

No. 898,108.

PATENTED SEPT. 8, 1908.

C. HORRELL.
METAL RAILROAD TIE.
APPLICATION FILED SEPT. 19, 1907.

FIG. 1.

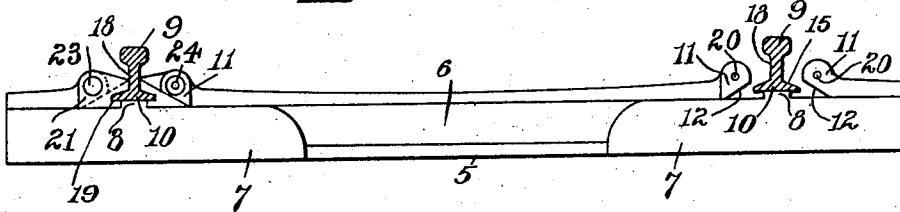


FIG. 2.

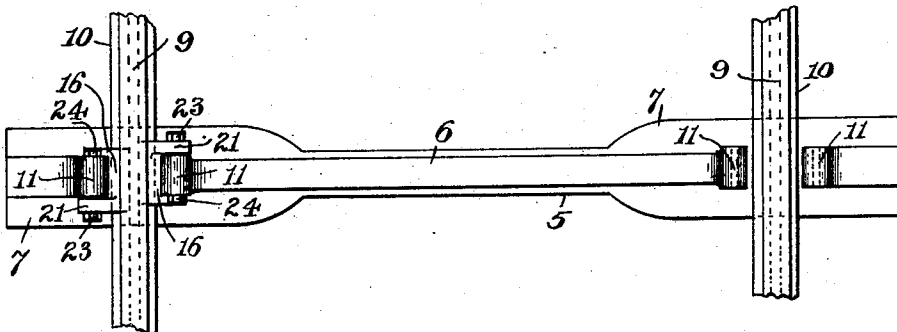


FIG. 3.

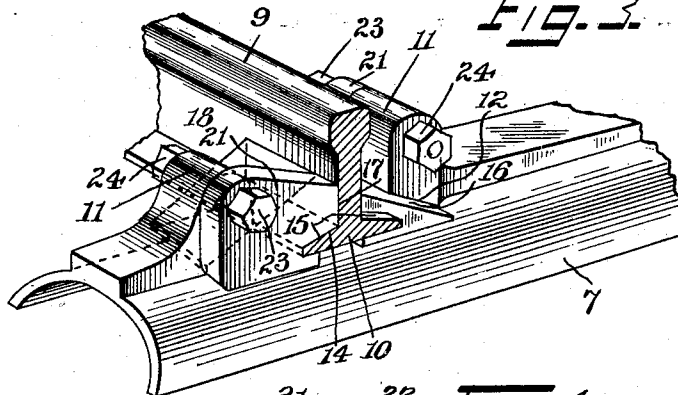
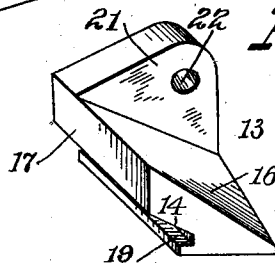


FIG. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES HORRELL, OF MADISON, ILLINOIS.

METAL RAILROAD-TIE.

No. 898,108.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed September 19, 1907. Serial No. 393,641.

To all whom it may concern:

Be it known that I, CHARLES HORRELL, a citizen of the United States, residing in Madison, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Metal Railroad-Ties, of which the following is a specification.

This invention relates to railroad ties and has for an object to provide improved and efficient means for securing a railroad rail to a metal tie.

In the use of metal railroad ties difficulty has not only been experienced in fastening or locking the rail to the tie but also in securing such fastening or locking device against accidental dislodgment. The jar and vibration incident to the passage of trains continuously tends to loosen and displace the fastenings which are employed to lock the rail and tie. The present improvement is not only for the purpose of locking the rail and tie together but also for securing the locking means against accidental displacement. This improved fastening device is capable of being readily tightened from time to time as occasion may demand and also affords means for effecting the lateral justification of the rails for bringing these into proper parallel relation.

