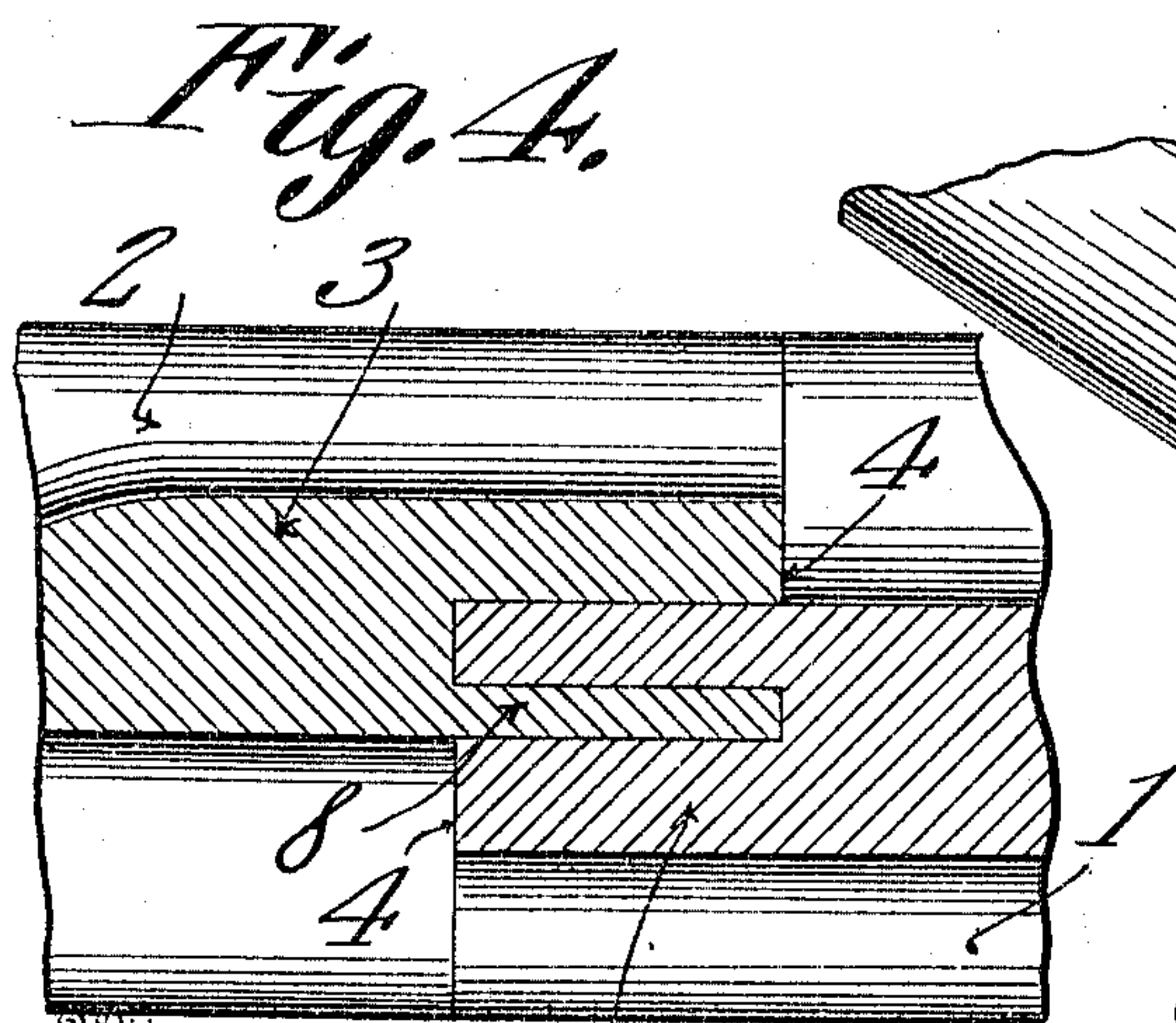
