

(No Model.)

2 Sheets—Sheet 1.

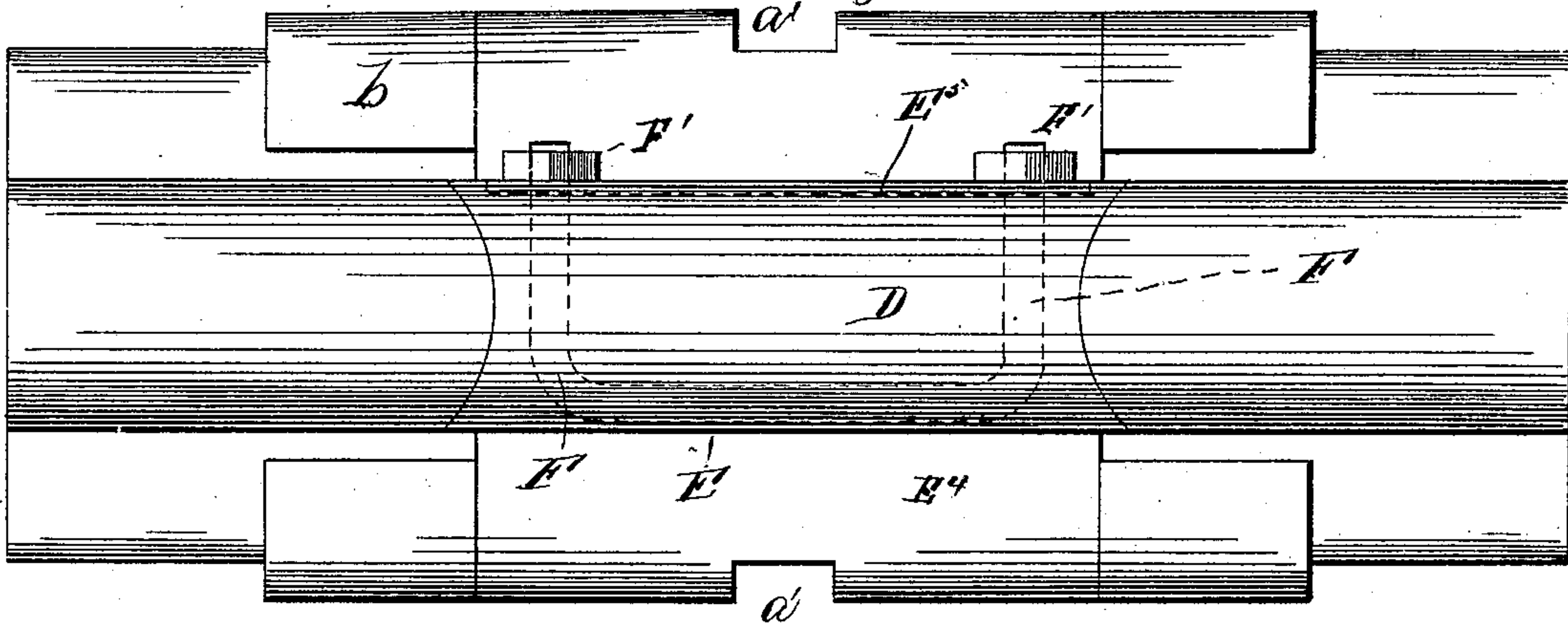
L. HAAS.

COMBINED RAILWAY JOINT AND CHAIR.

