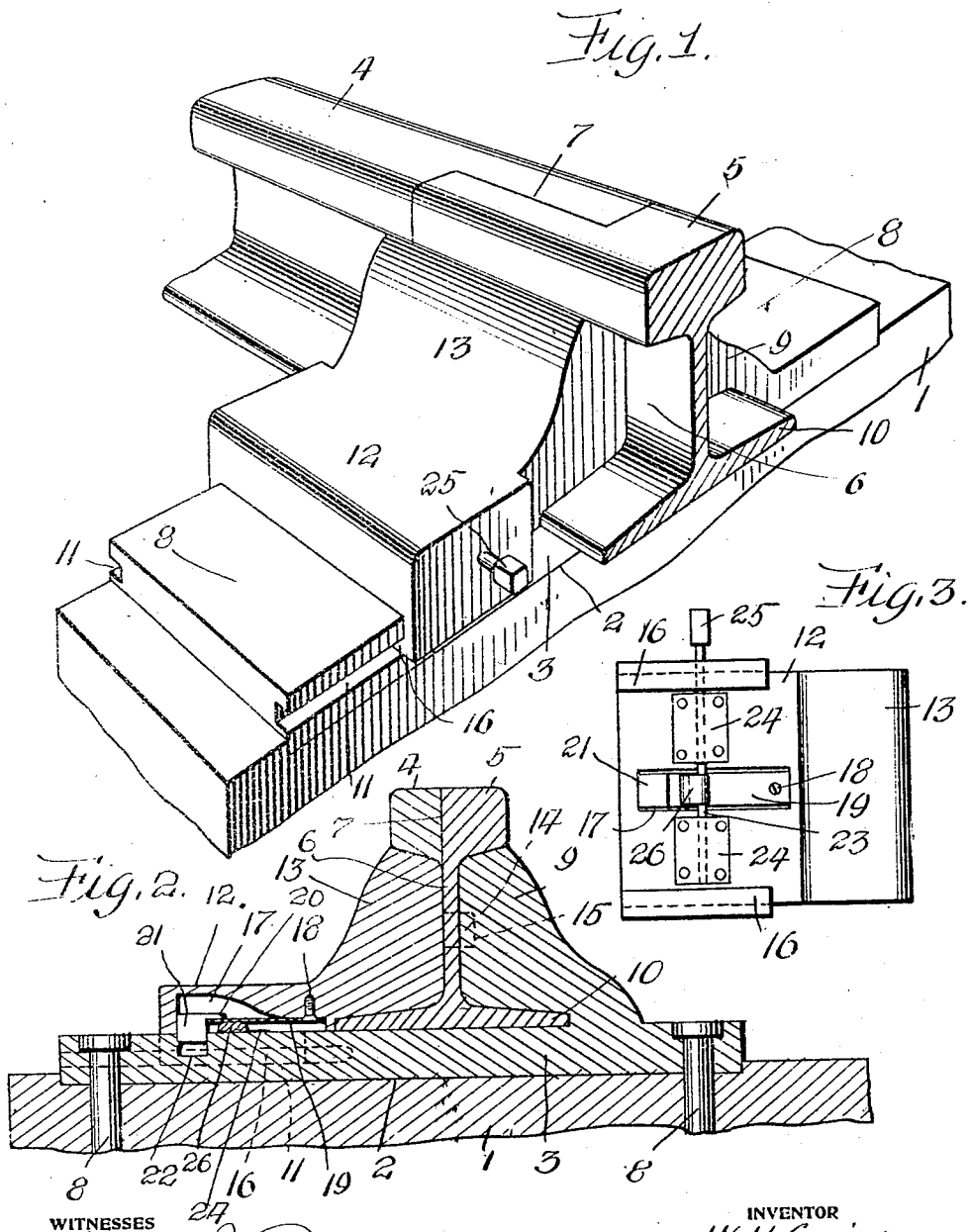


W. H. CRIPPS.
RAIL CONNECTION.
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1,013,747.

Patented Jan. 2, 1912.



WITNESSES
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UNITED STATES PATENT OFFICE.

WILLIAM H. CRIPPS, OF NEW BETHLEHEM, PENNSYLVANIA.

RAIL CONNECTION.

1,013,747.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed October 6, 1911. Serial No. 653,286.

To all whom it may concern:

Be it known that I, WILLIAM H. CRIPPS, a citizen of the United States of America, residing at New Bethlehem, in the county of Clarion and State of Pennsylvania, have
5 of Clarion and State of Pennsylvania, have invented certain new and useful Improvements in Rail Connections, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to rail connections, and the primary object of my invention is to provide a novel rail fastener for securing the confronting ends of rails upon a tie, whereby the confronting ends of said
15 rails cannot become vertically or laterally displaced.

