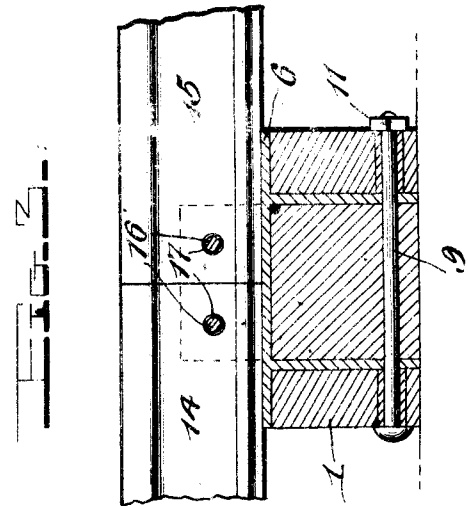
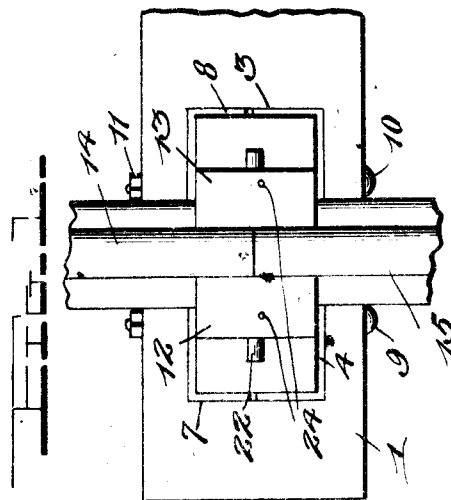
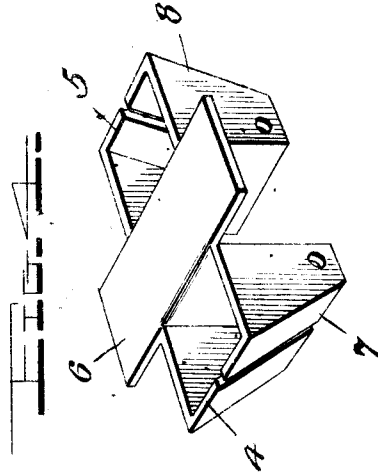
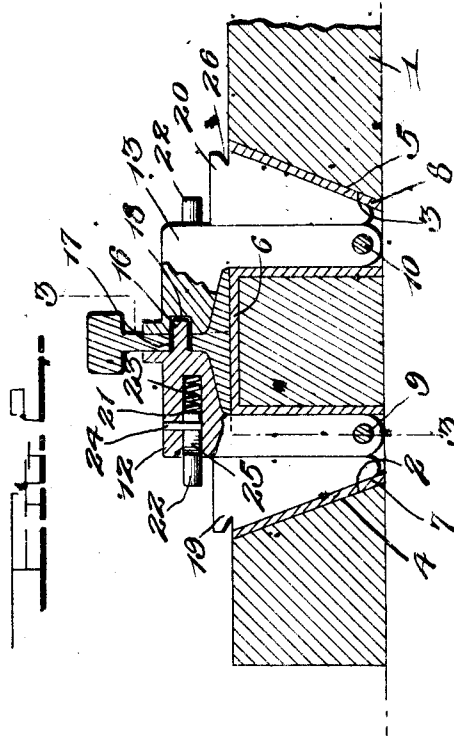


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RAIL JOINT..

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1,050,353.

Patented Jan. 14, 1913.



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# UNITED STATES PATENT OFFICE.

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## RAIL-JOINT.

1,050,353.

Specification of Letters Patent.

Patented Jan. 14, 1913.

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*To all whom it may concern:*

Be it known that I, ALBERT DILLON, a citizen of the United States, residing at Aitch, in the county of Monroe and State of Ohio, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to new and useful improvements in rail joints, the same being a division of my prior Patent No. 1,010,601, issued December 5, 1911, and the primary object of the invention is to provide improved means for securely retaining a pair of rails together and to a tie, so that the same will be prevented from casual movement, either laterally or longitudinally.

