

M. C. CATHERMAN.  
RAIL JOINT OF THE SCARF TYPE.  
APPLICATION FILED JUNE 9, 1905.

Fig. 1.

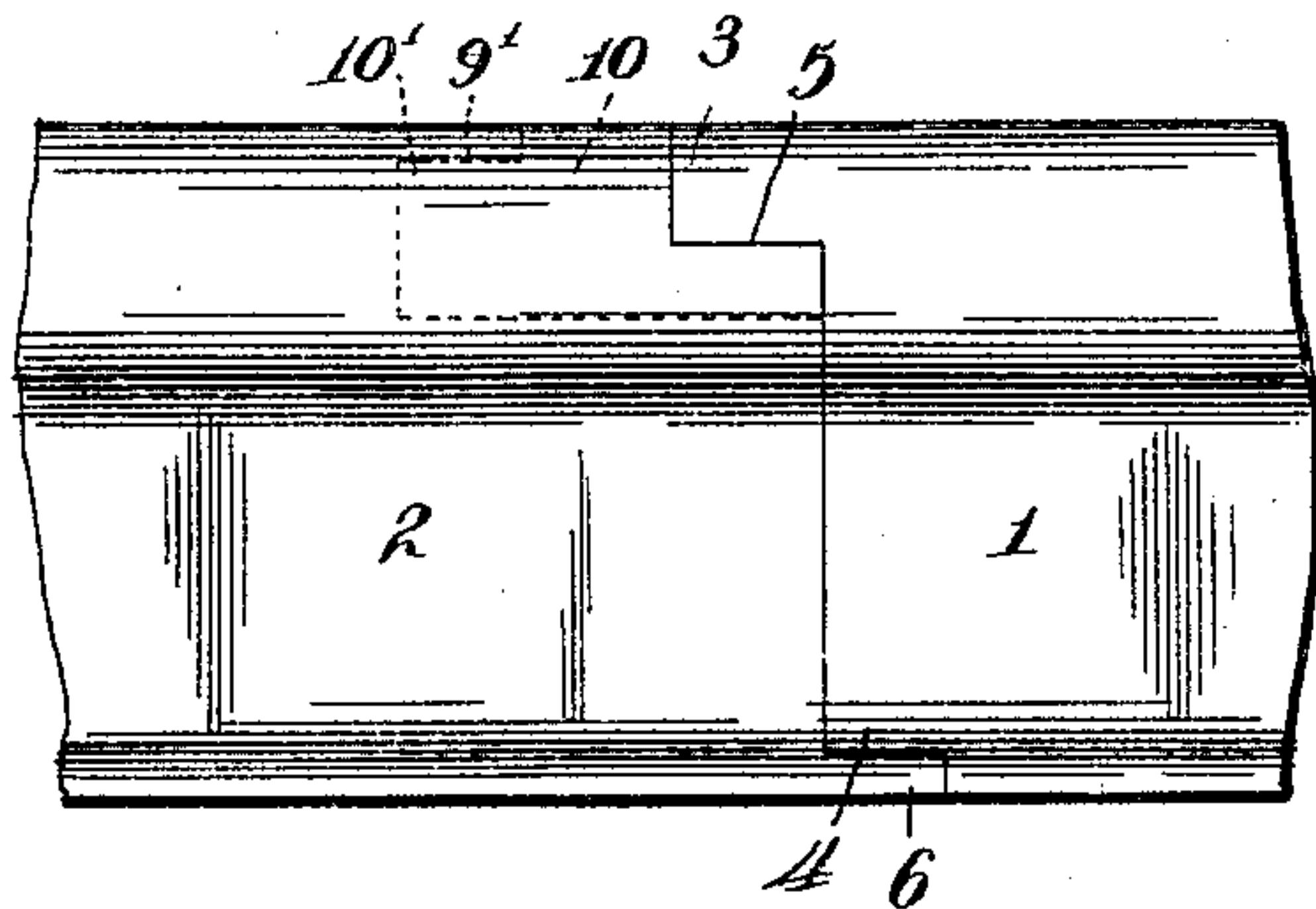


Fig. 4.