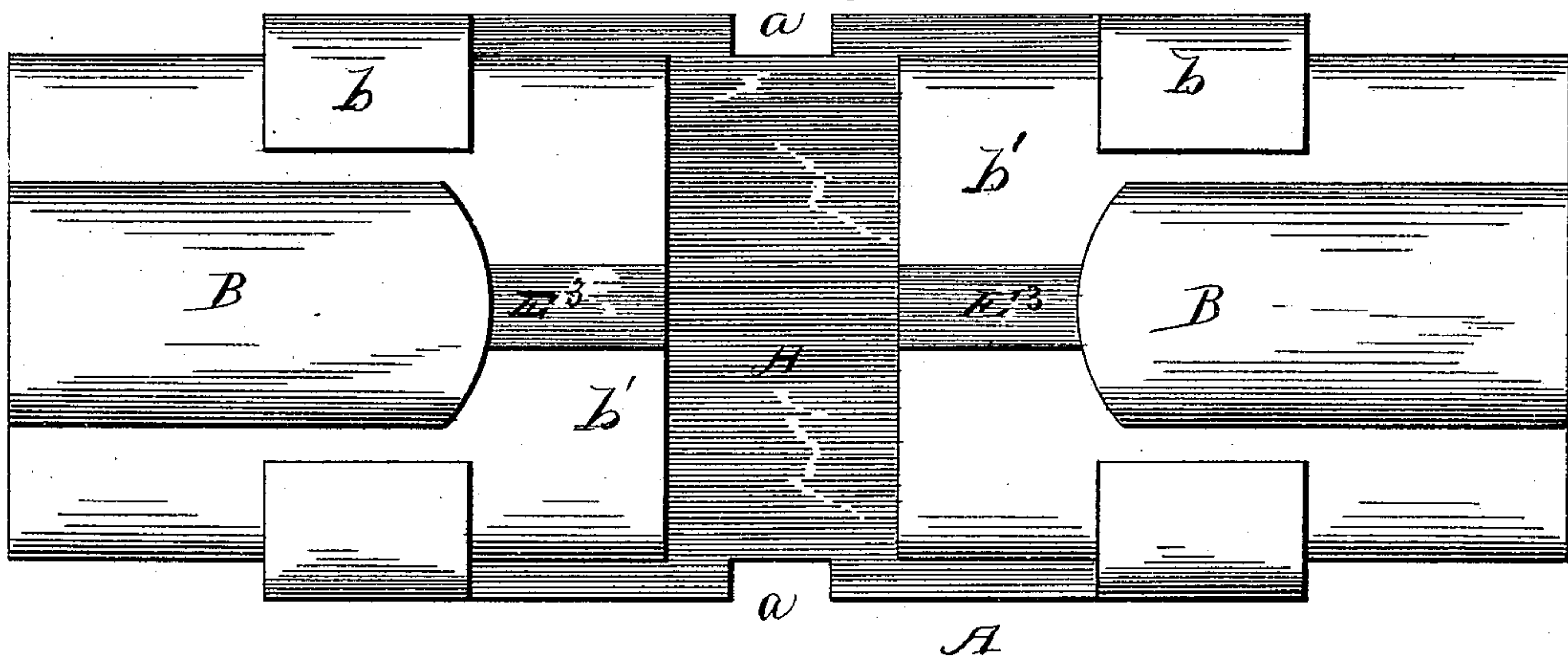
No. 308,491.

Patented Nov. 25, 1884.

