

M. KELLEY.
RAIL JOINT.
APPLICATION FILED APR. 5, 1917.

1,279,707.

Patented Sept. 24, 1918.

Fig. 1.

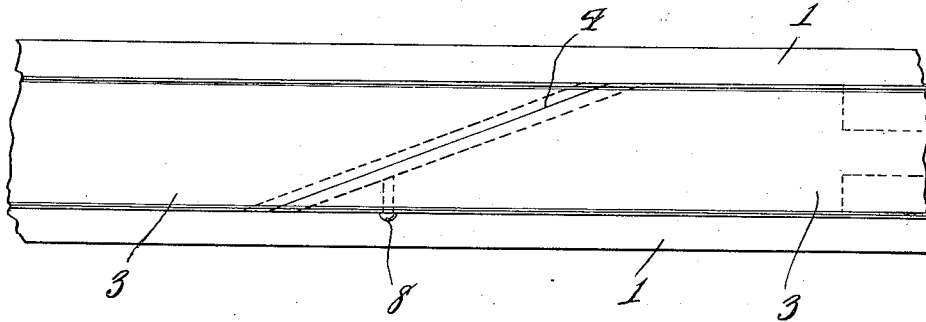


Fig. 2.

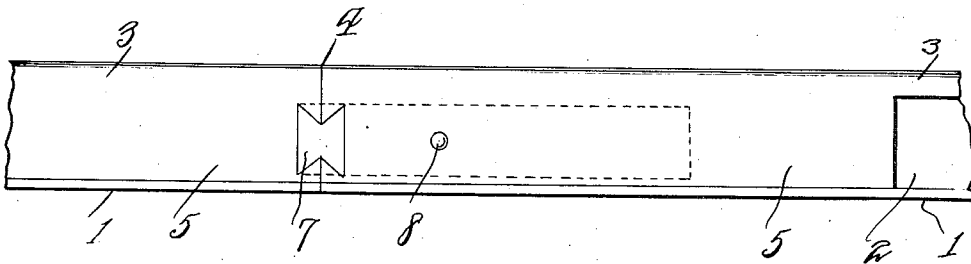


Fig. 6.

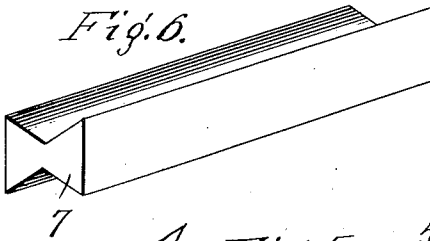


Fig. 3.

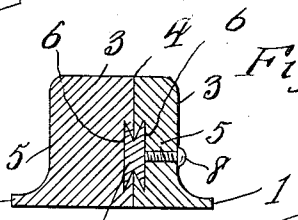


Fig. 5.

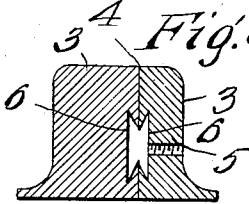
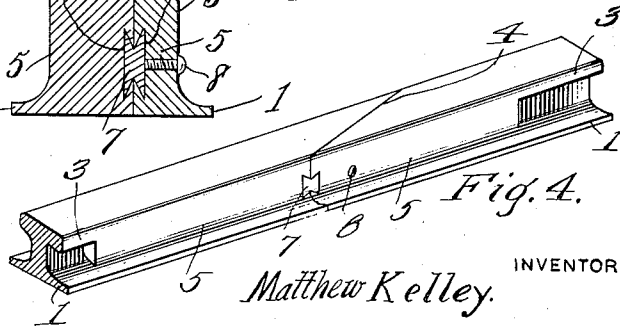


Fig. 4.



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RAIL-JOINT.

1,279,707.

Specification of Letters Patent. Patented Sept. 24, 1918.

Application filed April 5, 1917. Serial No. 159,942.

To all whom it may concern:

Be it known that I, MATTHEW KELLEY, a citizen of the United States, residing at Sault Ste. Marie, in the county of Chippewa and State of Michigan, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

My invention relates to new and useful improvements in railway rails and more particularly to a rail joint.

The primary object of the invention is the provision of means for connecting the meeting ends of the rails.

A further object of the invention is the provision of a key adapted to be received in recesses formed in the ends of the rail.

A still further object of the invention is the provision of means for locking the key in position.

With these and other objects in view the invention consists in the novel details of construction and arrangement of parts which will be more clearly understood from the following description and drawing, in which

Figure 1 is a top plan of the rail the key being shown in dotted lines,

Fig. 2 is a side elevation of the rails illustrating the locking key and key retaining device in position,

Fig. 3 is a transverse vertical section through the meeting ends of the rails, showing the key and retaining means in position,

Fig. 4 is a perspective showing how the rail is thickened at the meeting ends and adjacent thereto,

Fig. 5 is a transverse vertical section through the meeting ends of the rails, with the key removed, and

Fig. 6 is a perspective of the locking key.

In the drawings the numeral 1 indicates the base of the rail, 2 the web and 3 the tread portion of usual construction. The ends of the rails are scarfed, through the tread, web and base, as indicated at 4, and the web 2 is thickened, for a distance from the ends of the rails, as indicated at 5 and said web at the thickened portion, is preferably of the same thickness as the tread portion 3.

A dove-tail groove or recess 6 is formed in the ends of the rails, as more particularly shown in Fig. 5 of the drawing, and as in-

dicated as the ends of the rails are brought together, the dove-tail grooves will be in alinement to receive a locking key 7, of the shape shown, it being substantially X-shaped. As the key extends diagonally across the rails, the ends are beveled whereby they will lie flush with the sides of the web.

If desired, the grooves or recesses 6 may be of greater depth or width than the key 7, thereby allowing for the contraction or expansion of the rails.

A threaded opening is formed in the thickened portion 5, adjacent the end of one of the rails, and is adapted to receive a threaded bolt 8 which, when in position, is adapted to engage one face of the key 7 whereby the key will be securely held in position against accidental displacement.

From the above detailed description, it is thought that the invention will be clearly understood and that the advantages will be apparent. It will be seen that I have provided a rail joint which is simple and inexpensive in construction and which will securely connect the meeting ends of the rails which are of the scarfed type whereby the jar, when going over the joint will be reduced to a minimum. By thickening the web of the rails adjacent the ends, it will be seen that the rail is in no way weakened by making the dove-tailed grooves or recesses therein and the threaded bolt 8 securely locks the key 7 in position against accidental displacement. As previously stated, if desired, the grooves or recesses may be of greater depth, thickness or width, than the key, whereby the rails may contract and expand with the change in temperature.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. A rail joint, comprising rails mitered at their abutting ends, and having dove-tailed recesses formed in the faces of the miters, a dove-tailed key formed to fit in the recesses of the abutting rail ends to prevent vertical movement of the rails, and means carried by one of the rail ends for rigidly securing the key in said rail end thereby allowing for slight movement of the key in the opposite rail end during expansion and contraction of the rails without the loss of the key.

2. A rail joint, comprising rails mitered at their abutting ends, and having a dove-

tailed recess formed in the faces of the
miters, said rails being provided with a
thickened web portion throughout a part of
their length, a dove-tailed key formed to
5 fit in the recesses of the abutting rail ends to
prevent vertical movement of the rails, and
means carried by one of the rail ends for
rigidly securing the key in said rail end
thereby allowing for slight movement of the

key in the opposite rail end during expan- 10
sion and contraction of the rails without
the loss of the key.

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

MATTHEW KELLEY.

Witnesses:

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WM. D. OBERLIE.