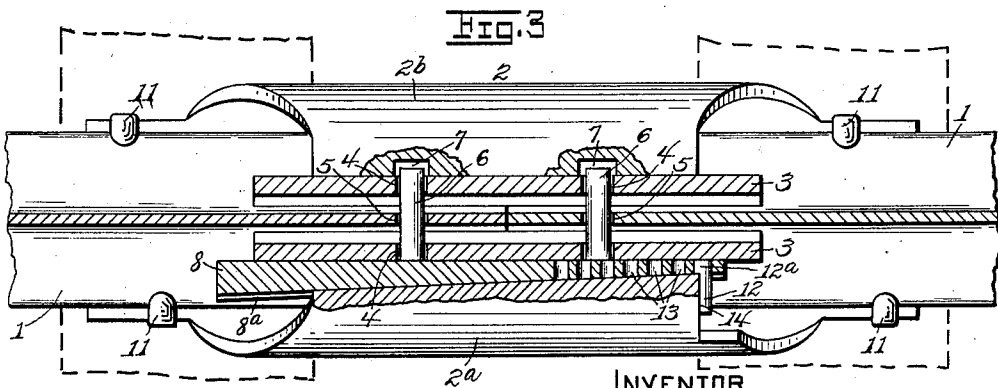
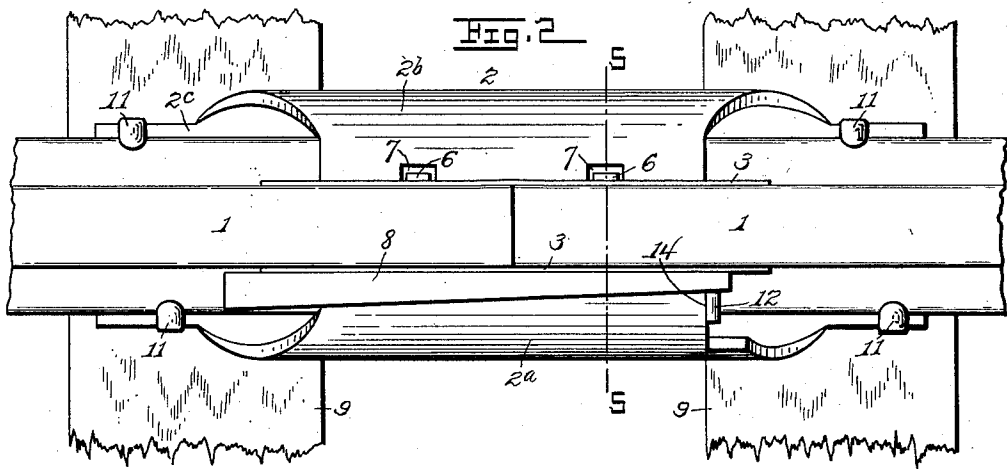
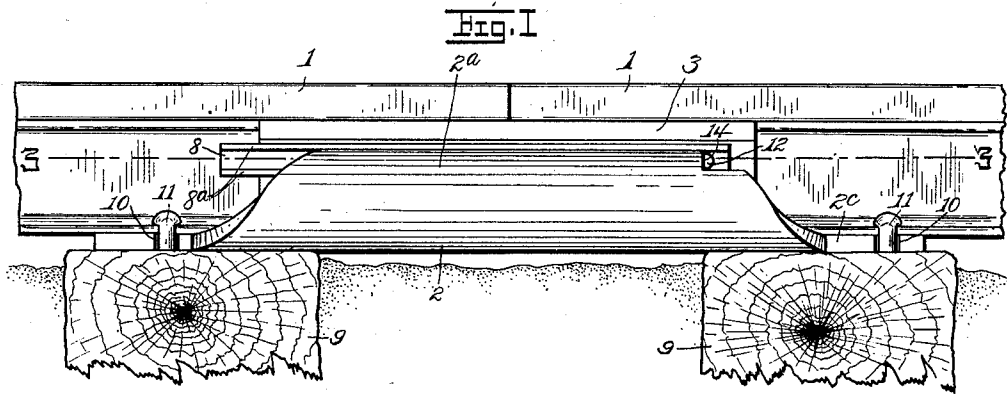


F. E. DILLON.
RAIL JOINT.
APPLICATION FILED OCT. 10, 1911.

1,055,991.

