N. DURBIN.

RAIL JOINT.

APPLICATION FILED SEPT. 12, 1911.

1,096,696.

Patented May 12, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

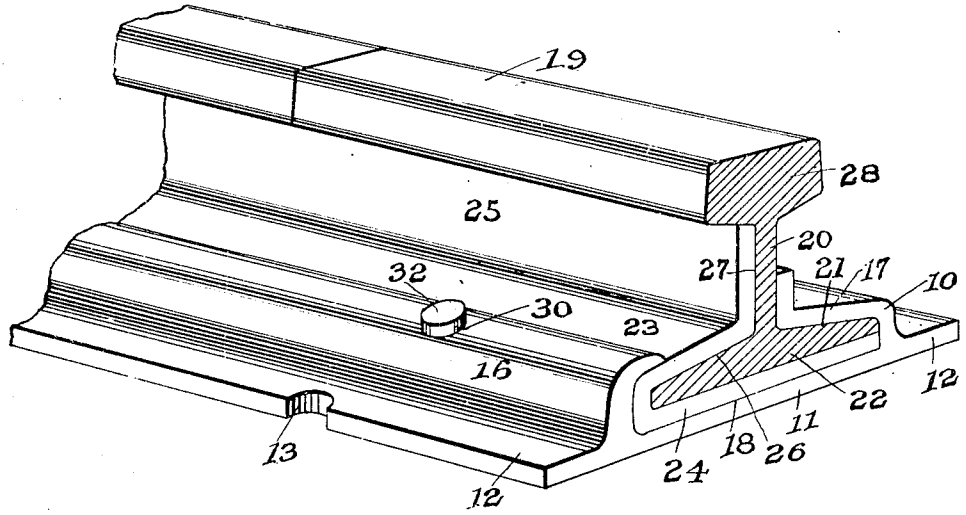
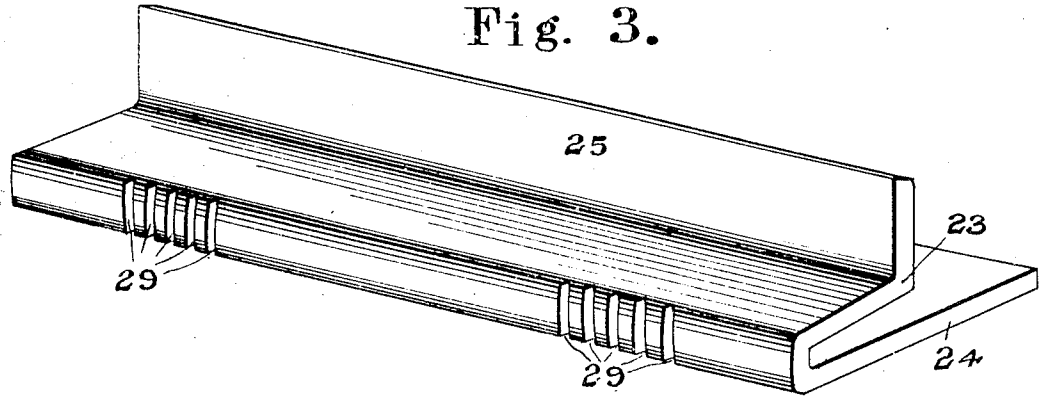


Fig. 3.



