O. J. MORRIS.

MEANS FOR SECURING RAILROAD RAILS TO TIES OF RAILROAD BEDS.

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900,570.

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FIG. 1

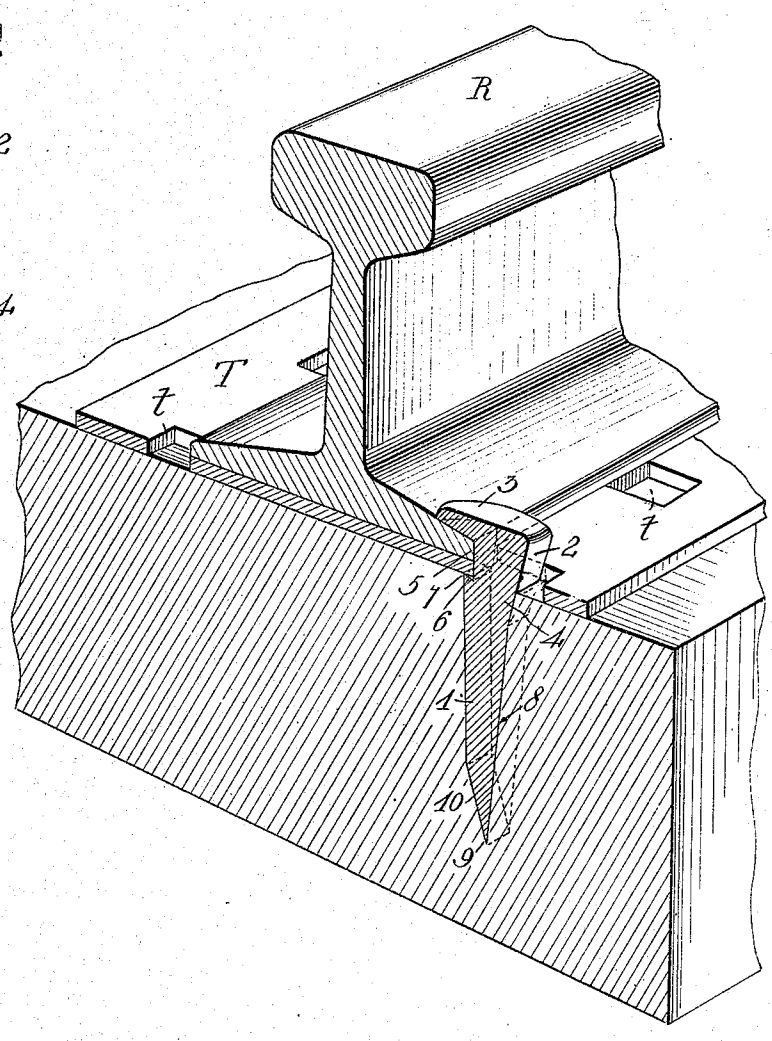
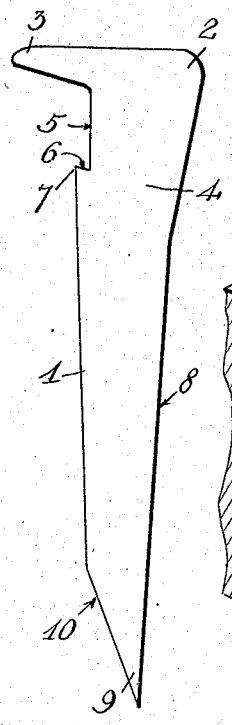


FIG. 2



Witnesses

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MEANS FOR SECURING RAILROAD-RAILS TO TIES OF RAILROAD-BEDS.

No. 900,570. Specification of Letters Patent. Patented Oct. 6, 1908.

Application filed March 4, 1907. Serial No. 360,517.

To all whom it may concern:

Be it known that I, OSCAR J. MORRIS, a citizen of the United States, residing at Laramie, in the county of Albany and State of Wyoming, have invented certain new and useful Improvements in Means for Securing Railroad-Rails to Ties of Railroad-Beds; and I do 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 appertains to make and use the same.

My invention relates to means for securing railroad rails to ties or sleepers of railroad beds, and it consists in the construction and arrangement of parts, as will be hereinafter described and particularly pointed out in the claim.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts,—Figure 1 is a view in perspective of a portion of a railroad rail and tie plate, exhibiting the manner in which the spike coacts therewith. Fig. 2 is a view in side elevation displaying the contour of the spike.

Referring to the drawings, R designates the rail and T the tie plate, which is provided with elongated spike openings *t*. These parts may be of the usual or any preferred construction, and therefore need no detail description.

The feature of the present invention in connection with the openings *t* of the tie plate T resides in the form of spike that is used for holding the rail and tie assembled with the sleeper. This spike comprises a shank 1 and an elongated head 2 provided with a rail-engaging nose 3. Adjacent to the nose, the neck 4 of the spike is provided with a notch 5, the upper face of the lower wall 6 of which is flat and inclined inwardly and downwardly to form a lip or edge 7 that is designed, when the spike is in position, to bite into the tie-plate, when such is used, or into the base of the rail, and thus effect a stable union between the parts.

As shown in Fig. 2, the back edge 8 of the spike is straight from the neck to the point 9, while the front edge is beveled at 10 to form a chisel-entering point.

By arranging the upper wall of the notch in the manner described, namely in a slanting or oblique plane relatively to the long diameter of the spike, frictional contact between it and the part with which it is contacted is rendered of the strongest character. The lower end of the shank of the spike is inserted in the elongated opening *t* of the tie plate T and the spike is driven into the sleeper of the road bed until the notch 5, is in line with the edges of the tie plate and flanges of the rail. The rear portion of the head of the spike is then driven inward towards the rail to permit of the notch to engage the under-face of the plate while the nose of the head of the spike will engage the upper surface of the flange of the rail thereby permitting of the lip 7 of the inclined wall 6 to contact with the under face of the tie plate T. This wall 6 is intended to reach or extend well under the rail and tie plate, and the weight from these parts and from the rolling stock will be transmitted directly to the lip 7, thereby transmitting the pressure straight toward the point or tip of the spike, and this will have a tendency to force the head of the spike in against the rail and its point outward thereupon. The shank of the spike, as shown in Fig. 1, is as a whole tapered, this being necessary in order to cause the spike always to lean forward so that it will hold the lip in position, and at the same time brace the rail and prevent the track from spreading.

It will be seen from the foregoing description that although the improvements herein defined are simple in character, that they will be found thoroughly efficient for the purpose designed.

I claim as my invention:—

A spike in combination with a tie plate and a railroad rail, the tie plate being provided with an elongated opening therein, said rail having its flange section mounted on said tie plate and the length of the opening of the tie plate being greater than the width of the spike, said spike having an approximately rectangular notch formed therein next to the head of the spike, one wall of the notch being downwardly inclined forming a lip on its outward forward edge, and said notch engaging the underface of the tie plate and the upper

face of the flange of the rail, the inner edge of the opening and the outer edge of the flange of the rail contacting with the vertical wall of the notch, and said lip on said inclined wall of the notch contacting with the underface of the tie plate to prevent lateral movement of said plate, substantially as specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

OSCAR J. MORRIS.

Witnesses:
E. A. WILKINSON,
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