

UNITED STATES PATENT OFFICE.

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RAIL-JOINT.

1,049,722.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PHILLIP S. JENNINGS, a citizen of the United States, residing at Altoona, in the county of Etowah and State of Alabama, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail joints and has for its object to provide a joint of complete and durable structure which will effectively hold the ends of rails in proper alinement with relation to each other whereby there will be no sagging at the ends of the rails.

With the above and other objects in view, the joint comprises a chair which is slotted longitudinally to receive the end portions of abutting rail sections. This chair fits snugly about the base flanges and webs of the rail section, and when in position fits snugly under the heads of the rail section. The chair is provided upon its interior with longitudinally disposed recesses which snugly receive ribs provided at the sides of the webs of the rail section; also the end portions of the rail sections are provided with transversely disposed pins which are connected together by links. These links are adapted to enter the recesses in the chair. The connections between the pins and links is such that the rail sections may be elongated and contracted during the changes in temperature of the atmosphere, and, therefore, the said rail sections may have longitudinal movement without tending to displace the rails from the ties to which they are applied.

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 top plan view of the rail joint with parts thereof in sections. Fig. 2 is a vertical longitudinal sectional view of the joint. Fig. 3 is a transverse sectional view of the same cut on the line 3—3 of Fig. 1. Fig. 4 is a transverse sectional view of the same cut on the line 4—4 of Fig. 1.

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

As illustrated in the accompanying drawing, the rail sections 1 are provided at the

sides of their webs and in the vicinity of their ends with outstanding ribs 2. The upper and lower sides of the ribs 2 converge toward each other from the outer faces of the ribs to the sides of the webs. Pins 3 pass transversely through the webs of the rail sections 1 and are located beyond the ends of the ribs 2. These pins are forced, or otherwise secured, in the webs of the rail sections so that they cannot rotate. They have slightly reduced ends 4 upon which are mounted links 5. These links 5 bridge the space between the ends of the rail sections 1, and each link is provided at one end with an approximately round opening 6 which receives one of the pins 3, and at its other end with a slightly elongated opening 7 which receives the other pin 3. These elongated openings 7 permit the rail sections 1 to have slight longitudinal movement with relation to each other thereby to compensate for contraction or expansion of the rail section. When the links 5 are engaged with the pins 3 they lie approximately in alinement with the ribs 2. The joint also includes a chair 8. This chair is adapted to be secured directly to the ties by spikes or other suitable securing devices, and is provided at its edges with notches 9 for the reception of the head portion of the said spikes.

The chair 8 is provided with a longitudinally disposed recess 10 which snugly receives the base flanges and the webs of the end portions of the rail sections 1. These recesses are provided in their sides with grooves 11 which snugly receive the ribs 2. These grooves also receive the links 5. The upper edge portions of the chair fit snugly against the under sides of the heads of the rail sections 1.

To assemble the parts, one of the rail sections 1 is put approximately in its position upon the ties, and then the chair is slipped over the ribs 2 thereof until the end of the said chair is approximately flush or even with the end of the said rail section. The next adjacent rail section 1 is then placed approximately in alinement with the first-mentioned rail section, and the links 5 are placed in position upon the pins 2 of the said alined rail sections, then the chair 8 is slipped back so that it receives the links 5 and all of the ribs 2 upon the adjacent rail

section 1. When so positioned, the chair is secured to the tie by spikes which are passed through the notches 9. Therefore, it will be seen that the rail sections are held in proper alinement without the use of nuts or bolts, and, consequently, the danger incident to the loosening of nuts and bolts in connection with track rails is avoided. To disconnect the parts the operation above described is reversed.

The ribs 2 may be secured to the sides of the webs of the rails 1 in any suitable manner, but the preferred mode of attaching them is that shown in Fig. 2 of the drawing, in which rivets 12 are passed transversely through the ribs and the webs of the rails and are flattened at their ends and counter sunk in the ribs with their ends flush with the outer faces of the ribs. The rivets so disposed do not interfere with the free movement of the ribs in the grooves 11 when the chair 8 is positioned upon the rails or removed from the same.

Having described the invention, what is claimed is.

1. The combination of alined rail sections, a rail joint comprising ribs connected at the sides of the webs of the rail sections, links loosely connecting the ends of the rail sections together and lying approximately in alinement with said ribs, a chair recessed to snugly receive the base flanges and webs of the rail sections and provided in the sides

of its recess with grooves which snugly receive the webs and the links.

2. In combination with rail sections a rail joint comprising ribs located at the sides of the webs of the rail sections, pins passing through the webs of the rail sections, links loosely engaging said pins, a chair recessed and adapted to fit snugly over the base flanges and against the webs of the rail sections, said chair having in the sides of its recess grooves which snugly receive the ribs and the links.

3. In combination with rail sections a rail joint comprising ribs located at the sides of the rail sections, the upper and lower edges converging toward each other from the outer faces of the ribs toward the sides of the webs, links loosely connecting the ends of the rail sections together approximately in alinement with the ribs, a chair recessed longitudinally and fitting snugly about the base flanges and the webs of the rail sections, said chair having in the sides of its recess grooves which snugly receive the inclined surfaces of the ribs, said grooves also receiving the said links.

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

PHILLIP S. JENNINGS. [I. S.]

Witnesses:

BEN LUBELSKY,
H. M. CORNELIUS.