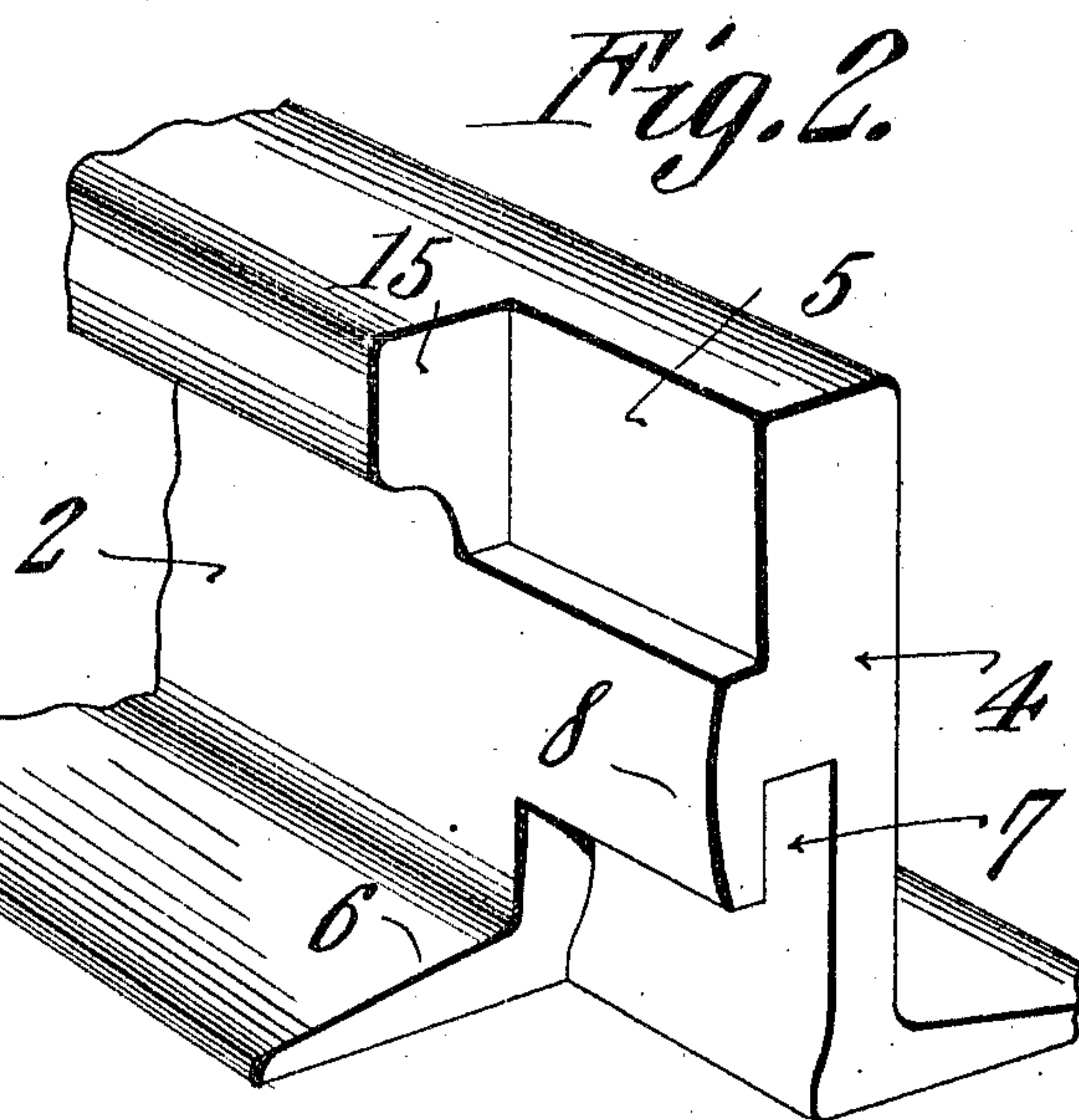
