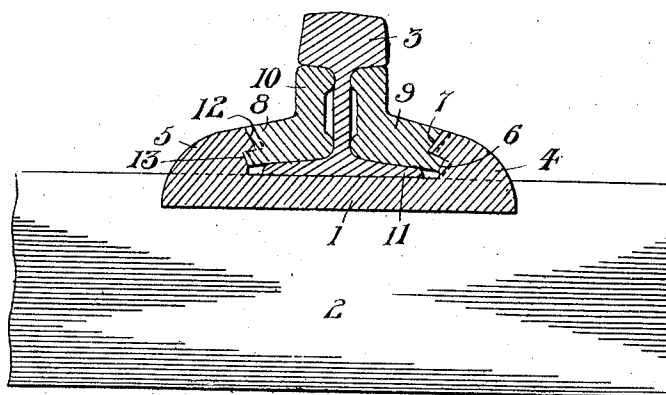
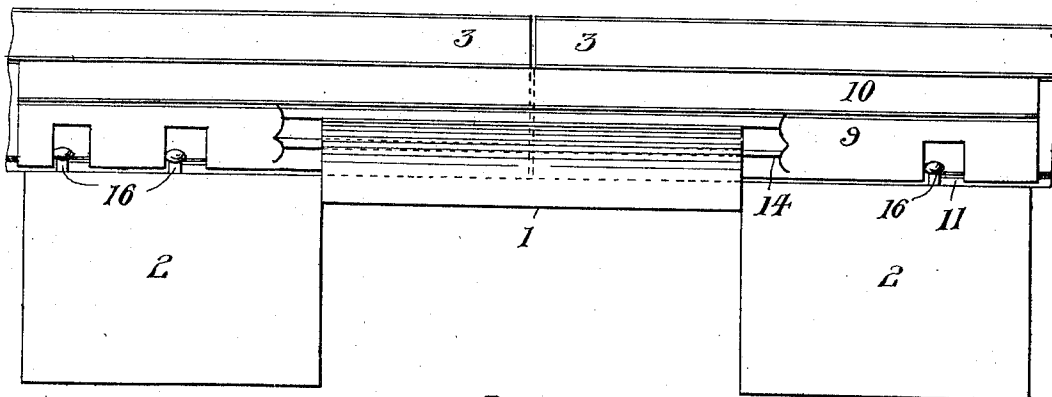
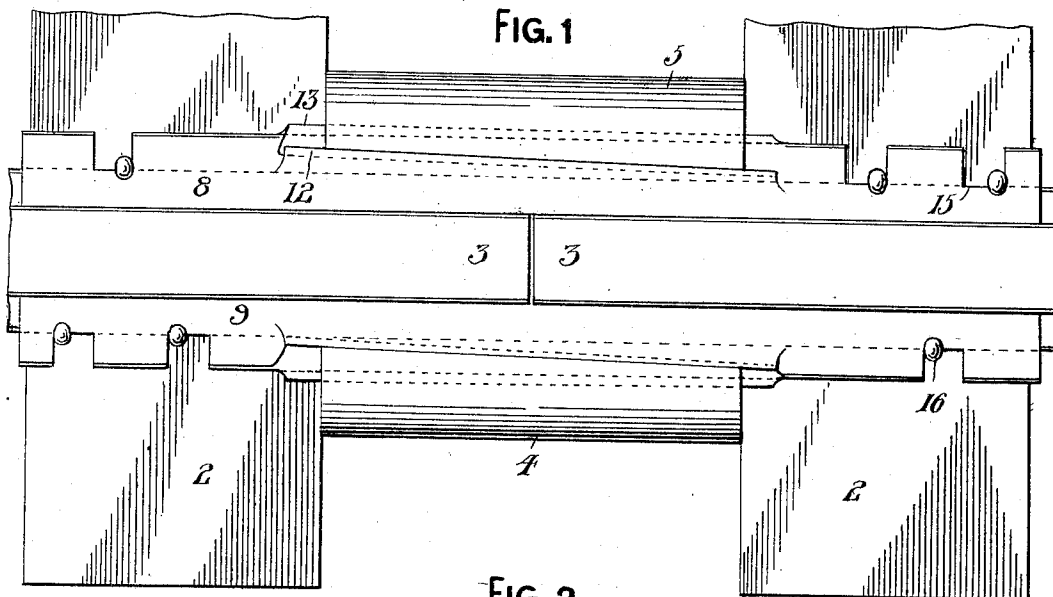


J. CUSICK.
RAIL JOINT.
APPLICATION FILED SEPT. 6, 1911.

1,016,674.

Patented Feb. 6, 1912.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN CUSICK, OF SHARON, PENNSYLVANIA.

RAIL-JOINT.

