

No. 696,658.

Patented Apr. 1, 1902.

A. A. STROM.
RAILWAY RAIL JOINT.
(Application filed Aug. 21, 1901.)

(No Model.)

FIG. 1

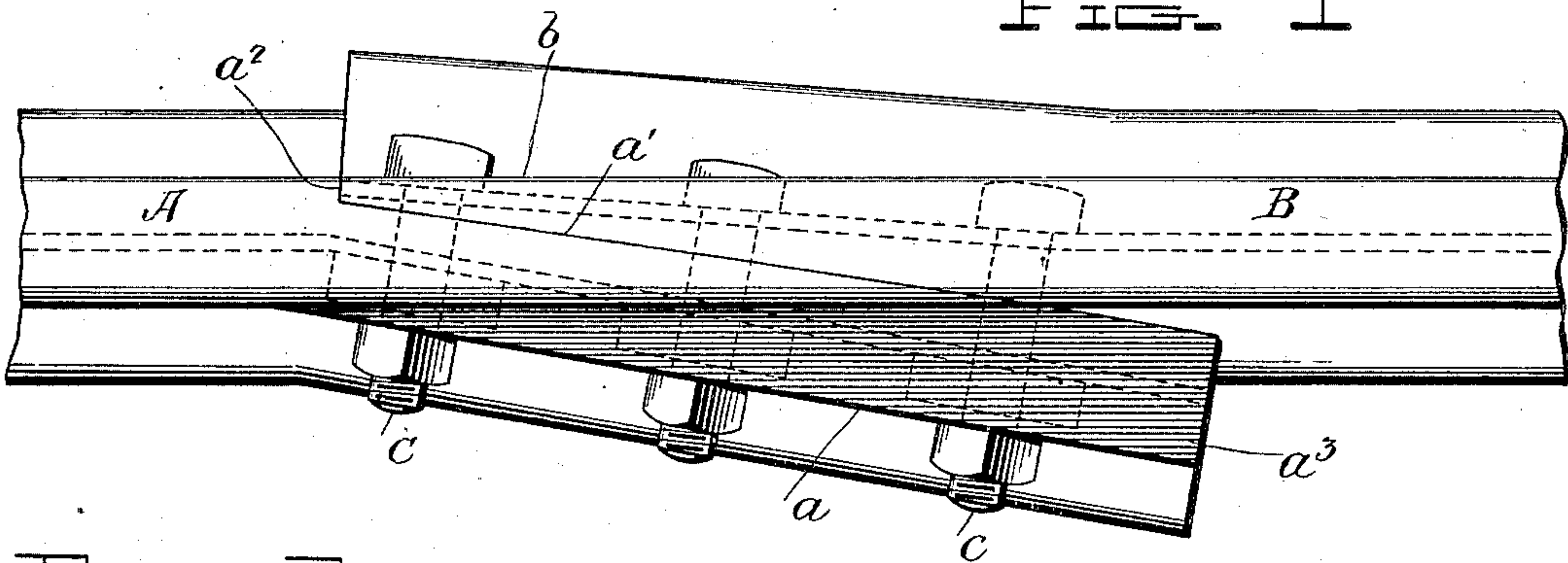


FIG. 2

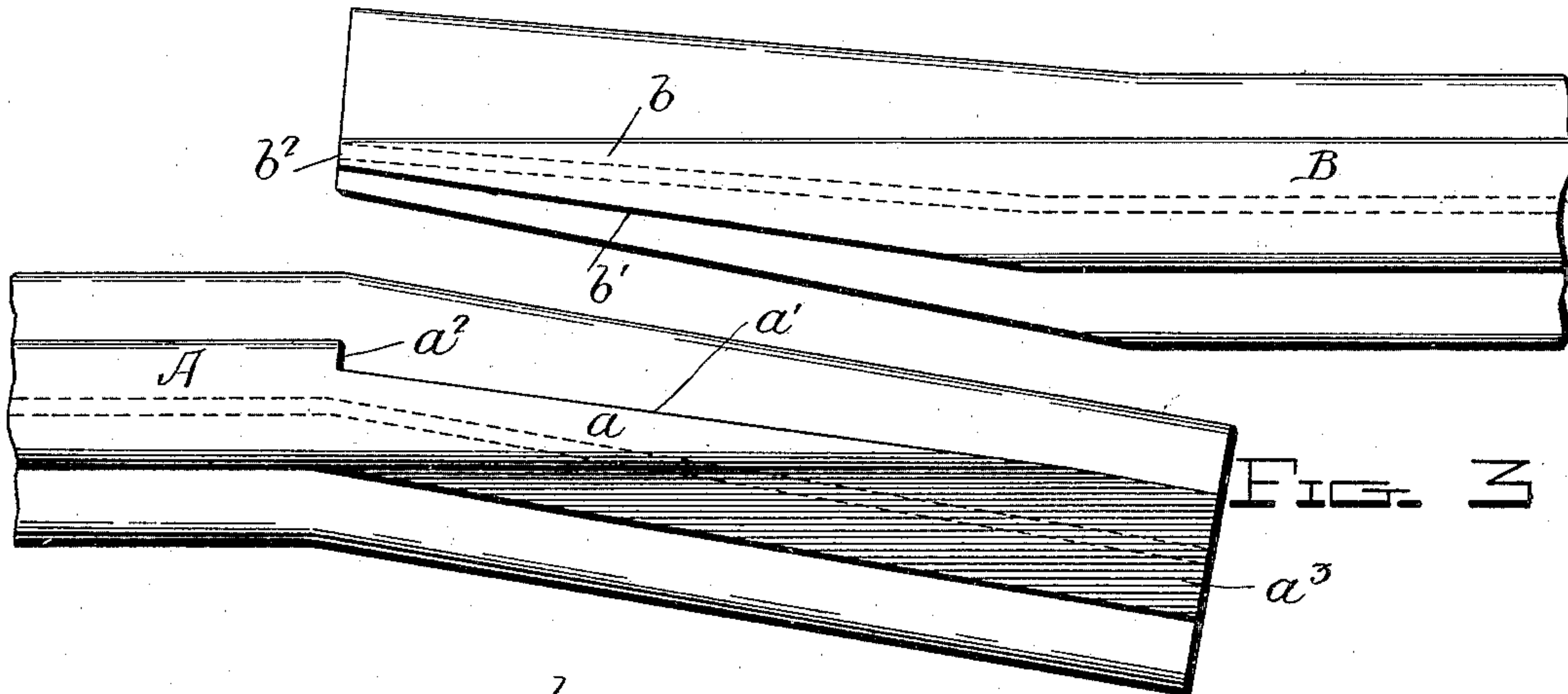


FIG. 3

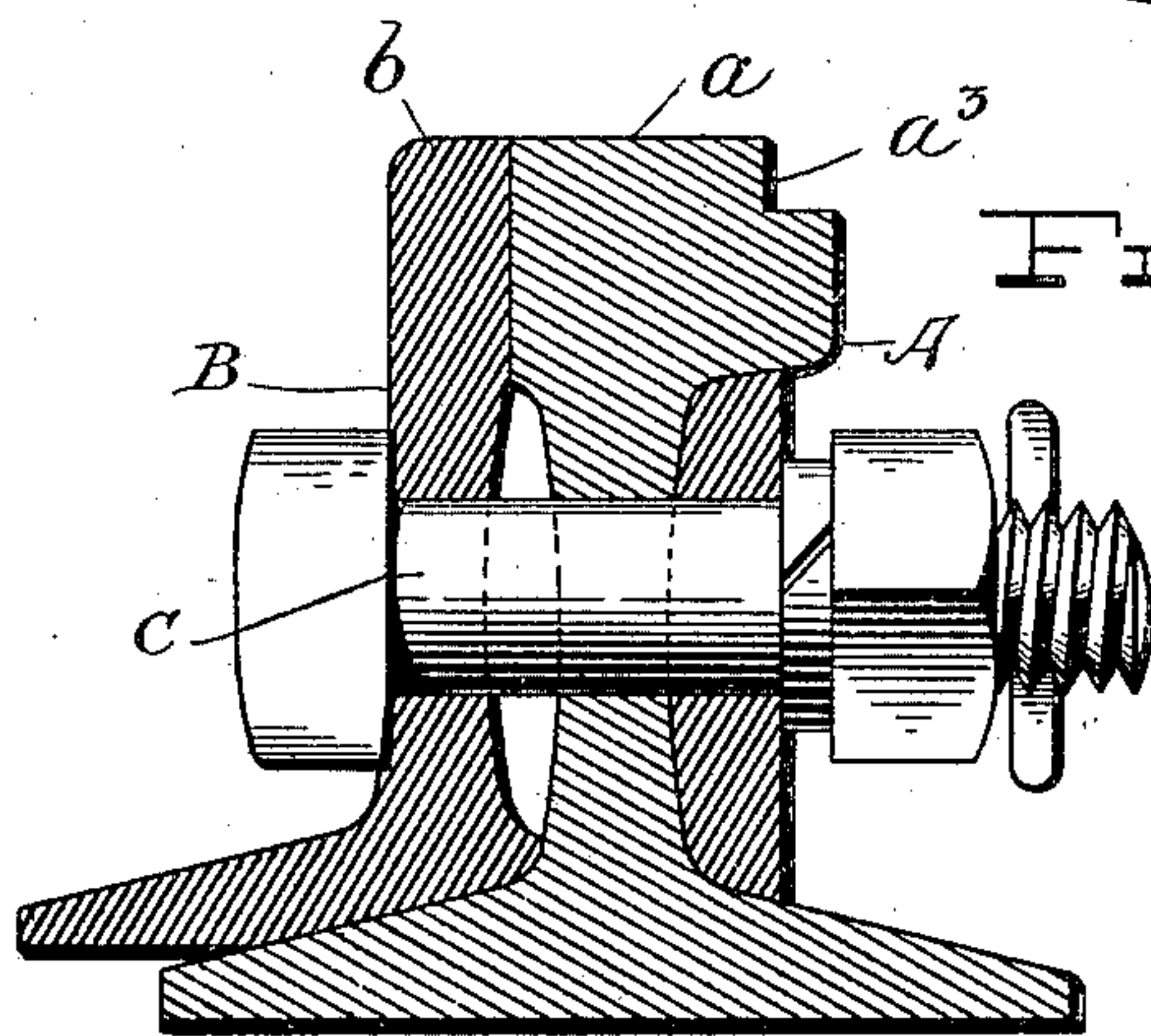


FIG. 4

Witnesses
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UNITED STATES PATENT OFFICE.

AXEL A. STROM, OF AUSTIN, ILLINOIS, ASSIGNOR TO STROM MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS.

RAILWAY-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 696,658, dated April 1, 1902.

Application filed August 21, 1901. Serial No. 72,740. (No model.)

To all whom it may concern:

Be it known that I, AXEL A. STROM, a citizen of the United States, residing at Austin, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway-Rail Joints; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

In my Patent No. 617,059, dated January 3, 1899, I have shown, described, and claimed a railway-rail joint comprised of an outwardly-bent rail and secured in overlapping relation to the beveled end of another rail, whereby the tread of the rails is practically continuous. In the patented construction the end of the beveled rail is sharply pointed and has side contact with the bent rail end from the point of commencement of said bend, thus bringing the inner sides of the jointed rails in alinement and permitting endwise movement of the rails through expansion by heat.

My present invention is directed to improvements on the patented rail-joint, one feature of the improvements consisting of a recess in the inner side of the bent rail end providing a shoulder and receiving the beveled portion of the other rail, the end of the latter rail being formed to engage the shoulder, and thereby to relieve the securing-bolts of the shearing action to which they would otherwise be subjected in the expansion of the rails.

