

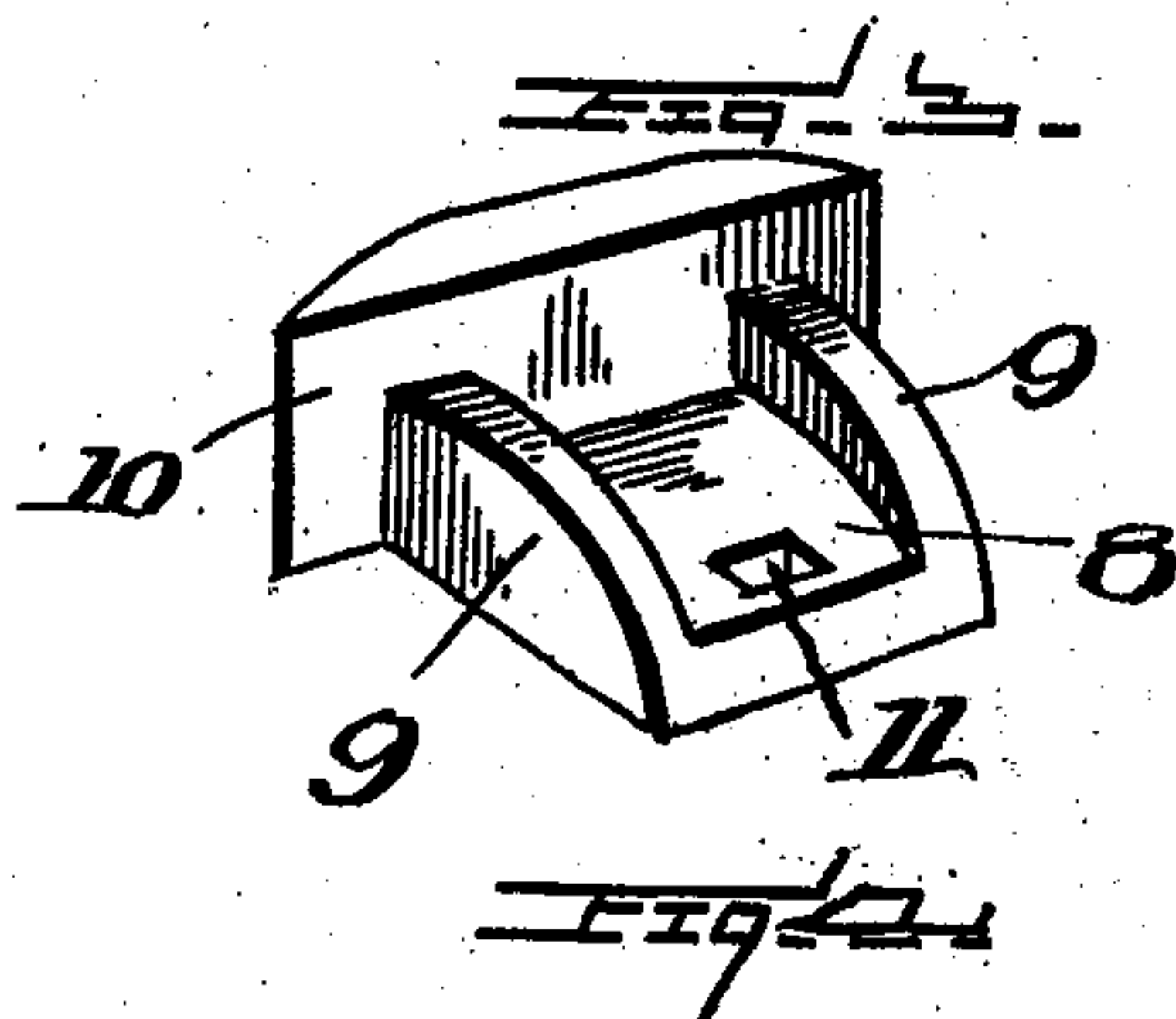
