No. 725,121. PATENTED APR. 14, 1903.

J. G. McMICHAEL.

RAILWAY RAIL JOINT.

APPLICATION FILED OCT. 8, 1901.

NO MODEL.

Fig. 1.

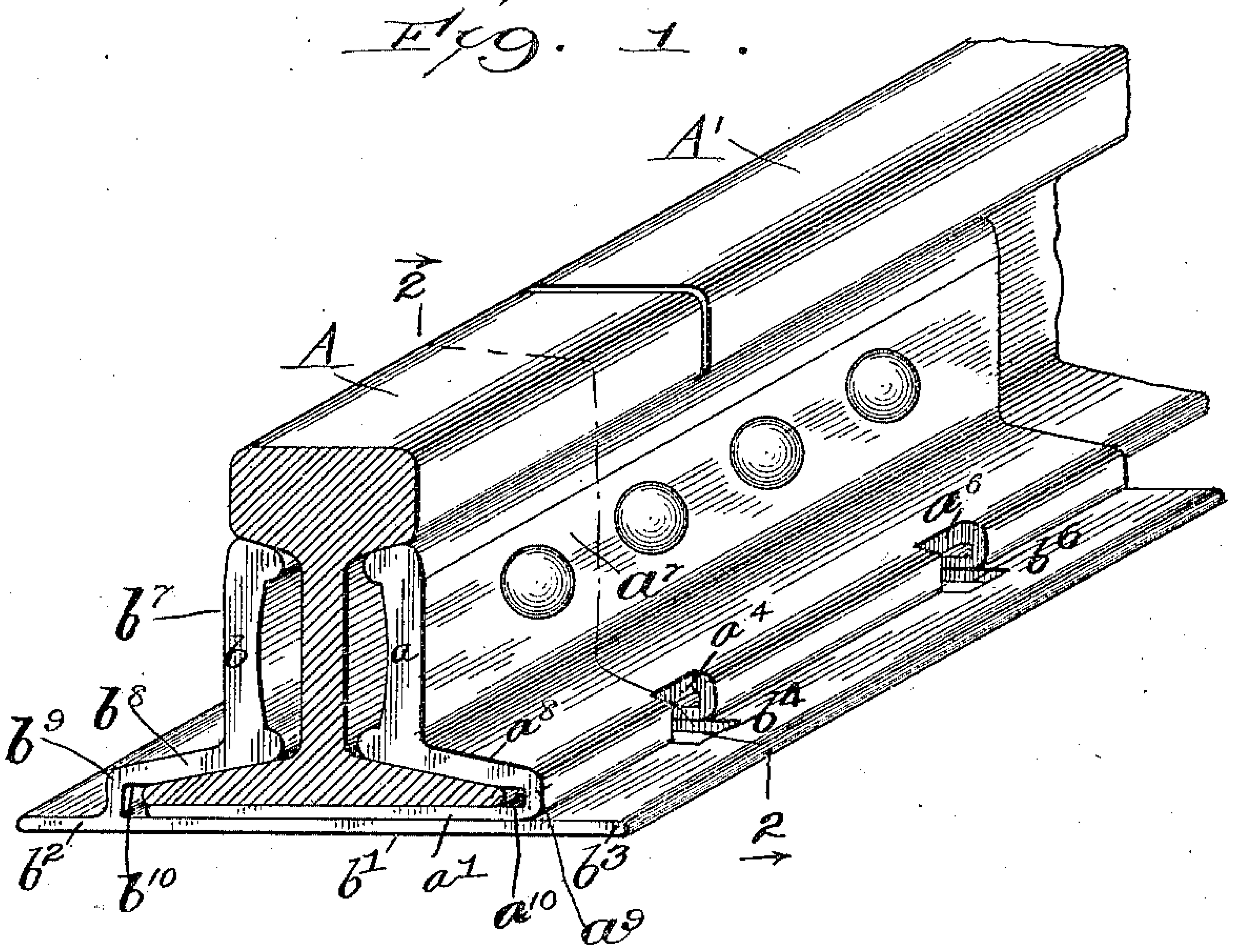


Fig. 2.

