

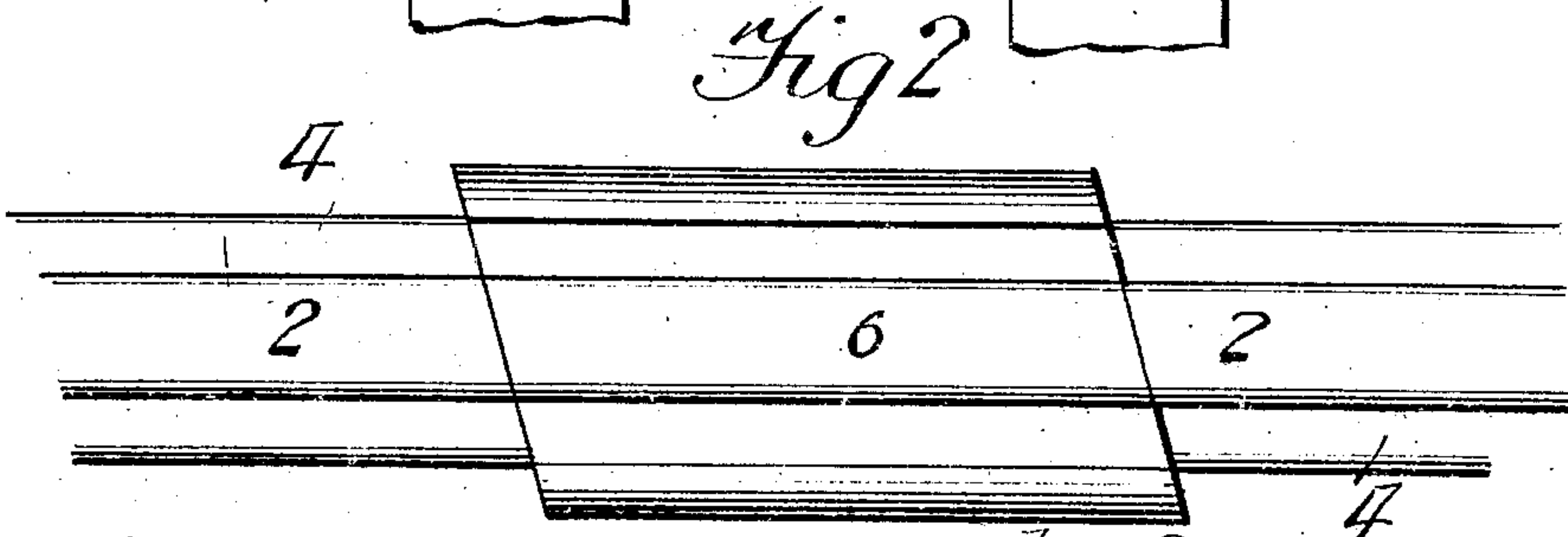
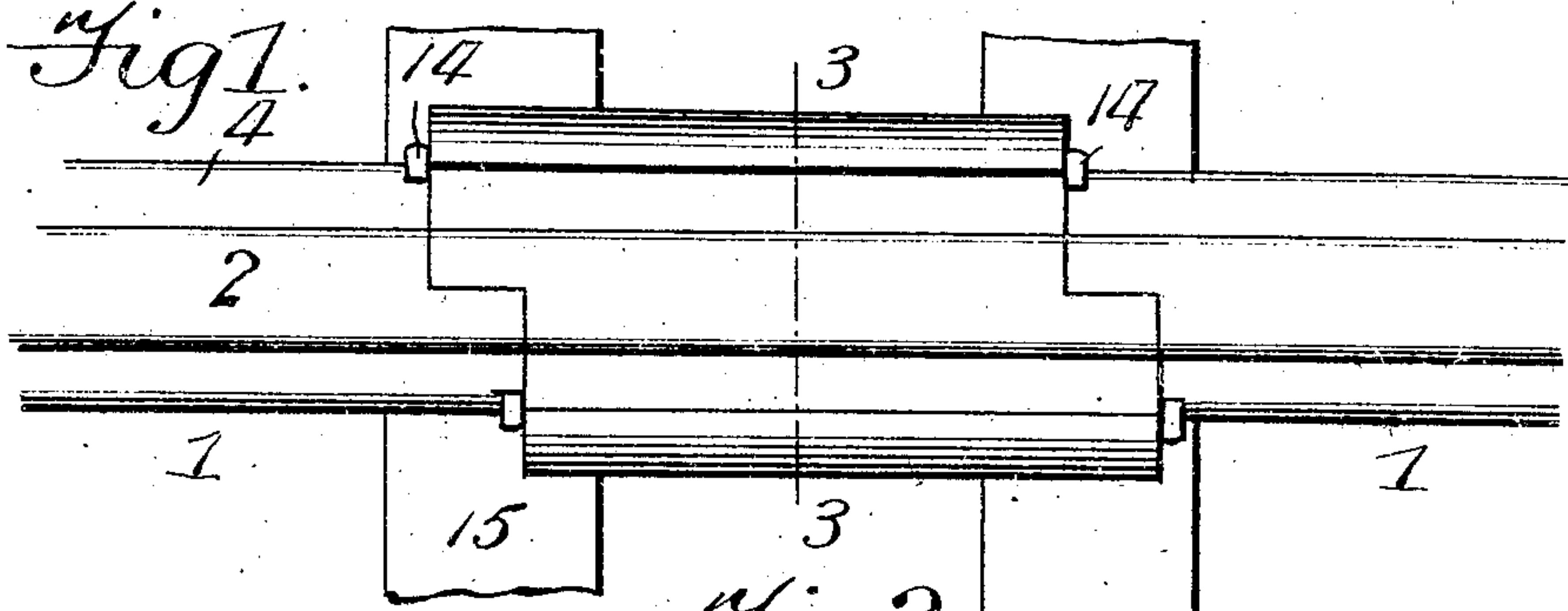
G. SEEMANN.

