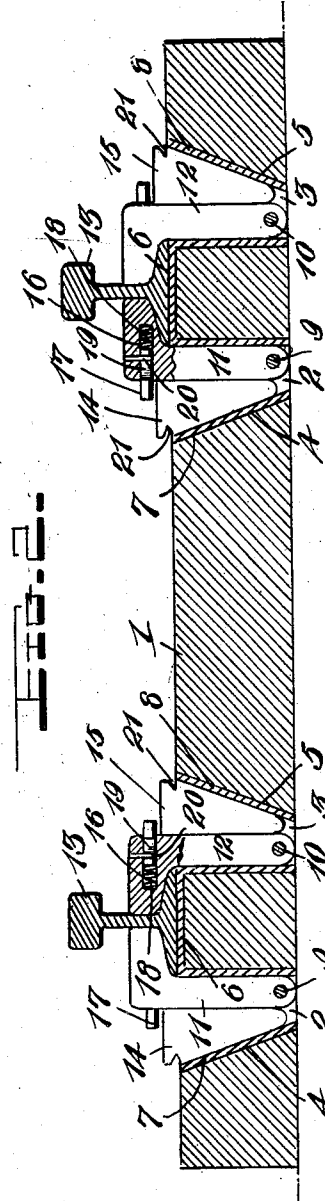
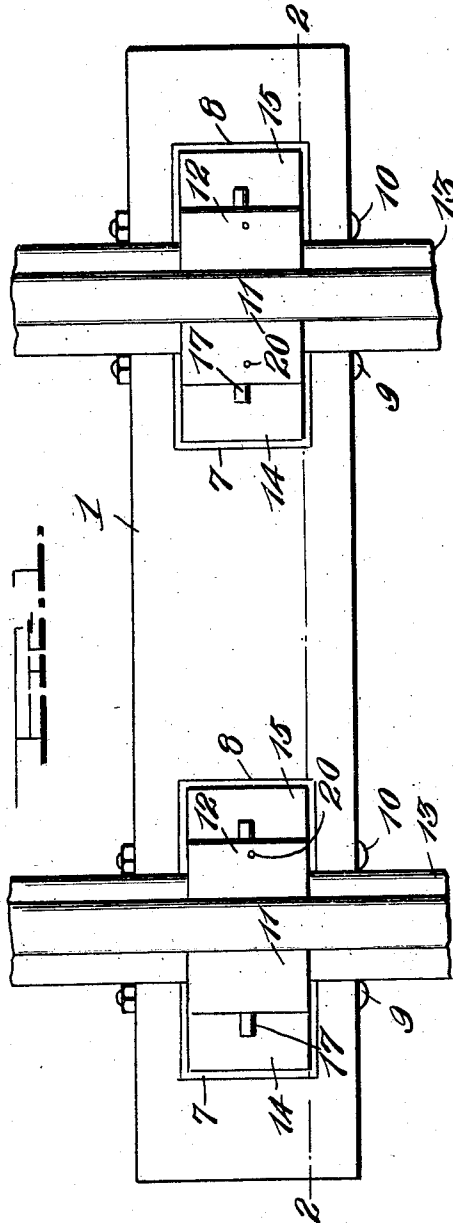


A. DILLON.
RAIL TIE AND FASTENER.
APPLICATION FILED JULY 1, 1911.

1,010,601.