Witnesses

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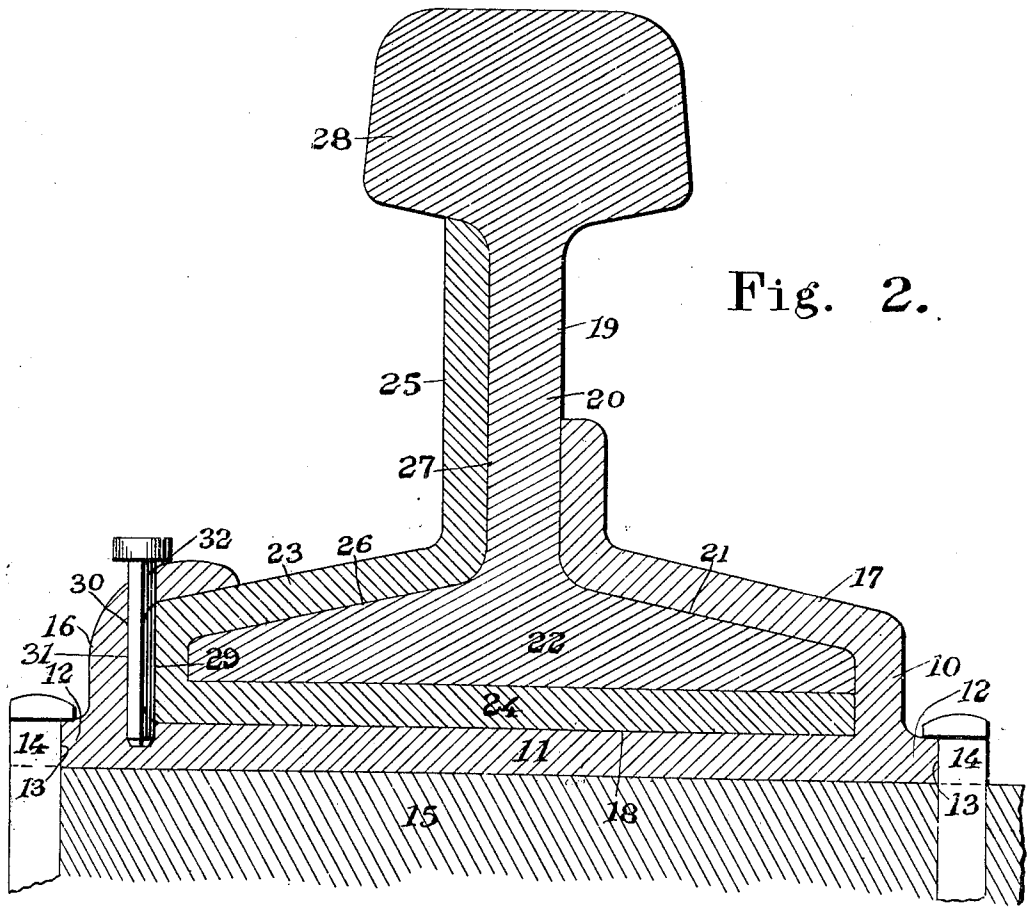
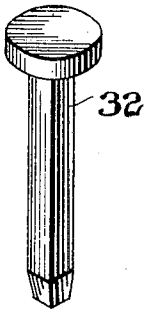


Fig. 2.

Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

NATHAN DURBIN, OF TAYLORVILLE, ILLINOIS.

RAIL-JOINT.

1,096,696. Specification of Letters Patent. Patented May 12, 1914.

Application filed September 12, 1911. Serial No. 648,850.

To all whom it may concern:

Be it known that I, NATHAN DURBIN, a citizen of the United States, residing at Taylorville, in the county of Christian and State of Illinois, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

An object of the invention is to provide a joint for effectively connecting adjacent rail ends. For the purpose mentioned, use is made of a clamp body for attachment to suitable ties and provided with side pieces forming a longitudinally extending slot in which the rail ends are received, a supporting plate being interposed between the bases of the rail ends and the base of the clamp body, the said supporting plate being provided with a brace plate engaging one of the sides of each of the rail ends, the other sides of the said rail ends being engaged by one of the said side pieces, serrations formed on the said supporting plate and a pin for insertion in one of the side pieces and adapted to engage the teeth of the said supporting plate to releasably lock the said supporting plate to the said clamp body.

Reference is to be had to the accompanying drawings constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a perspective view of my rail joint. Fig. 2 is a transverse vertical sectional view, showing the pin for locking the supporting plate to the clamp body. Fig. 3 is a perspective view of the supporting plate, showing the serrations thereon. Fig. 4 is a perspective view of the locking pin.

Referring more particularly to the views, I provide a clamp body 10, consisting of a base 11 terminating in flanges 12, provided with cut out portions 13 adapted to receive suitable spikes 14 for securing the clamp body 10 to ties 15.

