

(No Model.)

F. J. PRIBYL.  
RAIL JOINT.

No. 549,154.

Patented Nov. 5, 1895.

Fig. 1.

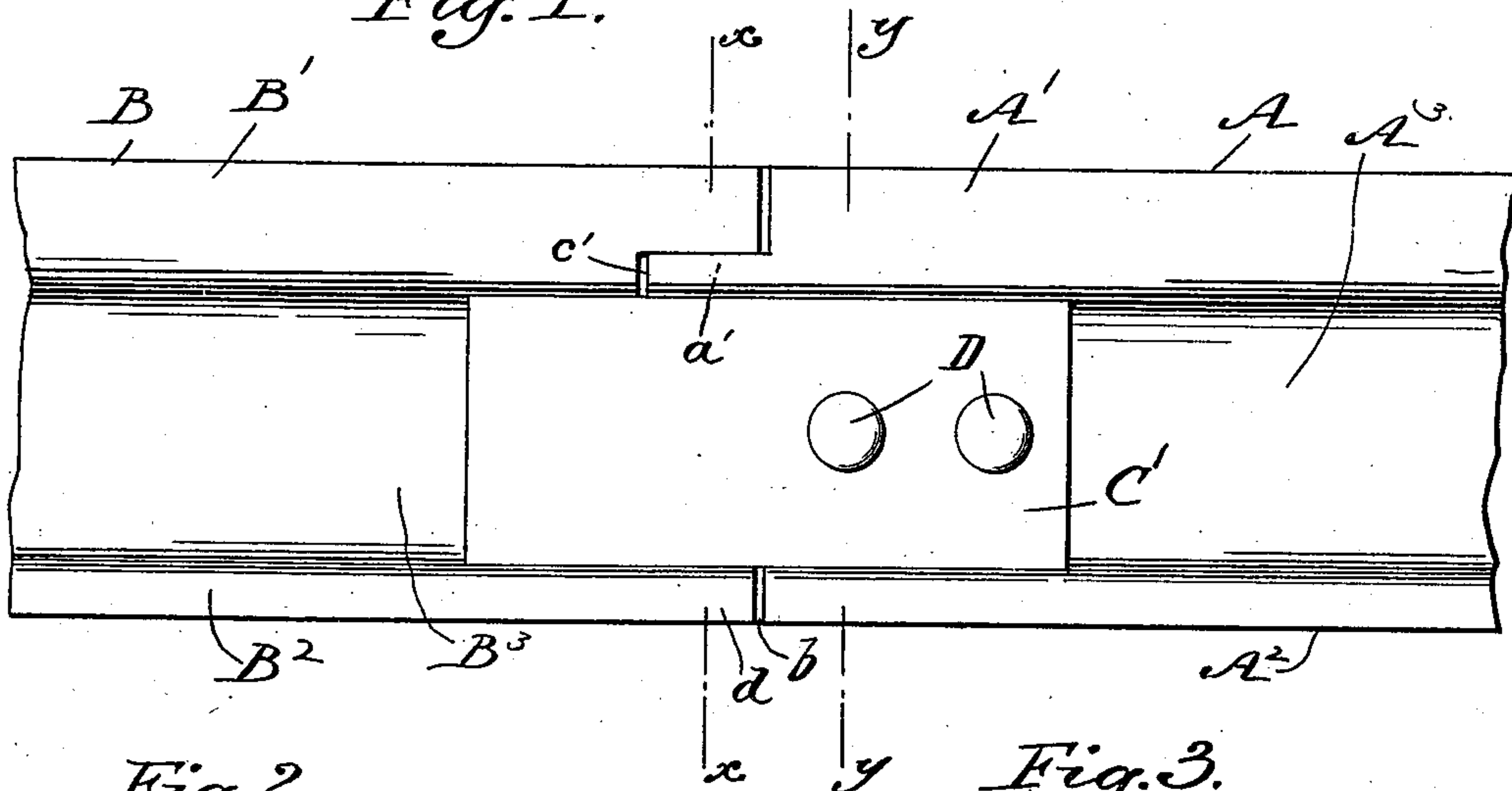


Fig. 2.

