

No. 788,433.

PATENTED APR. 25, 1905.

A. C. SHAND.

RAIL JOINT.

APPLICATION FILED JAN. 21, 1905.

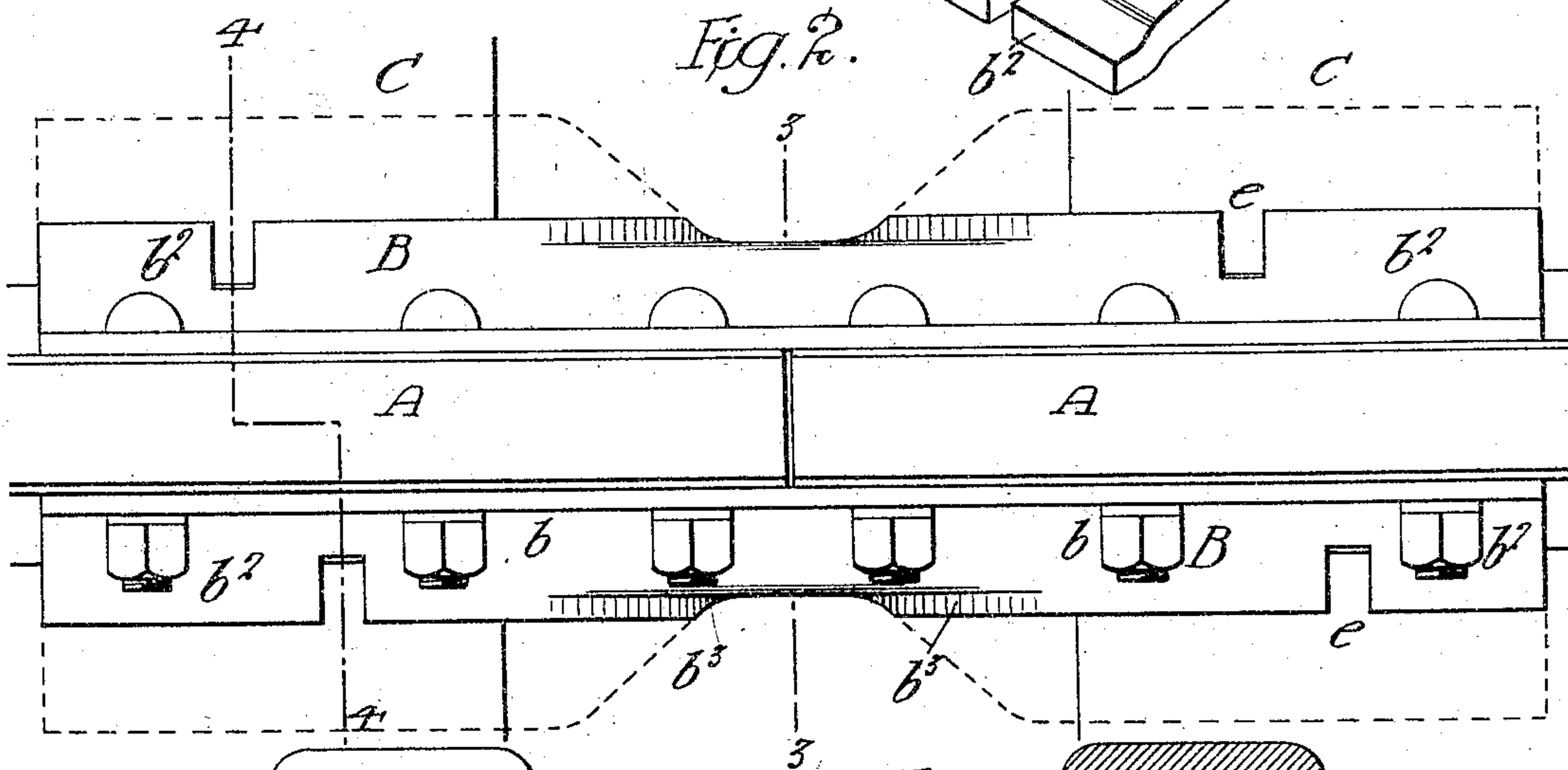
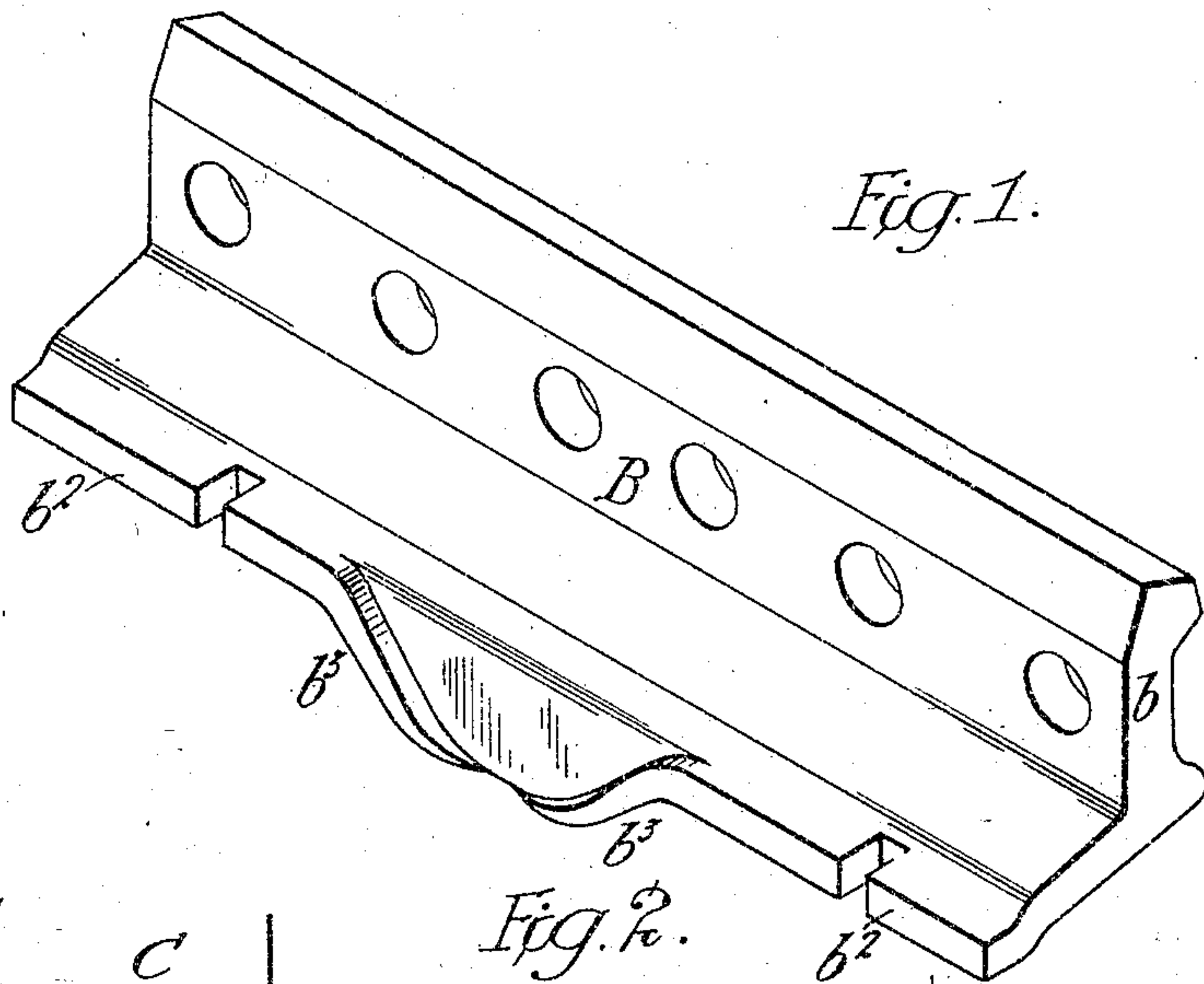