RAIL JOINT.

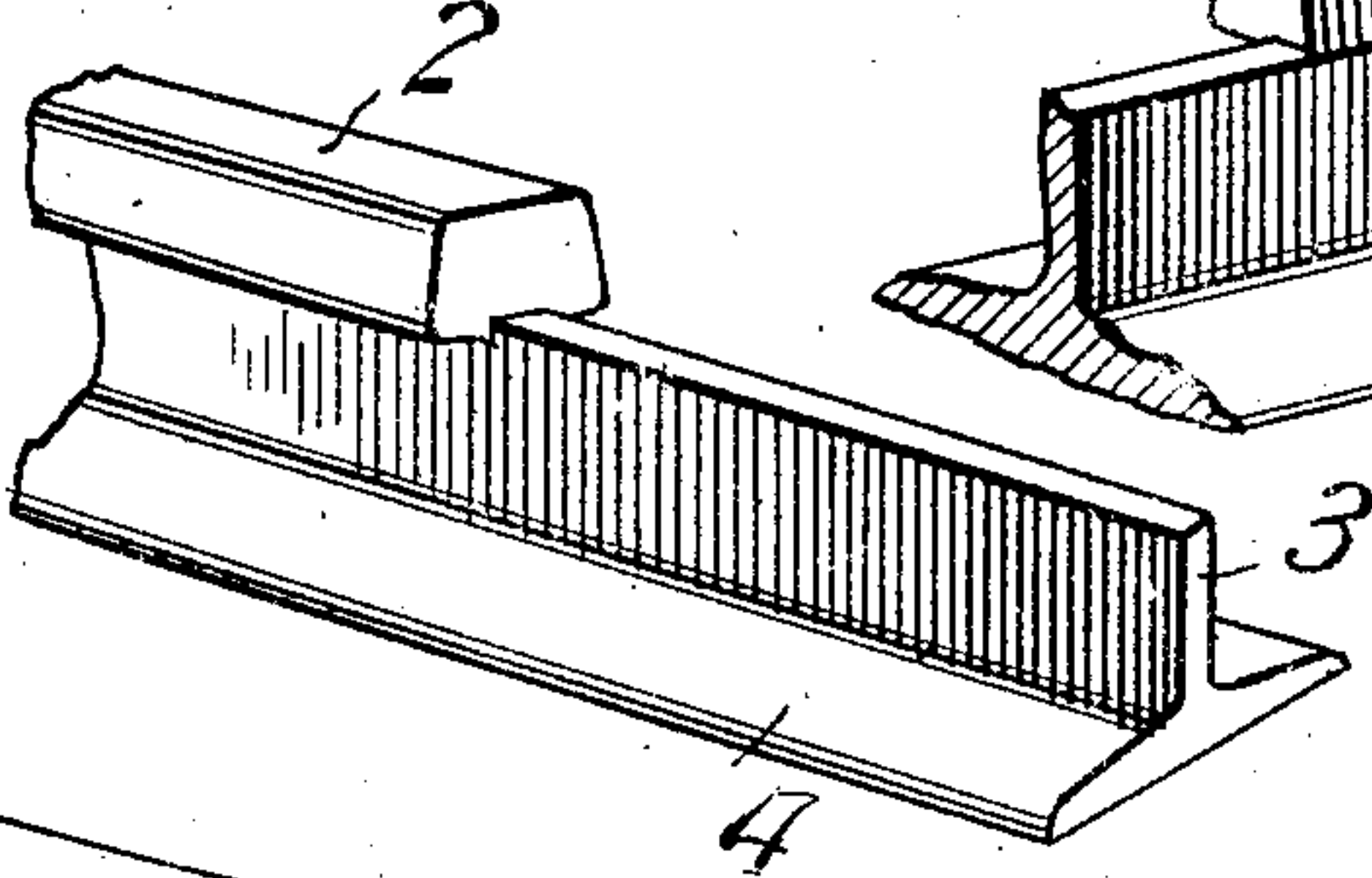
APPLICATION FILED APR. 11, 1908.

