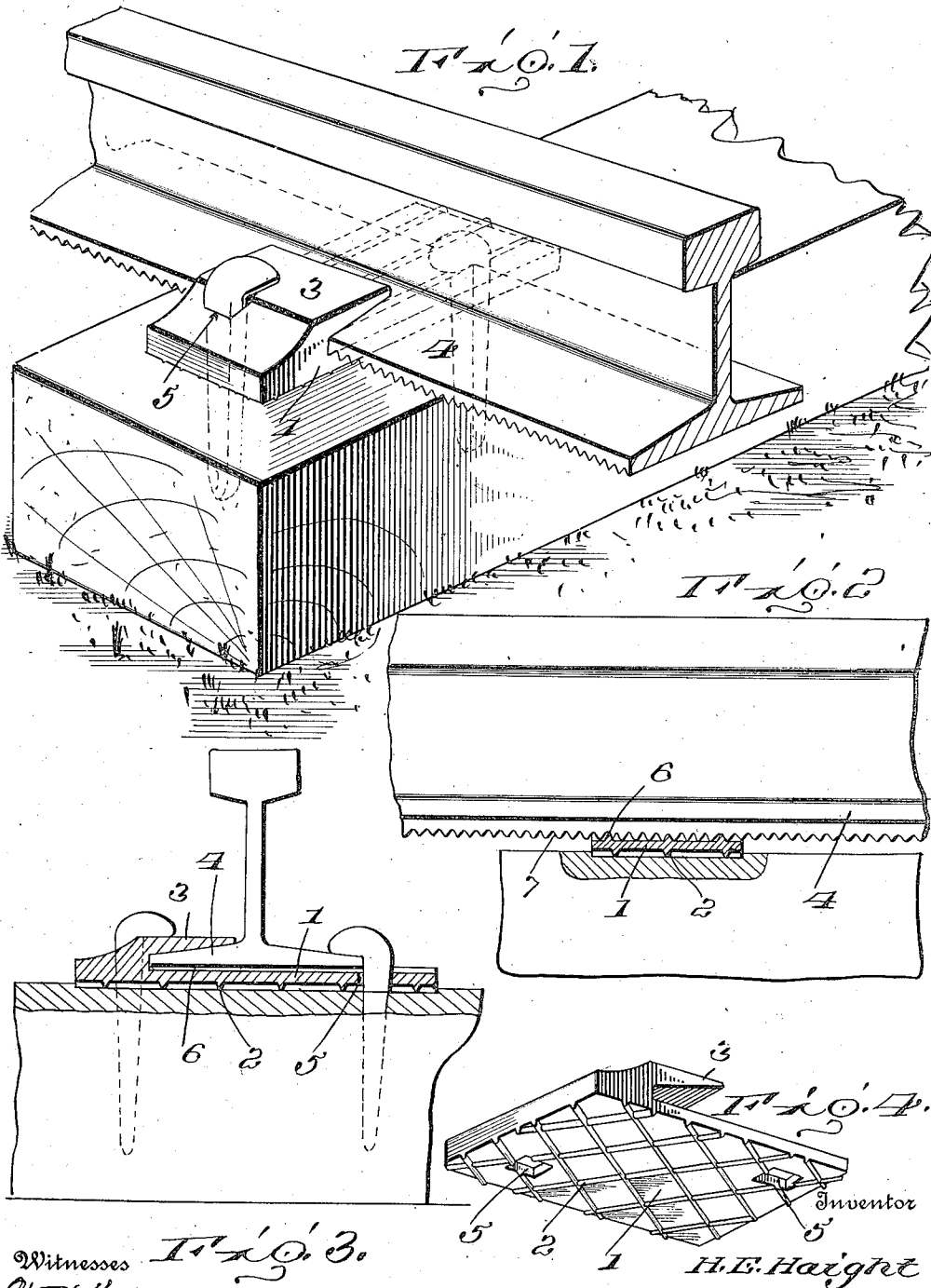


H. E. HAIGHT.
RAIL AND RAIL TIE PLATE.
APPLICATION FILED APR. 6, 1911.

1,004,778.

Patented Oct. 3, 1911.



Witnesses
W. K. Woodson
Cora N. Sandy.

By

H. E. Haight
Attorneys

UNITED STATES PATENT OFFICE.

HARRY E. HAIGHT, OF MARSHFIELD, WISCONSIN.

RAIL AND RAIL-TIE PLATE.