Fig. 3.

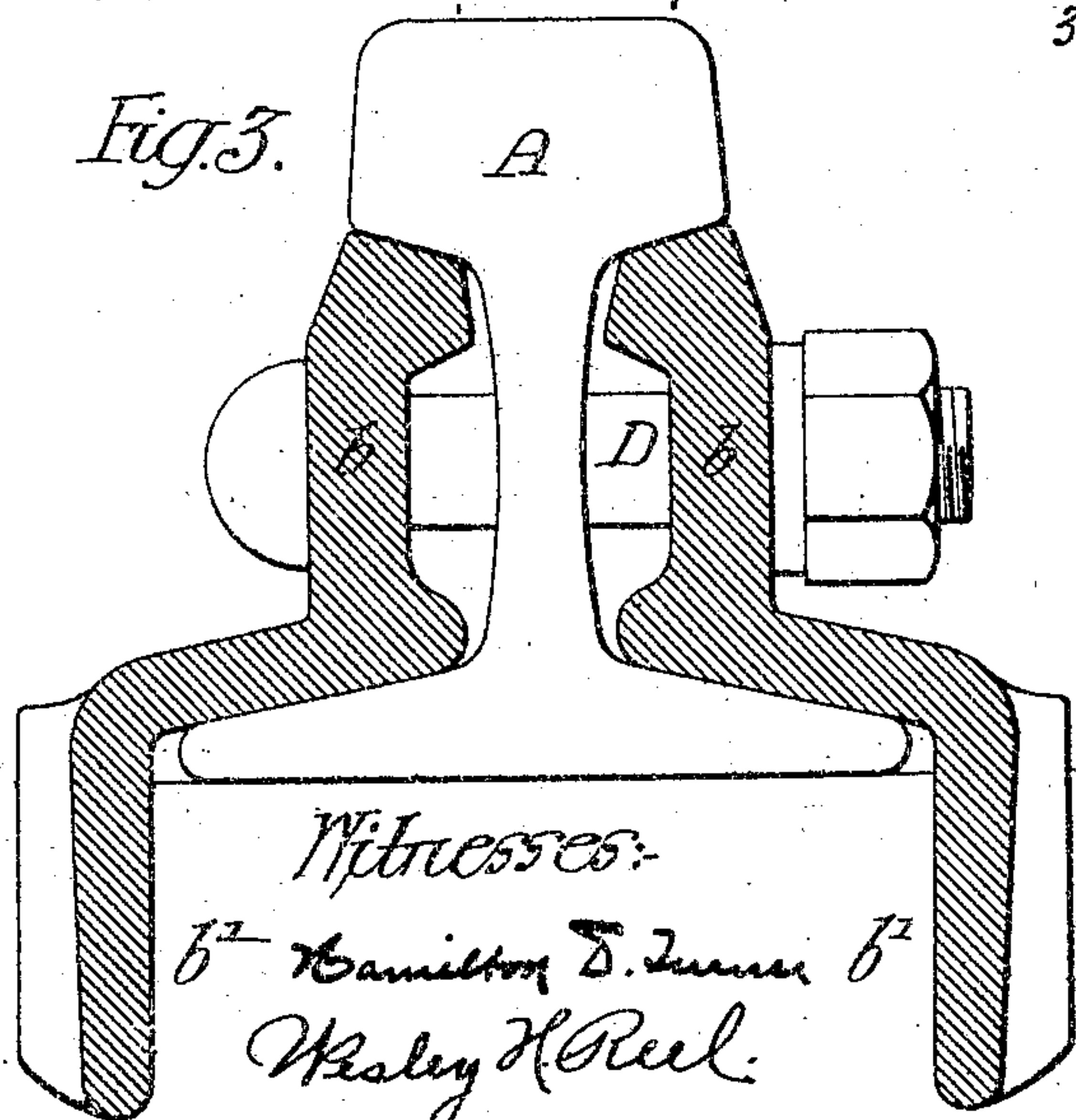
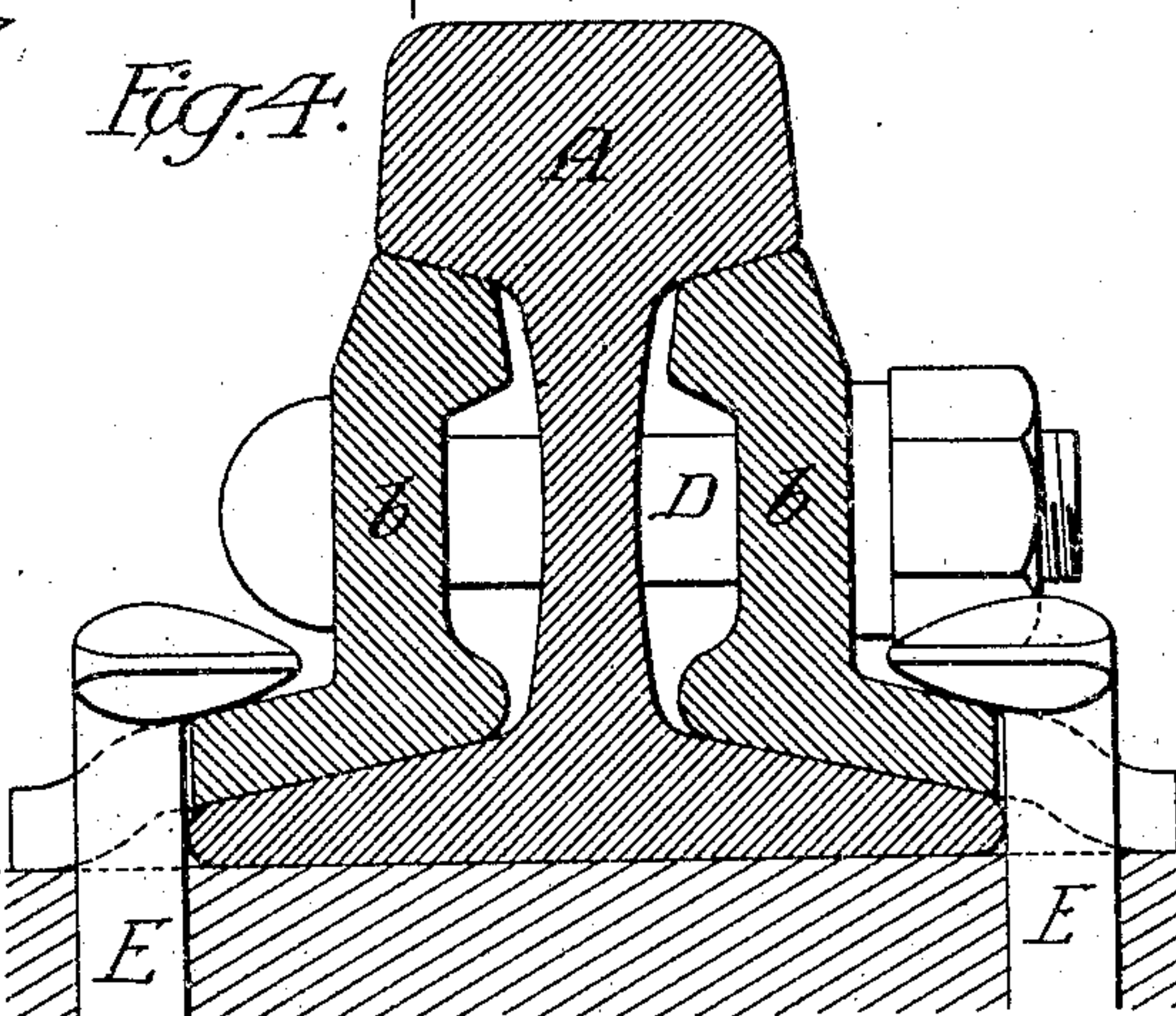


