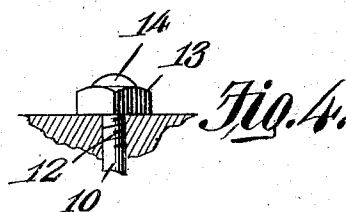
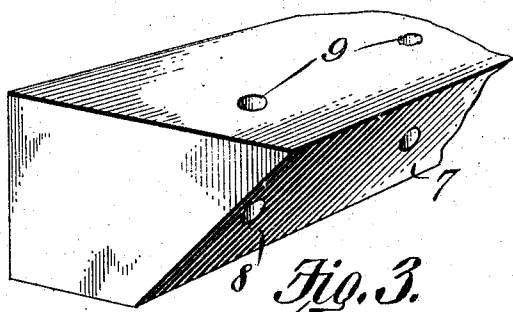
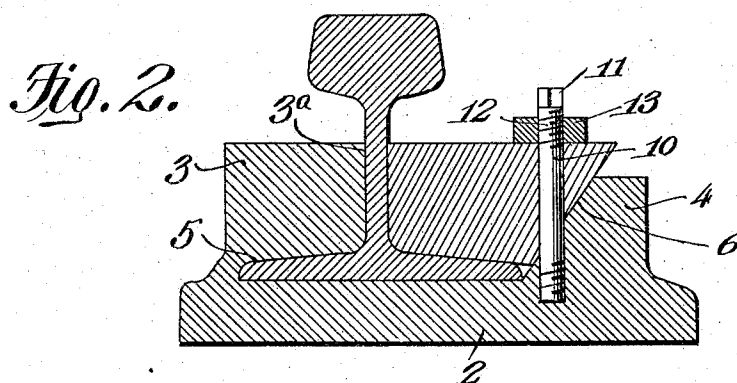
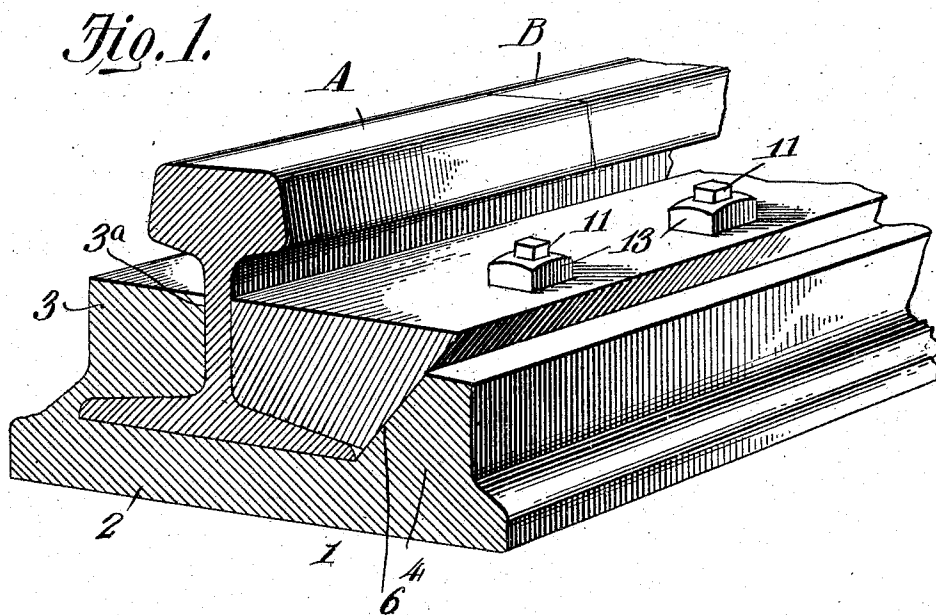


A. LAWRENCE.
RAIL JOINT.
APPLICATION FILED MAR. 12, 1909.

947,108.

Patented Jan. 18, 1910.



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ALBERT LAWRENCE, OF LOS ANGELES, CALIFORNIA.

RAIL-JOINT.