912,495.

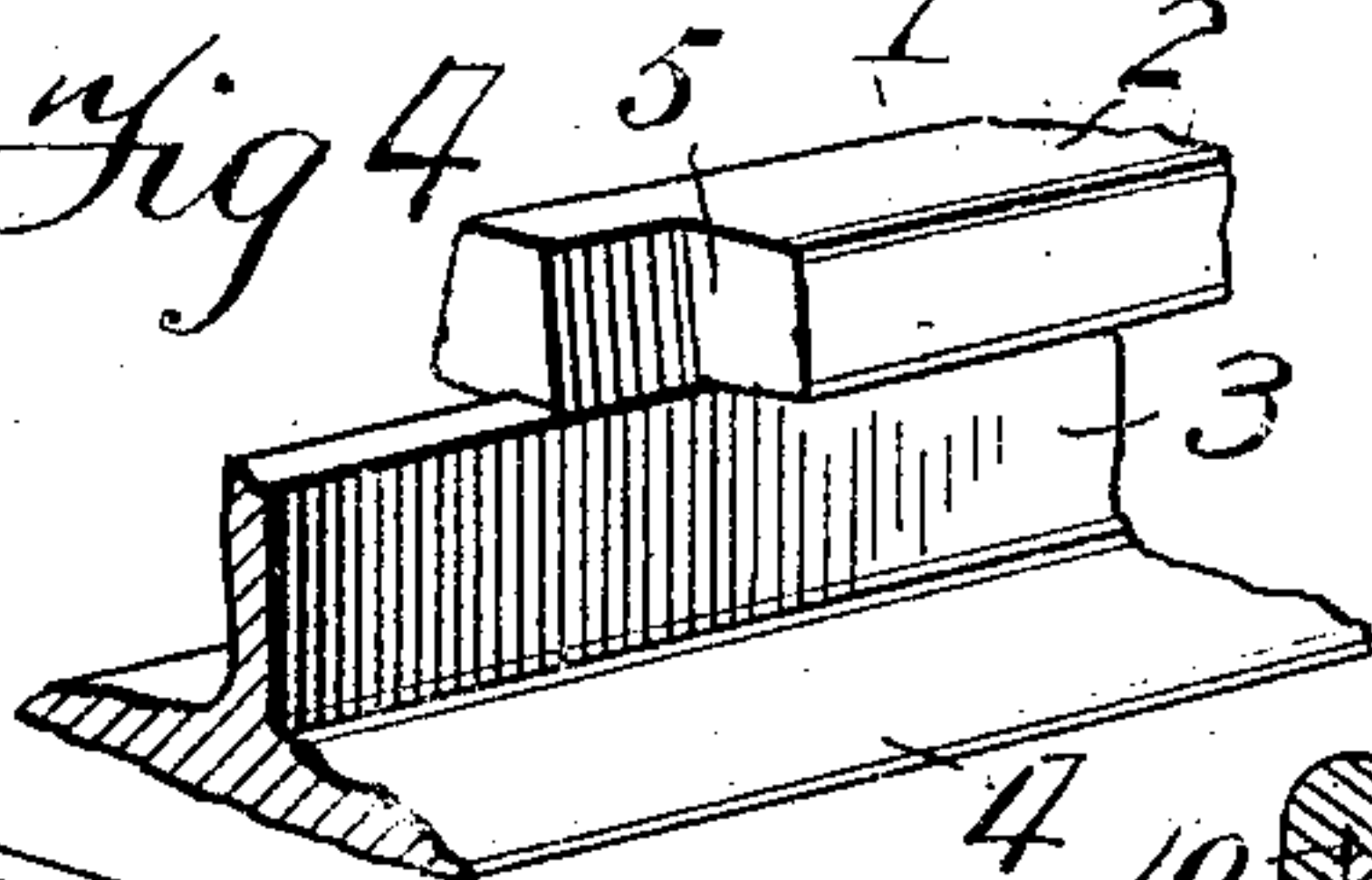
Patented Feb. 16, 1909.