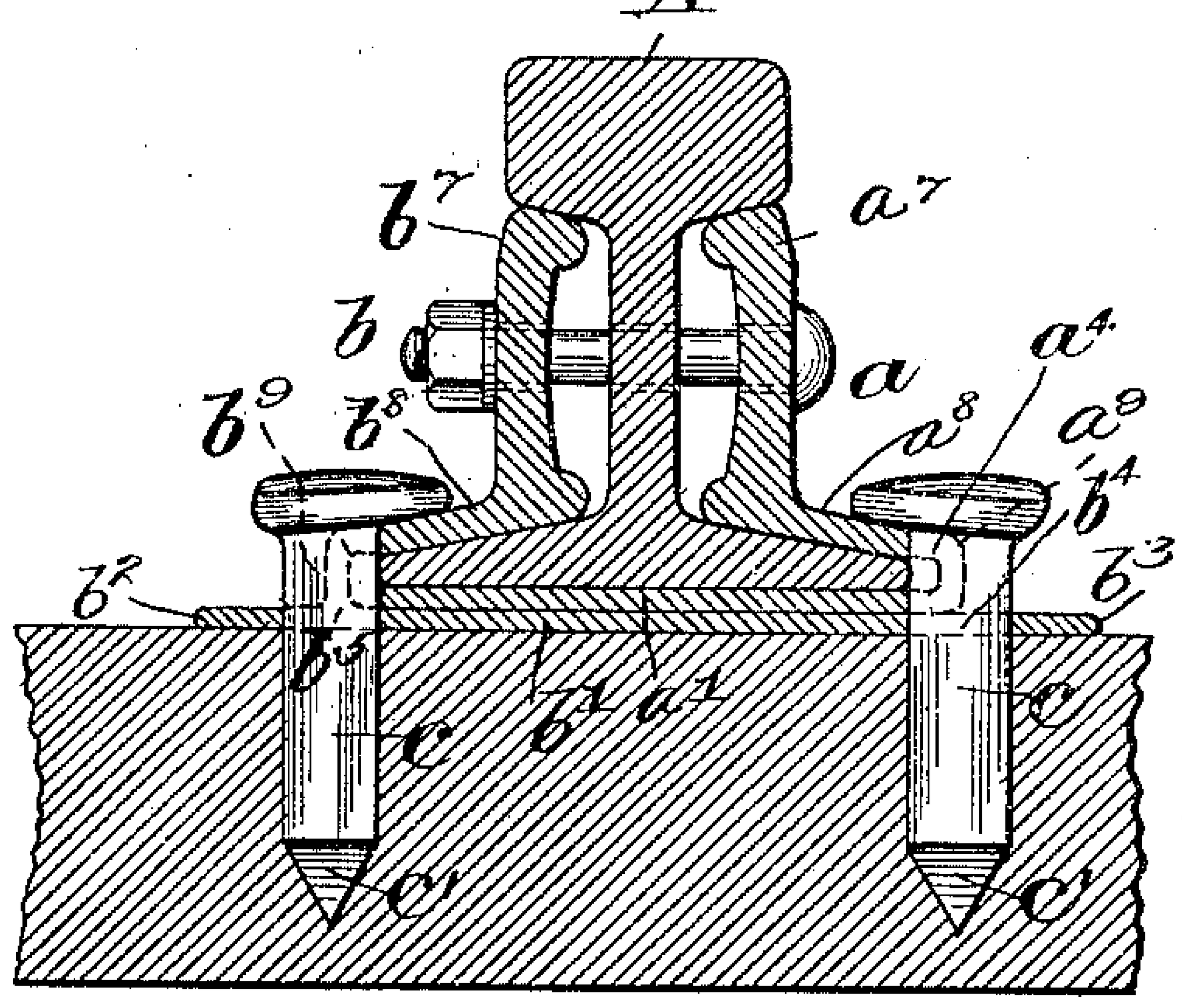
