

RAIL JOINT.

980,287.

2 SHEETS-SHEET 1.

Fig. 1. A perspective view of the tool 10, showing the handle 13, the head 14, the neck 15, the blade 16, and the cutting edge 17.

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2 SHEETS—SHEET 2.

Fig. 4.

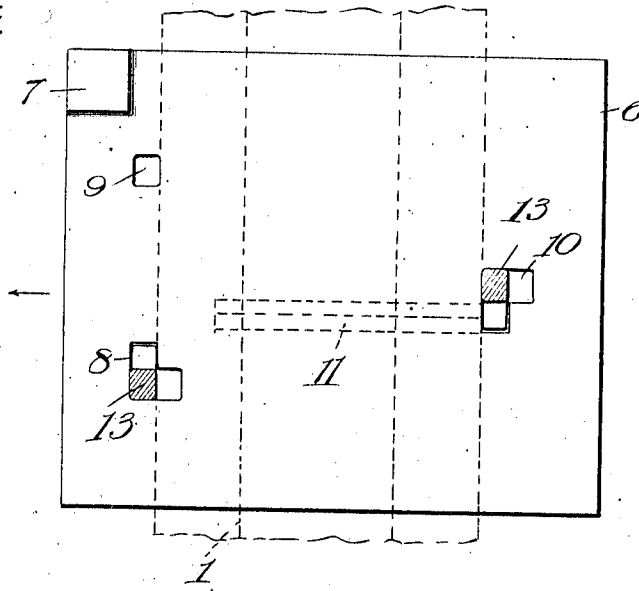
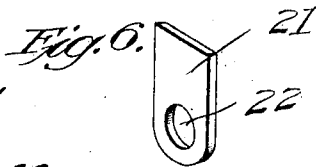
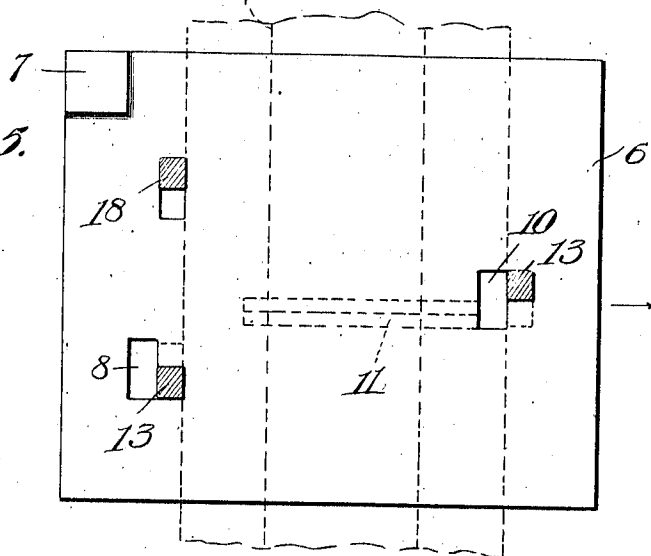


Fig. 5.



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RAIL-JOINT.

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To all whom it may concern:

Be it known that I, JOHN J. KOHN, a citizen of the United States, residing at Chisholm, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail joints and one of the principal objects of the same is to provide reliable and efficient means for holding the rails at their meeting ends firmly in connection with the ties and to prevent spreading, sinking, or displacement of the rails at the joints.

Another object of the invention is to provide means of simple construction for holding the meeting ends of railway rails upon the ties and to provide a spike of simple construction for locking the base flange of the rail to the tie.

Still another object of my invention is to provide means for holding the rails at their meeting ends to the ties in a manner which will permit the rails to be joined and secured in place quickly and which will at the same time permit the rails to be withdrawn for renewal or repairs.

These and other objects may be attained by means of the construction illustrated in the accompanying drawings, in which,

Figure 1 is a side elevation of a rail joint made in accordance with my invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail perspective view of one of the spikes for locking the rails in place. Fig. 4 is a top plan view of one of the chair plates showing two of the spikes in section before the chair plate has been moved in the direction indicated by the arrow for locking the plate in position, said view showing the rail in dotted lines and broken away at the ends. Fig. 5 is a similar view showing the chair plate moved to the position for locking the shoulders of the spikes under the chair plate. Fig. 6 is a detail perspective view of a nut lock which I may use in connection with my invention.