In addition to the numerous objects of my prior patent, above noted, a further object of this invention resides in the provision of clamping members, pivoted to the tie and having means thereon engaging the ends of the opposed rails to secure the same together and to the tie proper.

A further object of the invention resides in providing a pair of clamping members pivoted at their lower ends within openings in the tie, portions of said clamping members being adapted to engage the base flanges of the opposed rails and a still further object of the invention resides in providing studs on one of the clamping members, which are adapted to extend through openings in the opposed rails and be received in sockets in the opposed clamping member.

With these and other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts, as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawing forming a part of this application, Figure 1 is a top plan view showing my device as applied to use; Fig. 2 is a vertical section there-through; Fig. 3 is a vertical section through the device, as seen on line 3—3, Fig. 2, and Fig. 4 is a perspective view of the metallic lining used in connection with the openings formed in the tie.

In carrying out my invention I shall refer to the drawing, in which similar reference characters designate corresponding parts throughout the several views and in which—

I indicates a tie formed of any desired

material, preferably cement or the like, in this instance, adjacent each end of which is provided a pair of rectangular openings 2 and 3, said openings being extended completely through the tie. The openings in each pair are arranged in spaced alinement with respect to one another, the outer side wall of the opening 2 and the inner side wall of the opening 3 being inclined inwardly from their upper to their lower edges, as shown at 4 and 5, respectively, and in order to prevent undue wear on the material forming the tie at the openings 2 and 3, I provide a metallic lining therefor, which is particularly shown in Fig. 4. This metallic lining comprises a flat strip 6, which is adapted to rest upon the outer face of the tie between said openings 2 and 3, the same having formed integrally with the side edges thereof and depending therefrom, a pair of casings or the like 7 and 8, which are designed to conform in outline to the openings 2 and 3, within which they are adapted to be disposed. This lining, comprising the strip 6 in the casings 7 and 8, is molded or otherwise applied to the tie so that said plate 6 will fit flush with the upper face thereof and the casings 7 and 8, disposed to entirely cover the four walls of said openings 2 and 3, whereby any apparatus which may be applied to the tie for the purpose of securing the rails thereto will not cause injury to said tie.

Extending through the openings 2 and 3, adjacent their lower portions, so as to project beyond the side walls of the tie, are the respective bolts 9 and 10, said bolts being held in position by means of the nuts 11 engaged with the free ends thereof and pivotally mounted on said bolts, within said openings 2 and 3, are the locking or clamping members 12 and 13 respectively. These clamping members are substantially inverted L shape in section and when positioned effectively, the inner faces of the vertical portions of said members are adapted to contact with the inner opposed walls of said openings 2 and 3, while the horizontal portions of said members are adapted to engage the base flanges of the opposed rails 14 and 15, the under faces of the horizontal portions of said members being beveled co incident to the inclination of said base flanges. It will be appreciated that by disposing these clamping members 12 and 13 in

their effective positions, as shown in Figs. 1 and 2, in engagement with the ends of the opposed rails 14 and 15, said rails will be held to the tie and in order to retain said rails in engagement with one another, the one clamping member 12 has the inner side face thereof provided with a pair of studs 16 which are adapted to extend through openings 17 in the webs of the opposed rails. The inner face of the opposed clamp 13 is also provided with registering sockets 18 to receive the studs 16 after passing through the openings in the opposed rails and wedge members 19 and 20 are also provided and adapted to be respectively entered in the openings 2 and 3, between the inclined walls thereof and the outer faces of the members 12 and 13. These wedge members have one wall thereof, the outer, inclined coincident to the inclination of the outer walls 4 and 5 respectively, whereby when said wedge members are forcibly driven in position, the same will cause the members 12 and 13 to bind tightly against the base flanges to secure the rails to the tie and simultaneously engage the openings 17 to secure the opposed rails in locked engagement with one another.