Patented Dec. 5, 1911

2 SHEETS—SHEET 1.



Witnesses

Chas. L. Griesbauer
L. H. Ellis

Inventor

Albert Dillon,

By

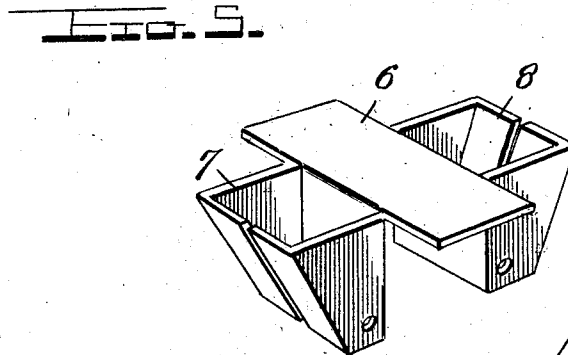
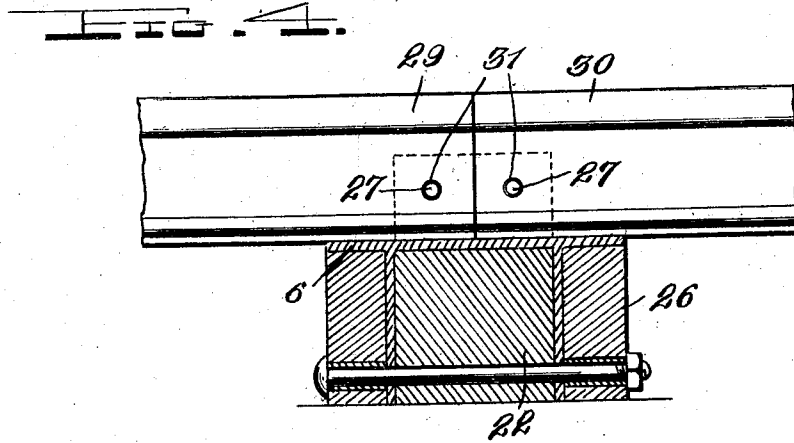
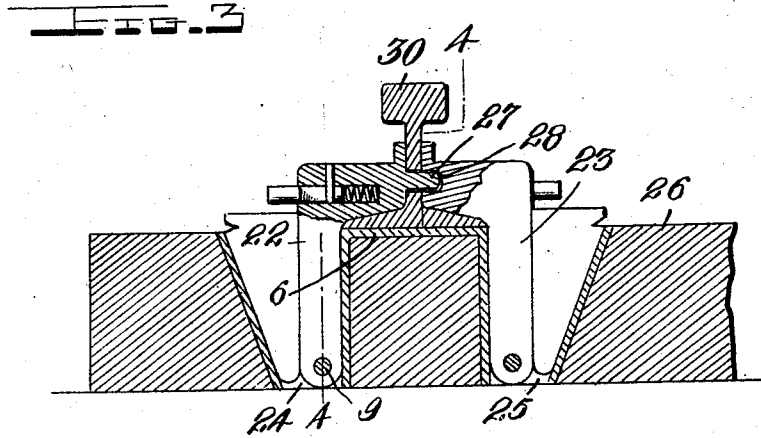
Watson E. Coleman
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Inventor
Albert Dillon,

By Watson E. Coleman.
Attorney

UNITED STATES PATENT OFFICE.

ALBERT DILLON, OF AITCH, OHIO.

RAIL TIE AND FASTENER.

1,7010,601.

Specification of Letters Patent.

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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 Ties and Fasteners, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to new and useful improvements in rail ties and fasteners, and my object is to provide a device of this character which will secure a rail in position and lock the same against casual movement, either laterally or longitudinally.

A further object of the invention resides in providing a tie having pivoted locking or clamping members thereon for engagement with the base flanges of the rail, and a further object of the invention resides in providing wedge members for retaining said locking or clamping members in effective engagement with the rail.

Another object of the invention resides in providing means in connection with the locking or clamping members whereby the wedge members will be prevented from total displacement in case the same become freed from their fastenings.

A still further object resides in providing means on certain of the clamping members for clamping the ends of a pair of rails together as well as to the tie, thereby forming a substantial rail joint.

Still another object of the invention resides in the provision of a lining for the openings in the tie formed of a single piece of metal which is adapted to be particularly applied to use when the tie is of cement structure or the like.

A still further object resides in providing a device which is extremely simple in construction, thereby readily and cheaply manufactured, and one which is durable, effective and useful in operation.

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 drawings forming a part of this application, Figure 1 is a top plan view of my improved rail tie and fastener applied to use. Fig. 2 is a vertical section therethrough as seen on line 2—2,

Fig. 1. Fig. 3 is a fragmentary vertical section through the tie showing a slightly modified form of rail clamping or fastening means. Fig. 4 is a vertical section as seen on line 4—4, Fig. 3. Fig. 5 is a detail perspective of the metallic lining used in connection with the openings in a cement or like formed tie.