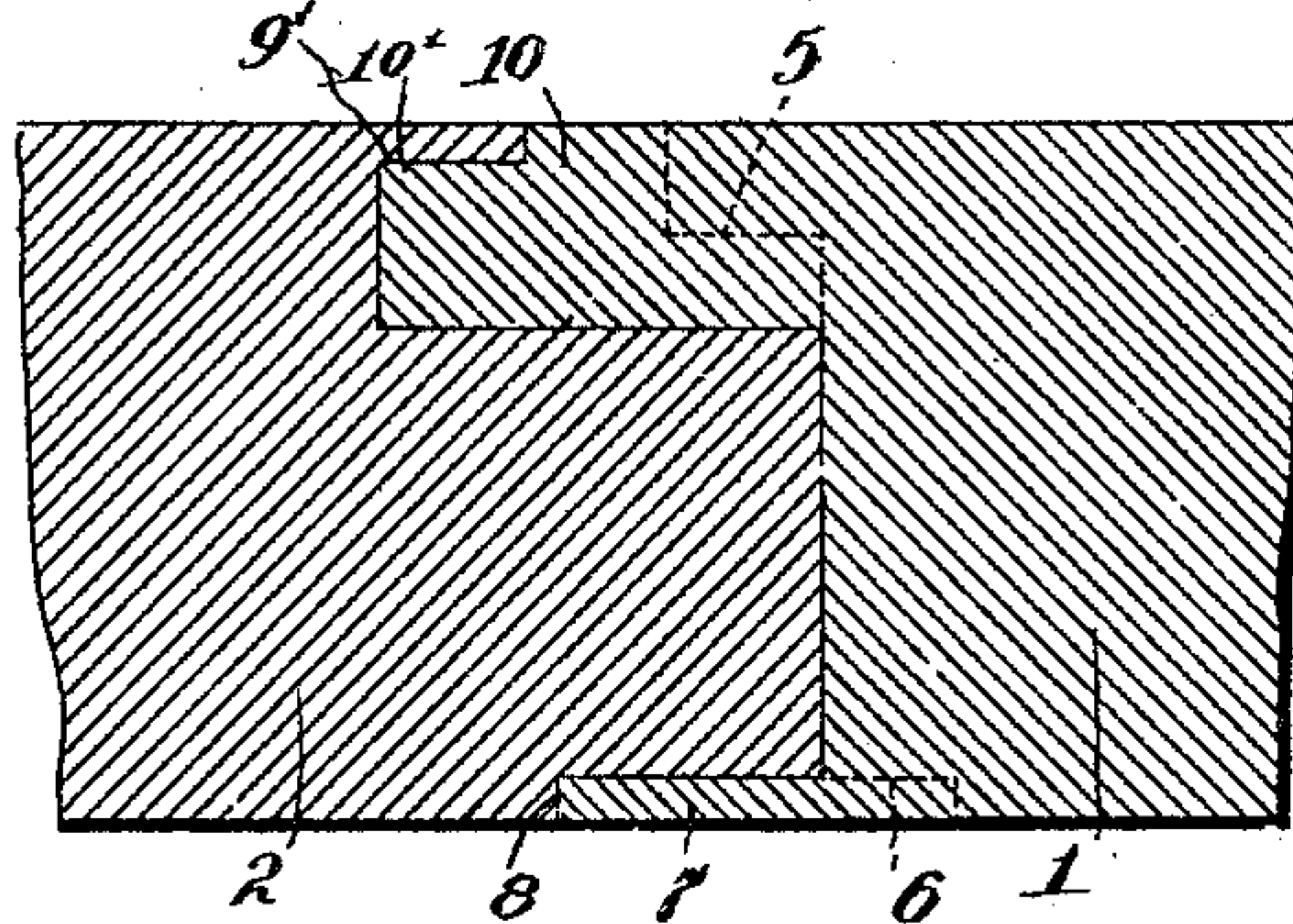


Fig. 2.

