

No. 677,704.

H. H. SCHWER.

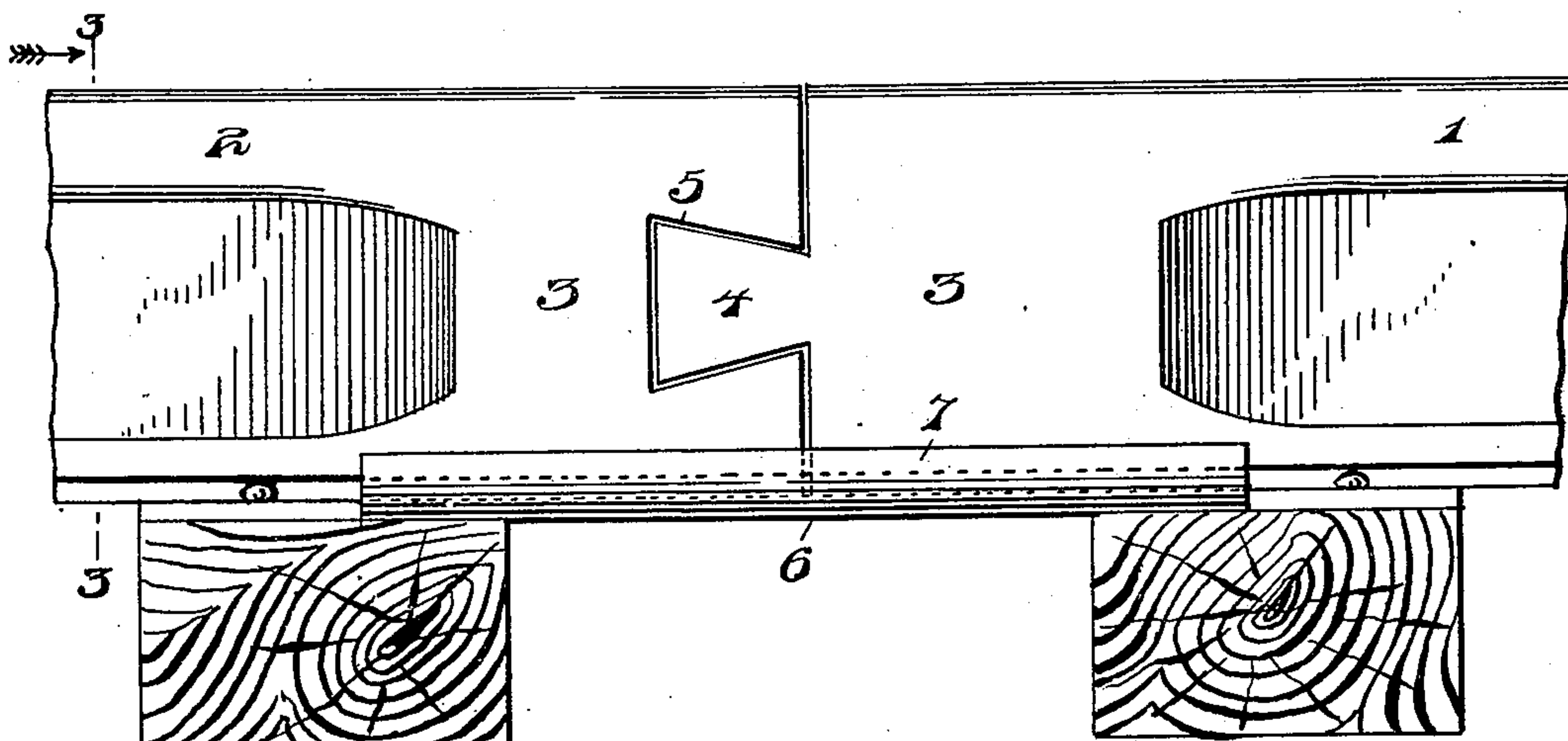
Patented July 2, 1901.

RAIL JOINT.

