

W. CHURCHILL & M. L. O'NEIL.

RAIL TIE.

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941,913.

Patented Nov. 30, 1909.

Fig. 1

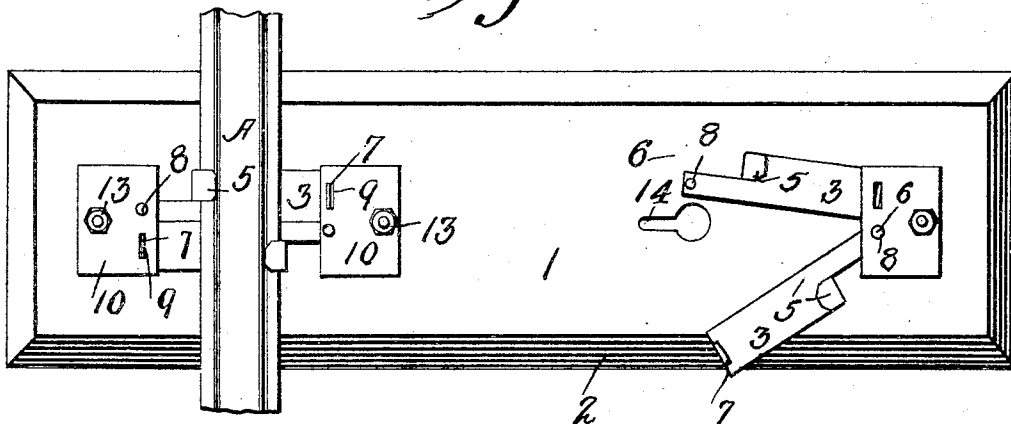


Fig. 3.

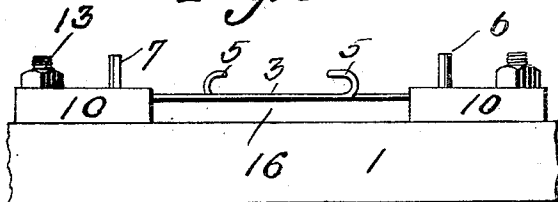


Fig. 2.

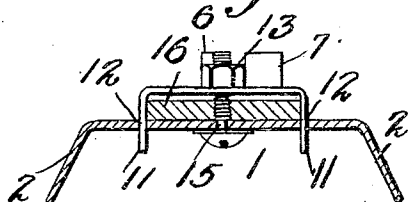


Fig. 4.

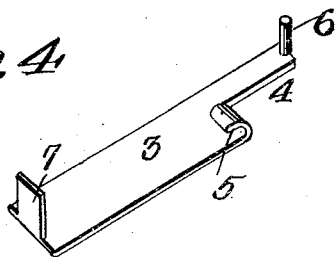
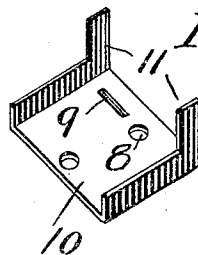


Fig. 5.



Witnesses

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RAIL-TIE.

941,913.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, WILLIAM CHURCHILL and MURT L. O'NEIL, citizens of the United States, residing at Janesville, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Rail-Ties, of which the following is a specification.

Our invention relates to railroad rail ties and has for its object the provision of a tie consisting of an inverted channeled bar having rail clamps at its ends comprising plates provided with hooks to engage the rail bases and upright ends that engage holes in inverted U-shaped clamping members that are removably secured to the tie. A block of wood or other fibrous material is placed under the clamping plates and held in position by the U-shaped clamping members, and serves as a cushion to take off the jar of the passing train.

Our invention will be described in detail hereinafter and illustrated in the accompanying drawings in which—

Figure 1 is a top plan view of our improved tie showing the rail in position at one end and the clamp at the other end in position to receive the rail, Fig. 2, a cross section of the tie, Fig. 3, a side view of one of the end fragments of the tie, Fig. 4, a detail view of one of the clamping plates, and Fig. 5, a detail view of one of the clamping members.

In the drawings similar reference characters indicate corresponding parts in the several views.

Our improved tie consists of an inverted channeled beam or bar 1 having sloping sides and ends 2 as shown.