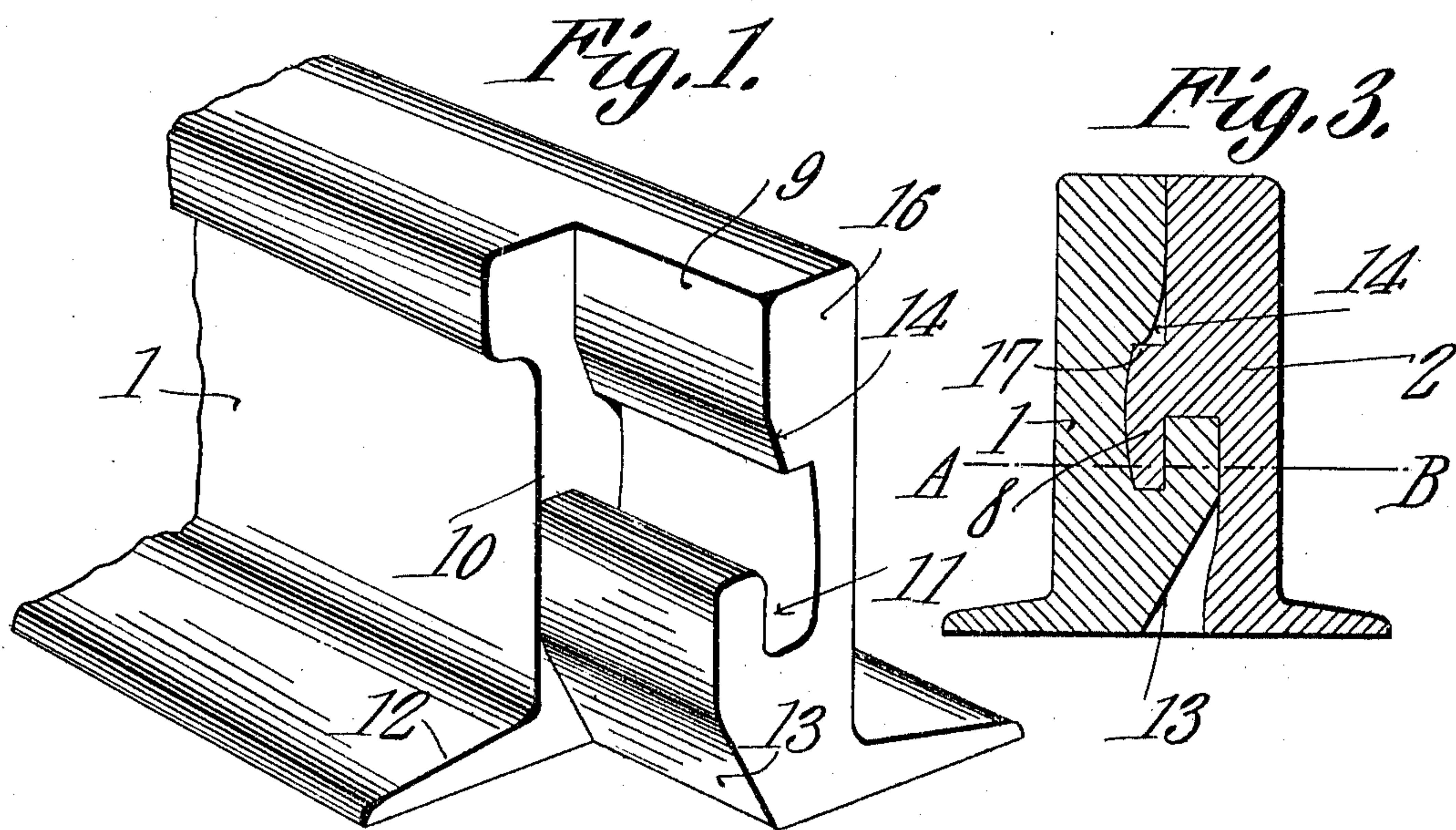


