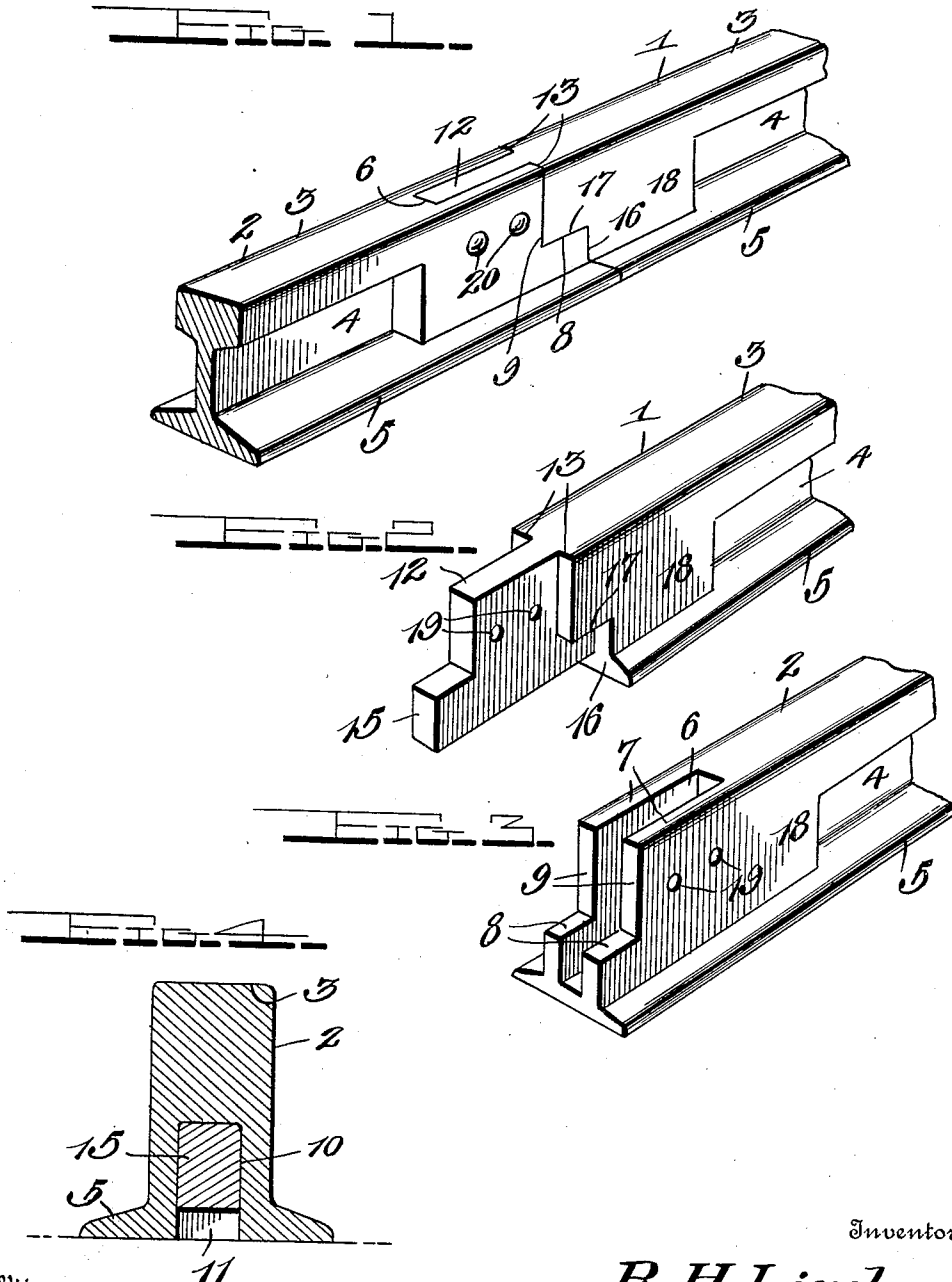


R. H. LIVELY.
RAIL JOINT.

APPLICATION FILED APR. 25, 1912.

1,041,823.

Patented Oct. 22, 1912.



Witnesses

Chas. L. Griestauer.
A. L. W. Day

By

Watson E. Coleman
Attorney

Inventor

R. H. Lively,

UNITED STATES PATENT OFFICE.

ROBERT H. LIVELY, OF OKARCHE, OKLAHOMA, ASSIGNOR OF ONE-HALF TO AMZEYE
W. SCHOOLEY, OF OKARCHE, OKLAHOMA.

RAIL-JOINT.

1,041,823.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed April 25, 1912. Serial No. 693,224.