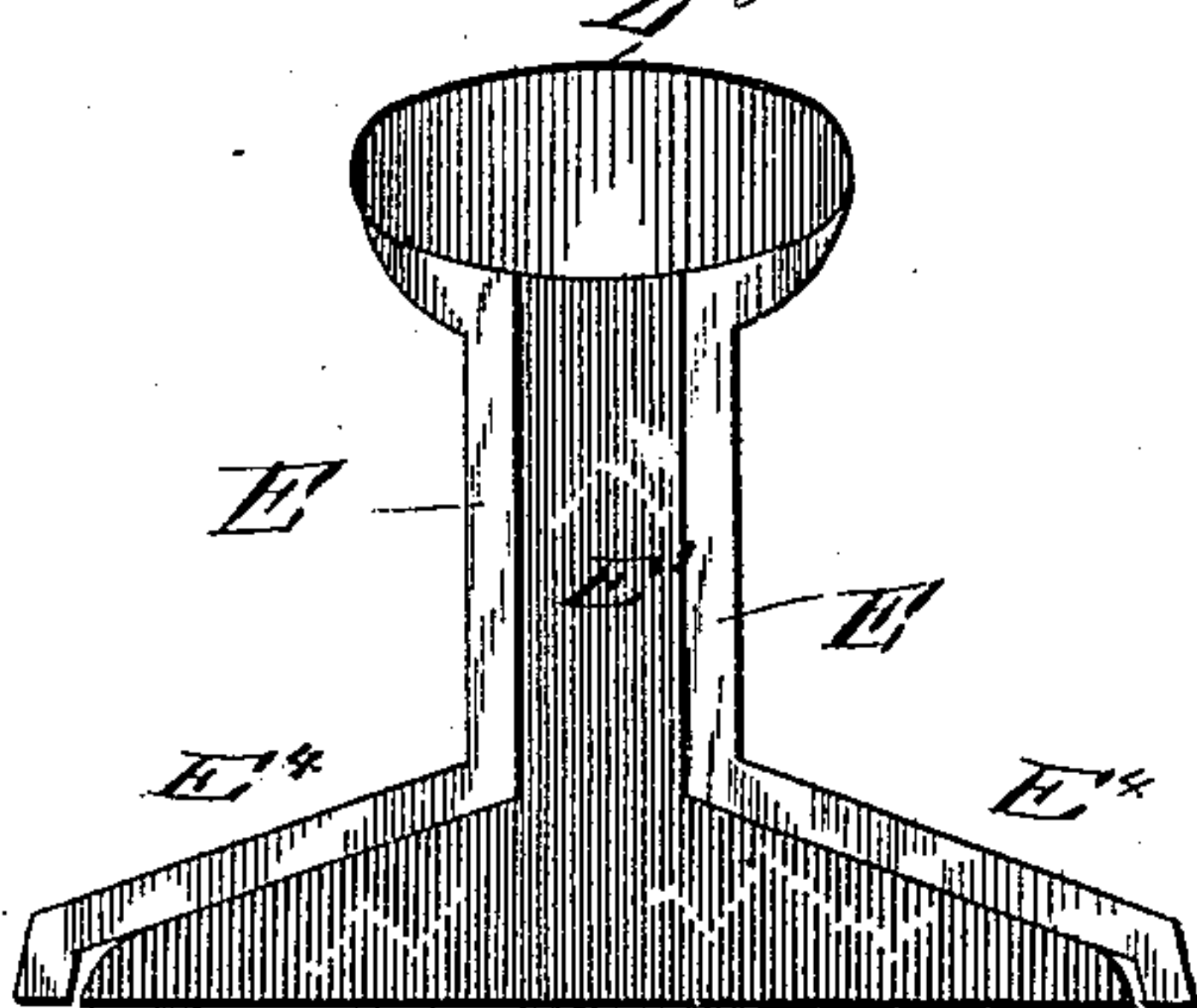
*Fig 1*



*Fig 2*



*Fig 3*



WITNESSES:

*W. E. Bowen*  
*W. M. Rheem*

INVENTOR

*L. Haas*  
BY *Myer & Co*  
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

L. HAAS.

COMBINED RAILWAY JOINT AND CHAIR.

No. 308,491.

Patented Nov. 25, 1884.

FIG. 4.