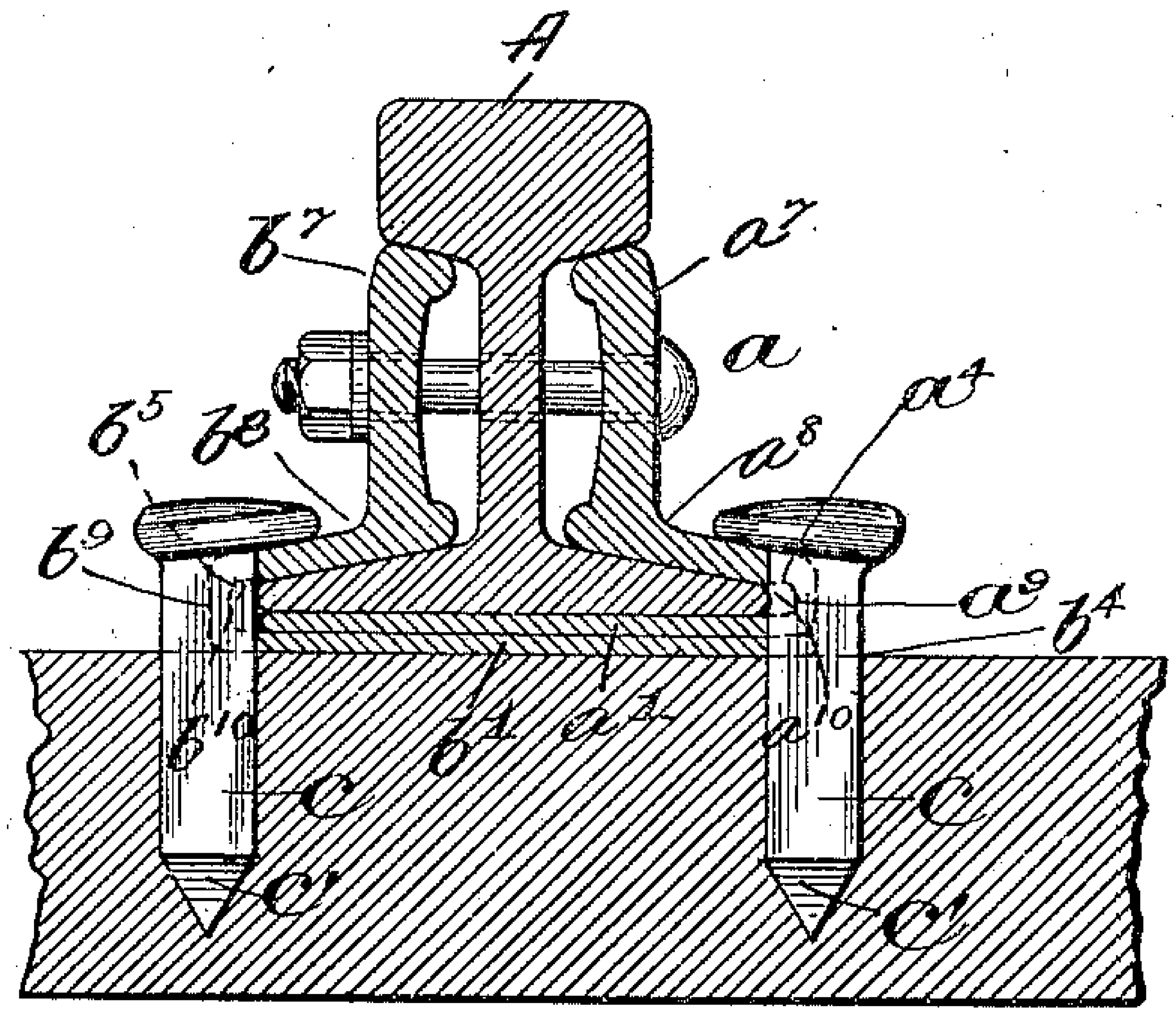