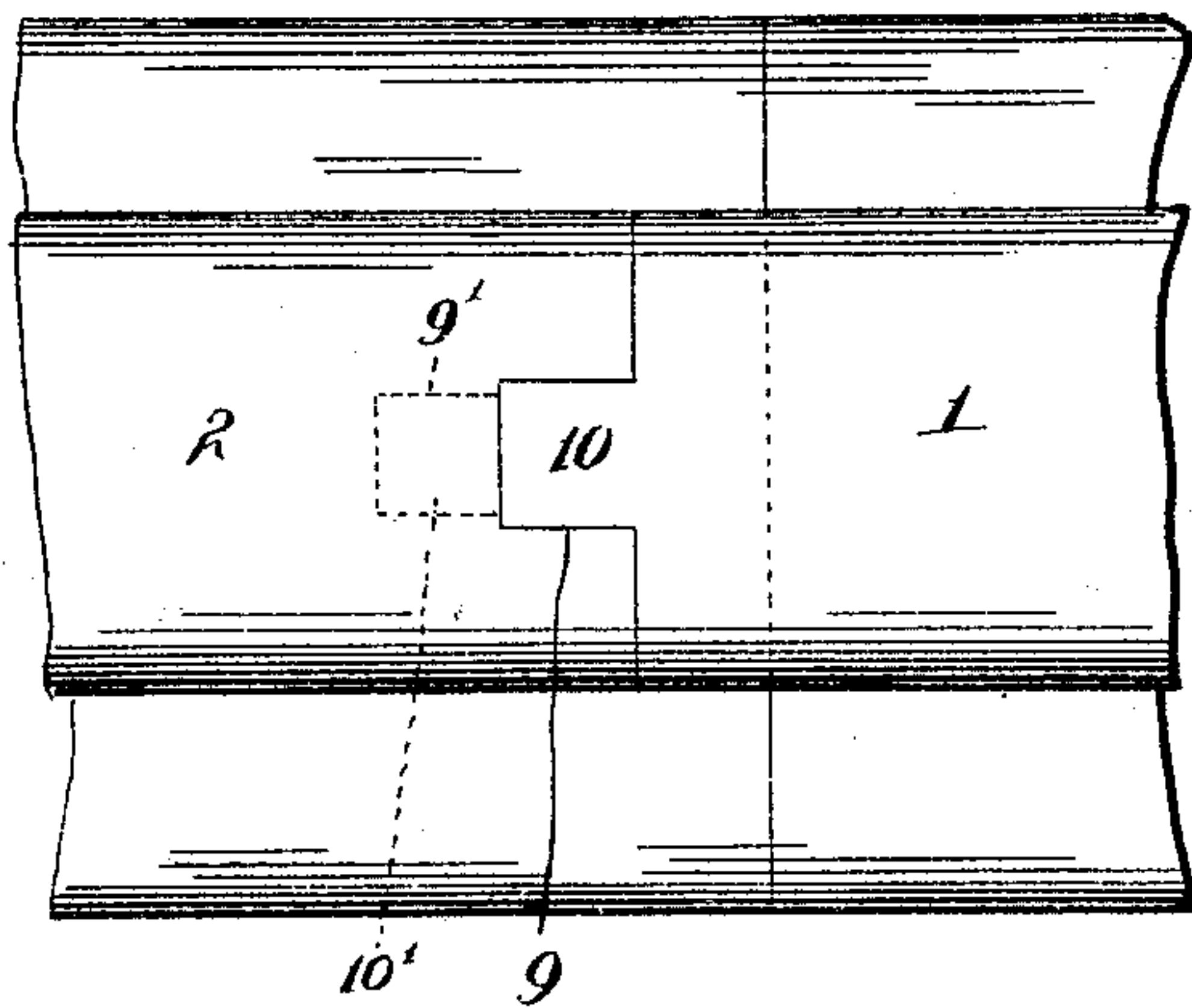


Fig. 3.

