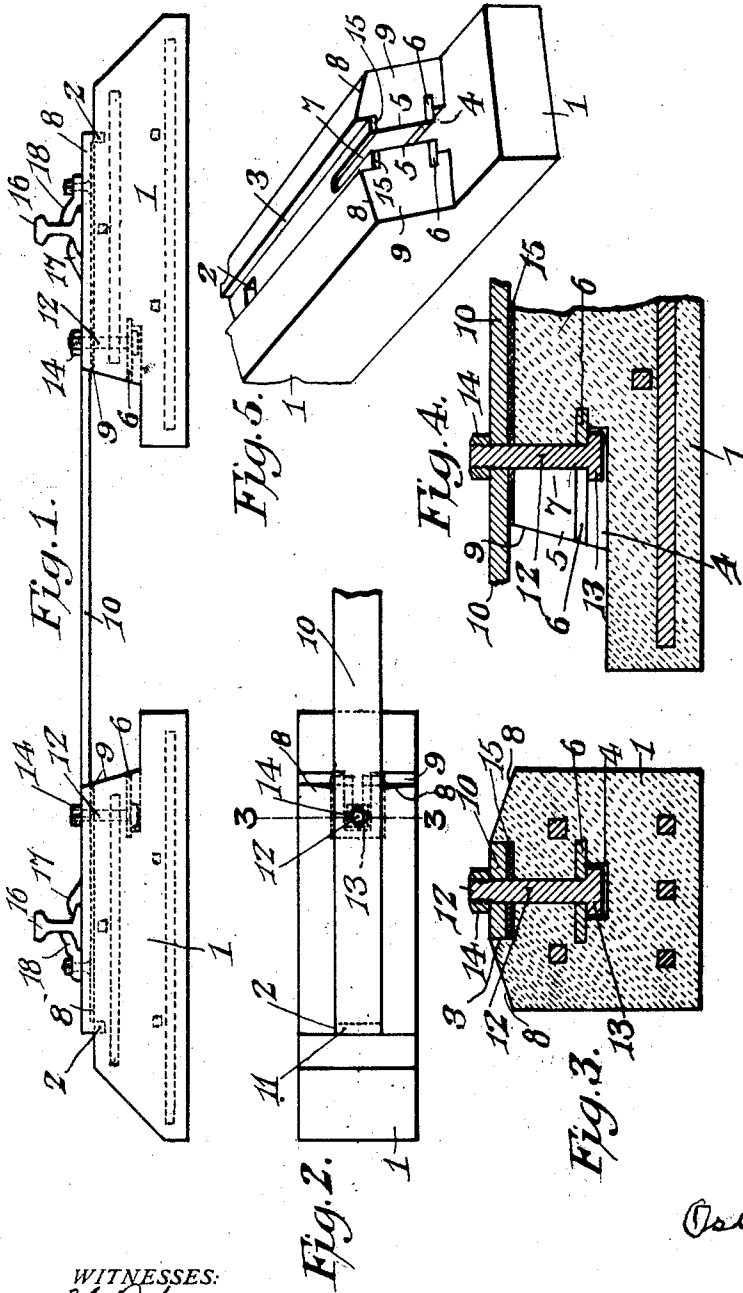


1,022,362.

Patented Apr. 2, 1912.



WITNESSES:
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OSCAR E. HALL, OF PAWNEE CITY, NEBRASKA, ASSIGNOR TO HATTIE J. STEVENS, OF PAWNEE CITY, NEBRASKA.

RAILWAY CROSS-TIE.

1,022,362.

Specification of Letters Patent.

Patented Apr. 2, 1912.

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To all whom it may concern:

Be it known that I, OSCAR E. HALL, a citizen of the United States, residing at Pawnee City, in the county of Pawnee and State of Nebraska, have invented a new and useful Railway Cross-Tie Providing Greater Safety for Railway Traffic, of which the following is a specification.

This invention relates to cross ties for railways and has for its object the provision of an improved tie which will contribute largely to the formation of a firm rail bed, and which will be readily renewable either in whole or in part in case of damage.

In the preferred form of construction, as illustrated in the accompanying drawings and serving as the basis of the following detailed description, the portion of the tie beneath the rail is made of concrete or other suitable composition, although it may be made of iron or of wood.

In the drawings:—Figure 1 is a side elevation of the improved tie showing the assembled relation of the tie and rails. Fig. 2 is a top plan of one end of Fig. 1. Fig. 3 is a cross section on the line 3—3 of Fig. 2 but drawn on a larger scale. Fig. 4 is a partial central longitudinal section on the same scale as Fig. 3. Fig. 5 is a fragmentary perspective view of one end of the tie.