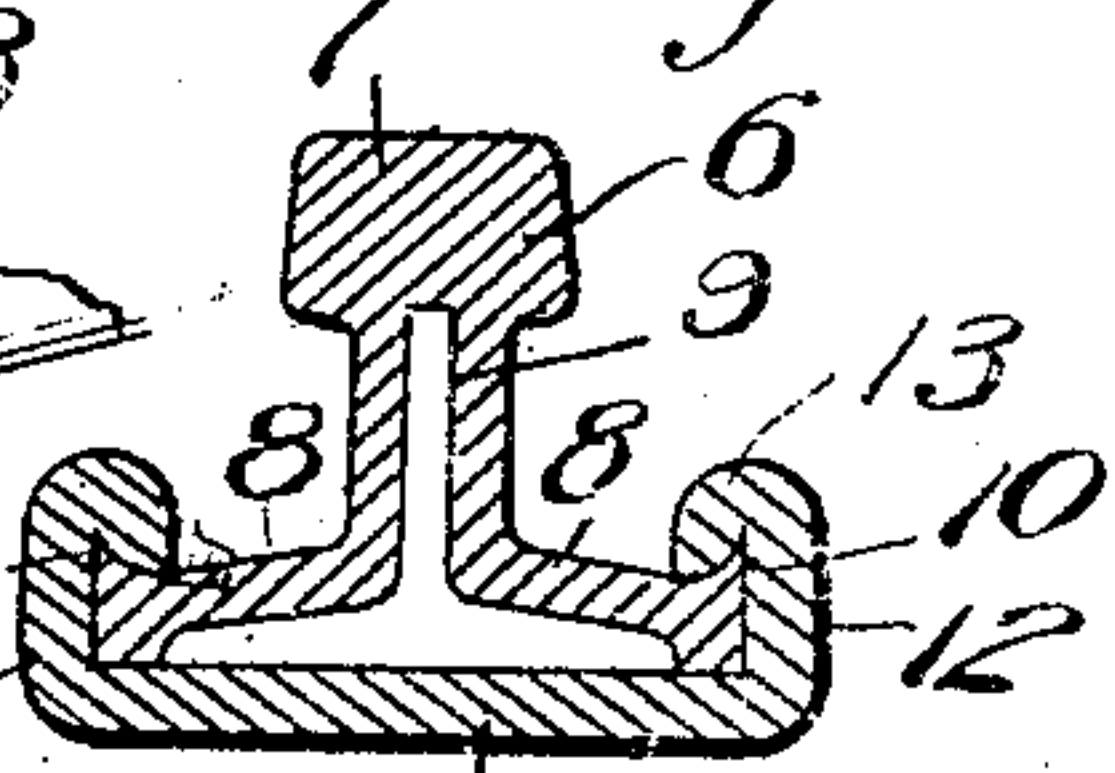
*Fig 8*



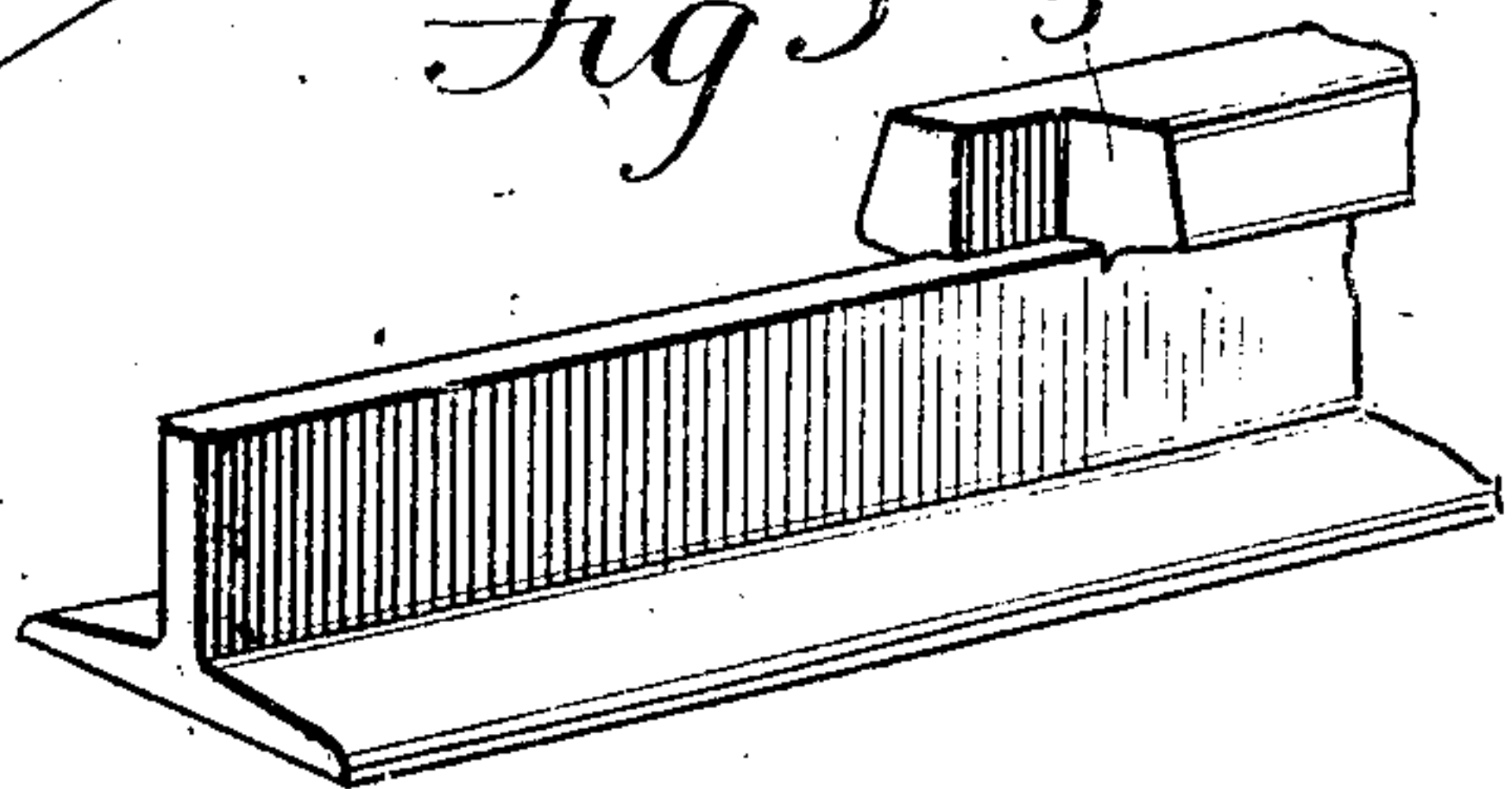
*Fig 4*



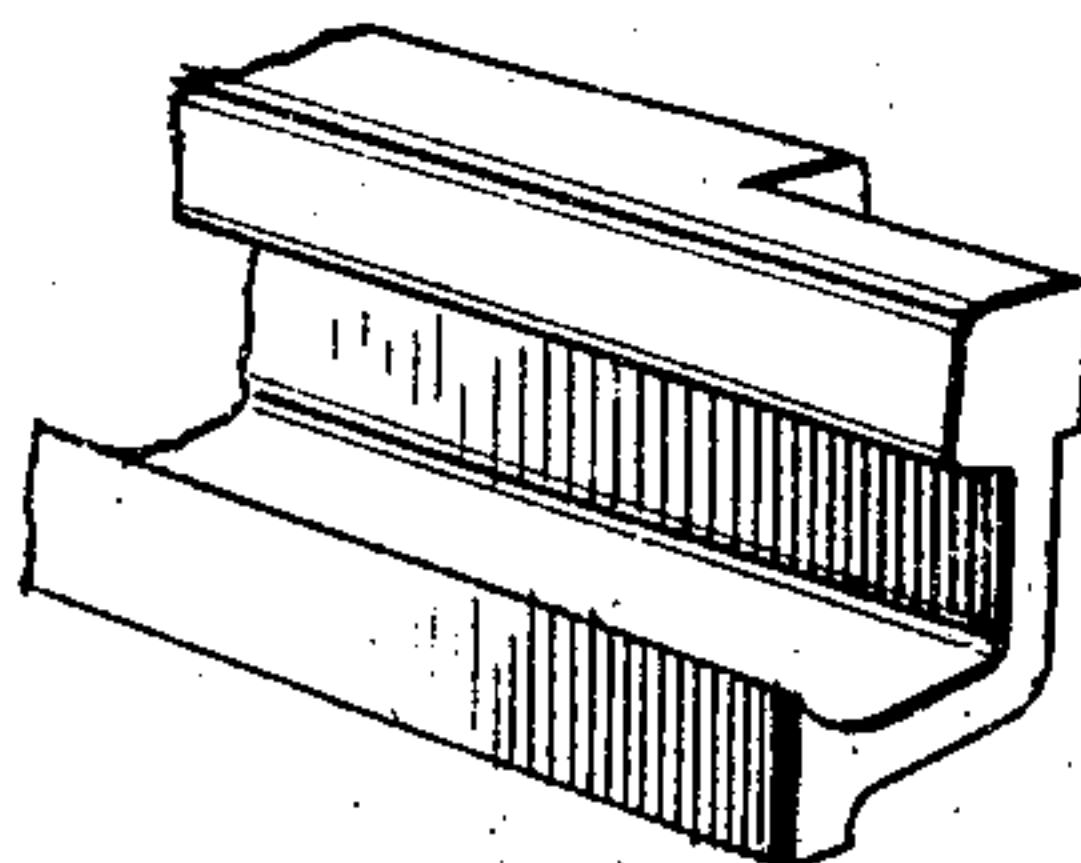
*Fig 3*



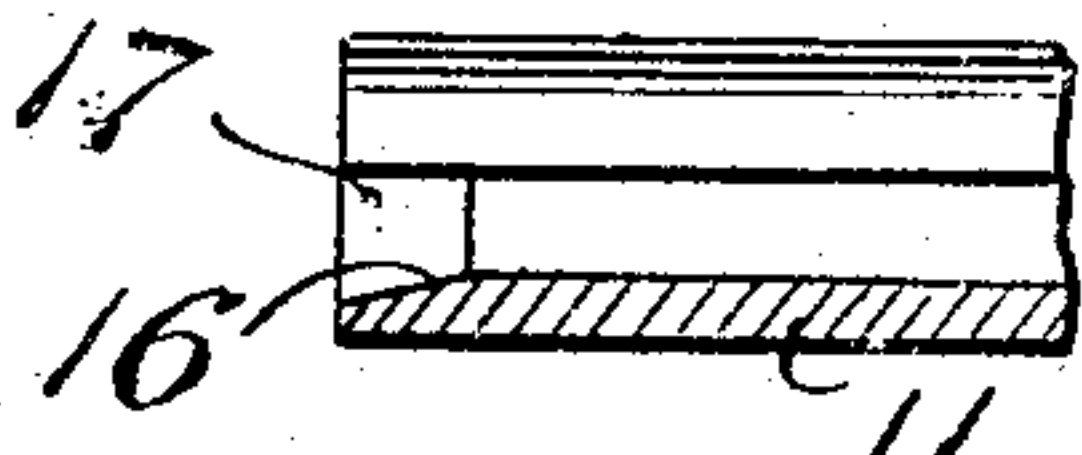
*Fig 5*



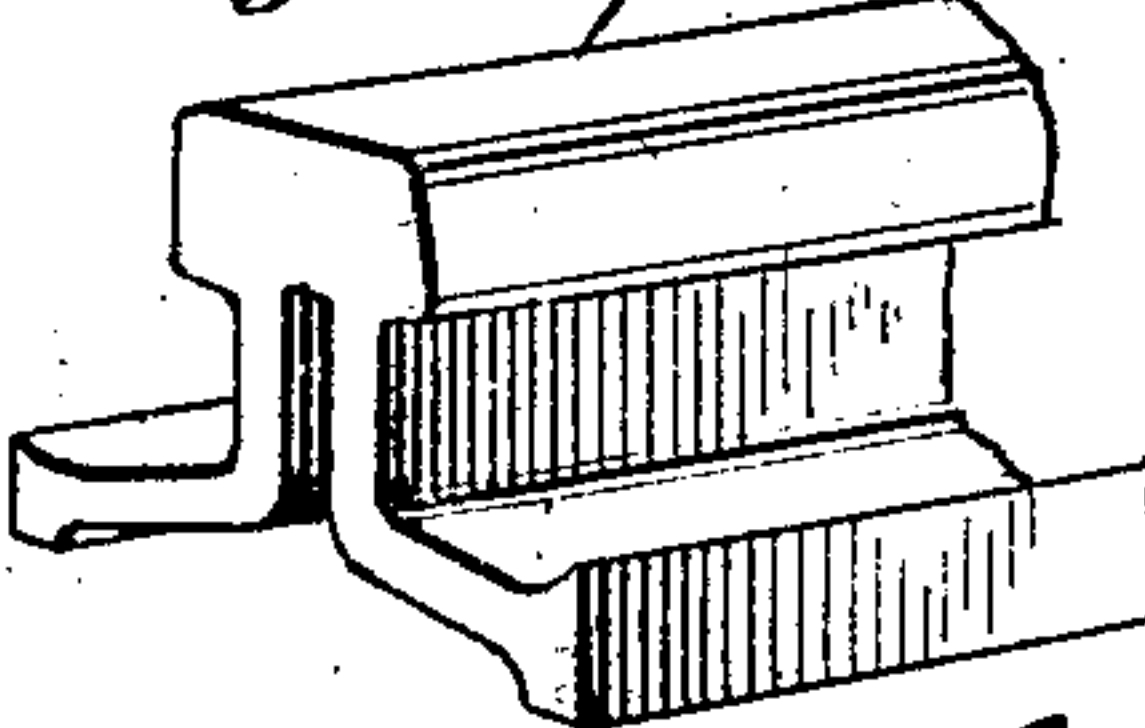
*Fig 6*



*Fig 7*



*Fig 9*



Witnesses

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# UNITED STATES PATENT OFFICE.

GEORGE SEEMANN, OF ROCKWELL, IOWA.

## RAIL-JOINT.

No. 912,495.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed April 11, 1908. Serial No. 426,537.

*To all whom it may concern:*

Be it known that I, GEORGE SEEMANN, a citizen of the United States, residing at Rockwell, in the county of Cerro