Another and perhaps the more important feature of my present invention consists of a recess in the tread portion or top of the bent rail end, which recess accommodates what is known as the "extra" or outside flange on treadworn or "guttered" wheels, and thereby relieves the rail-joint of strain which would tend to loosen it and prevent derailments, which otherwise might occur through the engagement of the extra flange with the outer side of the bent rail end.

In the following description I have set forth in detail the nature of my present improve-

ments and have illustrated them in the accompanying drawings, in which—

Figure 1 is a plan view of a railway-rail joint embodying my invention. Fig. 2 is a plan view of one of the rail ends. Fig. 3 is a plan view of the other rail end. Fig. 4 is an enlarged cross-sectional view on line 4 of Fig. 1.

Referring to the drawings by letter, A B denote the rails, each having an upper tread portion or head, a base, and an intermediate web. The rail A has its end portion a bent to a desired angle outwardly with reference to the inner side of the rail when in the track, and the inner side of the bent end a is cut away to provide a recess a' and a shoulder a^2 , which latter may be approximately at a right angle to the side of the rail, as shown. The end portion b of the rail B is beveled at its outer side b' and terminates in a blunt or squared end b^2 . In practice the beveled side b' of the rail B contacts throughout its length with the wall of the recess a' and the blunt or squared end b abuts against the shoulder a^2 , whereby shearing action on the securing-bolts $c c$ by expansion of the rails is prevented. The inner sides of the rails, which are engaged by the inside flanges of wheels, are in alinement, and preferably the base or foot of the rail B rests on and is supported by the base or foot of the rail A.

