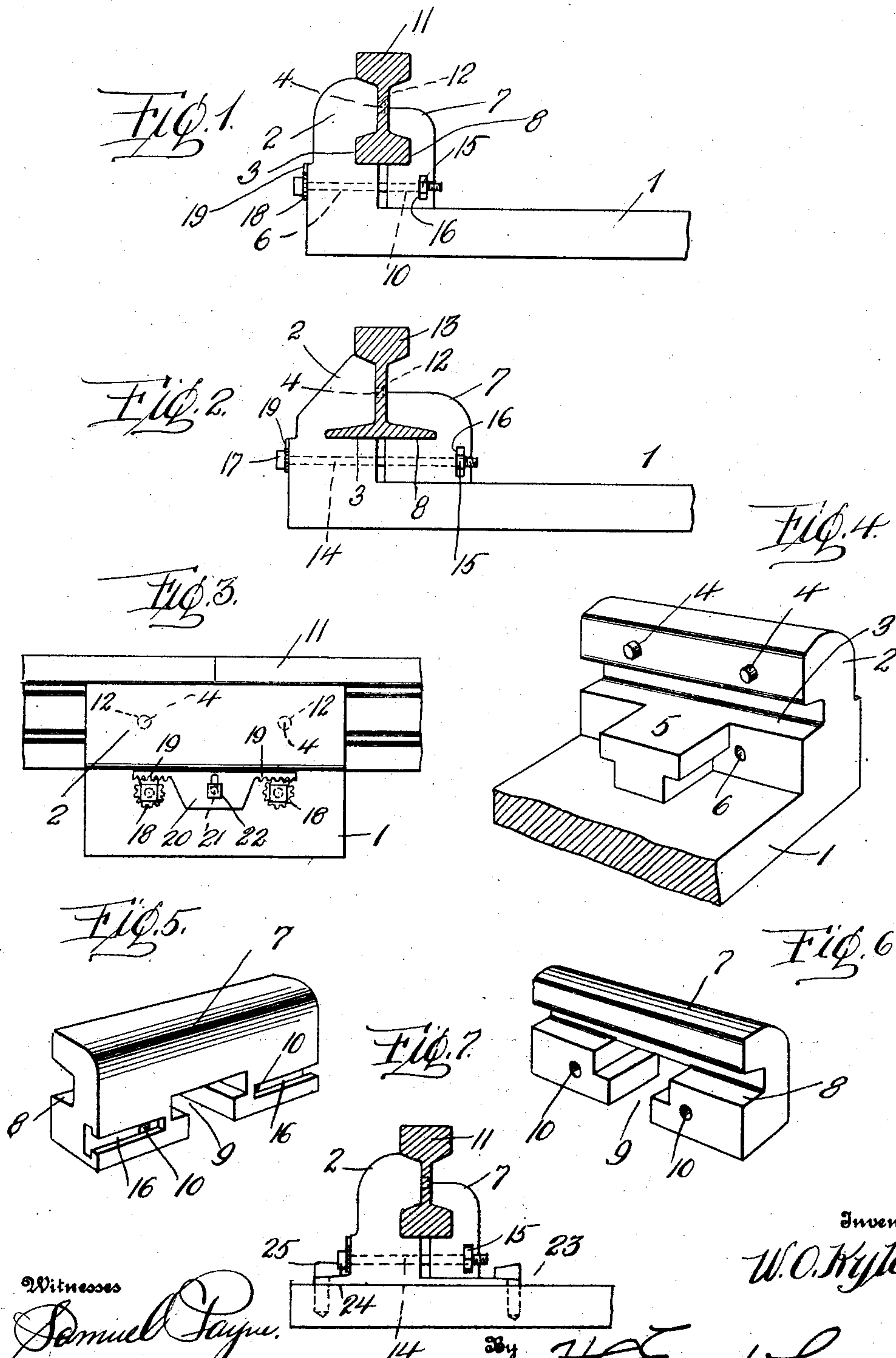


W. O. KYLE.
METALLIC TIE AND RAIL FASTENER.
APPLICATION FILED JULY 24, 1908.

906,900.

Patented Dec. 15, 1908.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM O. KYLE, OF MIDVALE, OHIO.

METALLIC TIE AND RAIL-FASTENER.

No. 906,900.

Specification of Letters Patent.

Patented Dec. 15, 1908.

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To all whom it may concern:

Be it known that I, WILLIAM O. KYLE, a citizen of the United States of America, residing at Midvale, in the county of Tuscarawas and State of Ohio, have invented certain new and useful Improvements in Metallic Ties and Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to a metallic tie and rail joint, and the object of my invention is to provide a novel metallic tie for firmly supporting the confronting ends of two rails, and novel means for holding said rails in engagement with said tie.

