

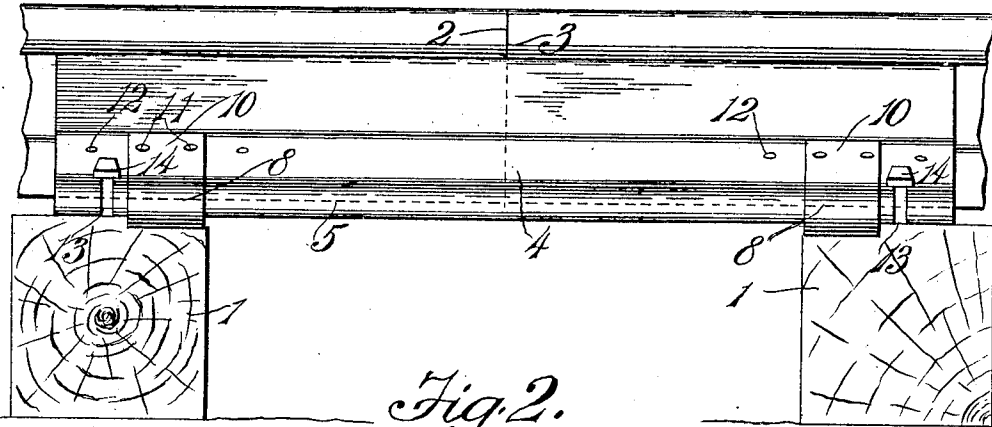
L. JOHNSTON.  
RAIL JOINT.  
APPLICATION FILED MAR. 19, 1908.

910,067.

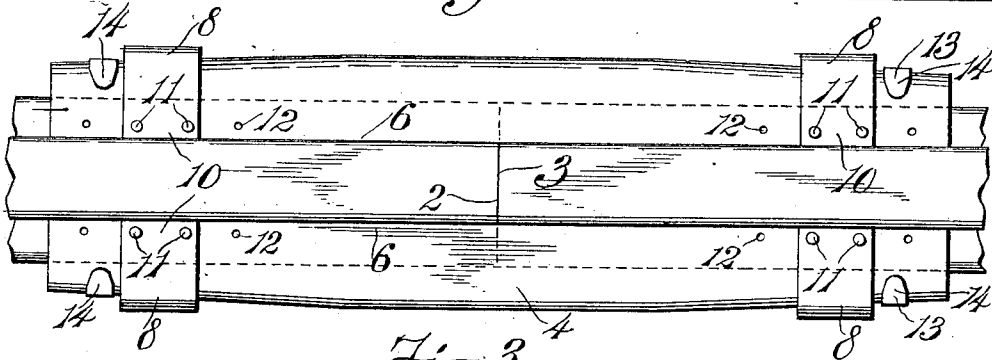
Patented Jan. 19, 1909.

2 SHEETS—SHEET 1.

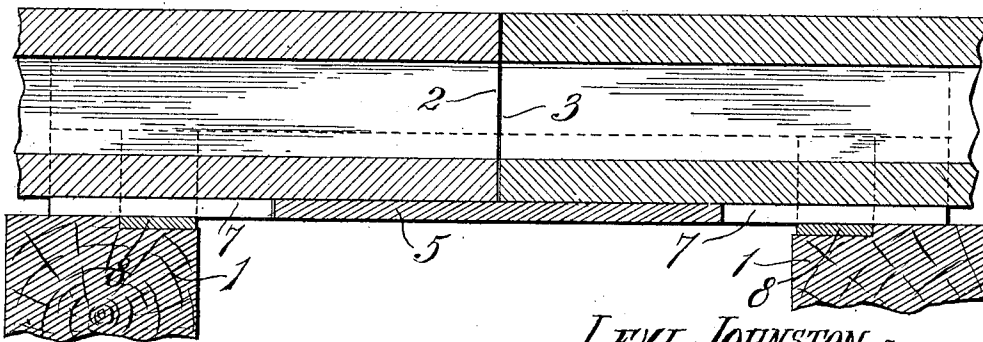
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



