

APPLICATION FILED APR. 20, 1910.

Patented May 30, 1911.



Hugh Helt
W. J. Root.

डेय

UNITED STATES PATENT OFFICE.

MARCELLUS H. LISTON AND ANDREW C. PITMAN, OF CONNELLSVILLE, PENNSYLVANIA.

METAL TIE FOR RAILWAYS.

993,850.

Specification of Letters Patent. Patented May 30, 1911.

Application filed April 20, 1910. Serial No. 556,483.

To all whom it may concern.

Be it known that we, MARCELLUS H. LISTON and ANDREW C. PITMAN, citizens of the United States, residing at Connellsville, in the county of Fayette and State of Pennsylvania, have invented new and useful Improvements in Metal Ties for Railways, of which the following is a specification.

This invention relates to metallic rail ties, preferably adapted for use in mines, and the object of the invention is to provide a device of this character having means whereby the rails may be easily and quickly attached thereto or removed therefrom.

In the accompanying drawings there has been illustrated a simple and preferred embodiment of the improvement, and in which drawings,

Figure 1 is a front elevation of a tie constructed in accordance with the present invention, and showing the rails in position thereon. Fig. 2 is a similar sectional view illustrating a slightly modified form of the tie.

In the accompanying drawings and referring particularly to Figs. 1 and 2 thereof, the numeral 1 designates the improved tie. This tie 1 is constructed of a single piece of rectangular material, which is bent downwardly to provide an offset 2, and the plate is then continued in a substantially horizontal plane to provide the rail receiving portion 3. The extremity of the rail receiving portion 3 is bent upwardly and inwardly at an inclination to provide the overlying flange engaging member or finger 4. The under face of the rail engaging member 3 adjacent the offset 2 is preferably serrated as designated by the numeral 5, the purpose of which will presently be apparent.

The numeral 6 designates what we term the rail engaging member. This member 6 comprises simply a flattened metallic bar, the said bar having its upper face serrated as at 7. The numeral 8 designates the band or securing ring of the device. This ring or band has its opposite inner faces serrated as at 9 and the said serrations are adapted to engage with the serrations 7 of the member 6 and the serrations 5 of the tie 1. When it is desired to connect a rail to the tie 1 the said rail is first positioned upon the portion 3 of the tie so that one of its base flanges is contacted by the overlying flange 4. The ring or band 8 is swung toward the

offset 2 of the tie 1, the retaining plate 6 is then positioned beneath the ring and has one of its ends contacting with the offset 2. It will be readily apparent that as the band 8 is forced toward the rail, the plate 6 will be swung into contact with the base flange upon this side of the rail until its free end contacts the web of the said rail. By providing the tie 1, securing plate 6 and band 8 with the serrated faces it will be readily apparent that the device cannot become accidentally disconnected. It will be further apparent that when it is desired to remove the rail from the tie for any purpose that a rearward pressure upon the band 8 will loosen the securing plate 6 so as to allow the same to be swung out of engagement with the rail.

In Fig. 2 we have illustrated a slightly modified form of the device. In this figure we have shown the tie 1' comprising a flattened rectangular strip of metal having its ends inclined inwardly to provide the overlying flanges 4'. The under face of the flattened strip comprising the tie is serrated as indicated by the numeral 5'. The upper face is likewise serrated as indicated by the numeral 10, the purposes of which will presently be apparent. The numeral 11 designates the rail securing member. This member 11 comprises a substantially flattened body portion 12 and a rail flange engaging offset portion 13. Both the upper and the lower faces of the body portion 12 are serrated as indicated by the numerals 14 and 15. The numeral 16 designates the securing band. This band 16 has its opposite faces provided with serrations as indicated by the numeral 17 so that the same may effectively retain the securing member 11 upon the tie and upon the rail. The upper face of the body portion 12 of the member 11 is inclined toward its overlapping lip, as clearly shown in the figures of the drawing, and it will be noted that when the ring is drawn toward the center of the tie the said body may have its serrated portion engaging the coinciding serrations in the upper portion of the said tie 1' and tightly into engagement with the base flange and the web of the rail. The band 16 is then forced into engagement with the inclined face and the serrated faces of the said band engaging the serrations upon the top of the member 11 as well as the serrations upon the bottom face of the tie 1' effectively

and securely retains the members in position. It will be apparent, however, that if desired the serrations in the meeting faces of the securing member 11 and the tie 1' may be
5 dispensed with and it will be further noted that if desired the serrations upon the band and the upper face of the securing member 11 as well as the serrations upon the under
10 face of the tie 1' may be also dispensed with. From the above description, taken in connection with the accompanying drawings it will be noted that we have provided a tie
15 having simple and effective means for securing the rails thereon, which entirely dispenses with the use of bolts or analogous devices, and while we have illustrated and described the preferred embodiment of the improvement, as it now appears to us, minor
20 details of construction within the scope of the following claim may be resorted to if desired.

Having thus fully described the invention, what we claim as new is:—

In a railway tie, a substantially rectangular metallic plate, said plate being provided
25 adjacent its ends with offsets and having its ends provided with overlying flanges, a rail engaging plate adapted to contact with the
30 offset of the tie, said plate having its upper face provided with serrations, the under face of the tie directly below the plate being also
provided with serrations, a band encircling the plate and the tie, and said band having
35 its opposite inner faces serrated, substantially as and for the purpose set forth.

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

MARCELLUS H. LISTON.

ANDREW C. PITMAN.

Witnesses:

WADE MARTIN,

SOLOMON McCracken.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
