S. R. CONROY.

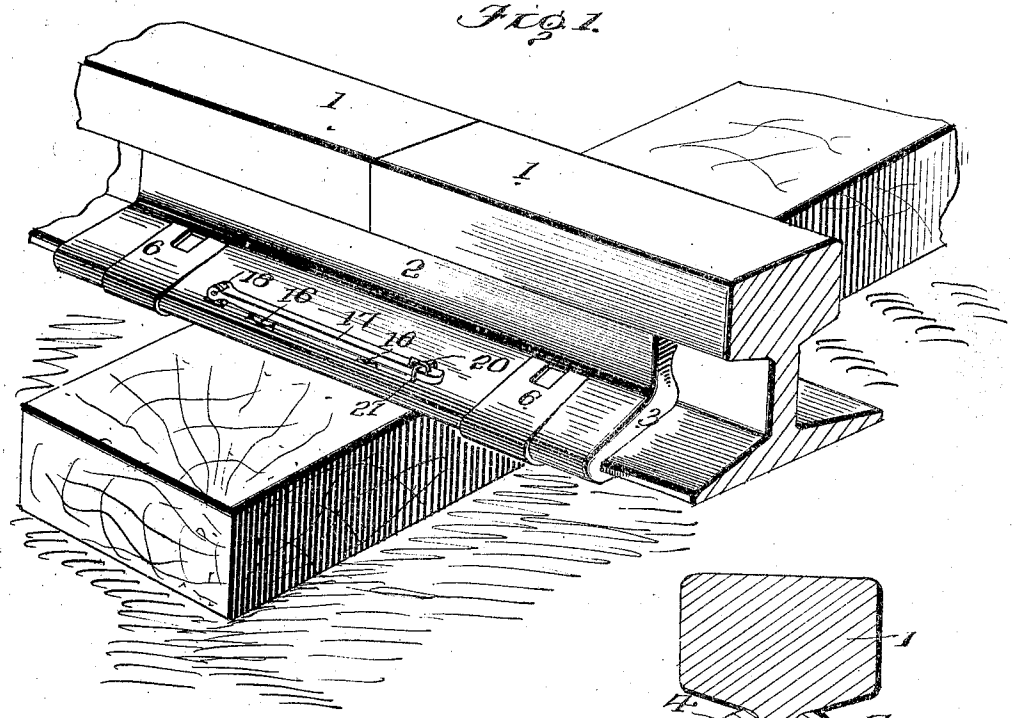
RAIL JOINT.

APPLICATION FILED APR. 5, 1910.

969,132.

Patented Aug. 30, 1910.

Fig. 1.



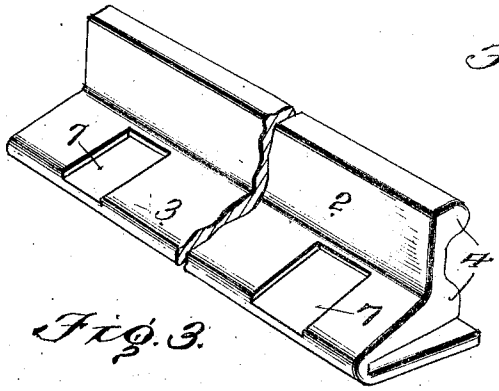
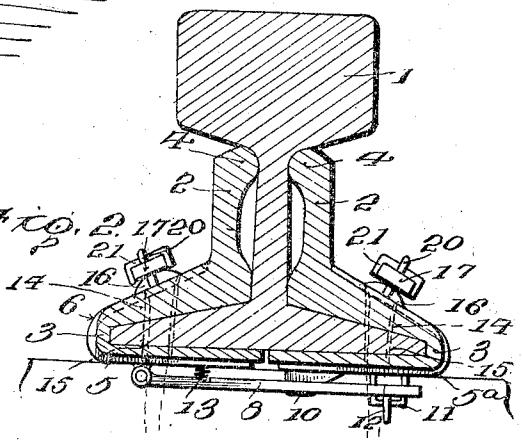


Fig. 3.

Fig. 2.



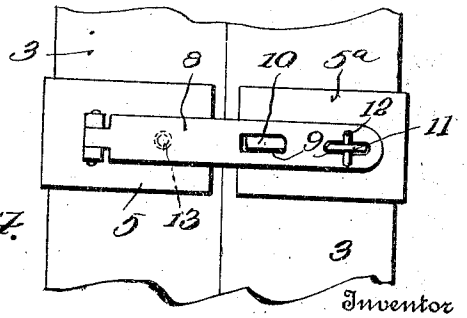
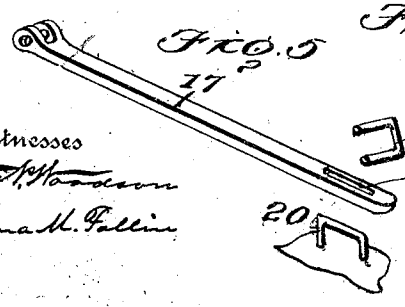


Fig. 4.