Another object of my invention is to provide a rail joint that presents a continuous tread for rolling stock, thereby eliminating the jarring and bumping experienced by
20 rolling stock passing over a joint.

A further object of this invention is to obviate the necessity of using nuts and bolts for connecting the confronting ends
25 of rails.

A still further object of this invention is to accomplish the above results by a rail fastener that can be easily installed and manufactured at a comparatively small
30 cost.

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
35 then claimed.

Reference will now be had to the drawing, wherein:—

Figure 1 is a perspective view of the rail connection, Fig. 2 is a longitudinal sectional
40 view of the same, and Fig. 3 is a bottom plan of a detached fastener.

The reference numeral 1 denotes a portion of a tie having the top thereof cut away to provide a seat 2 for a rail chair 3 adapted to support the confronting ends of
45 rails 4 and 5. The rails 4 and 5 have abutting webs 6 with the heads of said rails cut away to interlock, as at 7 and present a continuous tread that allows the wheels
50 of rolling stock to pass on to one of the heads before leaving the other, thereby preventing the heads from being broken and forming an uneven tread for rolling stock.

The chair 3 is retained upon the seat 2 by bolts 8 or other fastening means having

the heads or upper ends thereof counter-sunk in the ends of the chair and the opposite ends extending through the tie. The chair 3, at one end thereof, has an integral splice bar 9 corresponding in width to said
60 chair, and this splice bar extends over the base flanges 10 of the rails 4 and 5 and engages the webs and the under sides of the heads of said rails. The opposite or inner end of the rail chair has the side thereof
65 provided with longitudinal grooves 11.

Detachably mounted upon the inner end of the chair is an inner fastener 12 having an integral splice bar 13 extending over the base flanges 10 of the rails 4 and 5 and
70 bracing the webs and heads thereof. The splice bar 13 has pins 14 extending through openings provided therefor in the webs 6 of the rails and into sockets 15 formed in the splice bar 9 and these pins prevent longitudinal displacement of said rails between the splice bars 9 and 13. The inner
75 fastener 12 has the sides thereof provided with depending angle tongues 16 extending into the grooves 11 of the rail chair 3, and the under side of the inner fastener is cut away to provide a recess 17. Mounted in the recess 17 by a screw 18 or other fastening means is a flat spring 19 that extends
80 under the lip 20 of a locking block 21. This block is adapted to engage in a socket 22 provided therefor in the rail chair 3, whereby said inner fastener will be locked relatively to said chair.

Extending under the outer end of the
90 spring 19 is a rod or shaft 23 held in engagement with the inner fastener 12 by plates 24. The rod or shaft extends through one of the end walls of the inner fastener and is provided with a knob or
95 handle 25, whereby said rod or shaft can be easily rotated. The rod or shaft has a cam or crank 26 engaging the under side of the spring 19, and when the rod or shaft 23 is rotated a quarter of a revolution, the
100 free end of the flat spring 19 is elevated to move the locking block 21 out of the socket 22, whereby the inner fastener 12 and the splice bar 13 thereof can be shifted off of the inner end of the chair 3.

105 The rail fastener in its entirety is made of strong and durable metal, and while in the drawing there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements

thereof are susceptible of such variations as fall within the scope of the appended claims.

What I claim is:—

5 1. In a rail connection, the combination with a tie, and rails adapted to have the ends thereof supported by said tie, of a chair secured to the top of said tie and supporting the ends of said rails, a splice bar
10 formed integral with the outer end of said chair and bracing the outer sides of said rails, an inner fastener slidably mounted upon the inner end of said chair, a splice bar carried thereby and bracing the inner
15 sides of said rails, a movable block arranged within said inner fastener and adapted to engage in said chair for locking said fastener relatively to said chair, and means including a shaft and a spring ar-
20 ranged within said inner fastener for moving said block whereby said inner fastener can be shifted off of said chair.

2. In a rail connection, the combination with a tie, and rails adapted to have the

ends thereof supported by said tie, of a 25 chair secured to the top of said tie, an outer splice bar carried by said chair and bracing the outer sides of said rails, an inner fastener slidably mounted upon the inner end of said chair, a splice bar carried 30 thereby and bracing the inner sides of said rails, pins carried by said bar and extending through said rails into the outer splice bar, a spring arranged in said inner fastener, a block supported by said spring and 35 extending into said chair for locking said inner fastener relatively to said chair, and means including a shaft and cam arranged below said spring and operable from one side of said inner fastener for elevating 4 said block to release said inner fastener.

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

WILLIAM H. CRIPPS.

Witnesses:

MAX H. SROLOVITZ,
CHRISTINA T. HOOD.