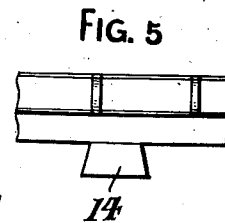
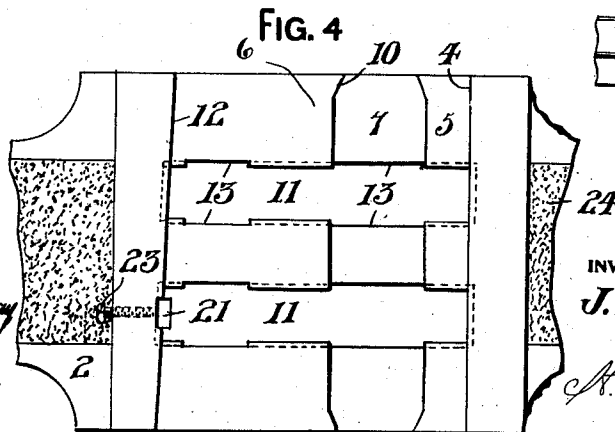
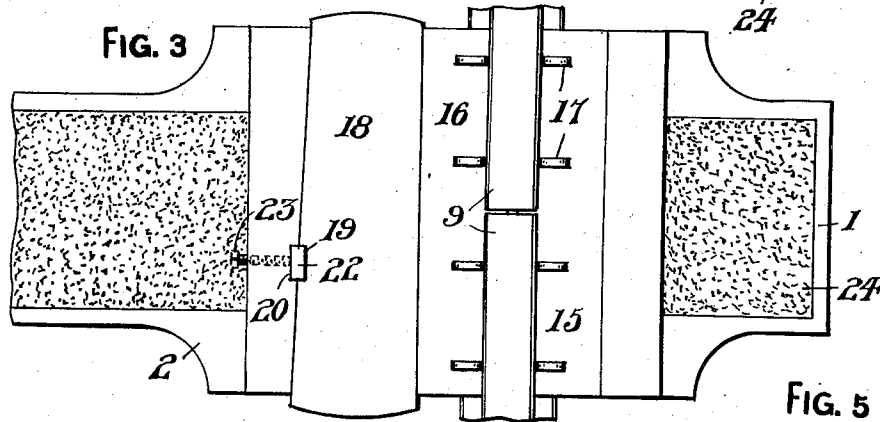
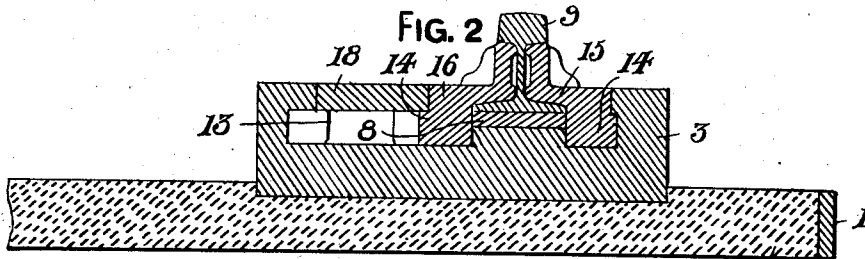
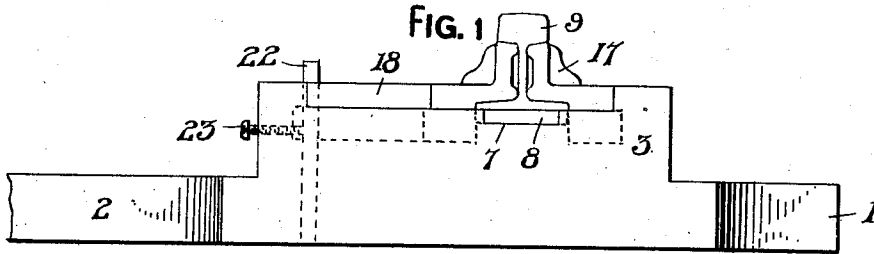


J. W. KENNEDY.
RAIL JOINT.
APPLICATION FILED DEC. 4, 1911.

1,021,533.

Patented Mar. 26, 1912.



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UNITED STATES PATENT OFFICE.

JOSEPH WILSON KENNEDY, OF DUQUESNE, PENNSYLVANIA.

RAIL-JOINT.

1,021,533.

Specification of Letters Patent.

Patented Mar. 26, 1912.

Application filed December 4, 1911. Serial No. 663,691.

To all whom it may concern:

Be it known that I, JOSEPH WILSON KENNEDY, a citizen of the United States of America, residing at Duquesne, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to ties and rail fasteners, and the objects of my invention are to substitute concrete and metal for the ordinary type of wooden tie or sleeper, and to provide a tie that is strong and durable and capable of supporting the great weight of rolling stock.