Patented Mar. 11, 1913.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 4

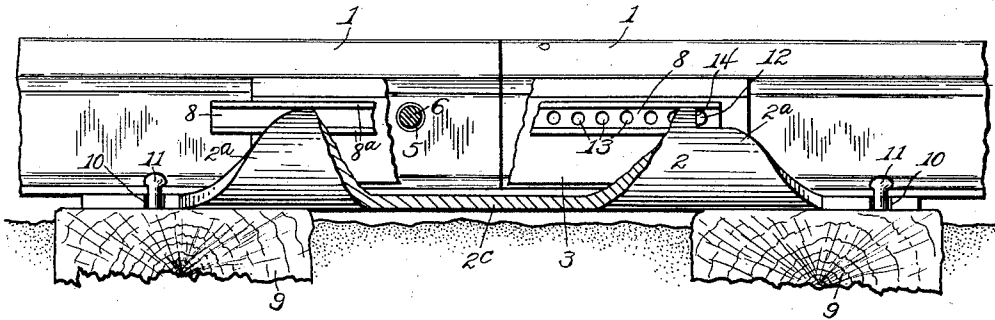


Fig. 5

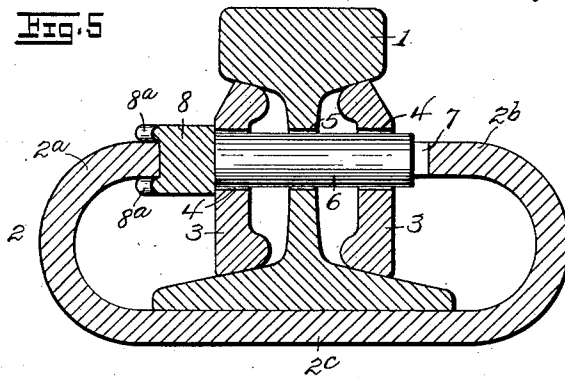


Fig. 6

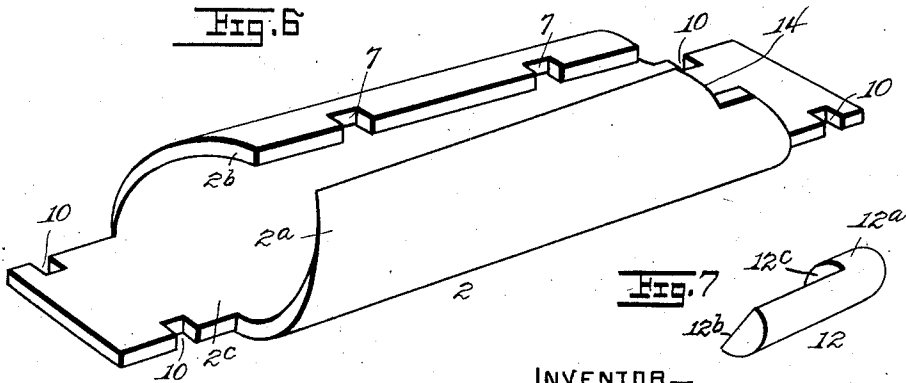
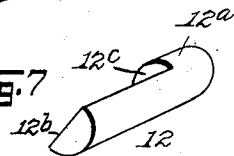


Fig. 7



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UNITED STATES PATENT OFFICE.

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RAIL-JOINT.

1,055,991.

Specification of Letters Patent.

Patented Mar. 11, 1913.

Application filed October 10, 1911. Serial No. 653,917.