The improved tie comprises end sleepers 1 which are in all respects duplicates and which are arranged end toward end in spaced relation. They are preferably constructed of concrete. Each of the sleepers has in its upper face near the outer end a vertical recess 2 and a longitudinal horizontal groove 3 extending from said recess to the inner end of the sleeper. This recess may or may not also extend to the outer end of the sleeper. The inner end of the sleeper about midway between the top and bottom is provided with a horizontal recess 4 having overhanging walls 5 faced by an inserted steel slotted plate 6. A slot 7 open to the end face of the sleeper extends vertically through the upper wall of the recess 4 and communicates with the slot of plate 6 and opens into the groove 3, the horizontal axis of the slot lying in the same plane with the axis of the groove. The upper face of the sleeper is preferably inclined transverse to the edges, as shown at 8, and the inner

end is stepped and inclined, as shown at 9, although such features of construction are not essential to the invention.

A tie member 10 comprises a bar of steel or the like, fitted within the aligned grooves 3 of the sleepers, and has at its ends angle extensions 11, entering the recesses 2, by which shifting of the parts longitudinally of the tie rod is prevented. The bolts 12 have their heads 13 anchored within the end recesses 4 beneath the overhanging slotted plate 6 with their shanks passing through the slot of the plate and disposed within the open slot 7, and their threaded ends passing through bolt openings 13 in the tie bar 10, while nuts 14 are threaded on the upper ends of the bolts and serve to clamp the tie bar to the sleeper to prevent vertical displacement and consequent disengagement of the ends 11 of the bar from the recesses 2. By this construction the tie bar and sleepers are assembled and disassembled without the necessity of removing the bolts 12, it being only necessary to loosen the same sufficiently to permit the ends 11 to be lifted out of the recesses 2, when the sleeper 1 or tie bar 10 may be moved longitudinally and the bolt slipped sidewise from the slot to disengage its head from the recess 4. In this way any part of the tie is removable without disturbing the remainder and without disassociating the bolt and tie bar.

Where the sleeper is made of concrete or similar composition, a yielding packing strip 15 of asbestos or the like is advantageously disposed within the grooves 3 beneath the tie bar 10. This packing strip may be dispensed with if the tie be made of wood or of iron, and in the latter case the facing plate 6 may also be omitted.

The rail 16 may be connected with the upper face of the sleeper or tie bar in any approved manner. In the drawing I have illustrated the tie bar as provided with upstanding lugs 17 which take over the inner base flange of the rail, and also adjustable toe clips 18 for engaging the outer base flange of the same, whereby the rails are held in rigid fixed relation to the tie.

What is claimed is:—

1. A railway tie comprising a pair of sleepers having each in its upper face a recess, the inner end of each sleeper provided

with a recess having an overhanging roof and with an open slot extending from the end recess to the upper face of the sleeper, a tie bar having terminal angle extensions 5 to engage in the upper recess of each sleeper, and clamping members anchored within the end recess and extending by way of the open slots into adjustable engagement with the tie bar.

- 10 2. A railway tie comprising a pair of sleepers having each in its upper face a recess and a groove extending therefrom longitudinally to the inner end, the inner end of each sleeper provided with a recess having 15 an overhanging roof, and with an open vertical slot extending from the end recess to the groove, a tie bar fitting within the grooves of the sleepers and having terminal angle extensions to engage one in the upper 20 recess of each sleeper, and clamping members anchored with the end recesses and extending by way of the open slots into adjustable engagement with the tie bar.

- 25 3. A railway tie comprising a pair of sleepers having each in its upper face a recess and a groove extending therefrom longitudinally to the inner end, the inner end of each sleeper provided with a recess having 30 an overhanging roof, a slotted plate inserted in the recess, beneath the roof, and an open vertical slot extending from the recess to an intersection with the groove, a tie bar fitting within the grooves of the 35 sleepers and having terminal angle extensions to engage one in the upper recess of each sleeper, and bolts having their heads anchored beneath the overhanging roof of the end recesses and extending by way of

the slots into adjustable engagement with the tie bar.

- 40 4. A railway tie comprising a pair of concrete sleepers having each in its upper face a recess and a groove extending therefrom longitudinally to the inner end, the inner 45 end of each sleeper provided with a recess having an overhanging inserted metal plate, and with an open vertical slot extending from the end recess through the roof to the groove, a resilient packing strip in the 50 groove, a tie bar fitting within the grooves of the sleepers and having angle extensions at its ends to engage one in the upper recess of each sleeper, and bolts having their 55 heads anchored beneath the overhanging metal roof of the end recesses and extending by way of the open slots into adjustable engagement with the tie bar.

5. A railway tie comprising a pair of sleepers having in the upper face of each 60 sleeper a recess which is located on the outer side of the rail, the inner end of each sleeper being provided with a recess having an overhanging roof and with an open slot 65 extending from the recess to the upper face of the sleeper, a tie bar interlocked with the recess at the outer side of the rail, and clamping devices anchored within the end 70 recess and connected with the tie bar on the inner side of the rail, said clamping devices being removable from the sleeper through the slot therein.

OSCAR E. HALL.

Executed in presence of—

WILLIAM RICE,
JOHN S. FULLERTON.