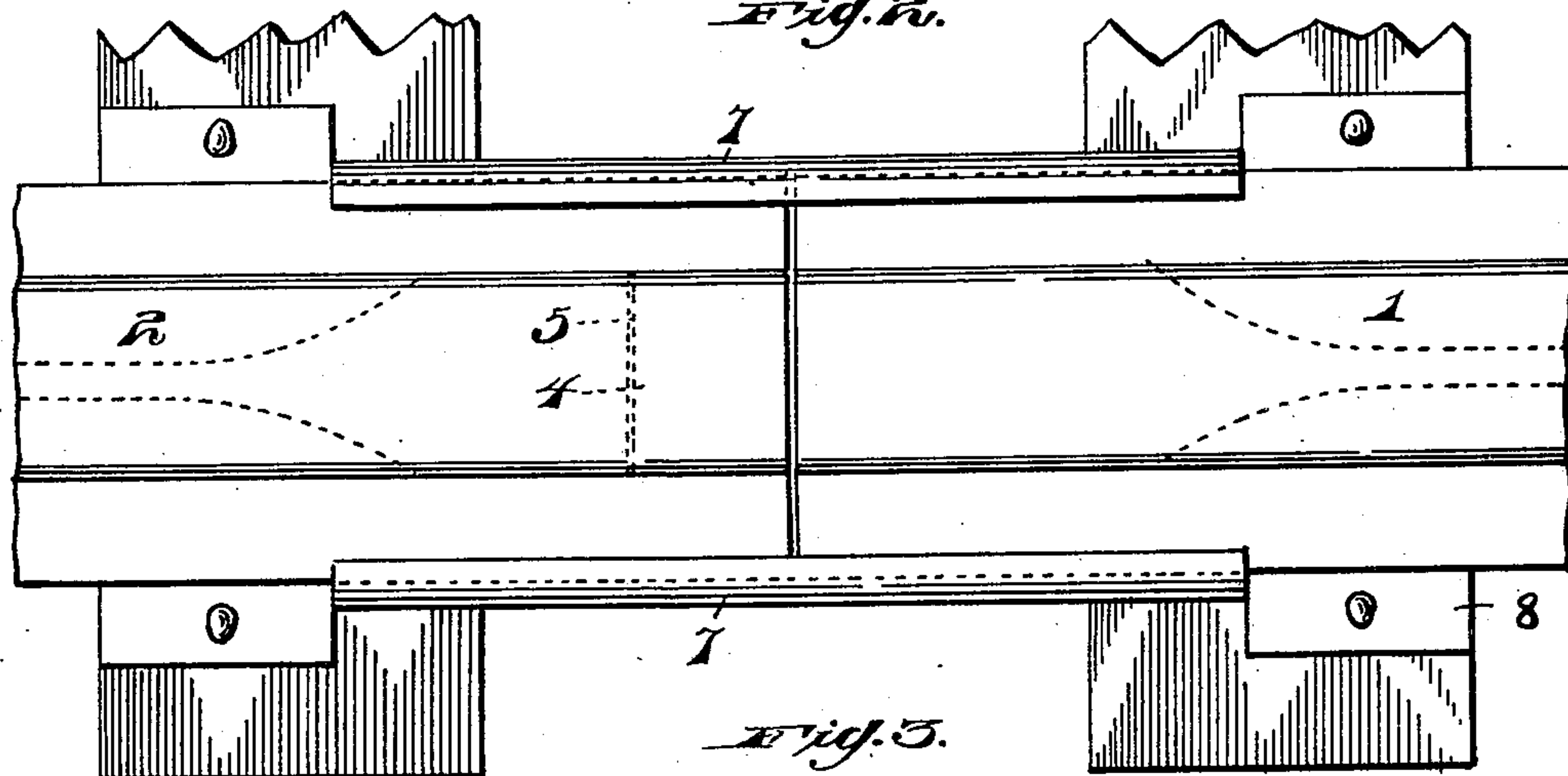
(Application filed Mar. 15, 1901.)

(No Model.)

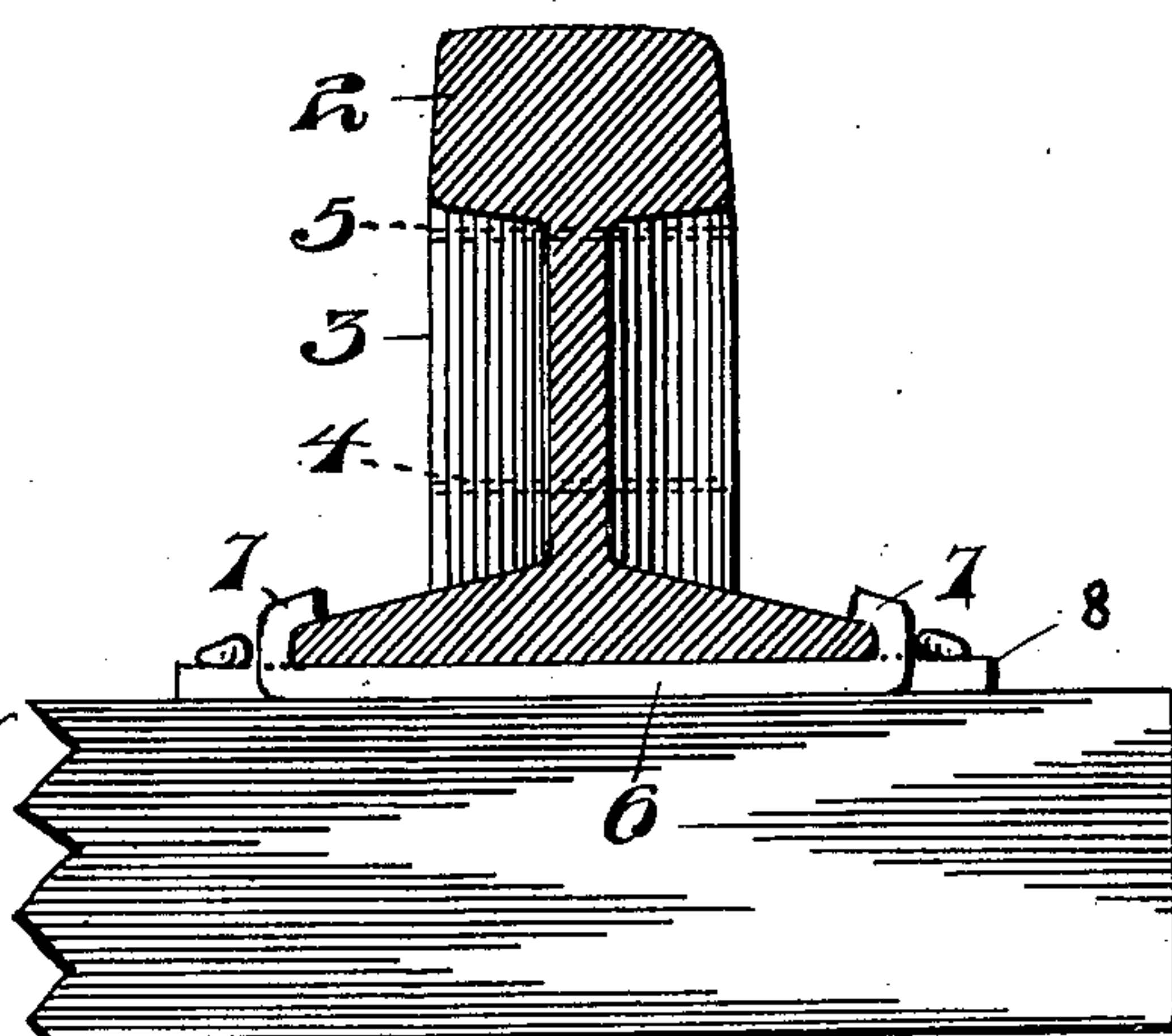
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 677,704, dated July 2, 1901.