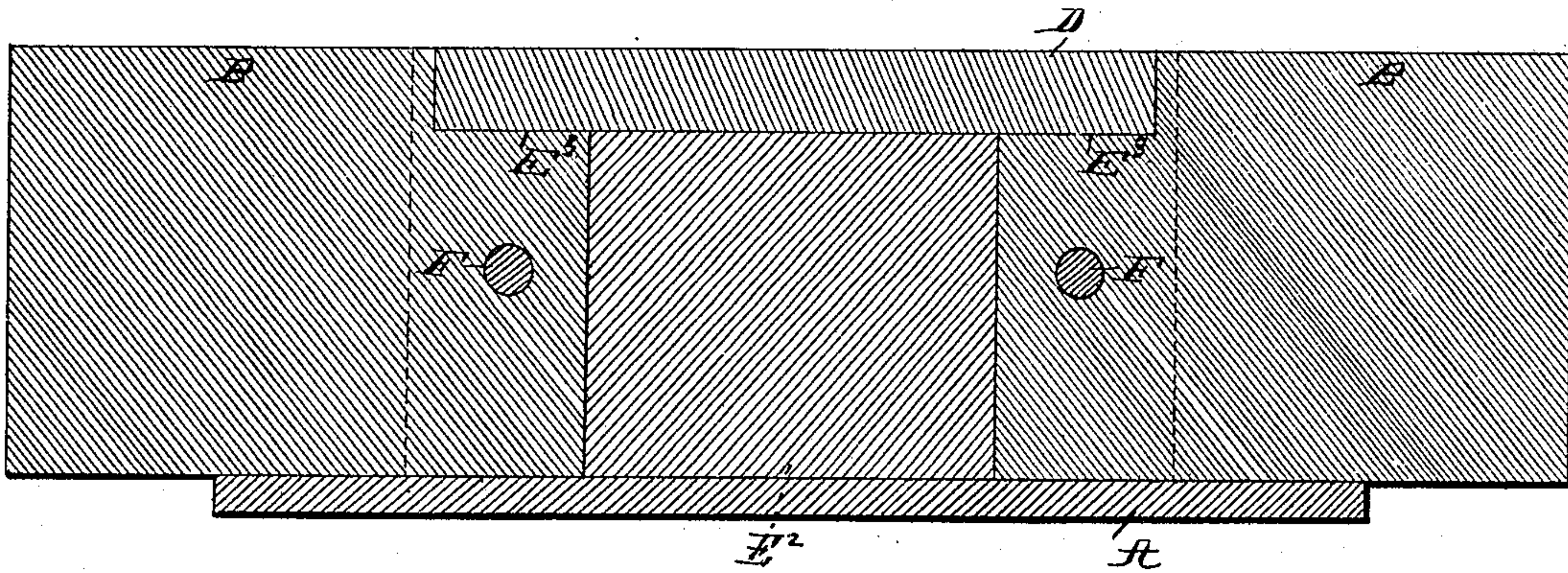


FIG. 5.