Other objects of my invention are to furnish a tie with a novel rail chair for supporting the confronting ends of rails, and to provide the chair with fasteners that will prevent vertical and lateral displacement of the rails mounted thereon.

Further objects of my invention are to provide rail fasteners that can be easily and quickly installed without the use of skilled labor, and to accomplish the above result by a mechanical construction that is highly efficient for the purposes for which it is intended.

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, wherein like numerals denote corresponding parts throughout the several views, in which:—

Figure 1 is a side elevation of a portion of a tie in accordance with this invention, Fig. 2 is a longitudinal sectional view of the same, Fig. 3 is a plan of the tie and rail fastener, Fig. 4 is a plan of a portion of the tie, and Fig. 5 is a side elevation of one of fasteners.

A tie in accordance with this invention comprises a rectangular frame corresponding in size to the ordinary wooden tie. The frame is made of metal and the sides thereof, adjacent to the ends, are provided with longitudinal enlargements. Formed integral within the enlargements 2 and extending transversely of the frame 1 is a rectangular chair 3, said chair extending above the upper surface of the frame 1. The top of the chair 3 is cut away, as at

4 to provide a seat 5 for an outer rail fastener, a seat 6 for an inner rail fastener and a seat 7 for a cushion 8. The cushion 8 is preferably made of wood and said cushion supports the confronting ends of rails 9. The ends of the seat 7 are reduced, as at 10 and the ends of the cushion 8 are tapered, whereby the cushion when placed upon the seat 7 cannot become accidentally displaced.

The chair 3 is provided with longitudinal dove-tailed slots 11 extending from the straight edge of the cut away portion of the chair to the inclined or beveled edge 12 of the chair. The walls of the slots 11 are cut away, as at 13 to provide clearance for the dove-tailed tongues 14 of an outer fastener 15 and an inner fastener 16. These fasteners extend over the base flanges of the rails 9 and brace the webs and heads of said rails, said fasteners being in the form of splice bars provided with equally spaced bracing webs 17.

To retain the fasteners 15 and 16 in position against the rails 9, a tapering key or wedge 18 is employed, said key or wedge being driven between the wall of the inner fastener 16 and the tapering wall 12 of the chair, said key or wedge forcing the fasteners into engagement with the rails 9.

To lock the key or wedge 18 in the chair, one edge of the key or wedge is provided with a slot 19 confronting a slot 20 in the chair, these two slots providing an opening that registers with a vertical opening 21 formed in the chair. Mounted in the opening is a vertical pin 22 that is locked within the chair by a set screw 23.

The frame 1 is filled with concrete 24 or a ballast, the concrete or ballast extending under the chair 3, as best shown in Fig. 2 of the drawing.

From the foregoing it will be observed that after the fasteners are placed in position that the tongues 14 of said fasteners prevent vertical displacement, while the chair and the key or wedge 18 prevent lateral displacement of said fasteners. In consequence of this construction, the rails are firmly held and braced, and the chair provides practically a continuous tread for rolling stock, thereby eliminating the jarring and bumping when rolling stock passes over a joint.

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 changes as fall within the scope of the appended claims.

What I claim is:—

- 5 1. In a tie and rail fastener, the combination with rails, of a metallic frame, a chair
formed integral with the upper edges of
said frame adjacent to each end of said
frame, said chair being cut away to provide
10 fastener seats and a cushion seat, a cushion
mounted upon said cushion seat and adapted
to support said rails, an outer fastener ar-
ranged upon one of said seats and provided
with dove-tailed tongues engaging in said
15 seat, an inner fastener arranged upon the
other seat and provided with dove-tailed
tongues engaging in said seat, a wedge ar-
ranged in said chair between the wall
thereof and the edge of said inner fastener,
20 and a vertical pin retaining said wedge in
said chair.

2. In a tie and rail fastener, the combina-
tion with rails, of a metallic frame, a chair

formed integral with the upper edges of said
frame adjacent to each end of said frame, 25
said chair being cut away to provide fas-
tener seats and a cushion seat, a cushion
mounted upon said cushion seat and adapted
to support said rails, an outer fastener ar-
ranged upon one of said seats and provided 30
with dove-tailed tongues engaging in said
seat, an inner fastener arranged upon the
other seat and provided with dove-tailed
tongues engaging in said seat, a wedge ar-
ranged in said chair between the wall 35
thereof and the edge of said inner fastener,
a vertical pin retaining said wedge in said
chair, concrete arranged in said frame and
beneath said chair, and means for locking
said pin in engagement with said chair. 40

In testimony whereof I affix my signa-
ture in the presence of two witnesses.

JOSEPH WILSON KENNEDY.

Witnesses:

MAX H. SROLOVITZ,
C. T. HOOD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."