(No Model.)

A. STORY.

METAL RAILROAD TIE.

No. 474,873. Patented May 17, 1892.

Fig. 1.

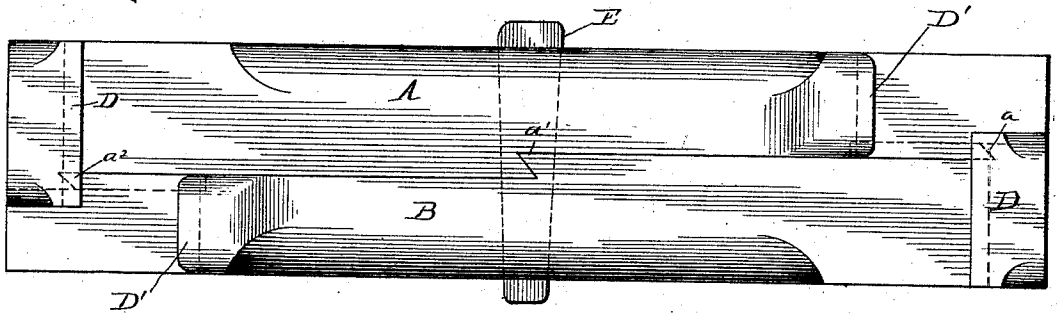


Fig. 2.

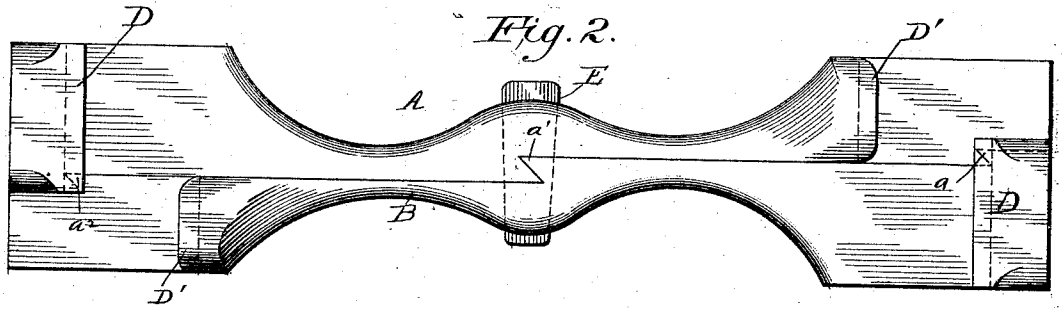


Fig 3.

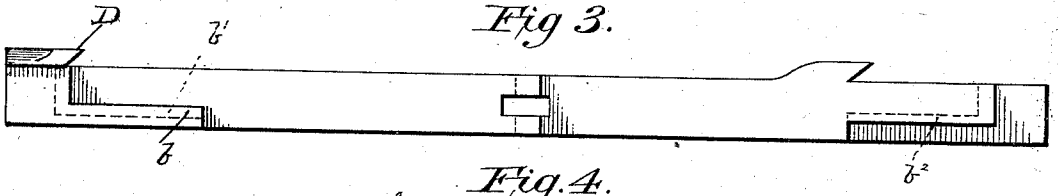
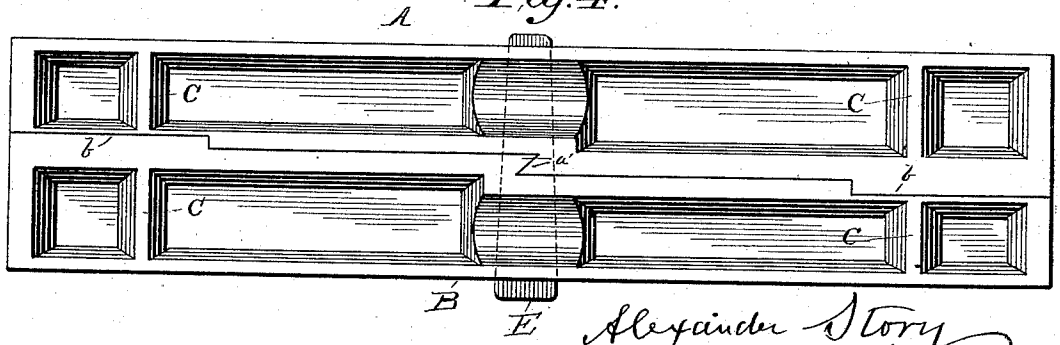


Fig. 4.