Application filed March 15, 1901. Serial No. 51,267. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY HERBERT SCHWER, a citizen of the United States of America, residing at Verona, 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, and has for its object to provide novel and effective means for joining the rails together without the aid of fish-plates and the bolts and nuts  
15 now ordinarily employed.

Briefly described, the invention comprises the constructing of the rails with enlarged ends and forming one of the rail ends with a tongue of especial formation which is adapted  
20 to engage with a correspondingly-shaped mortise in the end of the matching rail, together with a chair-plate which fits underneath the rails at the joint, all of which construction will be hereinafter more specifically described and  
25 then particularly pointed out in the claim.

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 similar parts throughout the several views of the drawings, in which—

Figure 1 is a side elevation of a pair of rails joined together in accordance with my invention. Fig. 2 is a top plan view of the same,  
35 and Fig. 3 is a vertical transverse sectional view taken on the line 3 3 of Fig. 1.

In the accompanying drawings, 1 indicates the one rail, and 2 the engaging or matching rail. These rails are provided with enlarged  
40 ends 3, and the rail 1 is provided on the end thereof with a tongue or mortise 4 of the dovetail form. The enlarged end of the rail 2 is provided with a recess 5, corresponding in shape to the dovetail mortise on the rail 1,  
45 which it receives. It will of course be understood that in practice the one end of the one rail is provided with the dovetail mortise, while the opposite end of the same rail is provided with a recess, as described, though  
50 herein I speak of two rails, since it is desirable to show the ends of two rails to clearly illustrate the invention. The increasing of the rails in thickness at their ends gives to the web of the rails the same thickness as the

tread thereof at this point, and thus permits  
55 me to make a more effectual and substantial joint. The rails are secured together by overlapping the ends thereof, so as to bring the dovetail mortise on the end of one rail opposite to the correspondingly-shaped recess in  
60 the end of the engaging rail, and the one rail then moved laterally to engage the mortise 4 into the recess 5. This recess is preferably made slightly larger than the outside dimensions of the mortise to allow for the expansion  
65 and contraction of the rails. In addition to the spikes in the ties and engaging the flanges of the rails in the ordinary manner for holding the joint I employ a chair-plate 6, provided with curved side flanges 7 to engage the  
70 base of the rails at the joint. These side flanges are slit near each end of the side and turned down flat to form lugs 8, which are securely spiked to the cross-ties. It will be observed that this chair-plate may be readily  
75 placed in position by first placing the same on one rail before the rails are interlocked, and after the interlocking of the rails sliding the chair-plate up into the position shown in  
80 Figs. 1 and 2.

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

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

In a rail-joint, the combination with the meeting ends of the rails which are enlarged in the web to the thickness of the tread, a  
90 dovetailed mortise carried on the end of one rail extending transversely to and formed integral with said enlarged end, the engaging end of the adjacent rail forming a correspondingly-shaped recess to receive said mortise  
95 extending transversely through said enlarged end, and the chair-plate, upturned sides formed integral with said chair-plate engaging the base of said rails, flat lugs secured on the base-plate at each end of said upturned  
100 sides, and fastening means arranged in said lugs, substantially as described.

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

H. HERBERT SCHWER.

Witnesses:

JOHN NOLAND,  
E. E. POTTER.