(No Model.)

A. N. WARNER & T. J. DEAKIN.

RAILWAY TIE.

No. 342,987. Patented June 1, 1886.

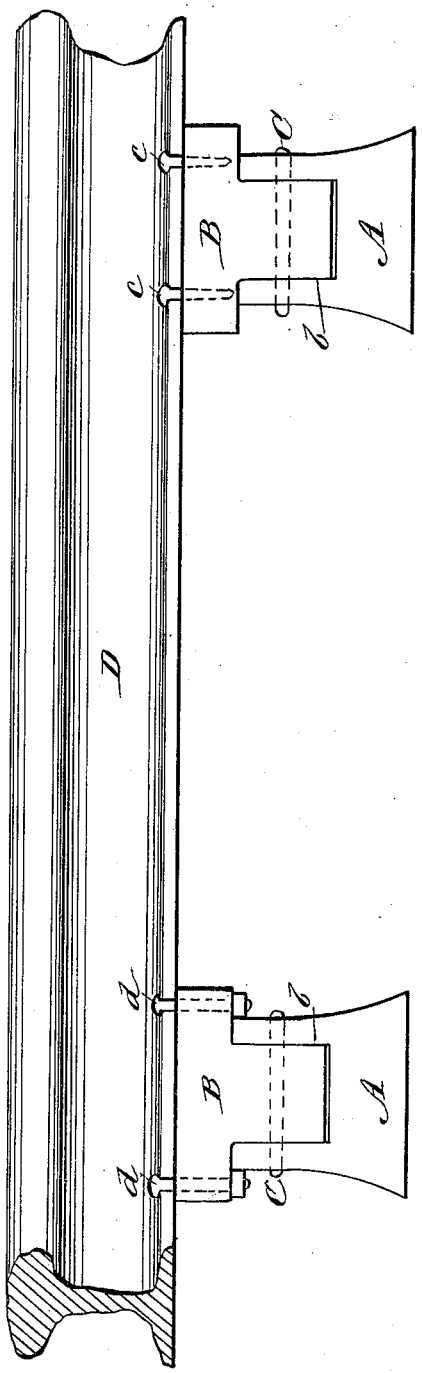

Fig. 1

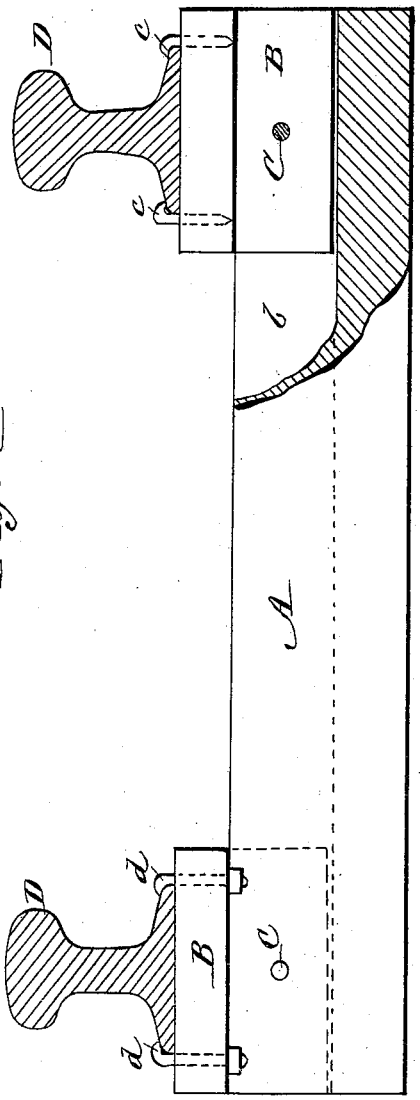

Fig. 2

WITNESSES:

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UNITED STATES PATENT OFFICE.

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RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 342,987, dated June 1, 1886.

Application filed December 30, 1885. Serial No. 187,131. (No model.)

To all whom it may concern:

Be it known that we, ADAM NICHOLAS WARNER and THOMAS JAMES DEAKIN, both residents of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Improvement in Railway-Ties, of which the following is a full, clear, and exact description.

Our invention relates to that class of railroad-ties in which grooved or channeled cross-ties of metal are provided with bearing-blocks or chairs for the rails; and the invention consists in the peculiar construction and arrangement of parts, which we will now proceed to describe.

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

Figure 1 represents an end view of a pair of the ties, with their combined bearing-blocks or sleepers, and a side longitudinal view of a railway-rail, in part, as secured thereon. Fig. 2 is a partly-broken side view of the tie, with bearing-blocks and the rails carried by the same in transverse section.

A A indicate metallic bed-plates, forming cross-ties, having a central longitudinal groove, *b*, open at its top, rolled or otherwise made in and along them, and so that said bed-plates resemble gutters or channels, the bases of which may be widened or spread to give a solid bearing.

B B are T-shaped blocks, made either of wood or metal, the shanks of which are constructed to fit down within the grooves *b* of the bed-plates, and their upper flanged or shouldered portions or heads arranged to rest upon and be supported by the upper marginal portions of the grooves *b*, which form the tops of the bed-plates.

Bolts C C are passed through the sides of the grooved bed-plates and shanks of the blocks B, to keep the bed-plates from moving and the blocks to their places; or the blocks and grooved bed-plates may be otherwise detachably secured. These blocks B form the bearers or sleepers for the rails D D to rest upon and to hold the rails to their places, either by spikes *c* or bolts *d*, accordingly as said blocks are of wood or metal, the heads of the blocks overlapping the sides of the bed-plates when necessary for arrangement of the rail-fastenings. When said blocks are of wood, then they will give a slightly-yielding support to the rails. When made of metal, a rubber or other elastic packing may be combined with them to give such yielding support to the rails.

In defining our invention more clearly with respect to other analogous structures, we would state that the upper flanges or shoulders of the T-shaped blocks B extend some distance over the side walls of the channeled cross-ties. This not only gives an additional bearing-surface for the blocks in sustaining the rails, but gives room for the application of screw-bolts for holding the rails, which bolts have their nuts accessible at the bottom sides of the flanges or shoulders and outside the cross-ties, as at *d d* in Fig. 1.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination, with the cross-ties A, having longitudinal channels in their upper sides, of the T-shaped blocks B, having flanges or shoulders at their upper edges overlapping the side walls of the channeled cross ties, substantially as shown and described.

2. The combination, with the cross-ties A, having longitudinal channels in their upper sides, of the T-shaped blocks B, having flanges or shoulders at their upper edges overlapping the side walls of the channeled cross-ties, and screw-bolts *d d*, passing through said flanges, and having their nuts accessible upon the outside of the cross-ties, substantially as shown and described.

ADAM NICHOLAS WARNER.
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Witnesses:
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