

F. S. ROBERTS.  
RAIL JOINT.  
APPLICATION FILED APR. 25, 1910.

992,805.

Patented May 23, 1911

Fig. 1.

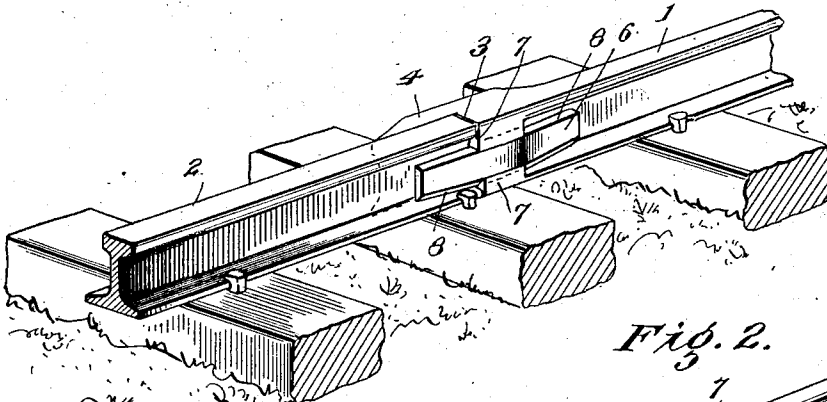


Fig. 2.

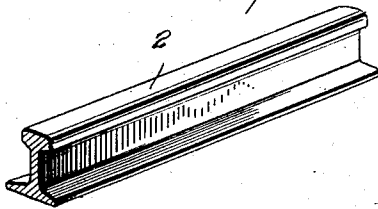
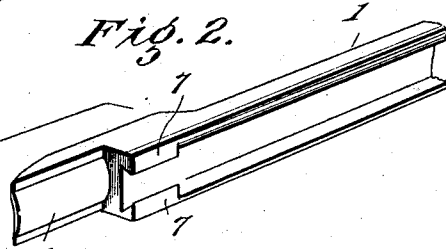


Fig. 4.

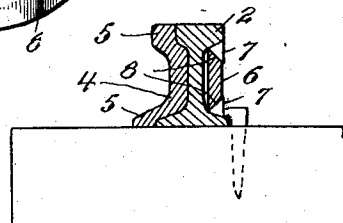
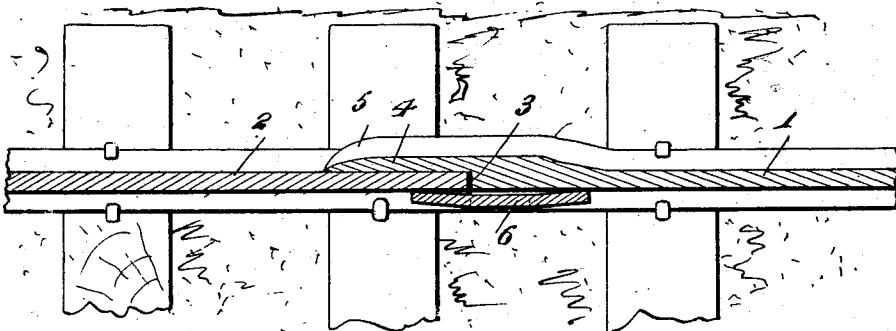


Fig. 3.



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Witnesses

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# UNITED STATES PATENT OFFICE.

FRANK S. ROBERTS, OF MOSIER, OREGON.

## RAIL-JOINT.

992,805.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed April 25, 1910. Serial No. 557,544.

*To all whom it may concern:*

Be it known that I, FRANK S. ROBERTS, citizen of the United States, residing at Mosier, in the county of Wasco and State of Oregon, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

The present invention comprehends certain new and useful improvements in rail joints, and the invention has for its object a device of this character in which the meeting ends of the rails are connected together and held in alinement in a simple and effective manner, the joint being effected without the use of the customary bolts which have been found so objectionable in practice.

A further object of the invention is a rail joint in which the meeting ends of the rails are afforded independent longitudinal movement, whereby to compensate for expansion and contraction through exposure to the weather.

A still further object of the invention is a rail joint in which one of the rail ends is equipped with a longitudinally movable splice bar, adapted to span the joint to hold the other rail end against a tongue that is extended longitudinally from the first-mentioned rail end.