To all whom it may concern:

Be it known that I, FRIEND E. DILLON, a citizen of the United States of America, and a resident of Martins Ferry, county of Belmont, and State of Ohio, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates broadly to rail joints, and specifically to a device for securing the adjacent ends of railway rails without the employment of the usual nuts and bolts.

The primary object of the invention is to provide a simple, efficient and durable device whereby the adjacent ends of railway rails are rigidly secured in alined position.

A further object is to provide a device of the character mentioned the construction of which is such that adjustment of its parts may be readily effected from time to time to compensate for wear.

In describing the invention in detail, reference is herein had to the accompanying drawings, forming a part of this specification in which—

Figure 1 is a side elevation of the invention applied; Fig. 2 is a top plan view of the same; Fig. 3 is a horizontal section on the line 3—3, Fig. 1; Fig. 4 is a view similar to Fig. 1, showing portions of the device broken away; Fig. 5 is a cross section on the line 5—5, Fig. 2; Fig. 6 is a detail perspective view of the clamp; and Fig. 7 is a similar view of the wedge-locking pin, or key.

Referring to said drawings, in which like designating characters distinguish like parts throughout the several views—1 1 indicate approaching rail-ends which are received between the upwardly and inwardly curved, or arcuate, lateral portions 2^a and 2^b of a clamping member 2, said rail-ends being seated upon the longitudinally-extending flat base portion 2^c of said member. Seated against the rails on opposite sides of the latter are splice-bars 3 having their lower edges resting upon the rail bases and their upper edges in bearing engagement with the under side of the rail heads, as shown. Holes 4 provided in said splice-bars are in

register with similar holes 5 provided in the rail webs and are adapted to receive pins 6 therein whereby longitudinal movement, or creeping, of said splice-bars with respect to the rails, or vice versa, is prevented. The length of said pins 6 is such that when one end is flush with the outer face of one of the splice-bars 3 the opposite end projects outward slightly from the outer face of the opposite splice-bar. The arcuate portion 2^b of the clamping member extends horizontally inward a greater distance than does the portion 2^a, the inner edge of the former being parallel to the rails and adapted to abut directly against the adjacent splice-bar for supporting the latter in position. For receiving the outwardly projecting ends of the pins 6, notches or recesses 7 are provided in said portion 2^b. When said pins are in place with their ends in said notches, the rails, splice-bars and clamping member are securely interlocked, as is apparent.

The arcuate portion 2^a of the clamping member has its lateral edge inclined out of parallel alinement with the rails and occupies a position wholly withdrawn from engagement with the adjacent splice-bar, a longitudinally tapered space being thus afforded between said edge and said splice-bar for the reception of a similarly shaped wedge 8 whereby the parts are drawn into binding relation for rigidly clamping the rails. The inner face of the wedge is adapted to seat throughout its length against the adjacent splice-bar, and the outer face thereof is inclined to correspond with the edge of said portion 2^a of the clamping member so that the force exerted by the wedge in driving is substantially equally distributed over the engaging surfaces. For facilitating the application of the wedge, beads 8^a are preferably provided on the outer face thereof to form an intermediate guide channel in which the lateral edge of the portion 2^a is received.

The clamping member 2 is of substantially even gage, or thickness, throughout and made of a material which is slightly resilient when subjected to bending strains; hence the inturned terminals of the oppos-

ing portions 2^a and 2^b yield slightly with the application of the wedge, and this tendency is materially augmented by the regular arcuate curvature of said portions. The liability to rupture under strains is at the same time but slight. The form of the clamp, furthermore, provides for a cushioning effect or function, operating to absorb lateral shocks or strains imposed on the joint and thereby to maintain the joint in a tightened condition.

The base portion 2^c of the clamping member has its ends projected longitudinally beyond the portions 2^a and 2^b for resting upon supporting cross-ties 9. Recesses 10 are provided in opposite sides of the projecting ends for the reception of spikes 11 whereby the member is secured to said cross-ties.