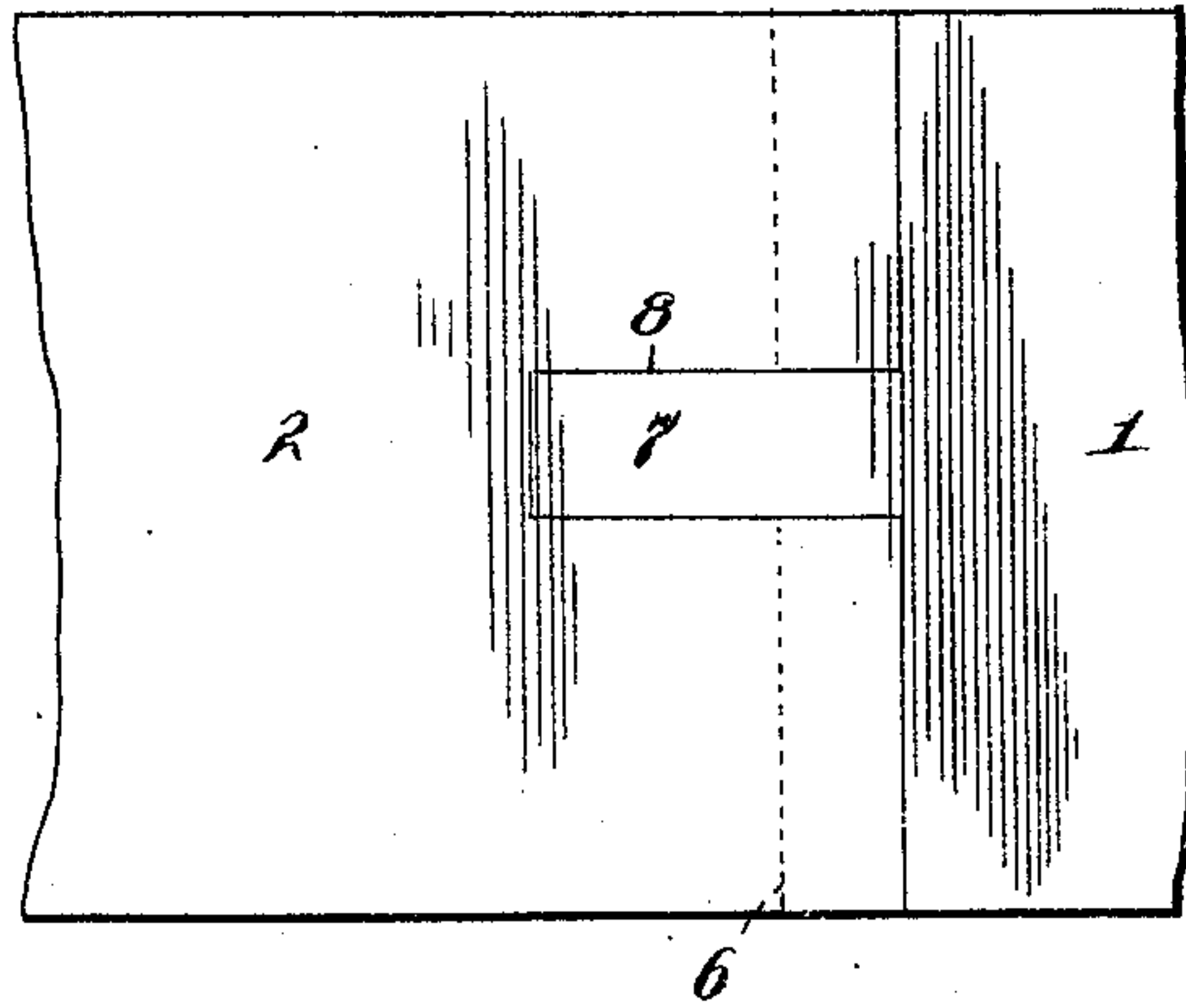


Fig. 5.