LEVI JOHNSTON, Inventor

Witnesses  
Row S. Johnson  
M. L. Skinner

By *Watson E. Coleman*  
Attorney

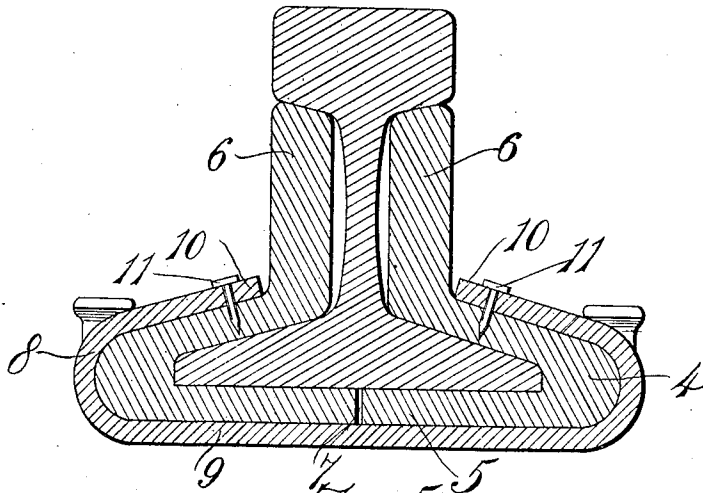
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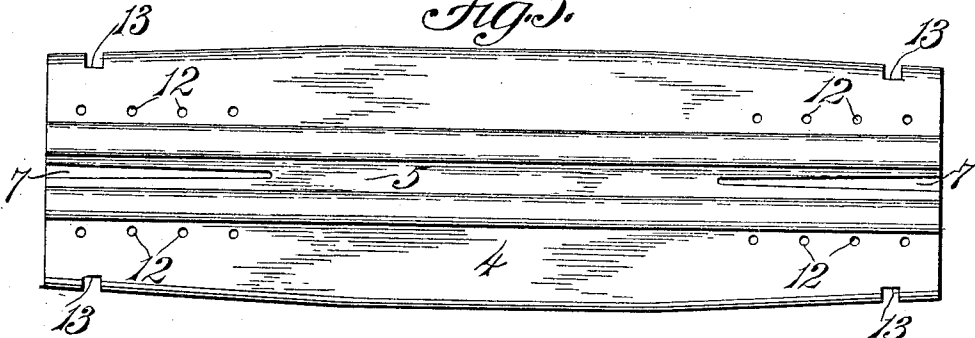
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2 SHEETS—SHEET 2.

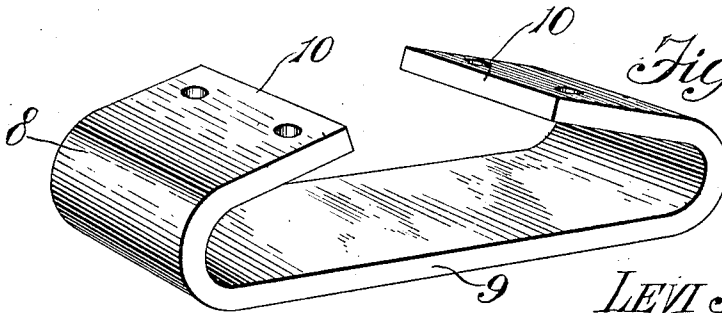
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



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# UNITED STATES PATENT OFFICE.

LEVI JOHNSTON, OF NEFFS MILLS, PENNSYLVANIA.

## RAIL-JOINT.

No. 910,067.

Specification of Letters Patent.

Patented Jan. 19, 1909.

Application filed March 19, 1908. Serial No. 422,099.

*To all whom it may concern:*

Be it known that I, LEVI JOHNSTON, a citizen of the United States, residing at Neffs Mills, in the county of Huntingdon and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in rail joints, and its object is to provide a simple, practical and inexpensive one which will permit the rails to be quickly, easily and firmly joined without the use of bolts.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which

Figure 1 is a side elevation of my improved rail joints; Fig. 2 is a top plan view; Figs. 3 and 4 are longitudinal and transverse sectional views; Fig. 5 is a plan view of the joint chair; and Fig. 6 is a detail view of one of the clamp yokes.