1,016,674.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed September 6, 1911. Serial No. 647,884.

To all whom it may concern:

Be it known that I, JOHN CUSICK, a citizen of the United States of America, residing at Sharon, in the county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to rail joints, and the primary object of my invention is to provide a novel chair and splice bars for connecting the confronting ends of rails without resorting to the use of bolts and nuts.

Another object of this invention is to furnish a rail chair with splice bars that will have a double wedging action for positively bracing and connecting alining rails.

A further object of this invention is to provide a rail joint consisting of comparatively few parts that are inexpensive to manufacture and easy to install by unskilled labor.

I attain the above objects by a mechanical construction that will be hereinafter specifically described and then claimed, and reference will now be had to the drawing, wherein:—

Figure 1 is a plan of the rail joint, Fig. 2 is a side elevation of the same, and Fig. 3 is a cross sectional view.

A rail joint in accordance with this invention comprises a chair or rail plate 1 adapted to be placed between two ties or sleepers 2 for supporting the confronting ends of rails 3 that rest upon ties or sleepers. The chair 1 has the longitudinal edges thereof provided with enlargements 4 and 5 and the confronting faces of these enlargements are provided with beveled portions 6 and 7. The beveled portions 6 and 7 of the enlargement 4 are tapered in a direction opposite that of the enlargement 5. The beveled portions 6 are further tapered, in a manner that will presently appear, and these beveled and tapered portions of the enlargements are adapted to engage the flanges 8 and 9 of splice bars 10, said splice bars resting upon the base flanges 11 of the rails 3 and bracing the webs and heads thereof.

The flange 9 of one splice bar is tapered in a direction opposite that of the flange 8 of the other splice bar, and the outer edges of these flanges are beveled, as at 12 to en-

gage the beveled portions 7 of the enlargements 4 and 5.

The flanges 8 and 9 have longitudinal tongues 13 adapted to engage the beveled portions 6 of the enlargements 4 and 5. The beveled portions 12 of the splice bars are tapered to correspond to the taper of the beveled tapered portions 7 of the enlargements 4 and 5, and the longitudinal tongues 6 have a double taper. The taper at the outer edges of the tongues conforms to the taper of the beveled portions 6 of the enlargements 4 and 5, and the upper surfaces of the tongues are inclined downward from end to end, as designated at 14 in Fig. 2, whereby these tongues will have a double wedging action.

It is necessary that the splice bars be driven in opposite directions between the enlargements 4 and 5 and the rails 3, and as said splice bars are driven home, the tapered beveled portions 6 and 7 of the enlargements 4 and 5 force the splice bars 10 inwardly against the webs of the rails, while the additional tapering of the tongues 13 forces said splice bars downwardly upon the base flanges 11 of the rails, thereby firmly holding the rails in the chair. I attach considerable importance to this double wedging action, as the rails are firmly clamped in position, and these two double wedging actions cooperate in preventing the splice bars from becoming accidentally displaced. However, to maintain said splice bars in position, the outer ends of said bars are provided with spike notches 15 for spikes 16 driven into the ties or sleepers 2. It is preferable to alternately arrange the spike notches, whereby there is less liability of the spikes 16 splitting the ties. Furthermore, it is preferable to use two spikes at the rear end of each splice bar to guard against any rearward movement of said splice bars. The joint can be easily tightened should it become loose and can be removed as easily and quickly as installed, without interfering with the rails.

What I claim is:—

In a rail joint, the combination with a pair of ties and a pair of rails mounted thereon, of a chair positioned against the lower faces of the bases of said rails and arranged between said ties, said chair projecting from the longitudinal edges of said bases, vertically disposed and longitudinally extending enlargements integral with

the projecting portions of said chair and spaced from the longitudinal edges of said bases, the inner face of each of said enlargements provided with an upper and a lower outwardly beveled tapered portion, the lower beveled portions of said enlargements providing pockets, the beveled portions of one enlargement disposed in an opposite direction with respect to the beveled portions of the other enlargements, splice bars positioned against said rails and provided at their lower portions with flanges, said flanges having tapered beveled portions and tongues of less length than the length of the splice bars, said tongues engaging in said pockets and the beveled portions of the flanges engaging the lower beveled portions of the enlargements whereby the enlargements

and flanges are connected together and the rails maintained in supported position, the beveled portion and tongue of one flange disposed in an opposite direction with respect to the beveled portion and tongue of the other flange, said splice bars projecting beyond the ends of said enlargements and upon said ties, and means engaging the projecting ends of the bars and said ties for maintaining the bars from shifting longitudinally.

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

JOHN CUSICK.

Witnesses:

CHRISTINA T. HOOD,
MAX H. SROLOVITZ.

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