15 My invention aims to dispense with wooden ties for supporting rails to obviate the necessity of discarding rails having worn heads, to dispense with the use of nuts and bolts for holding splice bars in engagement with the confronting ends of two rails, and to eliminate gage bars or rods as a track laying tool.

20 To this end, I have devised a metallic tie of strong and durable construction having integral splice bars for bracing the outer sides of a track, thereby preventing the rails of two tracks from spreading. The rails are held in engagement with the tie by detachable splice bars, which are arranged to prevent lateral and vertical displacement of the rails. The splice bars can be constructed to support double headed rails, and it is in this connection that I intend to reverse a rail after the head has become worn, thereby obtaining a longer period of use than with the present type of rail.

25 The invention, together with other novel features thereof, will be presently described, and then specifically pointed out in the appended claims.

30 Referring to the drawing: Figure 1 is a side elevation of a portion of a tie constructed to support a double headed rail, Fig. 2 is a similar view of a tie constructed to support a single headed rail, Fig. 3 is an end view of my tie, Fig. 4 is a perspective view of one end of the tie, illustrating the inner side with an integral splice bar, Fig. 5 is a perspective view of the outer side of a detachable splice bar, Fig. 6 is a perspective view of the inner side of a detachable splice bar, and Fig. 7 is a side elevation of my invention as applied to a wooden tie.

35 In the accompanying drawings, 1 designates an oblong metallic tie having the ends thereof provided with upper extensions or

enlargements 2, corresponding in width to the tie and serving functionally as outer splice bars. The inner sides of these extensions or enlargements are provided with rail seats 3, web engaging pins 4, a central inwardly projecting T-shaped tongue 5, and a longitudinal opening at each side of the tongue 5.

40 In conjunction with the outer splice bar, I use an inner splice bar 7, said splice bar having a rail seat 8 adapted to confront the rail seat 3, T-shaped grooves 9 adapted to receive the tongue 5, and longitudinal openings 10 adapted to aline with the openings 6.

45 The outer and inner splice bars just described are designed for the confronting ends of reversible and double-headed rails 11, said rails being provided with suitable web recesses 12 to receive the web pins 4 of the outer splice bar. In Fig. 2 of the drawings, I have illustrated a splice bar as designed for an ordinary type of rail 13, the principal difference of construction residing in the depth of the seats 3 and 8.

50 To hold the inner splice bar in position in relation to the outer splice bar, I employ bolts 14 and nuts 15, said bolts extending through the alining openings 6 and 10. The nuts 15 are placed in slots 16 provided therefor in the inner splice bar 7, these slots preventing the nuts from rotating. The bolts 14 are then inserted in the openings 6 and 10 and screwed into the nuts, until the heads 17 of said bolts engage the ends of the tie. To prevent the bolts from rotating I provide said bolts adjacent to the heads 17 thereof with integral toothed disks 18, these disks being engaged by the toothed ends 19 of a plate 20, said plate being mounted upon the stud bolt 21 carried by the end of the tie and maintained upon said bolt by a nut 22. At any time it is desired to adjust the bolt 17, the nut 22 is loosened and the plate 20 elevated, without entirely removing said plate from the end of the tie.

55 In Fig. 7 of the drawings, I have illustrated the application of my invention to a wooden tie 23. In this instance the outer and inner splice bars are adapted to rest upon the tie, and to hold said splice bars thereon, I provide the outer splice bar with flanges 24, which are secured to the tie 23 by spikes 25. The tongue 5 of the outer splice bar prevents the inner splice bar from shifting vertically, while the bolts 14 prevent lateral displacement.

The slots 16 of the inner splice bars, the integral disk 18 and the plates 20 simply provide means for preventing the bolts and nuts from becoming accidentally disengaged from the tie, and in this connection, I would have it understood that various types of nut locks can be readily used in connection with my invention.

Having now described my invention what I claim as new, is:—

1. In a metallic tie and rail joint, the combination with rails, of an oblong metallic plate, upward extensions carried by the ends of said plate, said extensions having seats formed therein for said rails, inwardly projecting T-shaped tongues carried by said extensions, grooved inner splice bars adapted to fit upon said tongues and embrace the inner sides of said rails, said inner splice bars having slots formed therein, nuts mounted in said slots, bolts extending through said extensions and said inner splice bars for screwing into said nuts, and means carried by the

ends of said tie for locking said bolts in engagement with said extensions and said inner splice bars, substantially as described.

2. In a metallic tie and rail joint, the combination with rails, of an oblong metallic plate, upward extensions carried by the ends of said plate, said extensions having seats formed therein for said rails, inwardly projecting T-shaped tongues carried by said extensions, grooved inner splice bars adapted to fit upon said tongues and embrace the inner sides of said rails, said inner splice bars having slots formed therein, nuts mounted in said slots, and bolts extending through said extensions and said inner splice bars for screwing into said nuts.

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

WILLIAM O. KYLE.

Witnesses:

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