1,004,778.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARRY E. HAIGHT, citizen of the United States, residing at Marshfield, in the county of Wood and State of Wisconsin, have invented certain new and useful Improvements in Rails and Rail-Tie Plates, of which the following is a specification.

This invention has relation to rail tie plates, and has for its object to provide a plate of simple structure adapted to receive the base flange of the rail and hold the same against tilting or canting, and at the same time is provided with means for engaging the under face of the base flange of the rail to prevent the rail and track from creeping.

On all heavy trunk lines where the traffic on the rails is in one direction, considerable difficulty is experienced in keeping the track from creeping in the direction with the traffic, or in the direction in which the rolling stock moves over the track, and it is the aim of the present invention to provide means for effectually supporting the rail and at the same time eliminating the creeping of the track and the disadvantages incident thereto.

With these objects in view, the structure includes a tie plate having a roughened under surface adapted to bear against the upper surface of the tie, said plate being provided with a flange adapted to bear upon the upper surface of the base flange of the rail to prevent the same from tilting or canting. The said plate is also provided with serrations which extend transversely with relation to the long dimensions of the rail and at the point where the rail bears upon the plate it is provided with serrations which are adapted to engage the serrations upon the tie plate, and when the plate is secured in position upon the tie will prevent the rail from creeping or moving longitudinally in either direction.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view of the tie plate with a rail resting thereon; Fig. 2 is a side elevation of a portion of a rail, showing the plate in section; Fig. 3 is an end view of a rail, showing the plate in section; Fig. 4 is an under perspective view of the plate.

Corresponding and like parts are referred

to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

The tie plate consists of a base portion 1 which is provided upon its under side with ribs 2 and which is provided at its inner end with a flange 3 adapted to overlap the base flange of the rail, indicated at 4. The plate is provided at opposite sides of the rail with spike apertures 5, and the base portion 1 of the said plate is provided upon its upper side with serrations 6 which extend transversely across the rail 4 under the base flange thereof. The rail 4 is provided upon the under side of its base flange with a series of serrations, indicated at 7, and when the rail is in position upon the plate the serrations upon the base flange thereof engage the serrations upon the upper surface of the plate, and one side portion of the base flange of the rail is inserted under the flange 3 of the plate. Spikes are then driven down into the tie through the apertures 5 and the spikes upon the one side of the rail have their heads bearing against the outer portion of the flange of the rail, while the heads of the spikes at the other side of the rail bear directly against the top of the plate 1. Therefore it will be seen that the rail cannot creep longitudinally for the reason that the serrations 7 at the under side of the base flange engage the serrations 6 and the rail cannot move laterally for the reason that the spikes at the one side of the rail have their heads bearing directly against the base flange thereof. Also the rails cannot tilt or cant for the reason that the other spikes hold the plate 1 tight down against the upper surface of the tie. Also the plate 1 cannot move in any direction with relation to the tie for the reason that the spikes through the plate at both sides of the rail hold the plate down firmly against the tie and embed the ribs at the under side of the plate into the grain of the wood of the tie.

Having thus described the invention, what is claimed as new is:

1. In combination with a rail having upon its under side serrations, a tie plate having a base provided upon its under side with ribs adapted to be embedded in the tie and upon its upper side serrations, said plate having at its side a flange adapted to pass over the base flange of the rail, the serrations upon the under side of the base flange

of the rail adapted to engage the serrations upon the upper side of the plate, and spikes passed through the plate at the opposite sides of the rail, the spikes at one side having their heads in direct contact with the base flange of the rail and the spikes at the other side having their heads in direct contact with the top of the plate.

2. In combination with a rail having upon the under side of its base flange serrations, a tie plate provided upon its upper side with serrations which extend transversely under the rail and which engage the serrations provided under the base thereof, said plate having a flange spaced from the base portion thereof and which lies over and in close contact with the base of the rail, said plate having at its one side a spike perforation which extends from the

top of the flange to the base of the plate and into which a spike may be inserted with its head bearing directly against the top of the plate, the plate having at its other side a spike perforation extending from the upper to the lower surface of the base and through which a spike may be inserted with its head bearing directly against the base flange of the rail, said plate also having upon its under surface ribs adapted to be embedded in the tie when the spikes are positioned in the manner as indicated.

In testimony whereof, I affix my signature in presence of two witnesses.

HARRY E. HAIGHT. [L. S.]

Witnesses:

T. B. HAMBRIGHT,
J. C. DORPAT.