Fig. 5.



Witnesses

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SHELTON R. CONROY, OF GARY, INDIANA, ASSIGNOR OF ONE-HALF TO CHARLES H. SUNNIVILLE, OF GARY, INDIANA.

RAIL-JOINT.

969,132. Specification of Letters Patent. Patented Aug. 30, 1910.

Application filed April 5, 1910. Serial No. 553,606.

To all whom it may concern:

Be it known that I, SHELTON R. CONROY, citizen of the United States, residing at Gary, in the county of Lake and State of Indiana, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

The present invention comprehends certain new and useful improvements in rail joints and the invention has for its object a quite reliable and efficient device of this character which possesses to a marked degree the characteristics of simplicity, durability, and rigidity, and which unites the meeting ends of the rail in such a manner as to positively prevent their accidental separation.

A further object of the invention is a rail joint including angle bars which span the joint and fit against the opposite sides of the rails, the angle bars being connected together without the use of the customary bolts, whereby to obviate the necessity of employing track walkers to keep the bolts tightened, and to effect a material economy in the cost of maintenance of the track.

A still further object of the invention is a rail joint in which the spikes which attach the parts of the joint to the cross tie, are held in an effectual manner against loosening movement.

With these and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a sectional perspective view of a rail joint constructed in accordance with my invention. Fig. 2 is a transverse section thereof. Fig. 3 is a detail perspective view of one of the angle bars. Fig. 4 is a fragmentary bottom plan view of the joint. Fig. 5 is a detail perspective view of the device for locking the spikes in place.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawing the numeral 1 designates the rails, the joint between the meeting ends of which is spanned by a pair of angle bars that fit against opposite sides of the rails. Each angle bar consists of a web portion 2 and a foot portion 3, the web portion being disposed substantially vertically and being formed on its inner face with vertically spaced ribs 4 which extend along its upper and lower edges and bear against the adjacent faces of the webs of the rails. The foot portion 3 is deflected laterally and outwardly at the lower end of the web portion and is then returned upon itself inwardly and downwardly so as to be substantially V-shape in cross section and to be adapted to embrace the corresponding base flanges of the rails. The foot portions of the two angle bars preferably meet longitudinally beneath the middle of the rails and provide a broad bearing support for the bases of the rails. The two angle bars thus co-act to form a complete chair for the rails' ends.

The angle bars are held firmly against the opposite sides of the rails through the medium of clamps which connect the angle bars together in proximity to their ends. Each clamp consists of a pair of separate co-acting members or plates 5 and 5^a which extend transversely beneath the foot portions of the respective angle bars. The members are returned upon themselves upwardly at their outer or remote ends to form hooks 6 which face toward each other and embrace the foot portions 3. The hooks are preferably received in grooves 7 in the upper faces of the foot portions, whereby to prevent the clamp from slipping longitudinally with respect to the angle bars. A hasp 8 is pivotally connected at one end to the member 5 so as to be adapted to be swung upwardly and tranversely with its free end under-lapping the other member 5^a. The member 5^a is formed with a lug 10 and a keeper loop 11 which depend therefrom and are arranged, in the operative position of the hasp to project downwardly through slots 9 formed in the free end of the hasp for this purpose. The hasp is retained in engagement with the lug and keeper loop, by means of a key 12 that is inserted through the latter, the key having bent ends and being substantially U-shape, as shown. A coil expansion spring 13 is interposed between the hasp and one of the members of the clamp and presses the hasp downwardly against the key. The members

of the clamp are thus prevented from rattling, while the key is held against movement in the keeper loop and is maintained against accidental displacement. The coil spring is held in place in any approved manner and in the present instance is fitted at one end into a suitable socket provided in the hasp.

The foot portion 3 of each angle bar is formed with two or more openings 14 extending vertically therethrough at longitudinally spaced points, said openings registering with openings 15 formed in the adjacent base flanges of the respective rail ends. Spikes 16 are inserted through these registering openings and are driven into the usual wooden cross tie. Attention is particularly directed to the fact that the spikes serve the dual function of attaching the rail ends and the angle bars to the cross tie and of securing angle bars to both rail ends. The openings 15 in the base flanges of the rails are preferably elongated, so as to afford the rails limited independent longitudinal movement to compensate for expansion and contraction through exposure to the weather.