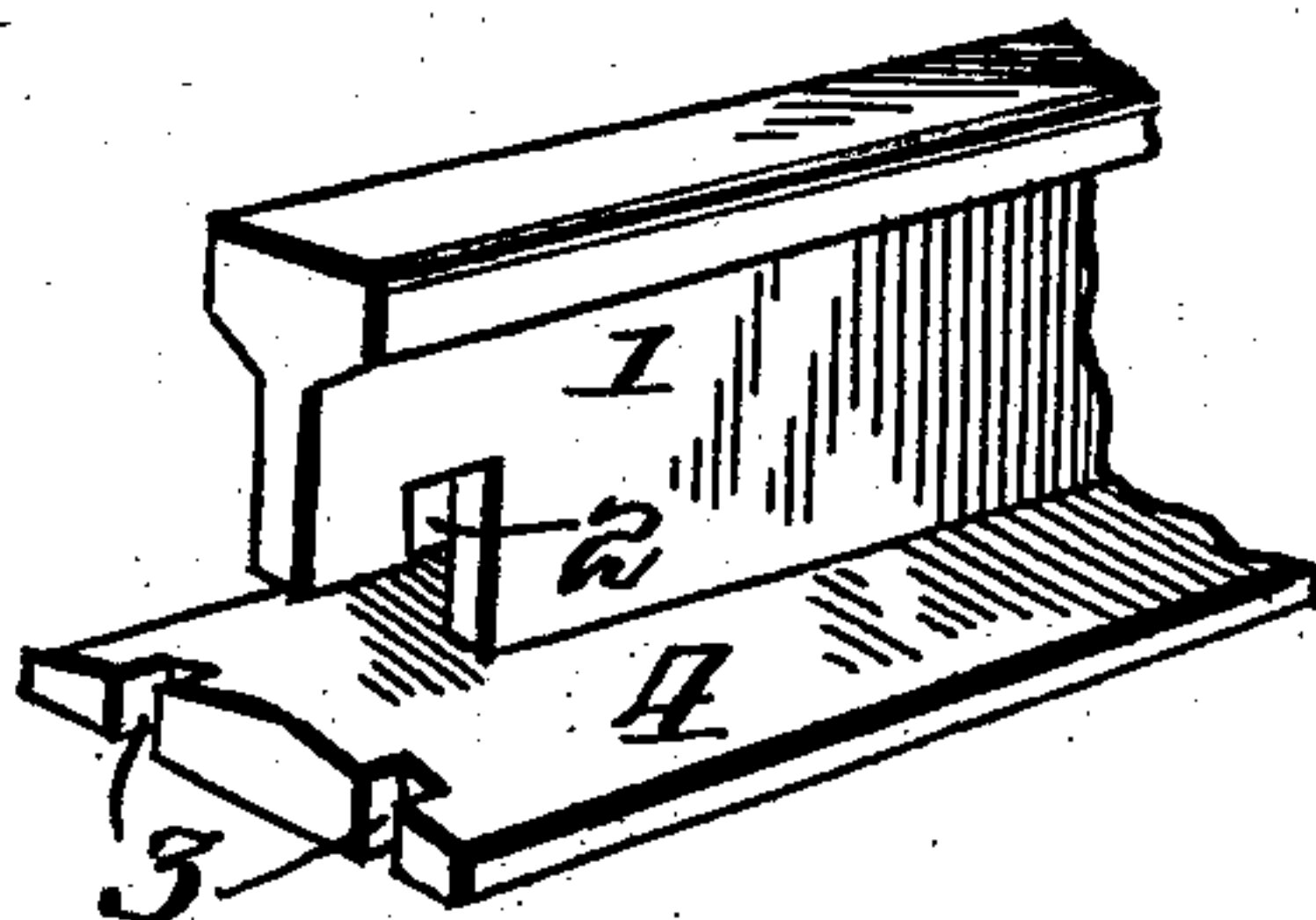