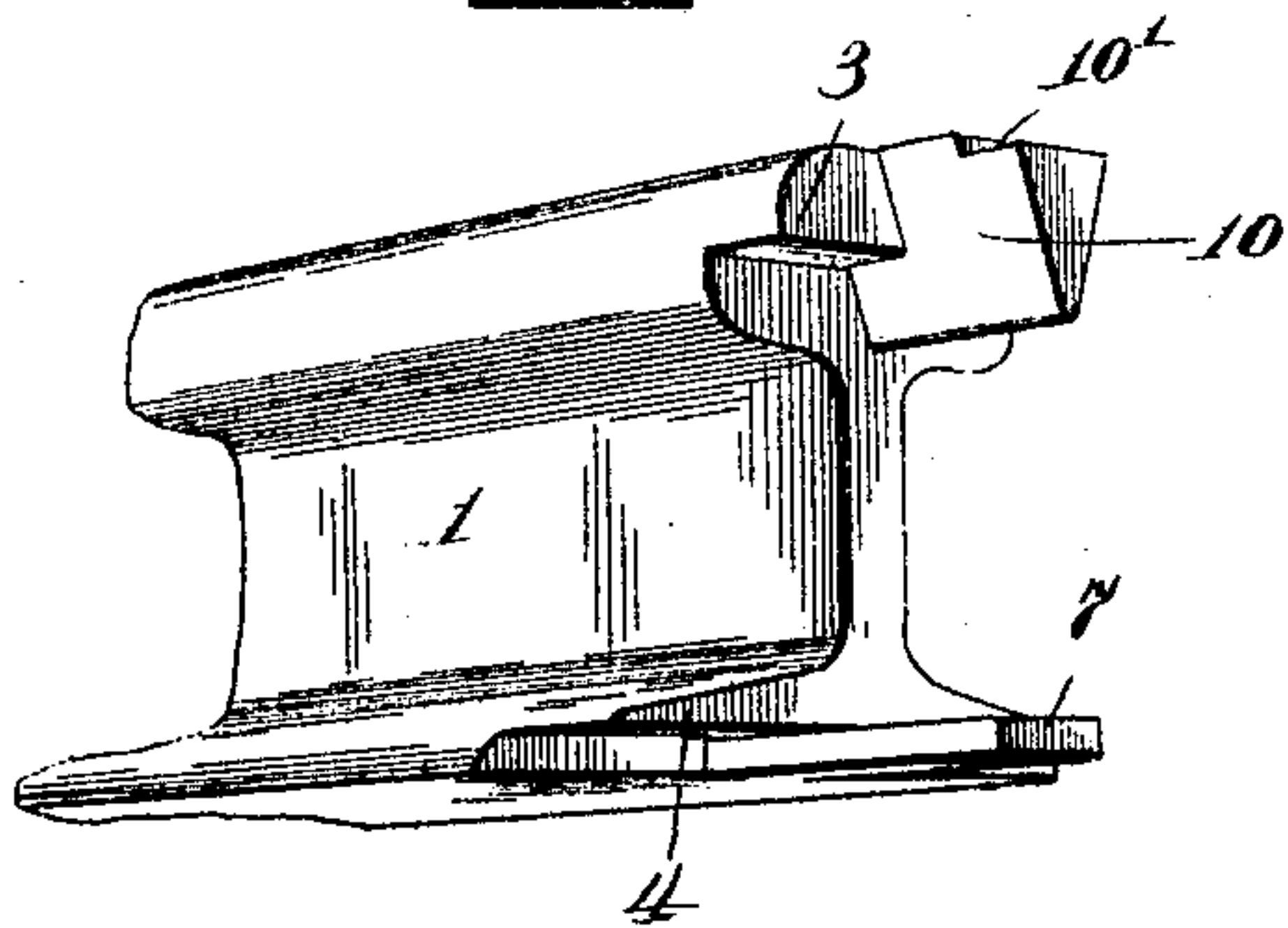