The locking bar 17 is pivotally connected at one end as indicated at 18, to the foot portion 3 of each angle bar. The locking bar is adapted to be swung into an operative position wherein it extends in the direction of the length of the angle bar and bears upon the heads of the adjacent spikes 16 to hold the same against loosening movement. The locking bar is formed in its free end with a slot 19 through which projects the keeper loop 20 that upstands from the foot portion 3, a substantially U-shaped key 21 being inserted through the keeper loop to retain the locking bar in engagement therewith.

From the foregoing description in connection with the accompanying drawing, it will be apparent that I have provided an improved rail joint which effectually unites the meeting ends of the rails and which positively prevents the same from becoming separated through excessive traffic thereover. The joint consists of comparatively few parts that are capable of being readily assembled to admit of the track being expeditiously laid at a minimum cost. Inasmuch as the angle bars are held in place without the use of the usual bolts passing through the rail ends, the strength of the joint is materially increased.

Having thus described the invention, what is claimed as new is:

1. A rail chair including separate angle bars adapted to fit against and embrace opposite sides of the rail, and means for connecting the angle bars, said connecting means including a pivoted hasp and a keeper adapted to be engaged thereby.

2. A rail chair including separate angle bars adapted to fit against opposite sides of a rail, and a clamp connecting the angle bars, said clamp including separate co-acting members engaged with the respective angle bars, and a hasp pivotally connected to one of said members and having a separable connection with the other member.

3. In a rail joint, the combination with the meeting ends of the rails, of separate angle bars fitting against opposite sides of the rails and spanning the joint, and means for connecting the angle bars together, said connecting means including a pivoted hasp and a keeper adapted to be engaged thereby.

4. In a rail joint, the combination with the meeting ends of the rails, of separate angle bars fitting against opposite sides of the rails and spanning the joint, and a clamp extending transversely beneath the rails, said clamp consisting of separate co-acting members having oppositely facing hooks embracing the respective angle bars, and means for connecting the said members, the angle bars being formed with grooves receiving the hooks to hold the clamp against moving longitudinally of the angle bars.

5. In a rail joint, the combination with the meeting ends of the rails, of separate angle bars fitting against the opposite sides of the rails and spanning the joint, and a clamp disposed beneath the rails, said clamp consisting of separate co-acting members engaged with the respective angle bars, and a hasp pivotally connected to one of the members and having a separable connection with the other member.

6. In a rail joint, the combination with the meeting ends of the rails, of separate angle bars fitting against opposite sides of the rails and spanning the joint, and a clamp consisting of separate co-acting members engaged with the respective angle bars, a keeper provided on one of the members, a hasp pivotally connected to the other member and having separable engagement with the keeper, and a key inserted through the keeper for retaining the hasp in engagement therewith.

7. In a rail joint, the combination with the meeting ends of the rails, of separate angle bars fitting against opposite sides of the rails and spanning the joint, and a clamp consisting of separate co-acting members engaged with the respective angle bars, one of said members being formed with a lug and a keeper loop, a hasp pivotally connected to the other member and formed in its free end with slots for the reception of the lug and the keeper loop, and means inserted through the keeper loop for retaining the hasp in engagement therewith.

8. In a rail joint, the combination with the meeting ends of the rails of separate angle bars fitting against opposite sides of the rails and spanning the joint, and a clamp consisting of separate co-acting members engaged with the respective angle bars,

one of said members being formed with a keeper loop, a hasp pivotally connected to the other member and adapted to be passed over said keeper loop, a key inserted through the keeper loop to retain the hasp in engagement therewith, and a spring interposed between the hasp and one of said members, as and for the purpose specified.

9. In a rail joint, the combination with the meeting ends of the rails formed with base flanges with openings, of a bar spanning the joint and fitting against one side of the rails and overlapping the adjacent base flange thereof, said bar being formed with openings registering with said openings in the respective rail ends, spikes inserted through the registering openings, a locking bar pivotally connected at one end to the first-named bar and movable into operative position to bear upon the heads of all of the spikes, and a separable connection between the first named bar and the free end of the locking bar to retain the latter in an operative position.

10. A clamp of the character described comprising separate co-acting members having engaging hooks facing toward each other, and a hasp pivotally connected to one of said members and having a separable connection with the other member.

11. A clamp of the character described comprising separate co-acting members formed with oppositely facing hooks, one of said members having an outstanding lug and keeper, a hasp pivotally connected to the other member and adapted to be passed over the lug and keeper, and means inserted through the keeper to retain the hasp in engagement with both the keeper and the lug.

12. A clamp of the character described comprising separate co-acting members formed with oppositely facing hooks, one of said members having a keeper, a hasp pivotally connected to the other member and adapted to be passed over the keeper, means for holding the hasp in engagement with the keeper, and a spring interposed between one of the members and the hasp.

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

SHELTON R. CONROY. [L. S.]

Witnesses:
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