The clamp body 10 is provided with integral upwardly extending side pieces 16, 17 which form a longitudinally extending slot 18 in the clamp body 10, the side piece 17 being curved and extended upwardly a greater distance than the side piece 16. Rail ends 19 are mounted in the slot 18 of the clamp body 10 with webs 20 of the rail ends and sides 21 of the bases thereof, engaged by the side piece 17 as shown in Figs. 1 and 2. Interposed between the bases 22 of the rail ends and the base 11 of the clamp body 10 is a supporting plate 23 provided with an integral base plate 24, reposing on the base 11 of the clamp body 10 and the mentioned supporting plate 23 is provided with an integral curved upwardly extending brace plate 25 engaging sides 26 of the bases 22 and sides 27 of the webs 20 of the rail ends, the upper end of the brace plate 25 being adapted to abut against heads 28 of the rail ends. Thus, it will be seen that the supporting plate 23 engages the outer sides of the rail ends, while the side piece 17 engages the inner sides of the rail ends and the side piece 16, being shorter than the side piece 17, engages the supporting plate 23 at the point where the supporting plate curves upwardly from the base 24 and around the outer edges of the bases 22 of the rail ends.

The supporting plate 23, at the point where the same curves around the outer edges of the bases of the rail ends, is provided on its outer side with integral serrations or teeth 29 and formed in the side piece 16 are openings 30 having cut away portions 31, the said openings being adapted to receive squared pins 32, each pin being received in each of the openings 30 and having an edge thereof extending through the cut away portions 31 and engaging the teeth 29 to lock the supporting plate 23 to the clamp body 10.

In the preferred manner of applying my device, I first slide the clamp body 10 over the rail ends, the mentioned clamp body being preferably inclined with one side of the clamp body higher than the other side thereof, so that the base 11 of the clamp body will be at an angle to the bases of the rail ends, thus permitting the clamp body to be more easily engaged with the rail ends. The clamp body is then permitted to repose upon the ties and the bases of the rail ends resting on the base of the clamp body and then by slightly raising the rail ends, the supporting plate is engaged with the clamp body so as to lie between the outer edges of the rail ends and the clamp body, with the base of the supporting plate interposed between the base of the clamp body and the bases of the rail ends, after which by subjecting the supporting plate to a series of blows at one end thereof, the mentioned supporting plate will be forced into frictional engagement with the clamp body and the rail ends until the teeth or serrations 29 are positioned oppo-

sitely to the cut away portions 31 so that the pins 32 can be inserted in the openings 30 to engage the teeth 29, thus locking the supporting plate to the clamp body 10 as has been heretofore mentioned, the clamp body having been previously secured to the ties by the bolts or spikes 14.

With a device of the character described, the rail ends will be prevented from moving transversely to the clamp body while at the same time the rail ends will be permitted to move longitudinally for the purpose of allowing for the expansion and contraction of the rails, due to heat or cold.

Having thus fully described the invention, what I claim as new, is:—

A joint for two rail ends, including an angle fish plate adapted to engage with one of the sides of the rails and having a base upon which the rails rest, the vertical longitudinal wall between the base and the overlying flange of the fish plate being provided, adjacent its ends, with a plurality of vertically disposed serrations, a chair having flanges adjacent its longitudinal edges one of which engages with the rails and the second engaging the serrated wall and a portion of the overlying flange of the fish plate, the last mentioned flange of the chair having an opening adjacent each of its opposite ends which enters the inner face of the vertical portion of the flange to provide a recess therein and which terminates in a pocket formed in the base flange of the chair and which is further adapted to register with one of the plurality of serrations upon the vertical connecting member of the fish plate, a headed pin adapted to be inserted within the openings and to rest within the pocket and to engage with the serrations in both the fish plate and chair, and spike members engaging with the longitudinal edges of the chair opposite the pins.

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

NATHAN DURBIN.

Witnesses:
L. B. Roberts,
Homer Brents.