With these and other objects in view, that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts hereinafter fully described and claimed.

For a full understanding of the invention and the merits thereof, and also to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing in which:

Figure 1 is a sectional perspective view of a rail joint constructed in accordance with my invention. Fig. 2 is a similar view, showing the parts of the joint in juxtaposition. Fig. 3 is a horizontal section, and Fig. 4 is a transverse section.

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

My improved rail joint is illustrated as applied to the meeting ends of the rails 1 and 2, which may be of any desired or approved construction or design, except as hereinafter noted. The meeting ends of these rails are cut off square to form a butt

joint 3. One of the rails, say the rail 1, is thickened at its meeting end on one side to provide a tongue 4, that is extended longitudinally beyond the rail 1 and has its inner face suitably formed to fit snugly against the adjacent side of the rail 2. At its upper and lower edges the tongue has laterally projecting flanges 5, which are flush with the heads and bases of the rails.

A longitudinally elongated splice bar or key 6 is mounted on the opposite side of the rail 1 from the tongue 4, and is suitably connected to said rail for longitudinal movement relative thereto. In the present instance the splice bar fits between a pair of lugs 7 integral with and outstanding from rail 1 at vertically spaced points, the upper and lower edges of the splice bar being beveled, as indicated at 8, to engage with the undercut walls of the lugs. The splice bar is thus adapted to be shifted longitudinally to assume the operative position illustrated in Fig. 1, wherein it spans the joint and bears against the rail 2 to hold the same against the tongue 4. In this position the middle portion of the splice bar is positioned between the lugs 7, while its end portions project therebeyond and bear against the webs of the respective rail ends. The splice bar gradually increases in width from its opposite ends toward the middle, and hence the middle portion of the splice bar wedges between the lugs so as to hold the splice bar in an operative position against accidental longitudinal displacement. Of course, when it is desired to separate the rail ends, as when taking up the track, the splice bar may be shifted longitudinally into an inoperative position by the application of positive driving force.

From the foregoing description in connection with the accompanying drawing, it will be apparent that I have provided an improved rail joint which positively holds the meeting ends of the rails in alinement, which is thoroughly practical and reliable, and which possesses to a marked degree the characteristics of simplicity, durability and strength. The joint consists of comparatively few parts that are capable of being easily and quickly assembled and are not likely to get out of order.

Attention is particularly directed to the fact that the splice bar is preferably curved longitudinally to bow the intermediate portion thereof away from the webs of the rails.

By virtue of such an arrangement the end portions of the splice bar are caused to bear more firmly against the webs of the respective rails in the operative position of the splice bar, while the intermediate portion of the splice bar is held firmly between the lugs with a binding action to further insure against the accidental longitudinal displacement of the splice bar.

10 Having thus described the invention, what I claim is:

1. The combination of a rail having a rigid tongue extending longitudinally beyond one end thereof, and a splice bar having a widened central portion slidably connected to the rail and movable longitudinally to project beyond said end of the rail in opposed relation to the tongue.

2. The combination of a rail formed in proximity to one end with a pair of spaced lugs having undercut walls, and a centrally widened splice bar fitting between the lugs and having beveled side edges to engage the undercut walls thereof, the splice bar being movable longitudinally between the lugs to project beyond the adjacent end of the rail to span the joint.

3. The combination of a rail formed in proximity to one end with a pair of spaced lugs upon one side and a rigid tongue upon

the other side, and a splice bar disposed in the direction of the length of the rail and adapted to be wedged between the lugs with one end projecting beyond the adjacent end of the rail to span the joint.

4. The combination of a rail and splice bar fitting against one side of the rail and connected thereto for longitudinally sliding movement, the splice bar being movable to project beyond one end of the rail to engage against the adjacent side of the compound rail and span the joint said splice bar having a centrally widened portion.

5. A combination with a rail having an enlarged end provided with a tongue having flanged upper and lower edges, spaced lugs formed on the opposite side of said rail provided with beveled faces and a splice bar having beveled edges slidably mounted between said lugs, said splice bar being provided with a centrally widened portion, the splice bar and tongue being adapted to engage the opposite sides of the abutting rail.

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

FRANK S. ROBERTS. [L. s.]

Witnesses:

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W. E. HURKEY.