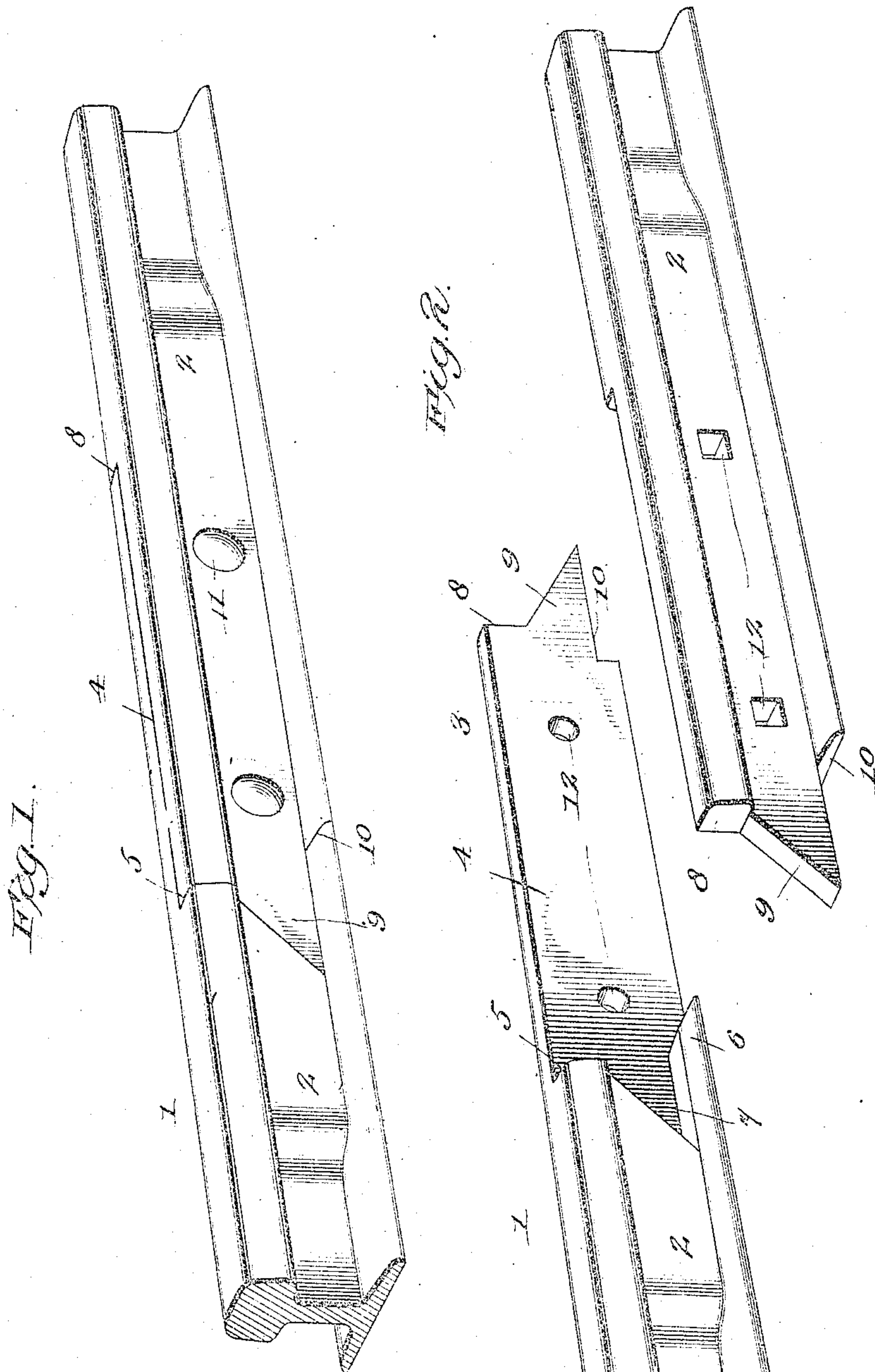


No. 856,086.

PATENTED JUNE 4, 1907.

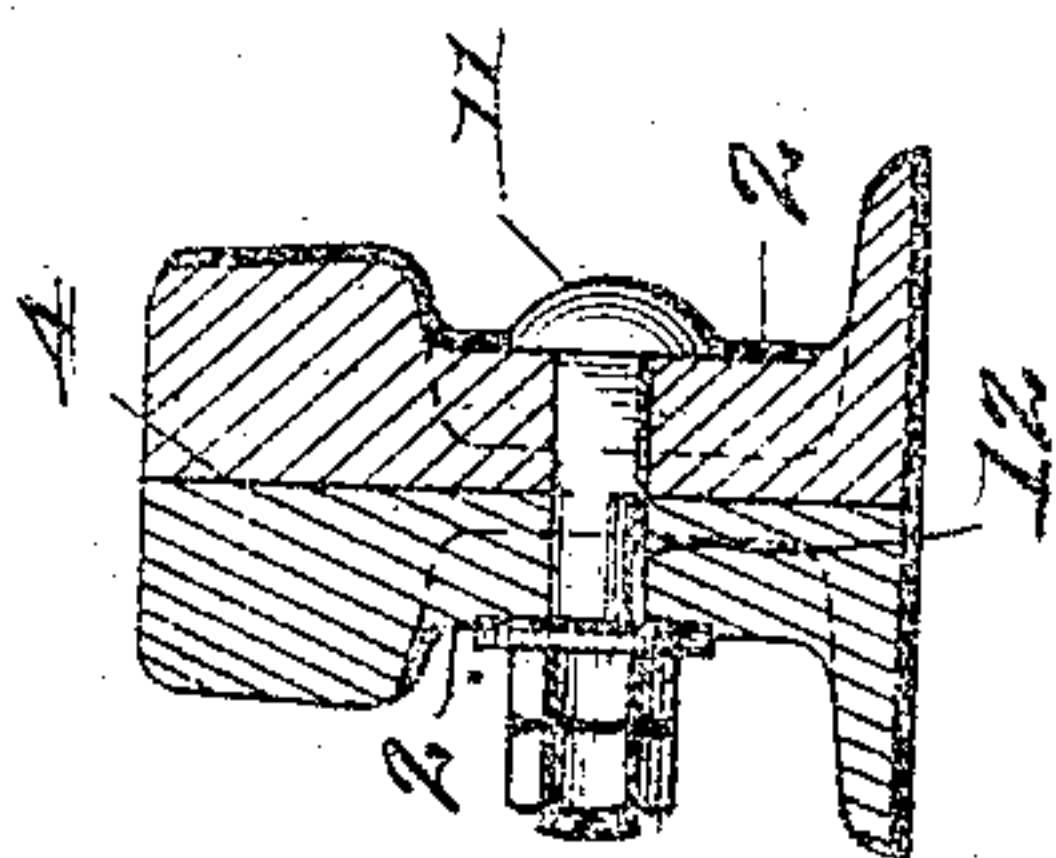
C. L. McVOY.  
RAIL JOINT.