The outer face of each of the members 12 and 13, adjacent its upper end, is provided with a recess 21, within which is disposed a lug or pin 22, a spring 23 being also disposed in said recess between said member and the rear wall of the same, whereby the normal tendency of said spring will be to force said pin outwardly beyond the outer face of the clamping member. This recess, however, is of such depth as will permit the pin 22 to be entirely disposed therewithin, but in order to limit the outward movement of the lug or pin 22, an additional pin 24 is extended vertically through said recess 21. The pin 22 is also provided with a cutaway portion 25 forming shoulders at each end thereof and between which the pin 24 is disposed. From this construction it will be readily seen that the outward movement of the pin 22 will be limited and when in its extended position, as shown in Figs. 1 and 2, will limit the upward movement of a wedge member to prevent the total casual displacement thereof. It will be seen therefore that in placing these wedge members in position, the same must be forced against the lugs or pins 22 which will yield against the springs 23 and when once positioned, said wedge members cannot be totally removed, without first forcing said pins within the recesses 21.

When the wedge members are effectively disposed to force the clamping members into engagement with the base flanges of the rails, the upper faces thereof are positioned a very short distance above the upper face of the tie, so that considerable difficulty will ordinarily be incurred for the removal

of said wedge members but in order to aid this removal each of the wedge members is provided on its outer face, adjacent the upper face thereof, with a notch 26. Thus an instrument may be readily inserted within these notches to force said wedges upwardly and out of effective engagement with the walls of the opening and the walls of the clamping members.

From the foregoing it will be seen that I have provided a simple, inexpensive and efficient means for carrying out the objects of the invention and while I have particularly described the elements best adapted to perform the functions set forth, it is obvious that various changes in form, proportion, and in the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the details of the invention.

Having thus described my invention what I claim is:

1. In a rail joint, the combination with a pair of rails, each provided with an opening in the web adjacent the abutting end thereof; of a tie therefor, clamping members pivotally and permanently carried on said tie, means to force said clamping members into effective engagement with the base flanges and webs of said rails, and means on the effective faces of said clamping members adapted to cooperate with the openings in said rails to secure said rails together simultaneously with the clamping of the same to the tie.

2. In a rail joint, the combination with a pair of rails; of a tie therefor having a pair of openings adjacent one end thereof, clamping members pivotally carried in said openings and adapted to engage the base flanges and webs of said rails, means on the effective faces of said clamping members to clamp said rails together, wedge members adapted to be applied within said openings to force said clamping members into their effective positions, and means to prevent the total casual displacement of said wedge members.

3. In a rail joint, the combination with a pair of rails, each provided with an opening in the web adjacent the abutting end thereof; of a tie therefor having a pair of vertical openings therein, one disposed on each side of the rails, clamping members pivotally and permanently mounted in the openings of said tie, wedge members adapted for application in the openings of said tie to force said clamping members into engagement with said rails, means on the effective faces of said clamping members adapted to enter the openings in said rails to clamp the same together, and means yieldingly projected from the rear faces of said clamping members to prevent casual displacement of said wedge members.

4. In a rail joint, the combination with a pair of rails, each provided with an opening in the web adjacent the abutting end thereof; of a tie therefor having a pair of vertical openings therein, one disposed on each side of the rails, clamping members pivotally and permanently mounted in the openings of said tie, wedge members adapted for application in the openings of said tie to force said clamping members into engagement with said rails, means on the effective faces of said clamping members

adapted to enter the openings in said rails to clamp the same together, and spring forced pins carried in the outer faces of said clamping members adapted to project therebeyond to prevent casual displacement of said wedge members. 15

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

ALBERT DILLON.

Witnesses:

BRYAN DYE,  
M. C. DOUGHERTY.