To all whom it may concern:

Be it known that I, ROBERT H. LIVELY, a citizen of the United States, residing at Okarche, in the county of Canadian and State of Oklahoma, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in rail joints, the object of the invention being to provide a rail joint so constructed and arranged that the meeting ends or sections of the rails, rigidly secured to the ties, are adapted for an interlocking union which will admit of proper longitudinal movement of the rail due to expansion and contraction or other natural causes, but which at the same time rigidly secures the meeting ends or sections of the rails against either lateral or vertical movement under the heaviest strain.

Another object of the invention is to provide a rail joint so united as to form practically one continuous rail and an unbroken smooth tread surface, thus avoiding the jar and disagreeable sensation incident to passing over the uneven joints of the rails at present in use.

A further object of the invention is to provide a rail joint of this character which will possess advantages in points of efficiency and durability, is inexpensive of manufacture and at the same time is simple in construction and operation.

With the above and other objects in view, the invention consists in the novel features of construction and the combination and arrangement of parts hereinafter more fully described, pointed out in the claim and shown in the accompanying drawings in which,

Figure 1 is a perspective view of a rail joint constructed in accordance with my invention. Fig. 2 is a perspective view of the meeting end of a rail having a forwardly projecting tongue. Fig. 3 is a perspective view of the other end of the rail having the recess portion adapted to receive the tongue formed on the end of the other rail. Fig. 4 is a transverse sectional view.

Referring more particularly to the drawings, 1 and 2 indicate the meeting ends of two rails of ordinary construction comprising the tread portion 3, webs 4 and flanges

or bases 5. The meeting end of the rail 2 is provided with a recess 6, which latter extends through the tread 3, and the web 4, and forms the two vertically extending side walls 7 which are cut away at their outer ends to form the seats 8 and the shoulder 9. Formed in the web of the rail at the inner end of the recess 6 and arranged beneath the tread 3 is a socket 10, and an opening 11 is formed in the base 5 of the rail and adapted to communicate with the socket 10. The other rail 1 is extended to form a tongue 12, having its upper surface of the tread portion 3 flush or in alinement with the upper surface of the tread portion 3 of the rail 2 so that the tread 3 of the rail 1, provides shoulders 13 adapted to abut against the shoulders 9 of the rail 2. An extension 15 is formed on the outer end of the web 12 at the lower edge thereof and adapted to be disposed in the socket 10 in the rail portion 2 to prevent vertical movement of the rail ends. The web of the rail 1 is cut away to form the shoulders 16 and 17, the shoulder 16 being adapted to abut against the end of the rail 2, while the shoulder 17 is adapted to rest upon the seats 8.

The webs 4 of the rails are thickened on opposite sides as shown at 18 to increase the strength of the rails at their meeting ends. Bolt openings 19 are formed in the walls of the recess 6 and the web 12 so that the meeting ends of the rails can be securely fastened by means of the bolts 20. Thus it will be seen that the ends of the rails are securely held against vertical and longitudinal movement. When laying the rail upon the road bed, the ballast will push up through the openings 11 when the rails are laid to form a suitable anchor for the rails.

In order to remove a broken rail it will be necessary to move 5 or 6 rails longitudinal as much as they will go and then move the broken rail out until the extension 15 is entirely free of the socket 10 to allow the end of one of the rails to be moved upwardly to entirely disengage the ends of the rails.

While I have shown and described the preferred form of my invention, it will be obvious that various changes in the details of construction and in the proportions may be resorted to for successfully carrying my invention into practice without sacrificing any of the novel features or departing from the scope thereof.

What I claim is:—

A rail joint comprising a rail having a longitudinal recess formed in one end thereof, said rail having a socket formed in the web thereof at the inner end of said recess
5 and disposed beneath the tread of the rail, said rail having an opening in the base thereof communicating with said socket, the walls of the recess at the outer ends thereof
10 being cut away to form a horizontal seat and a vertical shoulder, and a second rail having an extending tongue formed on one end thereof, an extension formed on the outer end of the tongue at the lower edge
15 thereof and adapted to be arranged in said socket of the first rail, shoulders formed

upon the end of the second rail at the inner end of said tongue and adapted to abut against the shoulders of the first rail, angularly disposed shoulders formed upon the end of the second rail at the lower edge of the tongue and adapted to abut with the seats formed on the first rail and the end of said first rail, and bolts disposed through the ends of said rails to securely hold the same against vertical or lateral movement. 20 25

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

ROBERT H. LIVELY.

Witnesses:

L. D. ROBINSON,

A. W. SCHOOLEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."