947,108.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed March 12, 1909. Serial No. 482,975.

To all whom it may concern:

Be it known that I, ALBERT LAWRENCE, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail joints, and has for an object to provide a device of this character that can be manufactured at a relatively low cost, and which will provide means for holding the meeting ends of rails without the use of the usual spikes or bolts.

A further object of this invention is to provide a rail joint that will be so constructed that the rails may expand or contract without injury to the joint.

A still further object of this invention is to provide a rail joint which will embody but few parts, including a novel form of fastening adapted for use in retaining rail ends and for adjusting the rails with respect to each other.

Other objects and advantages will be apparent as the nature of the invention is better set forth, and it will be understood that changes within the scope of the claim may be resorted to without departing from the spirit of the invention.

In the drawing, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a perspective view of the meeting ends of two rails showing the application of my improved joint thereto. Fig. 2 is a transverse sectional view. Fig. 3 is a fragmentary perspective view of the locking key. Fig. 4 is a detail section through a portion of the key showing the manner of heading the upper ends of the retaining bolts.

Referring now more particularly to the drawings, there is shown a rail joint 1 comprising a base plate 2 having formed integral therewith vertically extending portions 3 and 4. The portion 3 extends inwardly toward the center of the base plate and is cut away upon its inner side as shown at 5 and is beveled to conform to the base flange of the usual rail sections. The portion 4 is provided with a beveled inner face 6 which is spaced from the inner face of the portion 3. A locking key is illustrated at 7 and is of substantially wedge form in cross section and this key, as shown, is provided

with a beveled outer face 8 conforming to the inner face of the portion 4 of the base member. The key is provided with a plurality of vertically disposed passages 9 which open at their upper ends onto the upper face of the key and at their lower ends onto the face 8 of the key. A plurality of vertically extending bolts 10 are engaged with the base plate and extend upwardly from the face 6 of the portion 4, as clearly shown in Fig. 2 of the drawing. The lower threaded extremities of the bolts are seated in correspondingly threaded passages in the base plate and they are removably engaged with the plate to facilitate the operation of inserting the key operatively between the portion 4 of the base member and the rail ends. These bolts are provided at their upper extremities with squared ends 11 and beneath the said squared ends the bolts are threaded as indicated at 12 to receive clamping nuts 13.

In practice, I place the meeting ends A and B of rails upon the base plate as shown clearly in Figs. 1 and 2 of the drawing, and finally place the key 7 at one side of the web portions of the rail ends in such position that its beveled face 8 lies against the beveled face 6 of the portion 4 of the base plate. After this operation the nuts 13 are driven onto the threaded portions of the bolts 10 to move the key in a downward direction, and in this movement of the key it is obvious that through its engagement with the rail ends at one side of the web portions, the rail ends will be moved toward the inner faces 3^a of the portions 3 of the base plate. In order to prevent rotation of the bolts in the passages 9, I flatten their upper extremities 11 to form a head 14 as shown in Fig. 4 of the drawing.

It will be seen that an extremely simple and effective rail joint is provided which will obviate the use of fastening bolts to be engaged directly with the rail ends, and in consequence of the omission of such bolts or the like it of course prevents weakening of the rail ends as will be readily appreciated. The construction of the joint further provides means whereby the rail ends may expand or contract incident to the change in temperature without injury to the rail ends.

I claim:—

In a rail joint, a base member having spaced vertical portions, one of the said

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vertical portions being adapted to lie against one side of the web portions of the rail ends, the other vertical portion having a beveled inner face, a key removably engaged with
5 the base member and provided with a beveled outer face conforming with the said beveled inner face of one of the vertical portions of the base member, and bolts having lower threaded portions removably en-
10 gaged with the base member, the said bolts being extended through the said key and provided with clamping nuts adapted for

frictional engagement with the upper surface of the key so as to move the key downwardly and inwardly bringing its inner face
15 into frictional engagement with the web portions of the rail ends.

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

ALBERT LAWRENCE.

Witnesses:

T. F. HENRY,
W. E. ROSS.