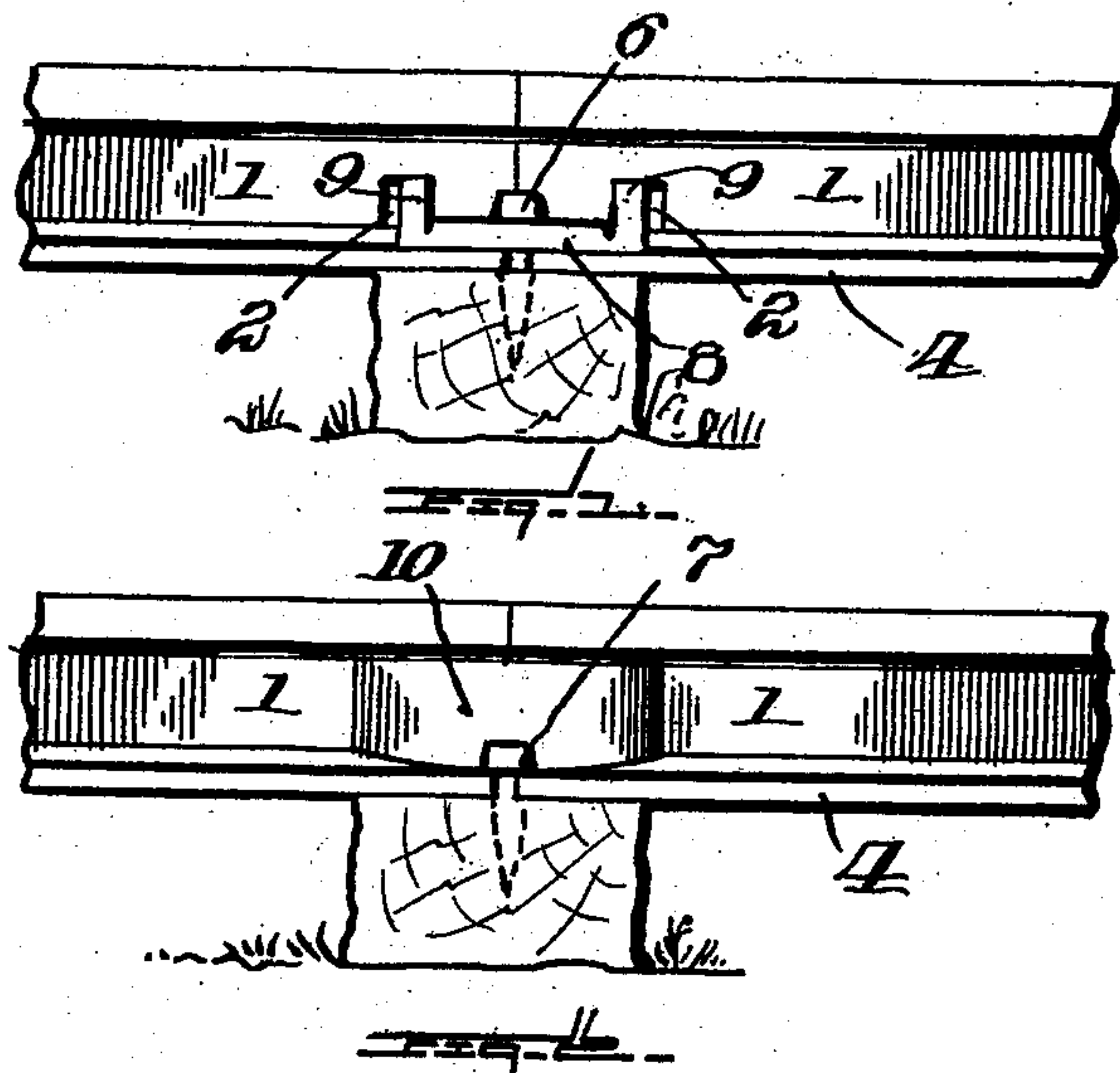
No. 715,628.

