(No Model.)

D. G. ROSS.

RAILWAY TIE.

No. 346,069. Patented July 20, 1886.

Fig. 1

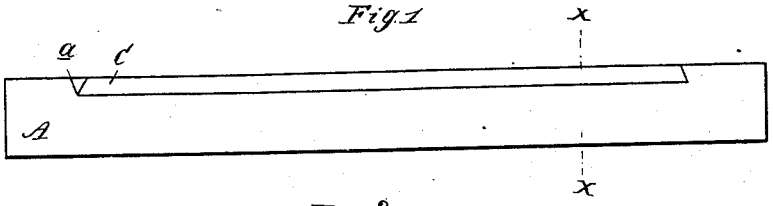


Fig. 2

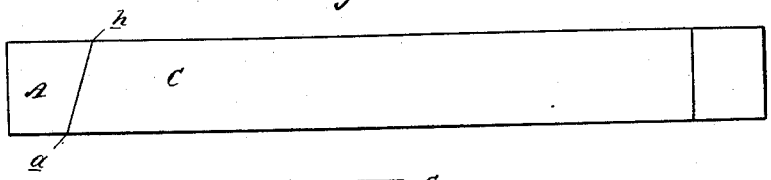


Fig. 3

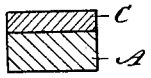
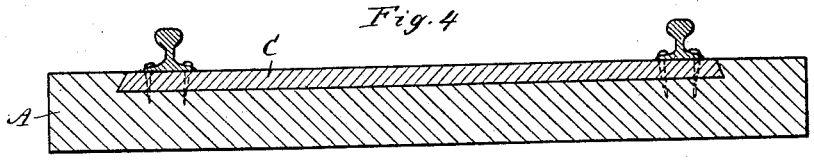


Fig. 4



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by his Atty
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UNITED STATES PATENT OFFICE.

DONALD G. ROSS, OF EAST SAGINAW, MICHIGAN.

RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 346,069, dated July 20, 1886.

Application filed March 25, 1886. Serial No. 196,452. (No model.)

To all whom it may concern:

Be it known that I, DONALD G. ROSS, of East Saginaw, in the county of Saginaw and State of Michigan, have invented new and useful Improvements in Railway-Ties; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in the manufacture of railway-ties, by means of which a softer wood, which is not readily affected by the elements, can be employed for the body of the tie, and a harder wood employed in connection therewith for that portion of the upper face which is exposed to the wear of the foot of the rail imposed thereon.

Oak ties have been the favorite ones heretofore employed; but as this particular kind of timber is growing scarcer every succeeding year there is a growing need to find some substitute therefor which will answer the purpose, while at the same time the expense will not be materially increased over the ordinary cost of the oak tie. The reason why ties made of softer wood than oak have not been used is that the foot of the imposed rail cuts into the face so rapidly as to render it necessary to frequently change the tie. It has been proposed to accomplish this object by inserting into the ties pieces of hard wood for the rails to rest upon; but these pieces were very apt to crack and become loosened, and to avoid this defect it has been proposed to compress and corrugate the blocks or pieces inserted in the ties, but this has failed to produce satisfactory results, as the pieces, owing to their narrowness, are very apt to crack in the sun, get loose, or be split by the driving of the spikes that secure the rails in place. I avoid these objections by extending the hard-wood pieces nearly the whole length of the tie, as shown in the drawings, and also effect a great saving in time in fitting the pieces, there being but half as many pieces to each tie as there are in the former construction. By making one side of the recess diagonal to the length of the tie, in case the inserted piece should become loosened it can be readily tightened by driving the said piece, which must necessarily be inclined on one side, thus forming a wedge.

Figure 1 is a side elevation of my improved tie. Fig. 2 is a top plan of the same. Fig. 3 is a cross-section on the line X X in Fig. 1. Fig. 4 is a longitudinal section of Fig. 1, showing the rails in position.

In the drawings, A represents the body of a railway-tie, preferably made of cedar, having a dovetail-shaped recess, *a*, cut in its upper face. This recess is longer than the width of the track, and at one end is diagonal to the length of the tie, as at *h* in Fig. 2.

C is a piece of harder wood, preferably of oak or hard maple, cut into the same form as the recess, into which it is fitted closely, the more closely the better. This piece is held securely in place by the double dovetail, and when in use the rails are laid upon it and secured in the usual way, the spikes employed performing the double office of securing the rail to the tie and of securing the two parts of the tie together against accidental displacement.

In practice the body of the tie will last two or three times as long as the facing-block, and this latter may be easily removed and replaced by a new one as often as may be necessary, and with but a little expense.

What I claim as my invention is—

1. An improved railway-tie composed of the body A, of a softer wood, provided with a dovetail recess, *a*, longer than the width of the track, and the single piece of harder wood C, secured in said recess, substantially as and for the purpose specified.

2. The improved railway-tie described, consisting of the body A, of softer wood, provided with a dovetail recess, *a*, longer than the width of track, one end of said recess being diagonal to the length of the tie, as at *h*, and the single piece C, of harder wood, having one side diagonal to its length and snugly fitted in the recess in the piece A, substantially as shown, and for the purpose specified.

DONALD G. ROSS.

Witnesses:
H. S. SPRAGUE,
CHAS. THURMAN.