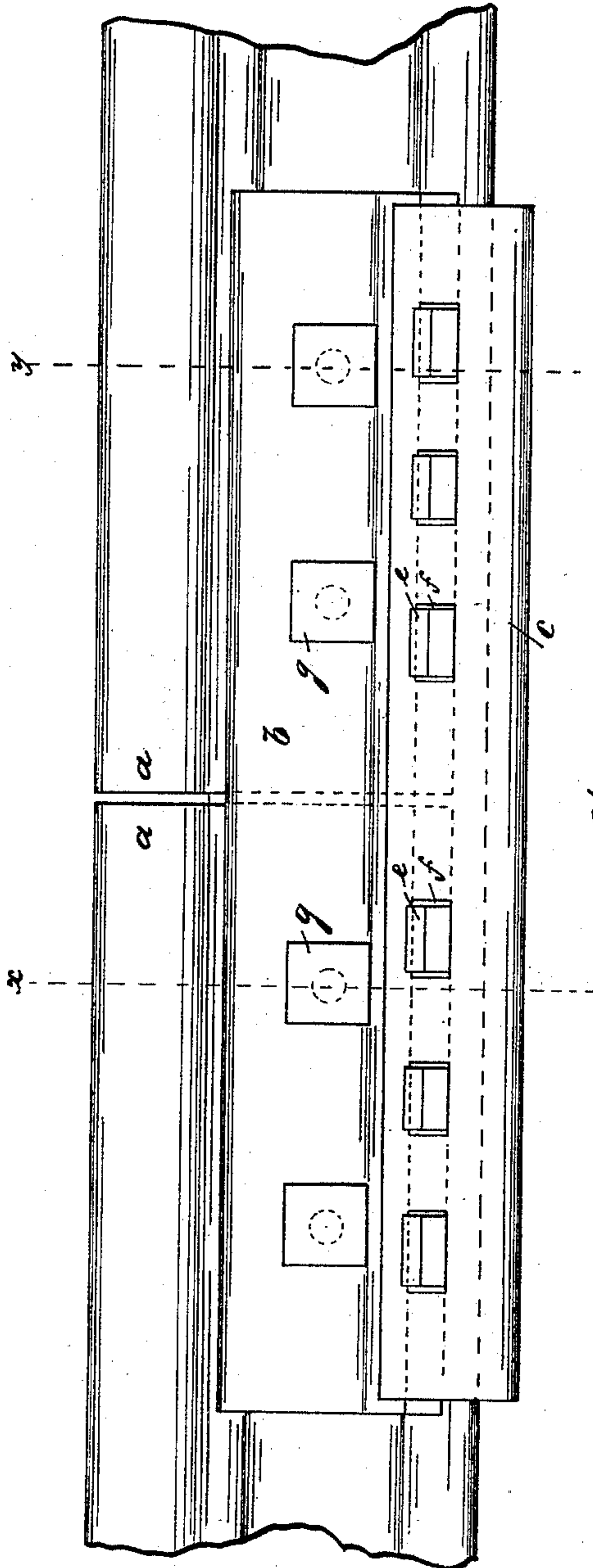


(No Model.)