Gordo and State of Iowa, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail joints, and the object of the invention is to provide a simple, durable and thoroughly effective means for connecting the contiguous meeting ends of a pair of rails, whereby transverse movement of the rails at their point of meeting, and the sagging of the rails as the rolling stock passes from the end of one of the rails to that of the succeeding rail, is prevented.

Another object of the invention is to provide a device of this character in which the ends of the rails are provided with projecting webs and base flanges provided with a rail block having suitable interior cut away portions adapted for engagement with the webs and flanges, and a base plate adapted to engage the under faces of the rail flanges and the rail block, securing means consisting of spikes being provided for retaining the flanges of the rails, the base plate and the rail block in secure engagement with each other without the necessity of bolts or other devices connecting the block and rail webs.

With these and other objects in view the invention resides in the novel construction of elements and their arrangement in operative combination, hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a top plan view of the contiguous meeting ends of a pair of rails connected in accordance with this invention. Fig. 2 is a similar view of a slightly modified form of rail block and base plate. Fig. 3 is a transverse sectional view upon the line 3—3 of Fig. 1. Fig. 4 is a perspective view of one of the rail ends constructed in accordance with this invention. Fig. 5 is a similar view of a slightly modified form. Fig. 6 is a detail perspective view of one of the rail blocks employed in Fig. 1. Fig. 7 is a detail longitudinal sectional view of the base plate. Fig. 8 is a perspective view of the end of one of the rails employed in the modification illustrated in Fig. 2. Fig. 9 is a perspective view of a portion of the block employed in the construction illustrated in Fig. 2.