The outer side of the bent end a of the rail A is at an angle to the outer side of the tread portion of the rails, and were it not for the provision of the recess in the top of said bent end, presently to be described, the extra or outside flange on treadworn or guttered wheels would in climbing the end a subject the joint to such a jar and strain as would tend to loosen it, or failing to climb said end the extra flange would, by engaging the inclined side thereof, derail the car or cause the rails to become loosened from the ties and spread apart. To avoid this difficulty and the accidents which may be occasioned thereby, there is provided in the top of the rail end a , beyond the outer side line of the rails, a recess a^3 , the depth of which is sufficient to enable the extra flange to ride thereover without engagement. This provision insures absolute safety regardless of guttered wheels, and owing to the lapping

of the rail ends the wheels will pass over the joint without jar and danger of derailment or spreading.

I have in the drawings shown the rails A 5 and B of equal size. Obviously the rail A may be of larger size than the rail B, as illustrated in my patent above referred to.

I claim as my invention—

10 A rail-joint comprising a bent rail end having at its inner side a recess terminating in a shoulder and having its tread portion beyond

the outside line of the rail cut away, a beveled rail end fitting the recess and having a shouldered end engaging the shoulder of the other rail end, and devices for securing the 15 rail ends together.

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

AXEL A. STROM.

Witnesses:

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L. HEISLAR.