APPLICATION FILED JAN. 16, 1907.



Witnesses  
*Geo. H. Byrne*  
*Alphonse Kineta.*

Fig. 3.



Inventor  
*C. L. McVOY.*  
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his Attorneys



# UNITED STATES PATENT OFFICE.

CHARLES L. McVOY, OF PENSACOLA, FLORIDA.

## RAIL-JOINT.

No. 856,086.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed January 16, 1907. Serial No. 352,592.

*To all whom it may concern:*

Be it known that I, CHARLES L. McVOY, a citizen of the United States, residing at Pensacola, in the county of Escambia and State of Florida, have invented certain new and useful Improvements in Rail-Joints; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in steel rails, and is primarily designed to so construct the ends of the rail with cut away portions adapted to snugly fit when the reversed ends of the rails are put together and securely bolted to insure a rigid scarf joint and thereby avoid the necessity of the use of fish plates, as are now commonly employed.

In addition to the foregoing, one of the primary advantageous features of a rail constructed according to the present invention is that it prevents a sharp line of division between the adjacent ends of the connected rails, so that at no time, when passing over the joint, are the wheels of the trucks not upon a solid base, and therefore there results no pounding or jumping action, as is the case where there is employed the ordinary form of rails abutting at their ends.

While the invention is not specifically limited to the exact details shown, yet for the purpose of disclosure reference is had to the accompanying drawings illustrating a practical embodiment of the invention, in which like letters indicate similar parts in the several views, and in which:—

Figure 1 is a perspective view of a portion of a pair of rails, the abutting ends of which are fitted and bolted together in accordance with my invention. Fig. 2 is a disassociated view of the complementary ends of the rails to be joined, and Fig. 3 is a transverse vertical section through the rail joint.

Referring to Fig. 2, 1 designates one of the rails having a tread portion, a vertical web and a flanged base constructed in accordance with the usual form of steel rails and provided at its ends with the enlarged or widened web portion 2, which extends laterally a considerable distance beyond both sides of the normal vertical web. At the end the rail is cut away to form a tongue 3, and the particular manner of cutting this end of the rail is clearly shown in the drawings where the inner face 4 of the tongue lies in a vertical plane

extending longitudinally through the center of the tread, cut away as at 5, the strengthened vertical web 2, and a portion of the base flange. That portion 6 of the base flange which is immediately below the shoulder formed by the meeting of the lateral and longitudinal cuts in the tread, indicated at 5, is not disturbed, the inner cut away portion forming the tongue 3 terminating in an inwardly extending angular recess 7 formed in the thickened web 2 between the top of the base flange and the bottom of the tread. The end of the tongue 3 is cut vertically at the tread portion as at 8 and is provided with the downwardly inclining angular member 9 formed from the web and below this angular member 9, the flanged base is cut away to form a notched or recessed portion 10, the angular member 9 projecting outwardly from the end of the rail between a position at the bottom of the tread and a position substantially in alinement with the top of the base flange.

From the foregoing description it will be understood of course that while the ends of each rail might be simply cut away on the same side of the rail, and special intermediate sections being made for joining two such rails, still in practice it is desirable that the opposite ends of the rails be reversely cut so that any one rail when reversed will fit with its complementary end of any other rail. It will also be observed from the foregoing and from the drawings that when the two rails are assembled, the parallel side faces 4 will snugly rest together with the angular member 9 of one rail inserted in the angular recess 7 in the thickened web of the other rail, the lower edge of the angular member resting on the top face of the projecting portion 6 of the complementary flange, this being permitted by the notched portion 10 at the end of the rail. When the parts are thus assembled, suitable bolts 11 are passed through apertures 12 and securely locked in any desired manner.

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

A rail provided at one end with a tongue, the inner face of which lies in a vertical plane extending longitudinally through the center of the tread, the vertical web and a portion of the flanged base; said tongue terminating in an angular-shaped member inclining downwardly from a position at the bottom of said tread to a position in alinement with the top

of said flanged base: said tread portion being  
cut away above and said flanged base being  
cut away below said angular shaped mem-  
ber; and the cut away portion forming said  
5 tongue terminating inwardly in an angular  
recess formed in the vertical web of said rail  
above said base flange, the said rail being  
adapted to cooperate with a similarly formed

reversed rail to make a rigid scarf joint, sub-  
stantially as described. 10

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

CHARLES L. McVOY.

Witnesses:

H. P. HOLMES,  
K. B. RADCLIFFE.