Fig. 4.



Witnesses:

Hamilton D. Turner
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by his Attorneys,
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UNITED STATES PATENT OFFICE.

ALEXANDER C. SHAND, OF NARBERTH, PENNSYLVANIA, ASSIGNOR TO
ADOLPHUS BONZANO, OF PHILADELPHIA, PENNSYLVANIA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 788,433, dated April 25, 1905.

Application filed January 21, 1905. Serial No. 242,133.

To all whom it may concern:

Be it known that I, ALEXANDER C. SHAND, a citizen of the United States, residing at Narberth, Pennsylvania, have invented certain
5 Improvements in Rail-Joints, of which the following is a specification.

My invention relates to certain improvements in the rail-joints for which Letters Patent were granted to Adolphus Bonzano on
10 February 9, 1897, No. 576,943.

The object of my present invention is to reduce the width of the feet of the joint plate or splice, so as to lessen the weight of the plate without destroying the truss feature.
15 This object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of one of the joint or splice plates. Fig. 2 is a plan view
20 showing the abutting rails coupled by my improved joint-plate. Fig. 3 is a transverse sectional view on the line 3 3, Fig. 2; and Fig. 4 is a transverse sectional view on the line 4 4, Fig. 2.

25 A A are the abutting rails, and the joint is formed, as usual, at a point between the ties C C.

B B are the splice-plates, consisting of an upper chord b and a lower chord b' . At each
30 end of each plate are feet b^2 , which are so shaped as to preferably rest upon the ties C or a tie-plate when such a plate is used. Web members b^3 connect the feet with the lower chord b' . The upper chord b is in the form of
35 a fish-plate, fitting snugly between the head and a base-flange of the rail and preferably conforms to the shape of the base-flange. In the upper chord are the holes for the passage of the ordinary securing-bolts D. The lower
40 chord depends from the inclined section of the upper chord, preferably in a vertical line. The webs b^3 project at right angles to the body of the lower chord and materially stiffen the lower chord, preventing it moving later-
45 ally by the action of the wheels traversing

the track. The feet b^2 are notched at e for the reception of the spikes E, which are driven so as to abut against the edges of the base-flange of the rails and so that the head of the spike will overhang the splice-plate. 50

In manufacturing this rail-joint it is preferably rolled the full width, as shown by dotted lines in Fig. 2, and then by bending the center down to right angles to the plate, forming the flanged lower chord. The excess 55 metal of the plate is then removed by cutting, so as to reduce the width and weight of joint.

When necessary, the joint can be either used with or without a tie-plate; but I prefer 60 in most cases to use the tie-plate to support the feet b^2 .

I claim as my invention—

1. A joint-plate for railroad-rails having an upper chord arranged to be secured to the 65 webs of the rails, a lower chord projecting downwardly beyond the base-flanges of the rails, with feet on each side of the lower chord less in width than the depth of the lower chord, and webs connecting the feet with the 70 lower chord, substantially as described.

2. The combination of abutting rails, joint-plates each having upper and lower chords, one arranged on one side of the rails and the 75 other on the opposite side of the rails, the lower chords having inclined flanges at each end and each plate having feet at each end less in width than the depth of the lower chord, said feet being notched, with spikes driven through the notches so as to rest in 80 close proximity to the base-flanges of the rails, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALEXANDER C. SHAND.

Witnesses:

WILL. A. BARR,
JOS. H. KLEIN.