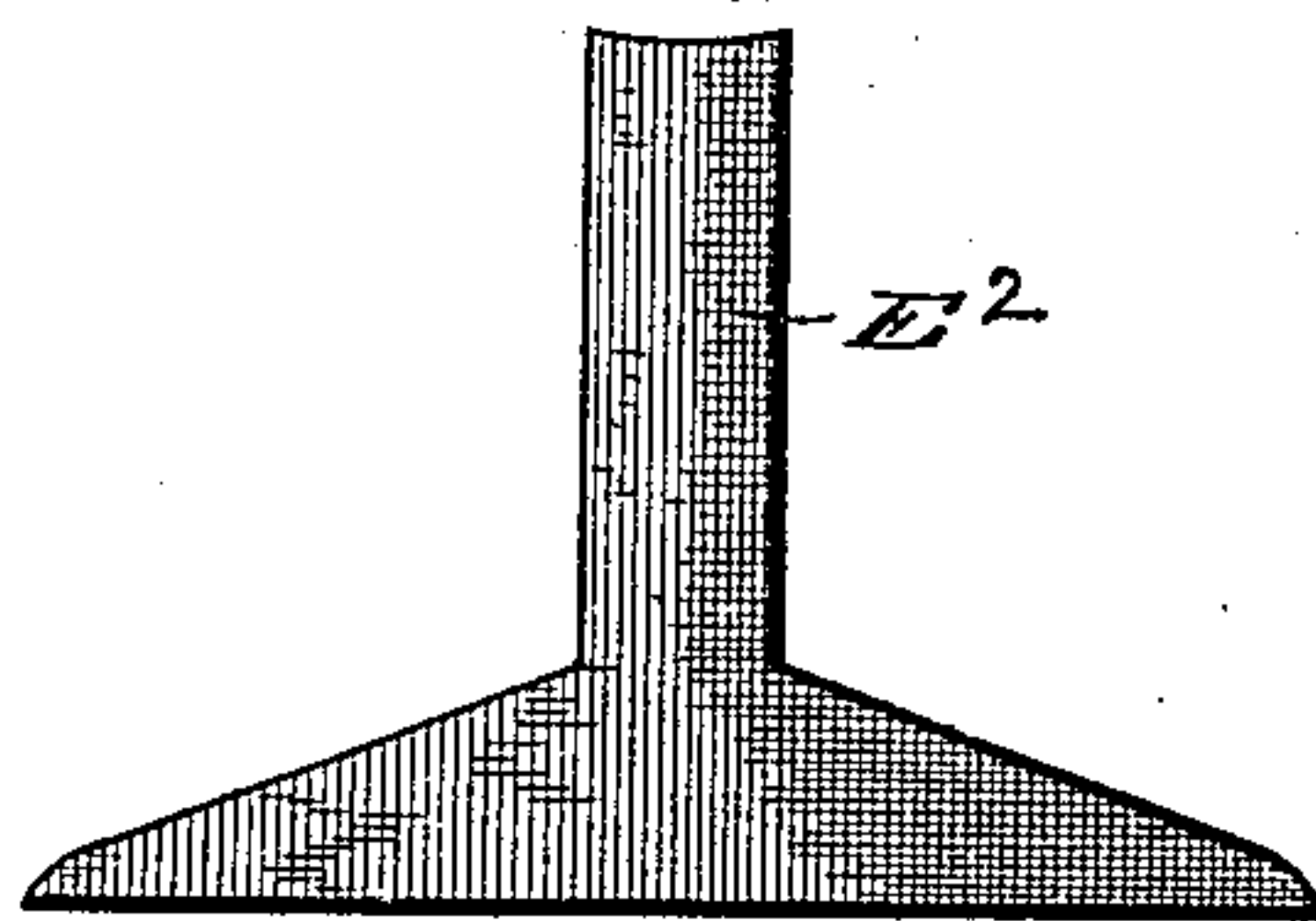
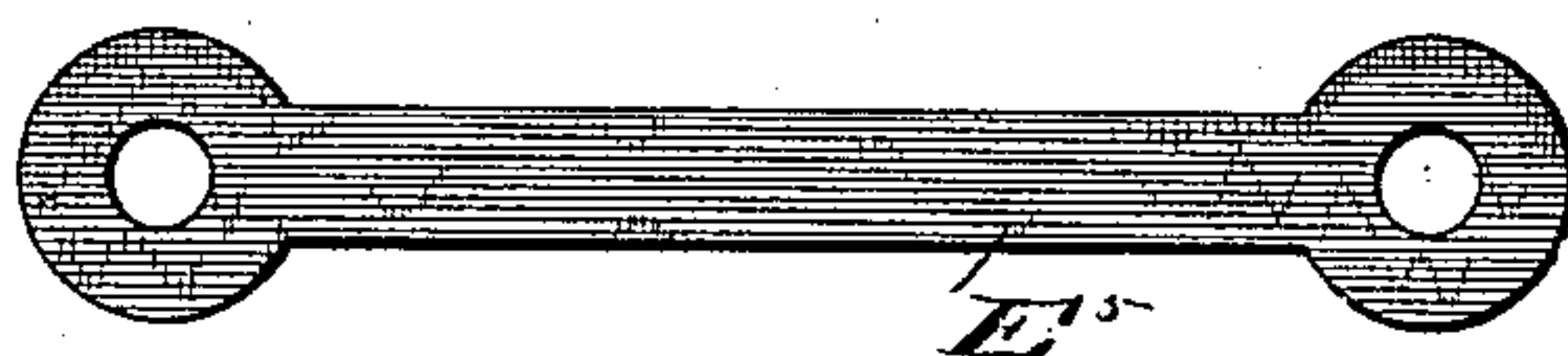


FIG. 6.



WITNESSES

*W. H. Deem*  
*John McCall*

INVENTOR

*Levi Haas*  
*By Myers & Co.*  
Attorneys.