In the drawings accompanying and forming a part of this specification, Figure 1 shows in side elevation a practicable embodiment of a form of my improved tie and fastening device applied to rails which are seen in cross section, the rail which is shown at the right hand end of the tie not being represented as being fastened in position. Fig. 2 is a top plan view of the parts shown in Fig. 1. Fig. 3 is an enlarged perspective view of the end portion of a tie provided with my improved fastening device and shows a portion of the rail in position; and Fig. 4 is a perspective of one of the fastening devices disassembled from the tie and rail.

This present device is somewhat in the nature of an improvement upon the metallic tie which is covered by United States Letters Patent No. 821,166 issued to me May 22nd, 1906.

The body portion of the tie is designated in a general way by 5. Such tie is shown as having a narrow central portion 6 and wide end portions 7 which end portions are hollow for the purpose of engaging the road-bed and becoming filled with the ballast which will hold the tie firmly in position. On

each end portion there is provided an up-standing rail seat 8 upon which a rail 9 is shown as seated. It will be observed that the seat 8 is of a less dimension than the width of the base 10 of the rail. At each side of the rail seat there is provided an offset lug 11 having an inclined face 12, which inclined faces are directed toward the rail seat and are disposed at a slight angle thereto.

The rail after it has been placed upon the rail seat will be locked to the tie by means of suitable wedges. In Fig. 4 one of these wedges is shown detached and designated in a general way by 13. It has a face 14 which will engage the top face 15 of the rail base and a face 16 which will engage the face 12 of the offset lug. The wedge also has a face 17 which engages the web portion 18 of the rail. The angular inclination of the faces 12 will preferably be in opposite direction so that when the wedges are being driven into position, force may be applied to the wedges in opposite directions transversely of the tie; as for instance, by the employment of two hammers striking in opposite directions which will prevent lateral movement of the tie, that is movement longitudinally of the rail. Further by making these faces in the manner above referred to, the wedges may all be made the same so that a wedge that will fit upon one side of the rail will also fit upon the other, which would not be the case were the wedges both required to be inserted from the same side of the tie. The wedge is also provided with a channel 19 for receiving the edge of the rail base 10.

The wedges illustrated herein will afford a firm and efficient holding or locking device between the rail and tie; but owing to the jarring of the rails incident to the passage of locomotives and trains and also incident to conditions arising through changes in temperature, the wedges are apt to work loose, but by efficient means for fastening these wedges against accidental dislodgment the locking will be rendered most secure; and to this end the lugs 11 are provided with openings 20 extending transversely of the tie. Each of the wedges is provided with a wing 21 having an opening 22 adapted, when the wedge is in position, to register with the bolt hole 20 of the lug. After the wedge has been placed in position and driven in with sufficient tightness to hold the rail in position, a bolt 23 may be passed through the bolt holes 20, 22 and the nut 24 may be secured upon

such bolt. This will prevent the wedge working loose. It will thus be a simple matter when the track-walker finds that, owing to wear or conditions of temperature, the
5 wedges need tightening, to drive the wedge further into position to tighten the nut upon the bolt. The wings 21 constitute heads as it were for the wedges which will afford an enlarged surface for receiving a hammer blow
10 in tightening the wedges and the wing will be in position to prevent the hammer blow striking the lugs 11. These wedges upon opposite sides of the rail being independently adjustable, will afford means whereby the
15 rails may be adjusted and justified laterally for the purpose of effecting true parallelism of the rails or for the purpose of increasing or decreasing the distance between the rails.

Having thus described my invention, I
20 claim:

1. A metal railroad tie formed at each end with a rail seat, a lug upon each side of said rail seat, and provided with wedge engaging faces directed toward said rail seat, wedges

adapted to be driven underneath said lugs 25 and each formed with a groove for engaging the side of the rail base and means for engaging the tie and wedge for securing such wedge in position.

2. A metal tie formed at each end with a 30 rail seat, a lug upon each side of said rail seat and provided with a wedge engaging face directed toward said rail seat, said faces upon opposite sides of the rail being inclined at opposite angles to the rail seat, wedges adapted 35 to be driven underneath said lugs from opposite sides of the tie, said lugs being provided with bolt holes disposed transversely of the tie and said wedges each carrying a wing and provided with a bolt hole registering with the 40 bolt hole in the lug and a bolt for traversing each of said bolt holes for securing the wedge in position.

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Witnesses:

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