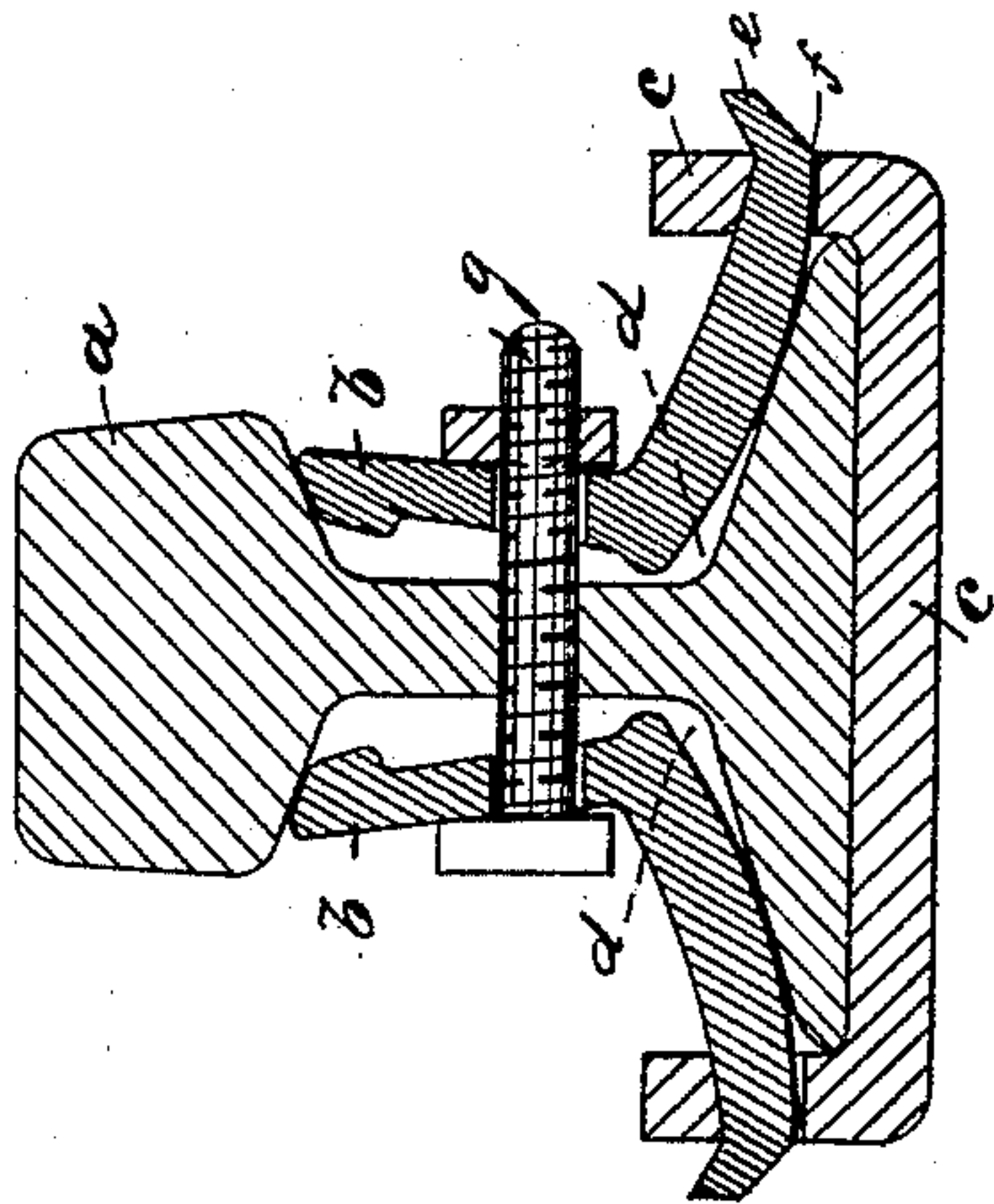
J. A. ENO.  
RAIL JOINT.

No. 462,967.

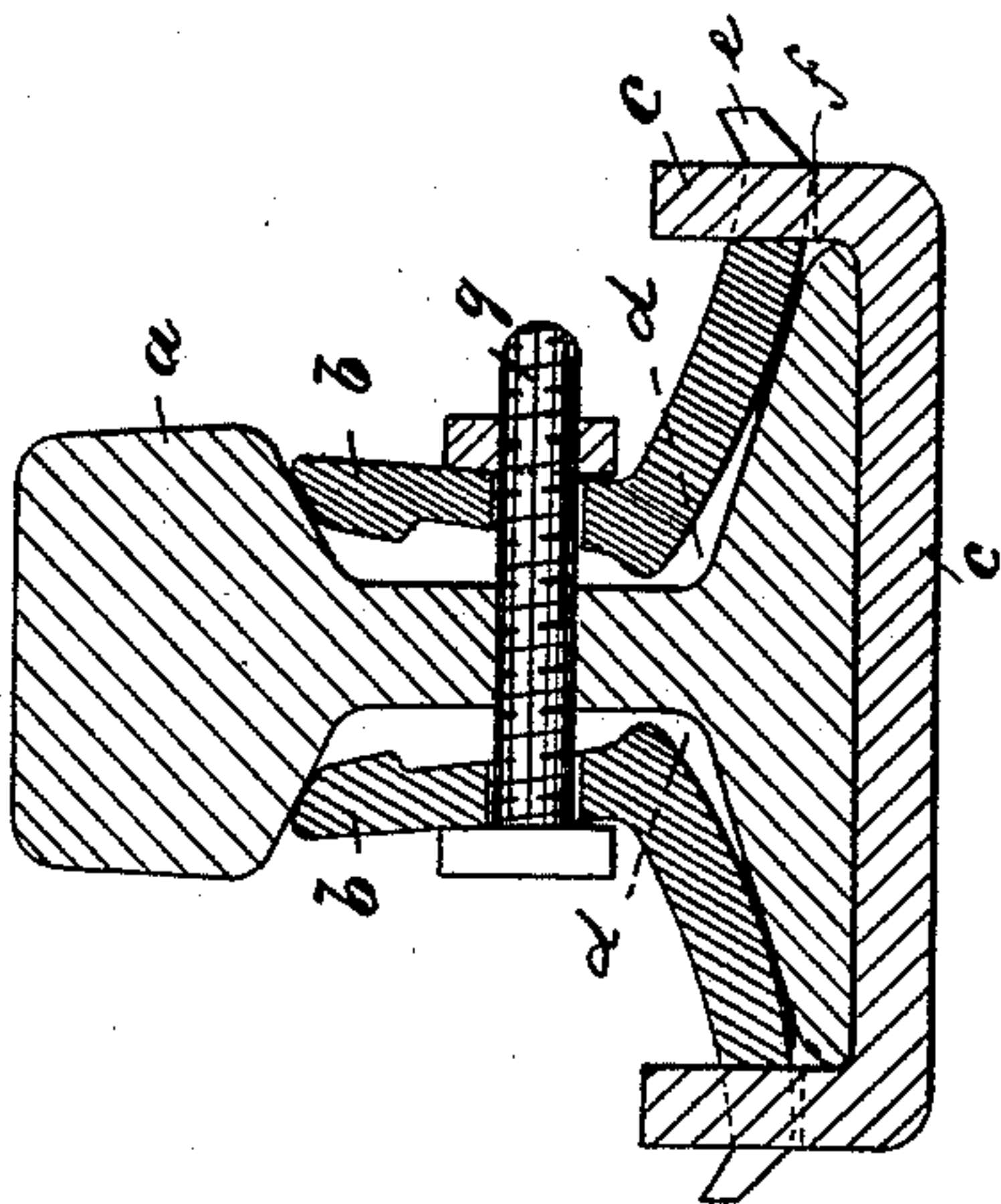
Patented Nov. 10, 1891.