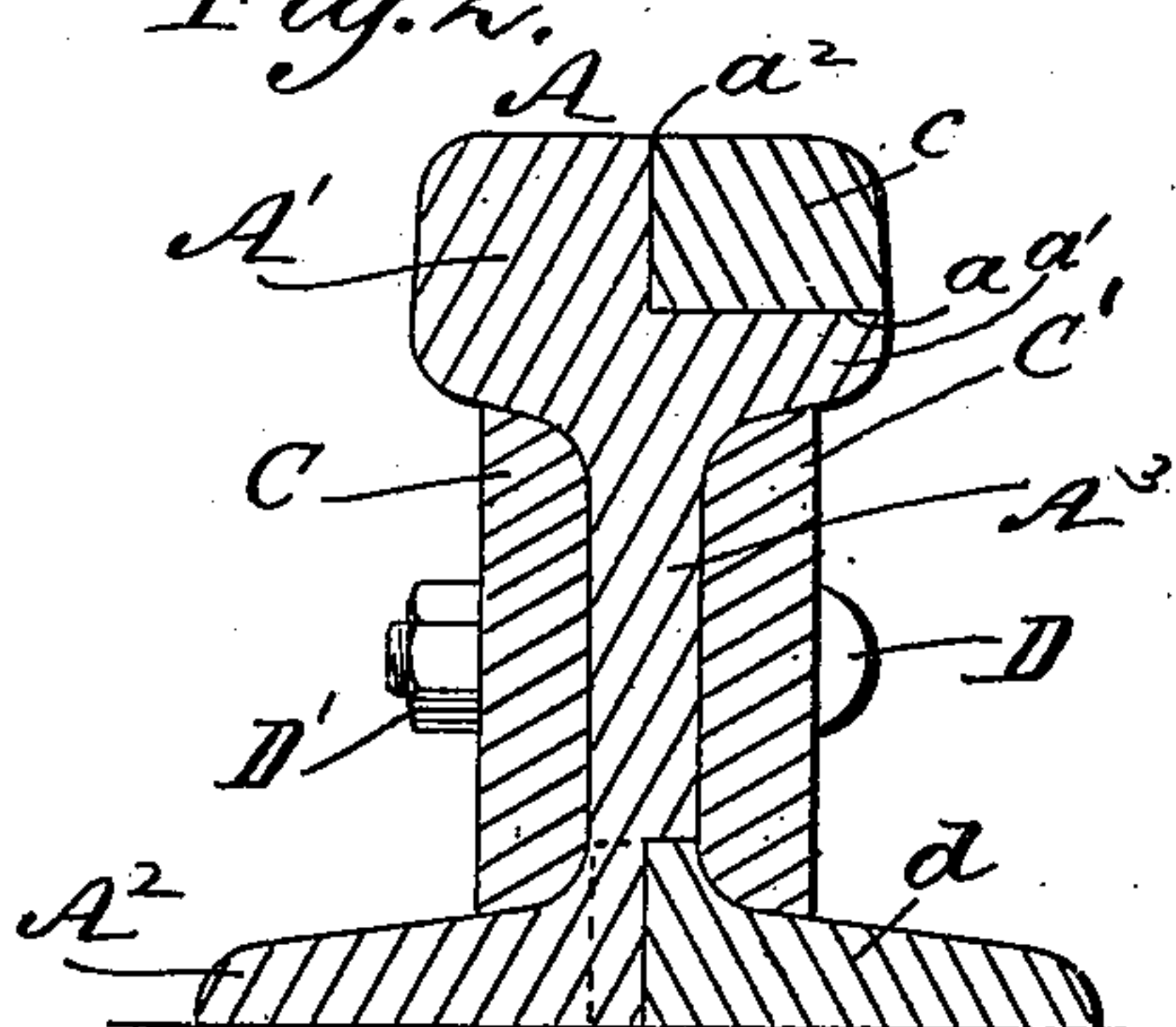


Fig. 3.