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

1 indicates a tie formed of any desired material, in this instance, preferably cement or the like, adjacent each end of which is provided a pair of rectangular openings 2 and 3, which openings are extended substantially vertically and completely through said tie. Each pair of openings is alined with one another and the openings of each pair are spaced a short distance apart, while the outer side wall of the opening 2 and the inner side wall of the opening 3 are inclined inwardly from their upper to their lower ends, as shown at 4 and 5, respectively. As stated, this tie 1 is preferably formed of cement or the like, and when so formed, a metallic lining for the openings 2 and 3 is molded therewithin. This lining consists of a flat strip 6 which is adapted to rest on the upper face of the tie between said openings 4 and 5 and has formed integral with the side edges thereof and depending therefrom, a pair of casings or the like 7 and 8, which casings are designed to conform in outline to the openings 2 and 3 in the walls of which they are adapted to be molded. Thus, when this lining is properly applied to the tie, the same will entirely cover the four walls of each of the openings 2 and 3 and also cover the space on the upper face of said tie between said openings, whereby any apparatus which may be applied to the tie for the purpose of securing the rails thereto, will not be adapted to cause the tie to disintegrate.

Pivotal mounted on the bolts 9 and 10, which extend, respectively, through the walls of the openings 2 and 3 to project beyond the side walls of the tie proper, are the locking or clamping members 11 and 12, said clamping members being of substantially inverted L-shape in section and the horizontally disposed portions of said clamping members are spaced a short distance above the upper face of the tie 1 when

said members are positioned effectively. When positioned effectively, the inner faces of the vertical portions of said members 11 and 12 are adapted to contact with the inner
 5 opposed walls of said openings 2 and 3, and in such positions, the horizontal portions of said members are adapted to engage the base flanges of a rail 13, and in order to cause
 10 said clamping members 11 and 12 to remain in their locked positions, the wedge members 14 and 15 are provided which are adapted to be, respectively, entered in said openings 2 and 3 between the inclined walls
 15 thereof and the outer faces of said members 11 and 12. These wedge members have one wall thereof, the outer, inclined coincident to the inclination of the walls 4 and 5, respectively, whereby when said wedge members are forcibly driven in position, the
 20 same will cause the members 11 and 12 to tightly bind against the base flanges and the web of said rail to secure the same against both lateral and longitudinal movement. In order to prevent these wedge
 25 members 14 and 15 from becoming totally freed in case of casual displacement, the outer faces of said clamping members are provided with the recesses 16 in which are disposed the movable pins or lugs 17. These
 30 pins 17 are held in their protruded or extended positions, as shown in the drawings, by means of the coil springs 18 disposed in said openings between the rear walls thereof and the inner ends of said pins, and
 35 in order to limit the movement of said pins, the same are provided with ways 19 to form shoulders at the ends thereof, whereby the pins 20 extending through the outer faces of said clamping members and entering the
 40 openings 16, will contact with said shoulders and prevent additional outward movement and limit the movement of said pins 17. It will be seen, therefore, that in placing these wedge members, the same must be forced
 45 against the pins 17 which will yield against the springs 18, and when once positioned, the same cannot be totally removed without first forcing said pins within the openings 16 so that said wedge members may be
 50 passed therebeyond. When the wedge members 14 and 15 have been driven into their effective positions so as to dispose said clamping members in engagement with the base flanges of the rail, the upper faces
 55 thereof are positioned a very small distance above the upper face of said tie, and in order to provide means whereby said wedge members may be removed, the same are provided on their outer side faces with the
 60 notches 21, whereby an instrument of any desired character may be entered within said notches to force said wedges upwardly out of effective engagement with the walls 4 and 5 and the clamping members.

65 As disclosed in Fig. 3, I have provided a

slightly modified form of rail fastening means wherein a pair of pivoted clamping members 22 and 23 are pivotally mounted within a pair of openings 24 and 25, respectively, of a tie 26, the arrangement of the
 70 openings and the pivoting of said members in said tie being substantially the same as that described in the other form, and in this modified form, the wedge members and the spring forced pins carried on the clamping
 75 members are also provided. The inner opposed or effective faces of said clamping members 22 and 23 which are adapted to engage the web of a rail, are provided with interlocking means and in this instance, the clamping member 22 is provided with
 80 a pair of spaced apart pins or lugs 27, while the face of said clamping member 23 is provided with a pair of openings 28 in alignment with the pins 27 and adapted to receive the free end thereof as said clamping
 85 members are forced into their effective positions. This form is adapted to be used as a rail joint, and in this instance, a pair of rails 29 and 30 are each provided with an opening 31 adjacent the abutting end thereof, said openings being in alignment
 90 with the pins 27 and the clamping member 23, and it will be seen when said rails are placed on the tie between the clamping members and said clamping members forced
 95 into their effective positions so that the pins 27 will extend through the openings of each of said rails and into the openings 28 of the opposite clamping member, and the wedge
 100 members driven into effective position, said rails will be securely clamped together and to the tie.