Referring to the drawings the numerals 1 designate the meeting ends of the railway rails, said rails being of the usual or any suitable type. The fish plates 2 are provided with flanges 3 which overlie the base flanges 4 of the rails, said fish plates being

cut away at their ends as at 5 to permit the heads of the spikes to engage the base flanges 4 of the rails.

The rail chairs each comprise a plate 6 provided at one corner with a lug 7, which serves to indicate the proper position of the edge of the base flange of the rail. Formed in one side of the plate is an L-shaped opening or slot 8 and in alinement with said opening is a spike hole 9, which may be elongated either transversely or longitudinally of the plate 6. In the opposite side of the chair plate is formed an L-shaped angular spike hole 10, as shown more clearly in Figs. 4 and 5. On the under side of each of the chair plates is a V-shaped rib 11, which is adapted to fit in a groove in the tie 12, said groove being longer than the rib 11 to permit the plate to slide transversely after the spikes have been driven and before the plate has been locked in position. The spikes for use in the spike holes 8 and 10 consist of a shank 13 having an overhanging head 14 and a locking shoulder 15 disposed at one side of the shank 13 and at one side of the overhanging head 14. The locking shoulders 15 are provided with tapering sides 16 running to a point 17, said locking shoulders being formed integral with the sides of the shank of the spike, as shown more clearly in Fig. 3. The spike openings 8 and 10 are of the proper dimensions to permit the shank 13 and the locking shoulder 15 to be driven through the plate and into the tie. After the spikes have been driven through the openings 8 and 10 and into the tie with the heads 14 engaging the base flanges of the rails the plates 6 are moved in the direction indicated by the arrow in Fig. 4, thus moving the plates over the shoulders 15. An ordinary spike 18 is then driven into the hole 9 with its overhanging head engaging the base flange of the rail, and thus locking the chair plate 6 against lateral movement. The guide lugs 7 are utilized for indicating the position of the base flange of the rail. The rib 11 which engages a groove in the tie 12 serves to prevent the movement of the plates lengthwise of the rails and to also serve as a guide for the chair plate relatively to the tie.

The fish plates 2 are secured upon opposite sides of the web of the rails by means of bolts 19. The nuts 20 of these bolts are held

in locked positions by means of the nut locks 21 comprising a malleable metal plate having a hole 22 therein, through which the bolt extends, said plate being adapted to be bent 5 down as at 23 when the nut has been adjusted on the bolt. A groove 24 is formed in one of the fish plates to permit the nut locking plate to slide therein and to prevent its turning after the nut has been adjusted 10 on the bolt and the end 23 of the locking plate bent down.

From the foregoing it will be obvious that a rail joint made in accordance with my invention can be quickly assembled, that the 15 chair plate will hold the rails firmly in position to prevent movement in any direction, that the rails can be quickly laid, and that repairs can be readily made owing to the fact that but a single spike 18 may be withdrawn before the plate is moved to one side 20 to permit the withdrawal of the plate and rail from the tie.

My invention is of simple construction, can be manufactured at low cost and provides strong, durable and efficient means for 25 holding the rails in proper position and to prevent undue movement in any direction.

I claim:

1. A rail joint comprising fish plates, chair plates underneath the base flanges of 30 the rails, said chair plates being provided with ribs on their undersides to fit grooves in the ties, and L-shaped boltholes through the plate, in combination with spikes having 35 shoulders at the sides thereof and formed integral therewith, said shoulders being tapered to a point at their lower ends to be driven into the ties, and a locking spike for holding said plates against lateral move- 40 ment.

2. A rail chair plate having a rib upon its underside to fit a groove in a tie, and L-shaped bolt holes extending through the plate at opposite sides thereof, in combination with spikes having lateral shoulders, 45 and a locking spike for holding the plate against lateral movement.

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

JOHN J. KOHN.

Witnesses:

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