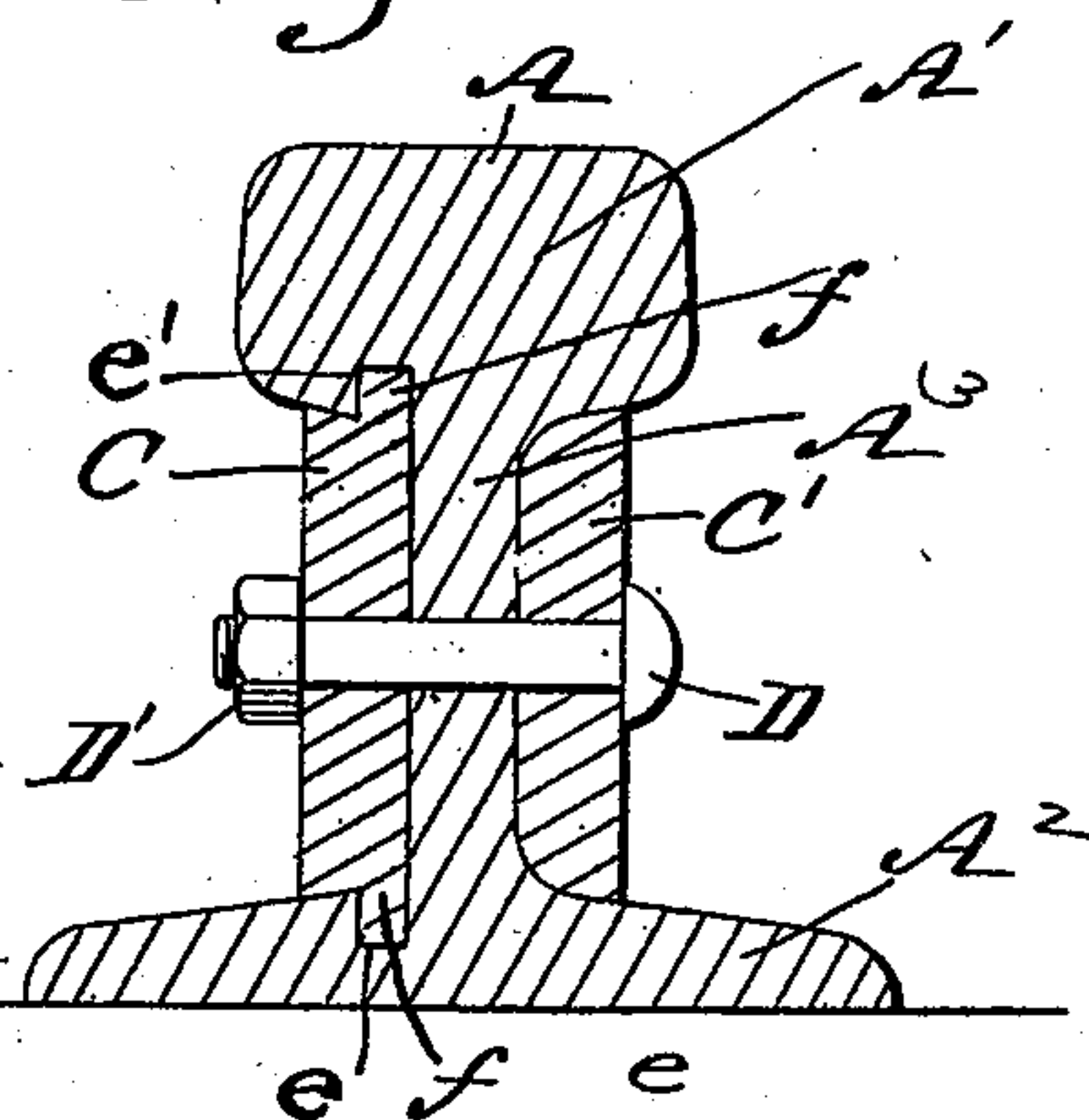
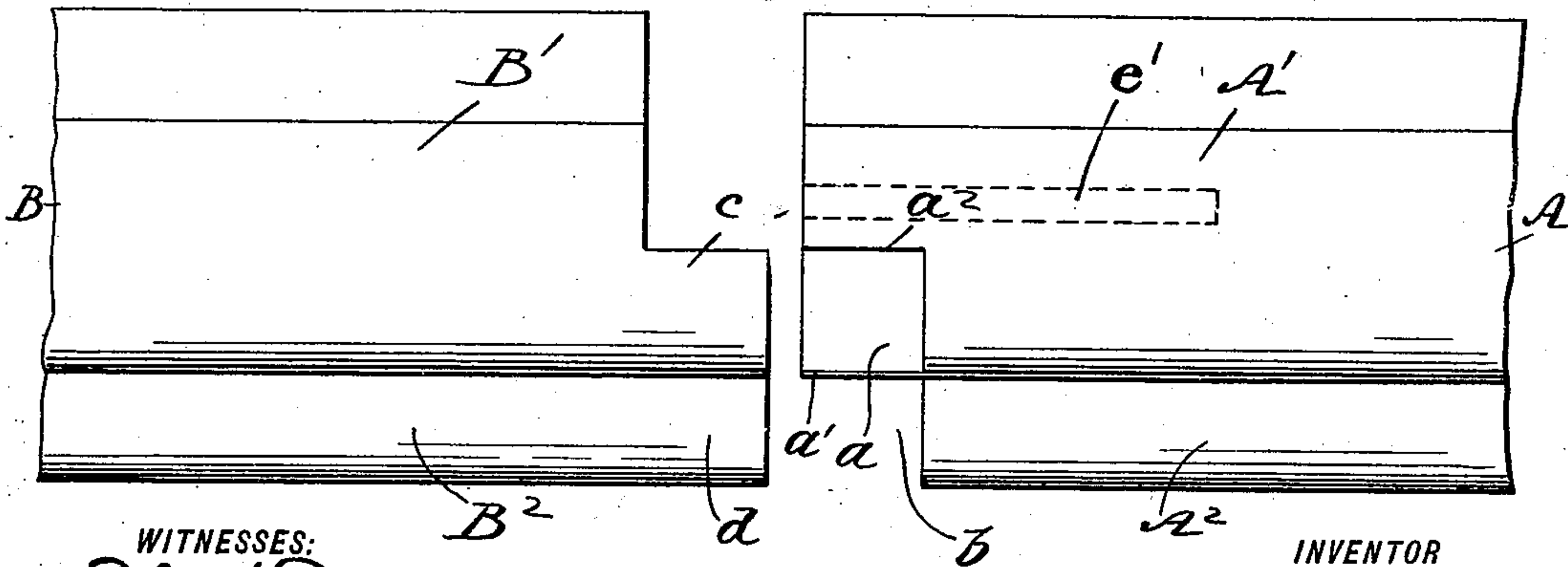