In the drawings 1 denotes the usual cross ties, 2 and 3 denote the meeting ends of two track rails of usual form and 4 denotes the chair or body of my improved joint. This chair is composed of a base portion or plate 5, upon which the base flanges of the rails rest, and two angular fish-plates 6 which are formed integral with the opposite sides of the base plate 5 and which are shaped to engage the outer faces of the webs and the base flanges of the rails and the bottom face of the heads of the rails, as clearly shown in Fig. 4. Said chair is preferably constructed of malleable iron and the T-shaped opening extending through it is of sufficient size to receive the meeting or abutting ends of the two track rails.

For the purpose of clamping the chair firmly to the ends of the rails and securely uniting them I form in the bottom or base plate 5 at the center of its ends longitudinally extending V-shaped slits 7 and taper the outer faces of said ends to receive yoke-shaped clamps 8, which latter, when driven longitudinally upon the chair in an inward direction, will spring its separated portions formed by the slits 7 together, to securely clamp the track rails between them. The yoke clamps 8 have straight body portions 9 to extend under the base plate of the chair

and upwardly and inwardly projecting hook-shaped ends 10 to extend over the upper faces of the outer portions of the fish-plates 6, as clearly shown in the drawings.

Owing to the slight taper of the ends of the chair body 4, it will be seen that when the clamp yokes are driven upon said ends the walls of the slits 7 will be forced together and the longitudinal sections or portions formed by said slits will be sprung inwardly toward each other and against the opposite sides of the rails. The slits 7 are V-shaped, that is, larger at their outer ends and they extend inwardly a distance sufficient to divide the ends of the chair body into longitudinal sections that may be sprung together by the clamp yokes. These clamp yokes are retained in position upon the chair by inserting pins 11 in one of longitudinal series of apertures 12 formed in the outer portions of the fish-plates. The chair may have its outer side edges formed with notches 13 to receive the usual spikes 14 that fasten the chair and rails to the cross ties.

From the foregoing it will be seen that my invention provides an exceedingly effective joint and dispenses with the necessity of bolts or similar transverse fastenings.

By constructing the chair as shown it will be seen that it will effectively hold the track rails in perfect alinement and that it may be quickly and easily applied to or removed from the rails.

By removing the fastening pins 11 the clamp yokes 8 may be quickly driven off of the ends of the chair to permit the divided portions of said ends to spring apart and release the track rails.

Having thus described my invention what I claim is:

1. The combination with the meeting ends of two rails, of a joint or connecting member having a solid base portion to engage the bottom faces of the base flanges of the rails, a side or top portion to engage the upper faces of the base flanges of the rails, said member being formed with slits extending from its ends inwardly and being of less length than said member, whereby the latter will have its ends separated into two clamping portions and the central part of its base or bottom will remain solid, and clamping yokes upon said divided ends of the member, substantially as set forth.

2. The combination with the meeting ends

of two rails, of a one piece joint chair having a body shaped to engage the rails at opposite points and a solid base portion formed at its ends with longitudinal slits, the latter extending inwardly from said ends and being of less length than said member, whereby the ends of the latter are separated into clamping portions and means for springing said clamping portions or divided ends together to clamp the rails between them, substantially as set forth.

3. The combination with the meeting ends of two rails, of a joint chair having a base portion formed at its ends with longitudinal slits and upon its sides with integral fish-plates, said ends of the chair being slightly tapered, and clamp yokes driven upon said tapered ends of the chair to clamp the rails therein.

4. The combination with the meeting ends of two rails, of a joint chair having a base portion formed at its ends with longitudinal

slits and upon its sides with integral fish-plates, said ends of the chair being slightly tapered, clamp yokes driven upon the tapered ends of the chair to clamp the rails therein and means for retaining the clamp yokes upon the chair.

5. The combination with the meeting ends of two rails, of a joint chair having a base portion formed at its ends with longitudinal slits and upon its sides with integral fish-plates, said ends of the chair being slightly tapered, clamp yokes driven upon the tapered ends of the chair to clamp the rails therein and adjustable pins for retaining the clamp yokes upon the chair.

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

LEVI JOHNSTON.

Witnesses:

DAVID R. DITTSWORTH,  
HULLER ISENBERG.