From the foregoing, it will be seen that I have provided an improved rail tie and
 105 fastener wherein pivoted clamping members are provided on the tie which are adapted to engage the web and base flanges of a rail to securely clamp the same to the tie against lateral and longitudinal movement thereon. It will still further be seen that in carrying
 110 out this same principle of locking the rail to the tie by means of clamping members, I have also provided means for the clamping of two rails together, thereby forming
 115 a substantial rail joint as well as a fastening means for the rail to the tie. Furthermore, it will be seen that these pivoted members will be forced and retained in their effective positions by means of wedge members, and
 120 it will still further be seen that I have provided means on the pivoted members for the retention of the wedge members in their positions in the openings of the tie, thereby preventing total displacement of the same. It will further be seen that I have provided
 125 a metallic lining for the openings in the tie, whereby when said tie is formed of cement or like material, the same will not be adapted to disintegrate when the movable parts are
 130

secured therein and placed in operation. It will further be seen that this metallic lining for each pair of openings, is formed of a single piece of metal, whereby the same may be readily molded with the tie, and if desired, can, in itself, be used as a supporting means for the rail and at the same time be provided with the clamping members to secure the rail thereto, thereby forming a substantial tie and securing means in itself. Furthermore, it will be seen that my device is of extremely simple construction, whereby the same may be readily and cheaply manufactured, but one which is durable in construction, and effective and useful in operation.

What I claim is:—

1. A device of the class described, comprising a rail tie having a pair of openings adjacent each end thereof, clamping members pivotally carried within said openings, wedge members adapted to be entered in said openings to force said clamping members in their effective positions, and means carried on the clamping members to prevent the total casual displacement of said wedge members.

2. A device of the class described, comprising a tie having a pair of openings adjacent each end thereof, clamping members pivotally mounted within said openings, wedge members adapted to be inserted in said openings to force said clamping members in their effective positions, and a spring-forced pin projecting beyond one face of each of said clamping members to prevent the total casual displacement of said wedge members.

3. A device of the class described, comprising a rail tie having a pair of openings adjacent each end thereof, clamping members pivotally carried within said openings, wedge members adapted to be inserted in said openings to force said clamping members in their effective positions, and yieldingly-held means on each of said clamping members to prevent the casual displacement of said wedge members.

4. A device of the class described, comprising a tie having a pair of openings ad-

jacent each end thereof, clamping members pivotally mounted within said openings, wedge members adapted to be inserted in said openings to force said clamping members in their effective positions, a pin projecting from one face of each of said clamping members to prevent the casual displacement of the wedge members, spring members acting on said pins to normally force the same in their extended positions, and means to limit the movement of said pins.

5. A device of the class described, comprising a tie having openings therein, clamping members pivotally mounted within said openings, and wedge members adapted to be inserted in said openings to force said clamping members in their effective positions, said wedge members being provided with notches in their outer faces, whereby the same may be readily engaged and removed from their effective positions.

6. A device of the class described, comprising a tie having openings therein, clamping members pivotally mounted within said openings, and wedge members adapted to be inserted in said openings to force said clamping members in their effective positions, said wedge members being provided with notches on their outer faces which project above the upper surface of said tie, whereby the same may be readily engaged and removed from their effective positions.

7. A device of the class described, comprising a tie having a pair of spaced apart openings adjacent each end thereof, a lining for each pair of openings formed of a single piece of metal and comprising a pair of casings fitting within said openings and a bridge piece for said casings resting on the upper face of said tie between said openings, clamping members pivotally mounted within said openings, and means to force the same into their effective positions.

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

ALBERT DILLON.

Witnesses:

CORA TRUEX,
ROBERT SMITH.