Fig. 4.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

FRANCIS J. PRIBYL, OF HAZLETON, PENNSYLVANIA.

## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 549,154, dated November 5, 1895.

Application filed March 9, 1895. Serial No. 541,143. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS J. PRIBYL, a citizen of the United States, and a resident of Hazleton, county of Luzerne, and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts in all the figures.

This invention relates to rail-joints for railways, and has for its object to provide an improved construction of rail and plate, by means of which lateral shifting or separation and upward movement of the rails will be prevented and longitudinal expansion thereof permitted without wholly separating the ends; and, further, to provide such a device as will permit of very ready and convenient construction and repair of a road.

The invention consists in the novel construction and arrangement of parts, whereby the above-mentioned and other desirable results are attained, and hereinafter fully described.

Referring to the drawings, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a transverse section thereof upon the line  $x x$ , Fig. 1. Fig. 3 is a similar section upon the line  $y y$ , Fig. 1. Fig. 4 is a plan view of the rails separated.

In the practice of my invention I form one end of the rail A with a substantially square vertical recess  $a$  in its head  $A'$  at one side, leaving the under surface of said head, beneath the same, in the form of a tongue  $a'$ , and a similar recess  $b$  in the base-flange  $A^2$ , extending from the longitudinal center of the rail or immediately in vertical alignment with the inner edge  $a^2$  of the recess  $a$ , outwardly to the edge of the base-flange  $A^2$ . The opposite end of the rail, and therefore the adjacent rail end B, is provided upon its head  $B'$  with a tongue  $c$ , registering with the recess  $a$ , said tongue being cut out upon the under surface to form a groove  $c'$  to receive the tongue  $a'$ . Beneath said tongue  $c$  the base-flange  $B^2$  is provided with a projecting tongue  $d$ , registering with and adapted to enter the recess  $b$ , and, preferably, said recess  $b$  extends through one side of the web  $A^2$  of the rail A,

and the tongue  $d$  correspondingly projects half-way beyond the edge of the web  $B^2$  of the rail B, as best shown in Fig. 2.