The rail clamps at the ends of the tie consist of plates 3 having one of their ends cut away as shown at 4 and turned up to form a hook 5 to engage the base of rail A. Each of the plates 3 has its ends turned upwardly to form tongues 6 and 7 that engage a hole 8 and slot 9 respectively in the top of inverted U-shaped clamping members 10. Each clamping member 10 is provided with tongues 11 that engage slots 12 in the top of the tie and is held in position by means of a bolt 13 mounted in keyhole slot 14 in the top of the tie, the head of the bolt being adapted to be inserted through the larger end of the slot 14 and the stem thereof provided with a rectangular shoulder 15 less in thickness than the threaded portion that engages the

smaller end of the slot 14 and holds the bolt in position while the clamping member 10 is being placed in position.

16 indicates a block of wood or other fibrous material under each plate 3 that acts as a cushion to absorb the jar of passing trains, said block being held in position by having its ends engaging the clamping members 10.

As shown in the drawings the tongue 6 on the narrow end of the plate 3 is round to fit the circular hole 8 in the clamping member so that in laying the rails one end of each pair of plates 3 is secured in position, and the plate having its end 6 secured in hole 8 is swung to one side as shown in Fig. 1 so that the rail A may be placed in position with its base resting against the hook 5 on the other plate, the plate swung to one side is then moved under the rail base so that the plates 3 are parallel and contiguous to one another when the two hooks 5 will engage the base of the rail. The other clamping member 10 is then placed in position so that the holes 8 and 9 therein engage the tongues 6 and 7 on the free ends of the plates 3 and secured by means of bolt 13.

It will be apparent that the cut away portion 4 serves not only to supply the material for the hook 5 but also allows the swinging of the plate to one side in securing the rail in position, as described above, so that the rail may be fastened from either side as desired.

As is well known the treads of railway rails wear off on the inside caused by the grinding of the wheel flanges on trains, and to counteract this and provide for moving the rails nearer to the center of the tie after they have been worn sufficiently to require it we construct one of each pair of clamping members 10 with the hole 8 and slot 9 farther from the edge of the member than the other. In the drawings we have shown the clamps in the position they are placed when the rails are first laid, *i. e.* with the members 10 having the hole and slot farthest from the edge on the outside of the rails. After the rails have become worn as stated above the clamping members in each pair are reversed so that the plates 3 are moved toward the middle of the tie a distance equal to the difference between the distance of the slots and holes from the inner edges of the members 10. It will be also apparent that the gage of the rails may be gradually ad-

justed by moving one rail after the rails have been laid for some time and then the other later.

Having thus described our invention what we claim is—

1. In a rail tie, elongated clamping plates arranged side by side in pairs longitudinally of the tie and having hooks thereon and upwardly extending tongues, and clamping members secured to the tie and engaging the tongues.

2. In a rail tie, clamping plates having cut away portions bent to form hooks and upwardly extending tongues on their ends, and clamping members secured to the tie and engaging the tongues on the plates, the cut away portions permitting the plates to be swung to one side in fastening the rails.

3. In a rail tie, clamping plates having hooks thereon and upwardly extending tongues, and inverted U-shaped clamping members having holes to receive said tongues and secured to the tie.

4. In a rail tie, clamping plates having hooks thereon and upwardly extending tongues, inverted U-shaped clamping members having holes to receive said tongues, said clamping members having tongues, the tie provided with slots to receive the tongues on the clamping members, and means secured to the tie to hold the clamping members in position.

5. In a rail tie, elongated clamping plates arranged side by side in pairs longitudinally of the tie and having hooks thereon and upwardly extending tongues, clamping mem-

bers secured to the tie and engaging the tongues on the plates, and a cushion of fibrous material between the tie and plates and held in position by the clamping members.

6. In a rail tie, clamping plates having hooks thereon and upwardly extending tongues, inverted U-shaped clamping members having holes to receive said tongues, tongues extending from said clamping members, the tie provided with slots to receive the tongues on the clamping members, a cushion of fibrous material between the tie and plates and having its ends engaged by the clamping members, and means secured to the tie to hold the clamping members in position.

7. In a rail tie, clamping plates having cut away portions bent to form hooks and upwardly extending tongues on their ends, U-shaped clamping members having holes to receive said tongues, tongues extending from said clamping members, the tie provided with slots to receive the tongues on the clamping members, a cushion of fibrous material between the tie and plates and having its ends engaged by the clamping members, and bolts secured to the tie and engaging said clamping members.

In testimony whereof we hereto affix our signatures in the presence of two witnesses.

WILLIAM CHURCHILL.

MURT L. O'NEIL.

Witnesses:

HENRY F. CARPENTER,

EDWIN F. CARPENTER.