*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

WITNESSES:  
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# UNITED STATES PATENT OFFICE.

JOSEPH A. ENO, OF NEWARK, NEW JERSEY.

## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 462,967, dated November 10, 1891.

Application filed November 12, 1890. Serial No. 371,151. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH A. ENO, a citizen of the United States, residing at Newark, Essex county, and State of New Jersey, have  
5 invented certain new and useful Improvements in Rail-Joints; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable  
10 others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a  
15 reliable railway-joint and one that will maintain a uniform connection without spreading or enlargement of the ends of the rails and also simple and economical in construction.

The invention consists in the improved  
20 railway-joint and the combination and arrangement of the various parts thereof, as will be hereinafter more fully set forth, and finally embodied in the claims.

Referring to the accompanying drawings,  
25 in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1 is a front view of a rail-joint embodying my improvement. Fig. 2 is a sectional view on line *x*, Fig. 1, and Fig. 3 is a  
30 sectional view on line *y*, Fig. 1.

In the drawings, *a a* represent rails as in ordinary use on railroads; *b b*, are angle-plates, and *c* represents a rail-chair extending under and beyond the ends of the rails  
35 *a a*, as shown. The upper portion of the angle-plates is designed to bear against the under side of the bearing-surface of the rail, the lower legs of said plates being curved and provided at their marginal ends with  
40 hooks *e e*. The bottom angle of the plates is designed and arranged to leave a slight opening, as shown at *d* in Figs. 2 and 3. The lower legs of said angle-plates are provided on their margins with hooks *e*, extending  
45 through the perforations *f* in the rail-chair and adapted to be struck up or bent up by a hammer without removal of the angle-plate for the purpose of taking up the wear. The rail-chair can be provided with hooks of a  
50 similar nature when desired, extending through perforations in the angle-plates and adapted to be struck or bent up by a hammer for the same purpose.

The rail-chair is made wide enough to fur-

nish a complete and effective support for the  
55 base of the rails, and is provided on its sides with upwardly-turned and perforated flanges, as shown in Figs. 2 and 3. The hooks or prongs on the margins *E* of the lower legs of the angle-plates must extend through and suffi-  
60 ciently beyond the perforated flanges to be upturned outside of the same to be struck or bent up by a hammer, as before described. The angle-plates are secured to the rails by  
65 bolts *g* in the ordinary manner.

In operation as the bolts are screwed up the angle-plates are drawn or pressed against the rails and the hooks or prongs on the margins of the lower legs of the angle-plates are then bent or turned by a hammer, thus clinch-  
70 ing all the parts together. Should the parts become loose from continual wear, they can be again tightened firmly by a few strokes of a hammer on the upturned hooks, thus firmly drawing the upturned flanges of the chair to-  
75 ward each other.

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

1. In a railway-joint, the combination, 80 with the rails, of a chair provided with upwardly-turned and perforated flanges, angle-plates the lower legs of which are curved and provided at their margins with hooks extending through the perforations in the chair  
85 and adapted to be struck or bent up by the hammer without removal of the plate to take up wear, and bolts securing the said plates to the rails, all as set forth.

2. In a railway-joint, the combination, 90 with the rails, of a chair provided with upturned and perforated flanges, angle-plates provided at their lower margins with prongs or hooks extending through and sufficiently beyond the perforated flanges to be upturned  
95 outside the same, and bolts securing the plates to the rails, whereby when the bolts are tightened the upturned ends of the prongs counteract any tendency of the flanges to spread apart, all as and for the purposes set  
100 forth.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of November, 1890.

JOSEPH A. ENO.

Witnesses:

ALFRED GARTNER,  
E. L. SHERMAN.