In the upper surface of the flange  $A^2$  and in the under surface of the head  $A'$ , immediately adjacent to the web  $A^3$ , opposite the recessed side of the rail, I form longitudinal grooves  $e e'$ , as shown in section in Fig. 3 and indicated by dotted lines in Fig. 4. In these grooves, which extend any desired distance within the edge of the rail, I insert the flanges  $f$ , which are formed upon top and bottom of a fish-plate C, shaped to correspond with and closely fit the under surface of the head  $A'$ , said plate being slid into the grooves from the end, the end thereof which projects beyond the grooves  $e e'$  being, of course, unprovided with the flanges  $f$ , and shaped as ordinarily. This fish-plate C is secured to the rail A, with an ordinary fish-plate  $C'$  upon the opposite side of said rail, by means of bolts D, extending therethrough and secured by the nuts  $D'$  or otherwise, the interior of said plates, however, being secured to the rail B.

The operation of the device will be readily understood from the foregoing description, taken in connection with the accompanying drawings. In laying the rails a sufficient space may be left between the ends thereof to permit longitudinal expansion thereof to the greatest possible degree without leaving an actual opening between the same, as the car-wheel will strike the tongue  $c$  before leaving the end of the rail A, said tongue  $c$  being supported by the tongue  $a'$  beneath the recess  $a$ , and further by the plate C, which, bearing under said tongue and upon the flanges  $A^2$  and  $B^2$ , transmits the strain upon the tongue  $c$  to said base-flanges, and at the same time outward spraying of the rail A is prevented by the tongues  $c$  and  $d$ . The plates C  $C'$ , particularly the former, which is inserted in the grooves  $e e'$ , are rigidly secured to the rail A and laterally immovable by reason of such insertion in the grooves, and said plates, being secured together, will rigidly grasp the web  $B^3$  of the rail B; but by reason of said plates being secured only to the rail A and not to said rail B in any manner whatsoever, longitudinal expansion of said rail is freely permitted, and, correspond-



ingly, that of the rail A. As shown by dotted lines in Fig. 2, I may extend the flange-tongue *d* beyond the center of the web A<sup>3</sup>.

5 The advantages resultant from the use of the invention will be manifest to all who are conversant with the general class of devices to which the same appertains.

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

1. The combination, with a rail having a recess in its head at one side, with a tongue or shoulder thereunder, and a corresponding recess in its base flange extending to the  
15 center of the web, of a rail having a tongue projecting from the head thereof to register with the head-recess and rest upon the tongue or shoulder thereof, and a tongue projecting from the base flange of said rail outwardly  
20 from the center of its web to correspondingly engage the flanged recess to permit longitudinal expansion of said rails, prevent lateral shifting or upward movement thereof and form a tight joint.

25 2. The combination, with a rail having a recess in its head at one side, with a tongue or shoulder beneath the same, and a corresponding recess in its base flange from the

center of the web outwardly, and longitudinal grooves in the under surfaces of said head 30 and the upper surface of said base flange, and a rail having a tongue projecting from its head to enter the head-recess of the adjacent rail and rest upon the tongue or shoulder thereof, and a corresponding tongue upon its  
35 base flange from the center of its web outwardly to engage the flanged recess; of a fish-plate having longitudinal flanges upon its upper and lower edges inserted in the grooves and corresponding in length there- 40 with, and a fish-plate upon the opposite side of said rail, said fish plates being secured together and to said rail by bolts and loosely clamping the opposite or tongued rail, where- 45 by longitudinal expansion of the rails is permitted, and whereby strain upon the head and tongue is transmitted to the base flanges of both rails.

In testimony that I claim the foregoing as my invention I have signed my name, in pres- 50  
ence of two witnesses, this 13th day of February, 1895.

FRANCIS J. PRIBYL.

Witnesses:

PERCY T. GRIFFITH,  
A. M. CUSACK.