Witnesses:

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ALEXANDER STORY, OF WASHINGTON, IOWA.

METAL RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 474,873, dated May 17, 1892.

Application filed February 17, 1890. Serial No. 340,816. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER STORY, a citizen of the United States, residing at Washington, in the county of Washington and State of Iowa, have invented certain new and useful Improvements in Metal Ties for Railroads; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it belongs or appertains to make and use the same.

The object of my invention is to do away with the wooden ties used in the construction of railroads by the substitution of metal ties, needing no spikes.

Figure 1 is a top plan view of the full tie ready for receiving the rail. Fig. 2 is a top plan view of the tie with the outer edges between the rails cut away. Fig. 3 is a view of the inner edge of the half-tie. Fig. 4 is a view of the under side of the tie.

The tie consists of two pieces A B, exactly alike. One end of the half-tie is a little narrower than the other. By placing the wider end of one piece alongside of the narrow end of another and bringing them together and keying them in the middle the tie is formed complete, Figs. 1 and 2. There are three inclined shoulders or projections a a' a^2 in the inner edge of the half-tie, one at each end and one at the middle, (the middle one may be omitted without damage to the tie,) intended to dovetail in with similar shoulders in the other half-tie when the two parts are brought together. The wider end of the half-tie inner lower edge has a projection b, extending lengthwise under the place for the rail. The upper side of this projection has a groove b', on which the inner lower edge of the narrow end of the companion half-tie b, shaped to dovetail into it, rests. The under side of the tie, Fig. 4, is hollowed out to make it lighter and cause it to lie more firmly on the ground. These hollows do not extend the whole length of the tie, but are divided by sectional divisions c or ribs to strengthen the tie. The upper side of the tie is rounding, except that part on which the rail rests, which is flat. The wide end of the half-tie has a flange or brace D, to fit exactly the outer flange of the rail when laid in place. The other end of the half-tie has a similar brace D', facing the same way, to fit the inner flange of the other rail when laid in place. When the two half-ties are placed together and the rails laid on top, just enough space between the braces of the two half-ties being left for admitting the rails, then by pushing the two half-ties lengthwise together and putting in the key E in suitable lateral recesses formed in the ties at the middle the tie is formed and the rail fastened securely in it. By thus placing all the ties needed for laying one length of rails, placing the rails on them, shoving them together, and driving in the key E the work is completed without driving a spike. The brace on the wide end of the tie (or on both ends) may extend over the narrow end of its companion half-tie, making the two more solidly one. By reversing the order of the braces or catches, making the brace on the small end of the half-tie to fit the outer flange of the rail and the brace on the wider end to fit the inside flange of the other rail, both braces facing the same way, and alternating these ties with the former ties when laying the track, there will be no possibility of either rails or ties being driven out of position, but all will be immovable. By this tie all spikes, bolts, and plates are entirely dispensed with, and the ties and rails made, as it were, one continuously. To make the tie lighter and yet not impair its efficiency, the part between the rails may be cut away, as in Fig. 2, the place for the key being enlarged or thicker than the rest of the tie between the rails.

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

1. The half-tie provided with inclined shoulders on the inner edge to dovetail into similar catches on its companion half-tie, also provided with a projection on the wide end to dovetail with that part of its companion half-tie meeting it, and all as substantially described above.

2. A metal tie consisting of two like sections having inclined rail-securing braces on their ends, their adjacent edges formed with oppositely-inclined shoulders arranged to engage with each other and interlocking connections on the lower inner portion of their ends, substantially as described.

3. A metal tie consisting of two like parts having one end reduced in width and formed with interlocking shoulders on their inner edges, and a key passing through the sections for securing them in place, substantially as described.

4. A metal tie formed of two like parts formed with interlocking shoulders and inclined rail-braces, flanges on one end of the section extending beneath the adjacent end of the other section into a groove formed therein, substantially as described.

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Witnesses:
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