Means is preferably provided for locking the wedge against chance retraction, said means embracing a key 12 adapted to be inserted in one of a plurality of horizontally directed holes 13 provided therefor in said wedge. When said wedge has been driven into place, the cylindrical end 12^a of said key is inserted in that hole 13 in the projecting point of the wedge next adjacent to a shoulder 14 formed by the provision of a notch in the corresponding end of the portion 2^a of the clamping member 2. That portion of the key 12 which then projects from the hole 13 is substantially semi-cylindrical in form, having a flat face 12^b adapted to engage said shoulder 14. The wedge is then driven rearward until said face 12^b engages said shoulder, whereupon further retraction of said wedge is effectually prevented by said key, while retraction of the key is prevented by the engagement of its shoulder 12^c with the lateral edge of the portion 2^a of the clamping member.

In the formation of each of the arcuate portions 2^a and 2^b a semi-circle is described, one end of the curve terminating in the horizontal base 2^c and the other in a horizontal terminal parallel with said base portion. Thus, no angles are formed, and the danger of breakage from strains to which said clamping member is subjected in practice is practically eliminated, while the resiliency of said member is increased.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A fastening for the adjacent ends of railway rails, comprising splice-bars seated against said rail ends on opposite sides, a clamping member having a base portion upon which said rail ends are seated and having arcuately curved outwardly yieldable portions with horizontal terminals approaching said splice-bars on opposite sides, one of said terminals having its inner edge

in direct bracing engagement with the adjacent splice-bar, the opposite terminal having its inner edge inclined with respect to the splice-bar located adjacent thereto, a wedge interposed between said inclined edge and the adjacent splice-bar, and means including a key having a cylindrical portion and a semi-cylindrical portion, for locking said wedge in adjusted position.

2. A fastening for the adjacent ends of railway rails, comprising splice-bars seated against said rail ends on opposite sides, a clamping member having a base portion upon which said rail ends are seated and having arcuately curved outwardly yieldable portions with horizontal terminals approaching said splice-bars on opposite sides, one of said terminals having its inner edge in direct bracing engagement with the adjacent splice-bar, the opposite terminal having its inner edge inclined with respect to the splice-bar located adjacent thereto, a wedge interposed between said inclined edge and the adjacent splice-bar, and a key seated in said wedge and interlocking with an end of said clamping member for locking said wedge against retraction.

3. A fastening for the adjacent ends of railway rails, comprising splice-bars seated against said rail ends on opposite sides, a clamping member having a base portion upon which said rail ends are seated and having arcuately curved portions with horizontal terminals approaching said splice-bars on opposite sides, one of said terminals having its inner edge in direct bracing engagement with the adjacent splice-bar, the opposite terminal having its inner edge inclined with respect to the splice-bar located adjacent thereto, a wedge interposed between said inclined edge and the adjacent splice-bar, and a key seated horizontally in said wedge and having a projecting end in interlocking engagement with an end of said clamping member.

4. A fastening for the adjacent ends of railway rails, comprising splice-bars seated against said rail ends on opposite sides, a clamping member having a flat base portion upon which said rail ends are seated and having oppositely disposed arcuately curved portions which end in horizontal terminals whose edges approach said splice-bars, one of said edges being parallel with the rails and in direct bracing engagement with the adjacent splice-bar and the opposite edge being inclined with respect to the adjacent splice-bar and wholly withdrawn from engagement with the latter, a wedge interposed between the said inclined edge and the adjacent splice-bar, pins directed through said splice-bars and the rail ends and maintained in place by the wedge at one side and by the opposite terminal at the other, the latter having recesses therein for the recep-

tion of the adjacent ends of said pins whereby said rails and said splice-bars are interlocked with said clamping member, and a key for interlocking said wedge with said clamping member, said wedge having transversely directed holes therein for the reception of said key, and said key having a shoulder adapted for interlocking engage-

ment with said clamping member whereby retraction of the key is prevented. ¹

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

FRIEND E. DILLON.

Witnesses:

EDMUND C. WHITEHEAD,
S. A. WOOD.

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