

No. 772,307.

PATENTED OCT. 11, 1904.

G. R. WOLFE.  
RAIL JOINT.

APPLICATION FILED APR. 20, 1904.

NO MODEL.

Fig. 1.

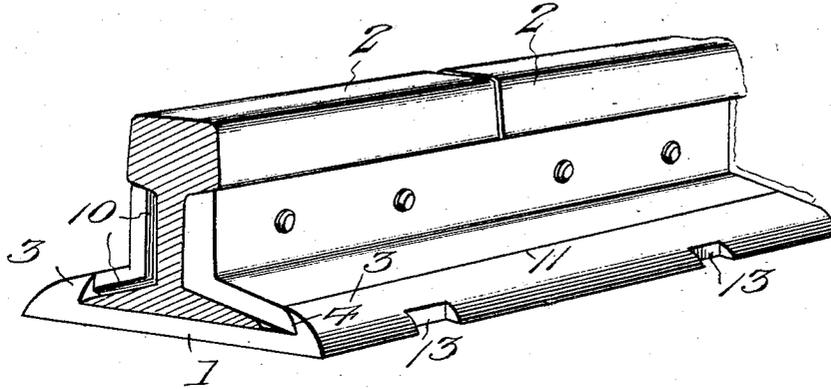


Fig. 2.

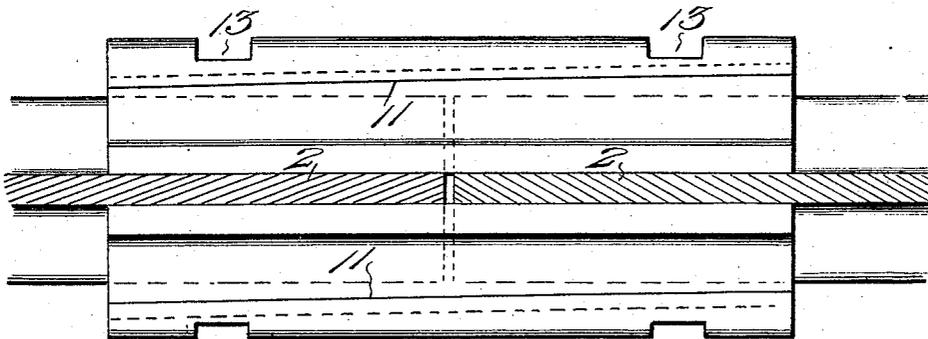
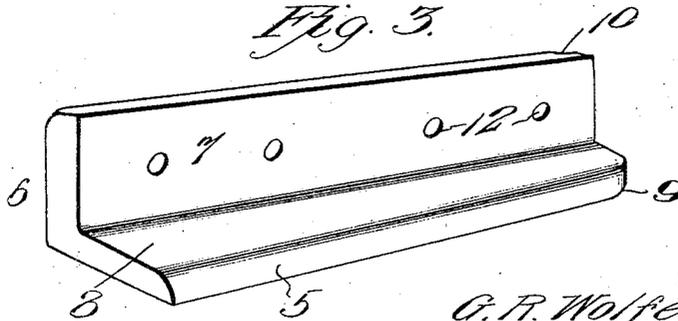


Fig. 3.



Witnesses

*Wm. K. Smith*  
Harry M. Test.

Inventor

G. R. Wolfe,

By

*Victor J. Evans*

Attorney

# UNITED STATES PATENT OFFICE.

GEORGE R. WOLFE, OF LEAD, SOUTH DAKOTA.

## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 772,307, dated October 11, 1904

Application filed April 20, 1904. Serial No. 204,146. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE R. WOLFE, a citizen of the United States, residing at Lead, in the county of Lawrence and State of South Dakota, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail-joints, the object of the invention being to provide a substantial solid rail-joint by means of which the adjacent ends of railway-rails are securely clamped and fastened together by means of a supporting-chair and fish-plates or splice-bars which have a wedging fit between portions of the chair and the rails, the splice-bars or fish-plates being interchangeable and applicable to either side of the rail and chair, thus expediting the construction and repair of a railway.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination, and arrangement of parts, as hereinafter fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a rail-joint embodying the present invention. Fig. 2 is a plan view of the same, the rail ends being in section. Fig. 3 is a detail perspective view of one of the splice-bars or fish-plates.

Like reference-numerals designate corresponding parts in all the figures of the drawings.

One member of the improved rail-joint consists of a chair embodying a base or bed plate 1, which extends beneath the rail ends 2 and is provided along its opposite longitudinal edges with upwardly and inwardly projecting flanges 3, which are undercut, as shown at 4, to receive and engage the correspondingly-beveled outer edges 5 of the other members of the rail-joint, which consist of two splice-bars or fish-plates 6, one of which is illustrated in detail in Fig. 3.

Each splice-bar or fish-plate is in the nature of a key or wedge and comprises an upright or body portion 7, which bears against the web and head of the rail ends, as shown in Fig. 1, the said splice-bar also comprising an

outwardly-extending tapered flange 8, which flange gradually tapers from end to end in the form of a true wedge, as clearly shown in Figs. 2 and 3, the forward narrow end of the flange being rounded, as shown at 9, to facilitate driving the same between the rail ends and one of the flanges 3 of the chair. The inner advance corner or angle of the body portion 7 is also chamfered or beveled, as shown at 10, to further facilitate the driving of the splice-bar into place.

By reference to Fig. 2 it will be seen that flanges 3 in addition to being undercut, as shown at 4, are also tapered from end to end to correspond with the taper of the flange 8 of each of the splice-bars, as shown at 11, the edges 11 being parallel to each other and oblique with respect to the rails. Therefore the wedge-shaped splice-bars are adapted to be driven into place from opposite directions and being of the same size and dimensions throughout said splice-bars are interchangeable, either one being insertible at either side of the joint.

It will also be observed by reference to Fig. 1 that the inner edges 11 of the flanges 3 are located at a sufficient distance from the extreme outer edges of the base-flanges of the rails to allow the chair 1 to be detached from the rail ends after withdrawing the splice-bars, or, in other words, the distance between the parallel oblique undercut edges 11 of the flanges 3 is slightly in excess of the extreme width of the rail-base.

In operation the chair is placed under and in contact with the bases of the rails and the splice-bars then inserted from opposite ends, which operation serves to cause the joint members to interlock. The splice-bars are then driven inward with a sledge until the bolt-holes 12 thereof register with corresponding holes in the rails, after which the usual retaining-bolts are inserted through the splice-bars and rail ends and secured by nuts. This prevents longitudinal movement and escape of the splice-bars and holds all parts of the joint in firm clamping engagement with the rail ends. The chair itself extends over a plurality of supporting-ties and is provided with spike-receiving notches 13,

through which ordinary spikes are driven into the ties.

Having thus described the invention, what is claimed as new is—

5 The combination with adjacent rail ends, of a chair extending beneath the rail ends and provided along its opposite edges with upwardly and inwardly projecting flanges having parallel oblique undercut inner faces, the  
10 extreme inner portions of which are located at a greater distance apart than the extreme width of the rail-base, and splice-bars provided with bevel-edged tapered flanges adapted to engage the chair-flanges and the

rail web and base, said splice-bars being insertible from opposite ends of the chair and provided with bolt-holes which register with corresponding holes in the rails, the advance ends of the splice-bars being rounded or chamfered, substantially as and for the purpose set forth. 15 20

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

GEORGE R. WOLFE.

Witnesses:

F. W. BROWN,  
CHAS. E. DUFFEY.