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES G. McMICHAEL, OF CHICAGO, ILLINOIS.

RAILWAY-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 725,121, dated April 14, 1903.

Application filed October 8, 1901. Serial No. 77,941. (No model.)

To all whom it may concern:

Be it known that I, JAMES G. McMICHAEL, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway-Rail Joints; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in railway-rail joints.

The object of my invention is to provide a joint which shall hold the rails in perfect alinement and which shall under all circumstances prevent the relative displacement of the ends thereof.

In the drawings, Figure 1 is an isometrical perspective view of my rail-joint, showing it applied to the ends of two abutting rails. Fig. 2 is a transverse section through line 2 2 of Fig. 1. Fig. 3 is a section of a modification as if taken through the same line.

In all of the views the same letters of reference indicate similar parts.

A and A′ are the rails.

a and b each represents a complete section of my joint. The base a' of the section a is contained between the base of the rail and the base b' of section b. The base b' has two lateral extensions b^2 and b^3, and both of these extensions are properly perforated for the reception of spikes. b^4 and b^6 show two such perforations in extension b^3, while b^5 shows one of a series of similar perforations in extension b^2. Each section is composed of four integral parts, indicated in the section a as follows: the vertical part a^7, that fits between the base-flanges and head of the rail, the angle part a^8, the folded part a^9, and the base part a'. Section b has corresponding parts, which are indicated generally by the letter b, but with exponent characters corresponding with those of section a. The inside surface of the angle part a^8 is tapered to fit the outside surface of the flange of the rail. At a point near the end of the rail-flange (indicated by a^{10}) there is a space between the inner surface of the folded part and the edge of the rail-flange. The upper part of this surface is made parallel with the base-surface, thus producing a clearance, so as to provide room for adjustment to take up the wear between the angle part a^8 and the surface of the rail-flange. This surface is cut away and is not a continuation of the angle. The deflection at this point provides the clearance. By means of this arrangement the joint-sections may be forced into very intimate contact with the rail after considerable wear thereof has taken place. The folded portion a^9 is notched out at a^4 and a^6 for the purpose of allowing the spikes c c to pass through the perforations b^4 and b^6, that are provided in the base-plate b', these notches registering with corresponding perforations for this purpose when the parts are finally in position.

When the tapered end c' of the spike c is inserted in the perforations b^4 and b^6, the body part of the spike enters the notches a^4 and a^6, and while the spike is being driven in the tapered portion thereof forces the notch and corresponding perforation into a position to exactly register. This action forces the vertical plates a^7 and b^7 into more intimate contact with the rails and prevents the base portions a' and b' from creeping out, which is a tendency so often noticed in railway-joints in which the base-plates of the joints extend under the base of the rail. The aperture b^5 upon the opposite side of section b extends in beyond the fold b^9, and said fold is therefore notched to accommodate a spike c.

In Fig. 3 I have shown a modified form of my joint, which is in every particular the same as that shown in Fig. 2, with the exception that the base extensions b^2 and b^3 are omitted and notches are provided at b^4, b^5, b^6, and b^7.

Having described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

In a railway-rail joint, the combination with the abutting rails, of a pair of complementary members, each comprising in an integral structure a vertical fish-plate portion, an angle portion, a folded portion, and a base portion, said members being disposed with the base of one member superposed upon the base of the other in contact throughout its length with the rail-base, and jointly arranged to embrace the said rail-base to leave a clearance therefor within the folded portion of each member,

the superposed member being provided with a series of notches in its folded portion, and the exterior member having a lateral extension provided with apertures adapted to be brought into registering alinement with the notches in the superposed member, and a series of notches in its folded portion, and pointed spikes adapted to be inserted in the registering notches and apertures to force the members laterally into proper relation and retain them in position, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAMES G. McMICHAEL.

In presence of—
FORÉE BAIN,
M. F. ALLEN.