J. E. MILLER.  
RAIL JOINT.  
APPLICATION FILED FEB. 4, 1910.

953,215.

Patented Mar. 29, 1910.



Witnesses

*E. J. ...*  
Francis Boyle

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# UNITED STATES PATENT OFFICE.

JESSE EVERIT MILLER, OF ALBUQUERQUE, TERRITORY OF NEW MEXICO.

## RAIL-JOINT.

953,215.

Specification of Letters Patent.

Patented Mar. 29, 1910.

Application filed February 4, 1910. Serial No. 542,018.

*To all whom it may concern:*

Be it known that I, JESSE E. MILLER, a citizen of the United States, residing at Albuquerque, in the county of Bernalillo and Territory of New Mexico, have invented a new and useful Rail-Joint, of which the following is a specification.

This invention relates to rail joints and has for an object to provide a rail joint of the class commonly known as a scarf joint, that will prevent either of the abutting rail ends from sinking below its normal alinement.

A further object is to reinforce the abutting rail ends so that the interlocking means will not be easily broken off due to expansion of the rails or heavy traffic.

A still further object is to so construct the joint that the rails may be easily assembled and disassembled to facilitate repairs.

To attain the above ends my invention embraces the structure which will be hereinafter more fully described and claimed.

In the accompanying drawing forming part of this specification,—Figure 1 is a perspective view of a rail end constituting one of the members of my improved railway joint. Fig. 2 is a perspective view of a rail end constituting the other member of the joint. Fig. 3 is a cross sectional view of the joint showing the parts assembled. Fig. 4 is a longitudinal sectional view taken on the line A—B of Fig. 3.

Referring now to the drawing in which like characters of reference designate similar parts in the views shown, 1 and 2 designate the abutting ends of adjacent rails, each being provided upon one of its lateral sides with an enlargement 3 extending from the head to the rail base flange and terminating in an abrupt contact face 4, flush with the end of the rail web. The enlargement serves to strengthen and reinforce the contact end of the rail and also to provide sufficient material for the formation of the interlocking members.

Formed upon the longitudinal edge of the head of the rail 2 is a substantially rectangular rabbet 5 which extends a slight distance into the web of the rail, as shown. The flange of the rail is cut-away, as shown at 6, and the web of the rail is also cut-away, as shown at 7, to provide an inverted L-shaped tongue 8.

Formed upon the longitudinal edge of the head of the rail 1 is a substantially rectan-

gular rabbet 9 which extends into the rail web approximately half way to the rail flange, as shown. A transverse recess 10 communicates with the rabbet 9 at one end and terminates at the other end in a cavity 11. The rail base flange is cut-away, as shown at 12, and the rail web is under-cut or beveled, as shown at 13, to permit of the rail ends being readily placed in engagement, and the meeting sides of the recess 10 and rabbet 9 are beveled, as shown at 14, for a similar reason. In assembling the parts the rails are placed end to end with the inverted L-shaped tongue 8 registering with the cavity 11. The rails are then forced together causing the tongue to engage and conform to the contour of the cavity 11, and the shoulder 15 of the rabbet 5 to snugly engage the contact face 16 of the end of the rail 1. The rail ends can now neither be displaced laterally since the interfitting rail heads prevent any but longitudinal movement of the parts, nor displaced vertically as the shoulder 17 of the inverted L-shaped tongue engages snugly the top face of the recess 10, as clearly shown in Fig. 3. The tread surfaces of the rails will thus be maintained in their normal alinement regardless of whether the securing spikes of the rails become loosened, or regardless of the expansion or other changes taking place in the rails, thereby positively preventing the so-called low joints of common occurrence in railway construction.

The beveled portions 13 and 14 of the rail 1 permit of the rail 2 being advanced to its final position without particular care being taken by the workmen in bringing the abutting ends of the rails to true alinement before the operation since the beveled portions will permit of the rail being slightly inclined laterally during the beginning of the advancing movement of the rail 2.

It is evident that the enlargements 3 of both rail webs permit of the interlocking portions of the rail ends being made of sufficient size to be strong and durable and not easily broken off during heavy traffic or during the expansion and contraction of the rails in severe conditions of climate.

From the foregoing description, taken in connection with the accompanying drawing, it is thought the construction and operation of my invention will be easily understood without a more extended explanation, it being understood that various minor changes



may be made in the details of construction within the scope of the appended claims.

What is claimed is:

- 5 1. The meeting rail ends having interlocking heads, the flange and web of one rail being mutilated to form an inverted L-shaped tongue, and the flange and the web of the other being mutilated to form a seat to engage said tongue.
- 10 2. The meeting rail ends having interlocking heads and thickened webs, the flange and lateral face of one rail web being mutilated to form an inverted L-shaped tongue, and the flange and opposed lateral face of  
15 the other web being mutilated to form a seat to engage said tongue.
3. The meeting rail ends having interlocking heads and each having the outer face of its web terminating in the vertical  
20 plane of the outer face of the rail head, the flange and inner lateral face of one rail web being undercut to form an inverted L-shaped

tongue, and the flange and opposed lateral face of the other being under-cut to form a seat to engage said tongue. 25

4. The abutting rail ends having inter-fitting heads and each having an enlargement upon one of its lateral sides extending from the head to the rail flange to reinforce the rail end and terminating in an abrupt  
30 contact face flush with the end of the rail web, the flange and lateral face of one rail web being cut away to provide an inverted L-shaped tongue and the flange and opposed lateral face of the other rail web being  
35 cut away to form a seat to engage and conform to the contour of said tongue.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JESSE E. MILLER.

Witnesses:

S. DANIEL HEADY,  
Mrs. M. H. MILLER.