

UNITED STATES PATENT OFFICE.

THOMAS RICHARDS, SR., OF PORTAGE, PENNSYLVANIA.

RAILROAD MINE TIE AND RAIL FASTENER.

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To all whom it may concern:

Be it known that I, THOMAS RICHARDS, Sr., a citizen of the United States, residing at Portage, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Railroad Mine Ties and Rail Fasteners, of which the following is a specification.

This invention relates to a railroad mine tie and rail fastener, which is especially adapted for use in laying track-ways in mines and the like, where it is necessary that a light tie be used.

Another object of this invention is the production of a simple and efficient tie formed of a minimum number of parts and which is so arranged as to sufficiently support a rail in conjunction therewith.

With these and other objects in view this invention consists of certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described and claimed.

In the drawings:

Figure 1 is a perspective view of one end of the rail tie and fastener, showing the rail attached thereto, the rail being shown in section.

Figure 2 is a perspective view of one end of the rail tie, the rail clamp and rail being removed therefrom.

Figure 3 is a detail perspective of the rail clamp used in conjunction with the rail tie.

Figure 4 is a longitudinal section through the rail tie and rail.

Figure 5 is a bottom plan view of the structure shown in Figure 1, showing the manner in which the rail clamp is secured to the tie.

By referring to the drawings it will be seen that 1 designates the body of the tie, which is preferably of a channel iron structure having side depending flanges 2, as illustrated in Figure 1. The end of the tie 1 is provided with a downwardly bent flange 3, which flange is provided with a plurality of gripping teeth 4 for the purpose of gripping into the ground or ballast upon which the tie is placed, to prevent endwise sliding movement of the tie upon the supporting element.

As clearly shown in Figure 1 of the drawing, an upwardly extending struck-up lip 5 is formed upon the top of the tie near one end thereof, which lip 5 is preferably formed

integral with the tie and is stressed or struck directly from the upper face of the tie. A substantially L-shaped slot 6 is formed in the upper face of the tie 1 near one side thereof, this L-shaped slot 6 comprising a transversely extending portion 7 and a longitudinally extending portion 8. The transversely extending portion 7 terminates short of the opposite side of the tie as clearly shown in Figure 5 and is provided with an abutment wall 9 against which the rail clamping plate 10 is adapted to rest as will be more definitely described in the following. The longitudinally extending portion 8 of the slot 6 extends down into the upper edge 11 of one of the flanges 2 as shown in Figure 2 to permit the rail clamping plate 10 to freely swing therein.

The rail clamping plate 10 is provided with an off-set or upwardly extending rail gripping portion 12, which is adapted to overhang the base portion 13 of the rail 14 as shown clearly in Figure 1, and a pivotally connecting rivet or bolt 15 is passed through the aperture 15 formed in the upper face of the tie 1 and extends through the aperture 17 formed in the rear end of the rail clamping plate 10. In order that this rail clamping plate 10 may be held against pivotal swinging movement, a securing rivet or pin 18 is extended through the aperture 19 formed in the upper face of the tie 1 and also extends through the aperture 20 formed in the rail clamping plate 10 as shown clearly in Figure 4. It will therefore be seen that a very simple and efficient means has been produced for holding or maintaining the rail clamping plate 10 in proper position to prevent the rail clamping plate from being swung out of engagement with the rail. However, it should be understood that by the removal of the pin or rivet 18, the rail clamping plate 10 may be readily swung to the position shown in dotted lines in Figure 5, thereby removing the plate 10 out of engagement with the rail and permitting the rail 14 to be readily detached from the railroad tie when it is so desired.

It should be understood that a very simple and efficient device has been produced in the nature of a rail tie and fastener which may be formed of sheet metal or any other material and it should further be understood that certain detailed changes in mechanical construction may be made in the invention with-

out departing from the spirit thereof so long as these changes fall within the scope of the appended claim.

What is claimed is:

5 In combination with a railroad tie formed of a substantially channel iron construction, the tie having a substantially L-shaped slot formed therein, the transverse portion of the L-shaped slot extending across the upper
10 face of the tie and terminating short of one side edge thereof, one end of the L-shaped slot constituting an abutment, the longitudinally extending portion of the L-shaped slot extending down through a portion of one
15 side of the tie, a rail engaging portion car-

ried by the tie and adapted to engage a rail, a pivotally mounted rail clamp pivotally secured to the under face of the tie and extending through the slot and being capable of being swung into and out of engagement 20 with a rail through said slot, and means extending through the tie and through the clamp for locking the rail clamp in firm engagement with the tie.

In testimony whereof I affix my signature 25 in presence of two witnesses.

THOMAS RICHARDS, SR.

Witnesses:

B. E. THOMPSON,

Mrs. B. E. THOMPSON.