# UNITED STATES PATENT OFFICE.

LEVI HAAS, OF CHESTER, PENNSYLVANIA.

## COMBINED RAILWAY JOINT AND CHAIR.

SPECIFICATION forming part of Letters Patent No. 308,491, dated November 25, 1884.

Application filed March 7, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, LEVI HAAS, a citizen of the United States of America, residing at Chester, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Combined Railway Joint and Chair, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has reference to improvements in railways, pertaining more especially to the splicing-bars, fish-plates, and chairs; and it consists of the detailed construction and combination of parts, substantially as herein-  
15 after fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my invention. Fig. 2 is a similar view with the splicing rail or bar removed.  
20 Fig. 3 is an end elevation of the splicing bar or rail and connected fish-plates. Fig. 4 is a longitudinal sectional view, and Figs. 5 and 6 are detail views of my invention.

In the construction of my combined railway joint and chair the chair A is provided on each longitudinal face with a corresponding bolt-recess, *a*, and each corner is formed into a flange-clamp, *b*, which flange-clamps jointly receive the flanges of two rails, B and  
30 B, whose ends are brought into contiguity to be spliced together, the rails resting upon the chairs or bottom plates. The flange-clamps *b* are cast integral with the chairs or bottom plates, and project vertically upward and then  
35 at a slight inclination inwardly over the flanges of the rails to which they are conformed. The flanges and webs *E*<sup>3</sup> of the adjacent rail-ends are projected beyond the head portions of the rails, the projected web portions being there-  
40 fore without the headed portions forming the tread or bearing-surface of the rail.

D is the splicing rail or bar, whose headed portion is oppositely shaped or curved at its ends to the curvature of the ends of the heads  
45 of the rail-sections, to enable them to fit into the latter. The splicing rail or bar consists of the coincident fish-plates E, terminating at top in the rail D, and having between them the longitudinal recess *E'*, wherein is centrally  
50 bolted, or it may be cast integral therewith, the flange and web *E*<sup>2</sup>, which serves as an adjunct in strengthening and supporting the

splicing-rail, the tread of which rests on flange and web *E*<sup>2</sup> and on the vertical walls of the fish-plates. The combined flange and web *E*<sup>2</sup> and the webs *E*<sup>3</sup> conjointly occupy the longitudinal recess *E'*, as shown in Fig. 4. The flanges *E*<sup>1</sup> of the fish-plates E are inclined downwardly parallel with the web of the combined web and flange *E*<sup>2</sup>, and after passing its longitudinal  
55 edge they project vertically down and rest upon the bottom plate, A. The flanges *E*<sup>1</sup> are provided with bolt-recesses *a'*, adapted to the coincident bolt-recesses *a* of the chair A. The fish-plates project beyond each end of the  
60 splicing rail or bar D, to enable them to embrace the webs of the rail-sections, to which they are fastened or connected by a staple-shaped bolt, F, with its ends passing through coinciding apertures in the rail-section webs  
65 and the fish-plates. The ends of bolt F are projected through orifices provided at either end of plate *E*<sup>5</sup>, and the plate is secured by the nuts *F'*, as shown. In this connection I  
70 would state that I am aware of German Patent No. 19,379, of 1882, wherein is employed a splicing bar or rail for forming a rail-joint curved at either end, the curves being adapted to coincident curves formed at either end of  
75 each rail-section; but said patent does not otherwise resemble my invention.

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

1. In a combined railway joint and chair, 85 the splicing bar or rail D, having the connected fish-plates, in combination with the flange and web *E*<sup>2</sup>, and the rail-sections B, having the headless web extensions and flanges *E*<sup>3</sup>, substantially as shown, and for the purpose  
90 described.

2. The splicing bar or rail having the fixed fish-plates projecting beyond said bar or rail, in combination with the rail-sections having headless web extensions and flanges, and the  
95 bottom plate or chair with flange-clamps at its corners, substantially as shown and described.

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

LEVI HAAS.

Witnesses:

P. BRADLEY,  
S. S. CORNOGG.