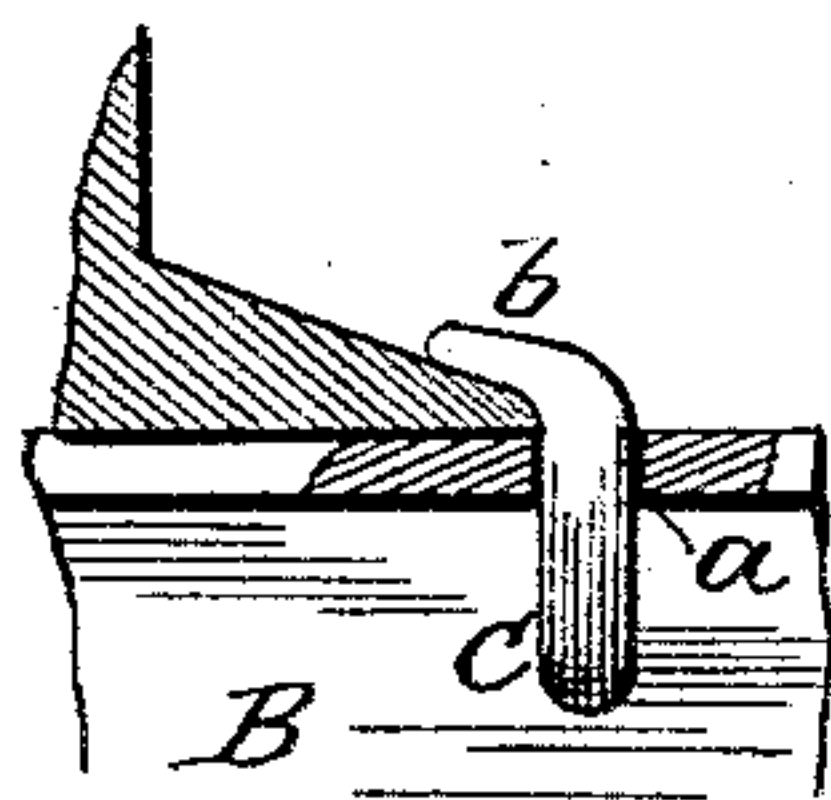


Fig. 2.



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RAILROAD CROSS-TIE.

SPECIFICATION forming part of Letters Patent No. 359,854, dated March 22, 1887.

Application filed February 5, 1887. Serial No. 226,712. (No model.)

To all whom it may concern:

Be it known that I, HENRY CLAY DRAPER, of Oswego, in the county of Labette and State of Kansas, have invented a new and useful Improvement in Railroad Cross-Ties, of which the following is a specification.

My invention relates to railroad cross-ties and means for supporting and securing the rails thereon; and it consists in the peculiar construction of composite cross-ties made partly of wood, partly of iron, in combination with a track-bolt of peculiar form for fastening the rail thereto, as will be hereinafter fully described.

Figure 1 is a sectional view, in perspective, of the cross-tie, rail, and track-bolt; and Fig. 2 is a sectional detail, looking endwise the track-bolt.

The cross-tie is composed of a central wooden beam, A, and two metal channel-bars, B B, having each an outwardly-projecting flange at top and bottom, the bottom flanges being much longer than the top ones, so as to give a broader bearing for the tie and a better hold in the ballast of the track to prevent the tie from rising. These channeled bars are bolted through the wooden center beam, so as to make a perfectly solid cross-tie. In the upper flange of each channel-plate is cut or formed notches or slots *a*, to receive a track-bolt, C, of peculiar construction. This track-bolt has an offsetting head or shoulder, *b*, that clamps the base of the rail, a bend, *c*, at right angles near this head, and a long shank adapted to pass through the composite cross-tie, and a screw-threaded end with nut *c'* or other fastening. In adjusting this track-bolt to place its long shank is passed through the composite cross-tie horizontally, the portion between the head and the bend fitting into one of the slots *a* in the flange of the channel-bar. Then, when the

nut (or key) *c'* draws the track-bolt tight, it will be seen that it serves the double purpose of clamping the three sections of the cross-tie together, and also holding by its head *b* the base of the rail down on the cross-tie.

The advantages of this form of cross-tie and fastening are as follows: It uses less metal than an all-iron cross-tie, and is therefore less expensive. The wooden center permits the rails and switch sections to be spiked to it in the usual way. The flanges and intervening wood present sufficient bearing surface on the ground to prevent settling, and the long lower flanges are securely held by the ballast down against rising. The wood and iron may also be coated with paint or tar at small cost, and the wood easily renewed from time to time, while the peculiar form and arrangement of the track-bolt co-operate to make a solid compact cross-tie of the several sections, and also hold the rail down to place.

Having thus described my invention, what I claim as new is—

1. A railroad cross-tie composed of a solid wooden middle portion, A, the two channel-bars B B, with notches in their upper flanges, and the track-bolt C, having an offset or head and a bend at right angles adapted to fit said notch, and a screw-nut or fastening device for securing the bolt on the opposite side of the cross-tie, substantially as described.

2. The track-bolt C, having a head or shoulder, *b*, a bend, *c*, at right angles, and a screw-threaded stem and nut, in combination with a cross-tie having a notched flange at its upper edge, substantially as and for the purpose described.

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Witnesses:

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