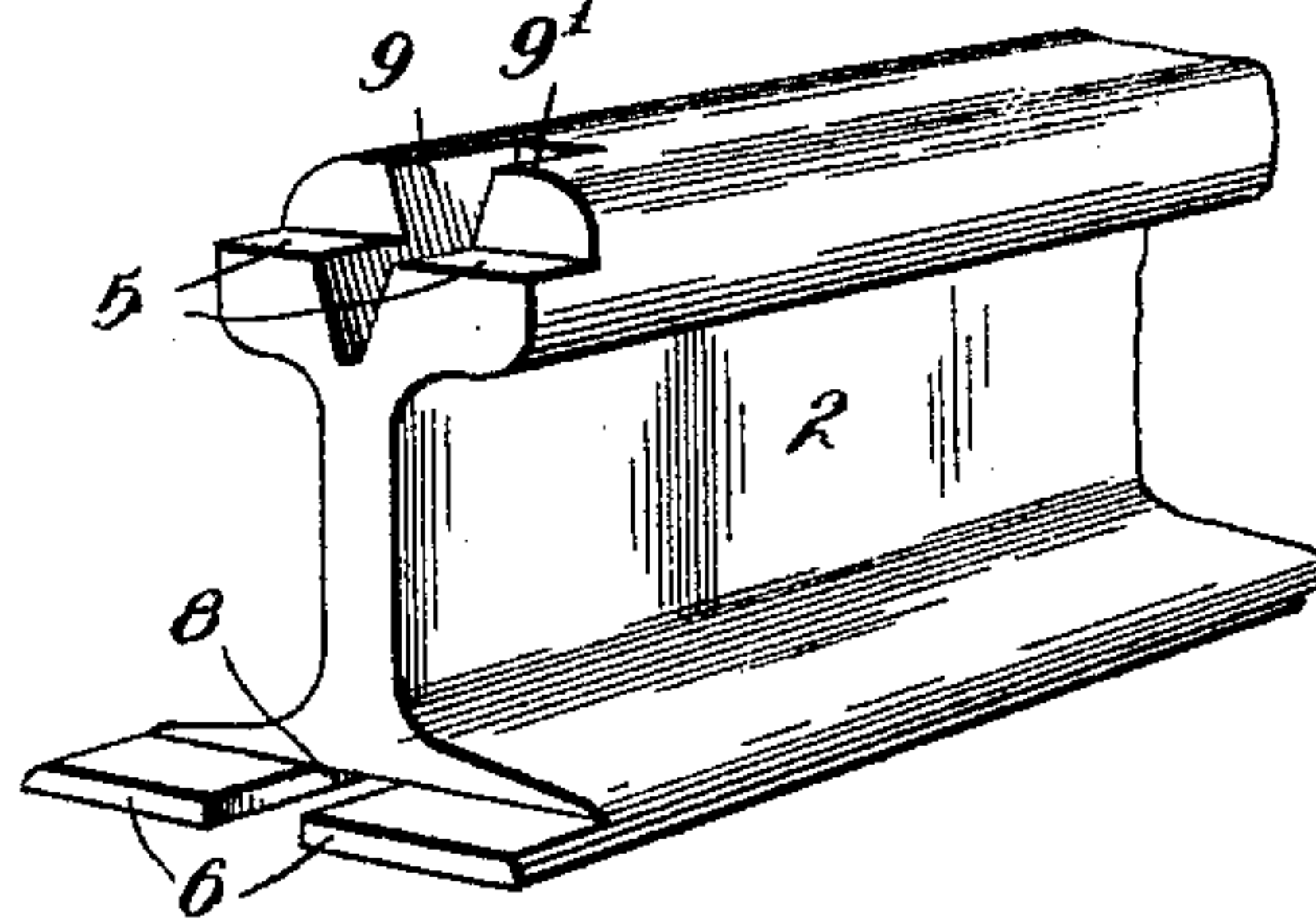


