

1,036,449.

WITNESSES
Samuel Payne.
Ralph C. Evert.

Fig. 2.

Fig. 3.

Fig. 5.

Fig. 8.

T. Carr.
BY *J. H. Everett*
ATTORNEYS

UNITED STATES PATENT OFFICE.

THOMAS CARR, OF ROOK, PENNSYLVANIA.

TIE AND RAIL-FASTENER.

1,036,449.

Specification of Letters Patent.

Patented Aug. 20, 1912.

Application filed March 29, 1912. Serial No. 687,213.

To all whom it may concern:

Be it known that I, THOMAS CARR, a citizen of the United States of America, residing at Rook, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Ties and Rail-Fasteners, of which the following is a specification, reference being therein to the accompanying drawing.

This invention relates to metallic ties and rail fasteners, and the objects of my invention are to provide a tie that is extremely light and durable and can be manufactured at a minimum cost, and to provide a tie possessing sufficient strength and firmness to support the great weight of rolling stock.

Other objects of my invention are to provide a tie having a bearing surface that will afford a sure and ready means for attaching rails, and to provide a tie made of standard material easily and quickly assembled.

Further objects of my invention are to furnish a metallic tie of the above type with a fastener that will preserve the alinement of rails, and to provide the tie with a fastener that is durable and inexpensive to manufacture.

Still further objects of this invention are to provide a rail fastener that can be easily and quickly installed by unskilled labor, and to accomplish the above results by a mechanical construction that obviates the necessity of using splice bars, bolts and nuts or fastening means that require considerable time and labor to install.

With the above and other objects in view, the invention resides in the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing forming a part of this specification wherein:—

Figure 1 is a side elevation of a tie, partly broken away and partly in section, illustrating the rail fastener in connection therewith. Fig. 2 is a plan of a portion of the same. Fig. 3 is an end-view of the tie and rail fastener. Fig. 4 is a perspective view of a portion of the rail and top plate of the tie, and Fig. 5 is a perspective view of a detached yoke adapted to form part of the rail fastener.

A tie in accordance with this invention comprises two parallel channel bars 1 having the lateral flanges 2 thereof riveted or

otherwise connected, as at 3 to an oblong base plate 4, which forms the base of the tie. The base plate 4 is provided with a plurality of transverse angle bars 30 adapted to prevent the tie from slipping upon a road-bed. The upper flanges 5 of the channel bars 1 are riveted or otherwise secured as at 6, to a rail plate 7, said plate corresponding in plan to the base plate 4. The rail plate 7, adjacent to the ends thereof, is provided with oppositely disposed openings 8, and the walls of these openings are provided with diametrically opposed vertical slots 9. Rails 10 are mounted upon the tie plate 7 with the base flanges 11 thereof arranged between the openings 8. The fasteners associated with each rail are identical in construction, therefore I deem it only necessary to describe one set of said fasteners. Engaging the inner side of the rail 10 is an inner fastener 12, and engaging the outer side of the rail 10 is an outer fastener 13, said outer fastener having an extension 14 that braces the head of the rail 10. The fasteners 12 and 13 are provided with depending tapering pins 15 that extend through the openings 8, said pins having diametrically opposed wings or lugs 16 that pass through the slots 9 when the pins are inserted in the openings 8, said pins or lugs engaging under the rail plate 7 when the fasteners 12 and 13 are swung into position and into engagement with the rail 10. In other words, the fasteners 12 and 13 are placed in parallel with the rail 10 when the pins 15 are inserted in the openings 8, but are swung at right angles to the rail 10, whereby the wings or lugs 16 will engage the under surface of the rail plate 7 and lock the pins within the openings 8 of said plate. In this manner, the fasteners 12 and 13 cannot become vertically displaced, except when the fasteners 12 and 13 are swung into parallelism with the rail 10.

The fasteners 12 and 13 are provided with transverse grooves 17 and vertical side grooves 18. Engaging in these grooves is an inverted U-shaped yoke 19 having the side arms 20 thereof provided with slots 21, and the top of said yoke with an opening 22. The side arms 20 of said yoke are secured in the grooves 18 of the fasteners by set screws 23, and set screws 24 are arranged in the openings 22 of the yoke to hold the top of the fasteners 12 and 13, within the grooves 17. The ends of the arms 20 extend into

and fill the slots 9 formed in the walls of the openings 8, thereby preventing foreign matter from entering said slots and clogging the same to interfere with the removal of the fasteners 12 and 13. After the yoke 19 has been placed in position and secured to the sides of the fasteners 12 and 13, the set screws 24 can be adjusted, thereby locking the upper ends of the yokes in engagement with the fasteners 12 and 13. The adjusting of the set screws 24 prior to adjusting the set screws 23, the yokes 19 would be moved out of engagement with the fasteners 12 and 13, therefore it is essential that the set screws 23 be adjusted first and then the set screw 24, which simply coöperates with the set screws 23 in retaining the yokes 19 in engagement with the fasteners 12 and 13.

From the foregoing it will be observed that I have devised a simple and inexpensive metallic tie that has fasteners that will not interfere with the passage of rolling stock over rails mounted upon the tie, and that the construction of the tie is such that it can be easily and quickly tamped in a road-bed to provide a firm bearing for the rails supported by said tie.

While in the drawing there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements are susceptible to such variations as fall within the scope of the appended claim.

What I claim is:—

In a metallic tie and rail fastener, the combination with rails, a tie adapted to support said rails and having openings formed therein with diametrically opposed walls of said openings provided with vertical slots, of inner and outer fasteners for holding said rails upon said tie, depending tapering pins carried by said fasteners and extending through the openings of said rail plates, wings carried by diametrically opposed sides of said pins for engaging under the under side of said rail plate, yokes carried by said fasteners and having the ends thereof extending into the slots of said rail plate, and set screws retaining said yokes in engagement with said fasteners.

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

THOMAS CARR.

Witnesses:

MAX H. SROLOVITZ,
CHRISTINA T. HOOD.