Patented Dec. 9, 1902.

R. E. VAN NAULAR.  
RAIL JOINT.

(Application filed Sept. 27, 1902.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

RALPH E. VAN NAULAR, OF MUNHALL, PENNSYLVANIA.

## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 715,628, dated December 9, 1902.

Application filed September 27, 1902. Serial No. 125,077. (No model.)

*To all whom it may concern:*

Be it known that I, RALPH E. VAN NAULAR, a citizen of the United States of America, residing at Munhall, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in rail-joints, the object of the invention being to provide novel and effective means whereby the ends of two rails may be joined together without the aid of the  
15 ordinary fish-plates and bolts and nuts.

To this end the invention resides in the novel construction and arrangement which, briefly described, consists in forming the adjacent ends of the rails with cut-away portions  
20 which receive the wedge-block that carries the fish-plate to engage against one side of the rail. This wedge-block engages the webs of the adjacent rails and is secured in position by the spike extending through the wedge-  
25 block through notches provided therefor in the adjacent ends of the base of the rails and engage the cross-ties.

The invention will be hereinafter more fully described and then specifically pointed out in the claims, and in describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views,  
30 in which—

Figure 1 is a side elevation of the rail-joint constructed in accordance with my invention. Fig. 2 is a like view of the reverse side of the joint. Fig. 3 is a detail perspective view of  
40 a part of the rail as constructed in accordance with my invention. Fig. 4 is a detail perspective view of the wedge-block which secures the rail ends together.

To put my invention into practice, I provide the web 1 of the rails at the end thereof with an L-shaped cut-away portion 2, the horizontal lug of which is at the base of the web and the other lug of which is vertically in the web. I also provide notches 3 in the ends of  
50 the rail-base 4, and when the rails are in abutting engagement with each other these notches 3 in one rail register with those in the

adjacent rail and form apertures to receive the securing-spikes 6 and 7. The cut-away portions in the ends of the adjacent rails register, forming a somewhat U-shaped opening at the joint which receives the wedge-block, comprising the base-plate 8, flanges 9, and the fish-plate 10. This wedge-block is inserted through the opening formed by cutting away  
60 the webs of the rails at the ends thereof, the base-plate 8 lying on the upper face of the base 4 of the rails. The flanges 9 are curved on their upper face, and these flanges engage in the vertical portions of the openings 2 in the  
65 rail-web, while the fish-plate 10 abuts against the rail-web at one side of the rails, a part of the fish-plate engaging each of the adjacent rails. The base-plate 8 of the wedge-block is provided with an opening 11, which registers  
70 with one of the openings 3 and receives the securing-spike 6. At opposite sides of the rails the spike 7 is inserted into the other openings 3, and when in position the head thereof is adjacent to or in engagement with the fish-plate  
75 10. The spike 7 is not absolutely essential to the securing of the wedge-block in position, as the spike 6, passing through the wedge-block and through the base of the rails into the tie, secures the rails firmly together, since  
80 the flanges 9 engage in the openings of the web of the rails to prevent any longitudinal movement of said rails.

A joint constructed in accordance with my invention is quickly and easily assembled, as  
85 the rails may be placed in position with their ends abutting and the wedge-block then inserted and secured in position by the spikes. The wedge-block is easily removed by withdrawing the spike 6 and also spike 7 in case  
90 the latter is employed, after which the block may be forced laterally out of this position in the webs of the rails.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

1. In a rail-joint, the combination with the rail ends having L-shaped cut-away portions in the web thereof, and provided with notches in the ends of the base, of a wedge-block com-  
100

prising a base, integral side flanges carried by said base and provided with curved upper edges, an integral fish-plate carried by the wedge-block, said base of the wedge-block  
5 having an opening registering with the openings in the rail-base to receive the securing means, substantially as described.

2. In a rail-joint, the combination with the rail ends having cut-away portions in the web  
10 thereof and provided with notches in the ends of the base, of a wedge-block comprising a base and flanges to be engaged in the cut-

away portions of the rail-web, a fish-plate carried by the said wedge-block, and means engaging through the wedge-block and rail- 15 base for securing said block in position, substantially as described.

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

RALPH E. VAN NAULAR.

Witnesses:

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