Fig. 6.



Witnesses  
Milton C. Genou.  
J. A. Hamilton

Inventor  
Milton C. Catherman  
by Henry N. Copp  
his Attorney



# UNITED STATES PATENT OFFICE

MILTON C. CATHERMAN, OF LAURELTON, PENNSYLVANIA.

## RAIL-JOINT OF THE SCARF TYPE.

No. 799,447.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed June 9, 1905. Serial No. 264,426.

*To all whom it may concern:*

Be it known that I, MILTON C. CATHERMAN, a citizen of the United States, residing at Laurelton, county of Union, and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints of the Scarf Type, of which the following is a specification.

My invention relates to rail-joints of the scarf type.

The object of the present invention is the provision of an improved rail-joint of the scarf type having improved interlocking means on the respective ends of the rails, whereby displacement of the parts in any direction whatsoever is absolutely prevented, and to accomplish this object I provide a novel construction, as fully set forth hereinafter and recited in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation; Fig. 2, a plan view; Fig. 3, a bottom view; Fig. 4, a longitudinal section; Fig. 5, perspectives of the rail end having the tenons, and Fig. 6 perspectives of the rail end having the mortises or sockets.

The rails are shown at 1 and 2. The rail 1 has on its end overhanging parts 3 and 4, which are adapted to rest upon corresponding under projecting parts 5 and 6 on the rail end 2, while the rail ends abut each other. Projecting as an extension of the base of the rail 1 is a tenon 7, flush with the bottom of the rail-base and which is received in a groove, mortise, or socket 8, formed in the base of the rail 2.

Formed inwardly from the end of the rail 2 in the head thereof is a mortise or socket 9, whose walls taper or converge downwardly, and this socket extends directly down from the head of the rail 2 for a part of the length of said head inwardly from the end thereof and thereafter continues underneath the head of said rail 2 as the socket or part 9', so that the top of the socket or mortise 9 is closed above at its said end. The socket or mortise 9 extends below the under projecting part 5.

Projecting from the rail end 1 is a tenon 10, of the form and size of the socket 9, and it is provided with a cut-away portion 10' on the upper part of its extremity, which is received in the end 9' of the socket 9.

Particularly by the provision of the parts 7

and 8 and of the parts 9, 9', 10, and 10' do I provide a construction which is superior to scarf-joints heretofore known to the art, as these features in connection with the other parts of the joint prevent vertical or lateral displacement of the rail ends, while it will be observed that the overlapping of the rail ends at the parts 3, 4, 5, and 6 maintains said rail ends perfectly flush on top. By forming the socket 9 and tenon 10 in taper or wedge form the weight of the cars tends to more firmly lock the rail ends together. The peculiar manner of forming these parts also provides a joint wherein the wheel passes from one part of the joint to another part thereof in succession, and there is no abrupt passing of the wheel from one rail to another, with its incident strains and noise.

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

1. In a rail-joint, the combination with a rail end having a socket or mortise extending inwardly from the end thereof and through the head thereof and thence continuing in a socket or mortise which is located underneath the head of the rail, of a rail-section having a tenon received in said socket flush with the top of the first rail-section and having its extremity extending into the socket under the head of the rail first named.

2. The herein-described rail-joint, comprising rail-sections having overlapping parts, one of said rail-sections having a groove in the bottom of its base and the other section having a tenon on its base which is received in said groove, one of said rail-sections having a socket or mortise made inwardly from its end and continued underneath its head, and the other rail-section having a tenon received in said mortise or socket flush with the top of the rail and having a depressed portion received in the part of the mortise or socket which lies under the head of the rail.

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

MILTON C. CATHERMAN.

Witnesses:

F. B. SCHNUR,

A. J. BINGMAN.