In the accompanying drawings, and referring particularly to Figs. 1, 3 and 4 thereof the numeral 1 designates a pair of rails. These rails 1 are constructed in the ordinary manner having a head 2, web 3 and base flanges 4. The rails have their webs 3 and base flanges 4 projected a suitable distance beyond the end of the head 2, and in the construction illustrated in these figures the head 2 is provided with a central cut away portion to provide a recess or pocket 5. The longitudinal wall of this pocket 5 is inclined from the edge of the web 3 to the top of the head 2, as clearly illustrated in Fig. 4 of the drawings. A rail block 6 is provided to engage the projecting portions of the tongues and base flanges of the rails. This block 6 comprises a head 7 of a contour corresponding with the head 2 of the rails, and is also provided with flanges 8, adapted to overlies the flanges 4 of the projecting portion of the rails. The block 6 is provided with a central groove or channel 9, adapted to receive the webs 3 of the projecting portions of the rails. The block 6 is provided with a cut away portion or pocket, corresponding with the cut away portion or pocket 5 of the rail ends. The flanges 8 of the block 6 have their outer edges provided with longitudinal lips or upstanding portions 10. A base plate 11 is provided. This base plate 11 is provided with upstanding edges or offsets 12, having inwardly projecting lips 13. The base plate 11 is cut to correspond to the shape of the block 6, and the plate is adapted to underlie the projecting base flanges of the rail ends and to have the vertical walls of its longitudinal walls or offsets engage the vertical walls of the flanges 8 of the block and their lips 13 engage the longitudinal lips 10 of the flanges. Spikes 14, or other suitable retaining elements are positioned in the rail ties 15, adjacent the edges of the base plate 11 and are adapted to engage the base flanges 4 of the rail members to effectively secure the connecting elements together and to prevent lateral or longitudinal movement of the block 6 or base plate 11, while allowing for the longitudinal expansion and contraction of the rails.

In Fig. 2 there is illustrated a slightly modified form of connecting block and base flange and the rails have their heads cut at a suitable angle to correspond with the angle of the connecting block. The rails employed in



this modification are adapted to have their webs 3 and base flanges 4 project a suitable distance beyond the head 2 of the rail, as clearly illustrated in Fig. 8 of the drawings.

5 In Fig. 9 there is illustrated in perspective a portion of the head 6 of the rail block employed in the construction illustrated in Fig. 2.

10 In Fig. 5 there is illustrated a slightly modified form of rail end. This form is substantially similar to that illustrated in Fig. 4 of the drawings, except that the longitudinal wall of the pocket 5 is vertical instead of slanting.

15 The base plate 11 employed in connecting the rail blocks and rail flanges is provided at one of its ends with a slanting or beveled horizontal portion 16, and has its sides or projections 12 also provided upon their inner  
20 faces with cut away portions or bevels 17, corresponding with the cut away portions 16. The object of having this end of the base plate 11 beveled or wedge shaped is to allow the plate 11 a free start upon the flanges 8 of  
25 the block 6 when the plate is being driven into position upon the block beneath the extending web of the rails.

30 From the above description it will be seen that a simple, cheap and thoroughly effective means has been provided for securing the meeting ends of rails, one which allows for the contraction and expansion of the rails, and one in which bolts or other devices tend-

ing to weaken the rails are entirely disposed with.

Having thus fully described the invention what is claimed as new is:

In a rail joint, the combination of the contiguous ends of a pair of rails, said rails having their heads cut away longitudinally a  
10 suitable distance and the transverse walls provided by this cut away portion arranged at an angle to the web of the rail sections, a rail block having an interiorly arranged cut  
away portion adapted to engage the webs of  
45 the rail sections and the base flanges of the rails between the heads of the rails, the block having its vertical edges provided with upwardly extending curved longitudinal projections, a tie plate having a base portion  
50 adapted to extend beneath the block and the base flanges of the rail, said plate having upstanding sides provided with inwardly projecting portions having curved lips adapted to engage the curved extending portions of  
55 the block, and retaining elements for engaging the flanges of the rails, the ends of the block and the tie plate at their points of engagement with the flanges of the rails.

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

GEORGE SEEMANN.

Witnesses:

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R. J. BARNHILL.