A. B. JOHNSON.

Railway-Rail Joints.

No. 151,290. Patented May 26, 1874.

Fig. 1.

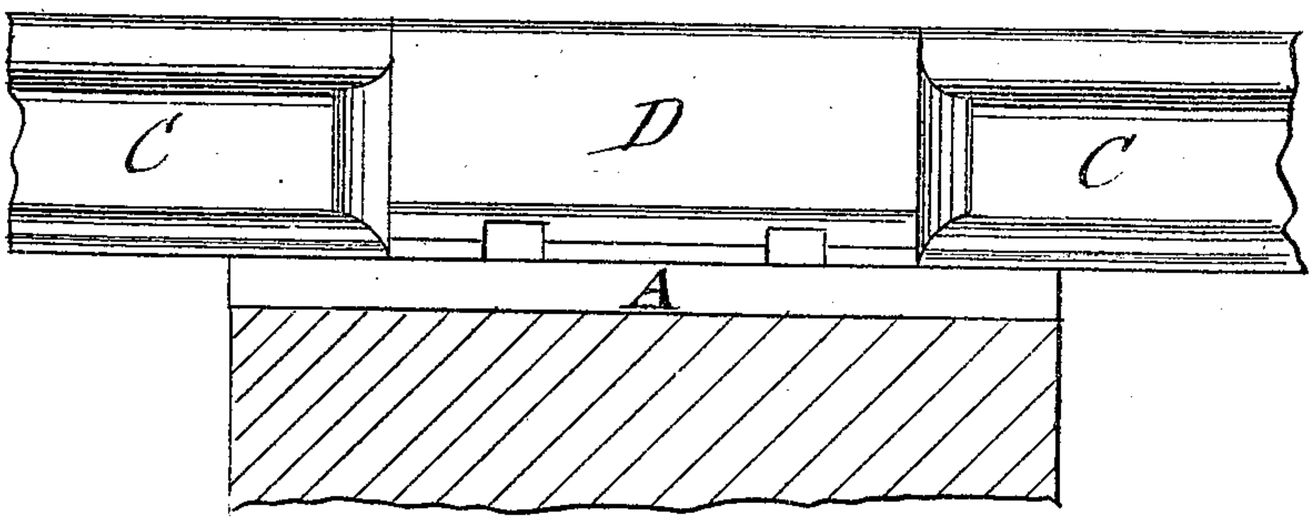


Fig. 2.

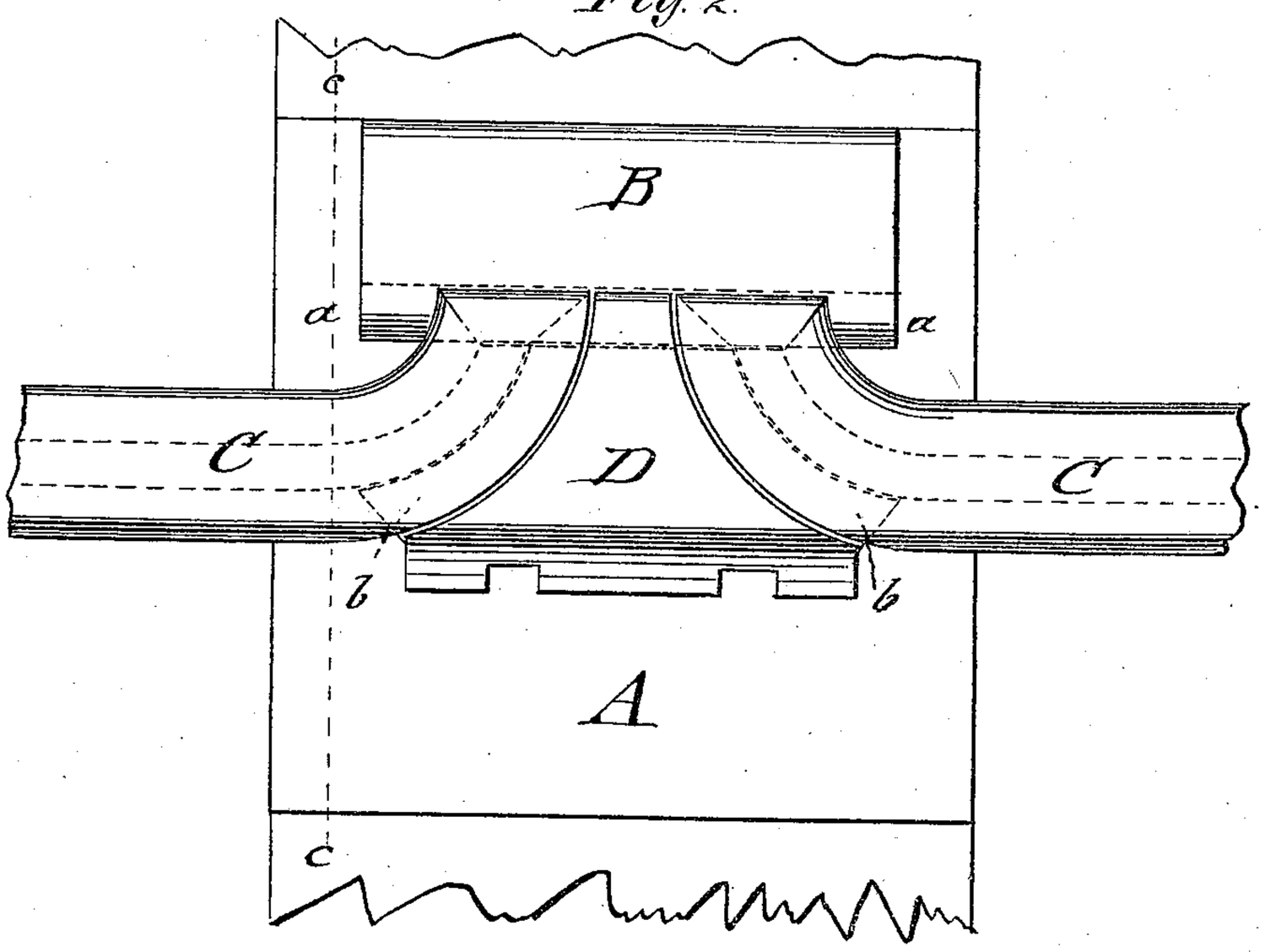
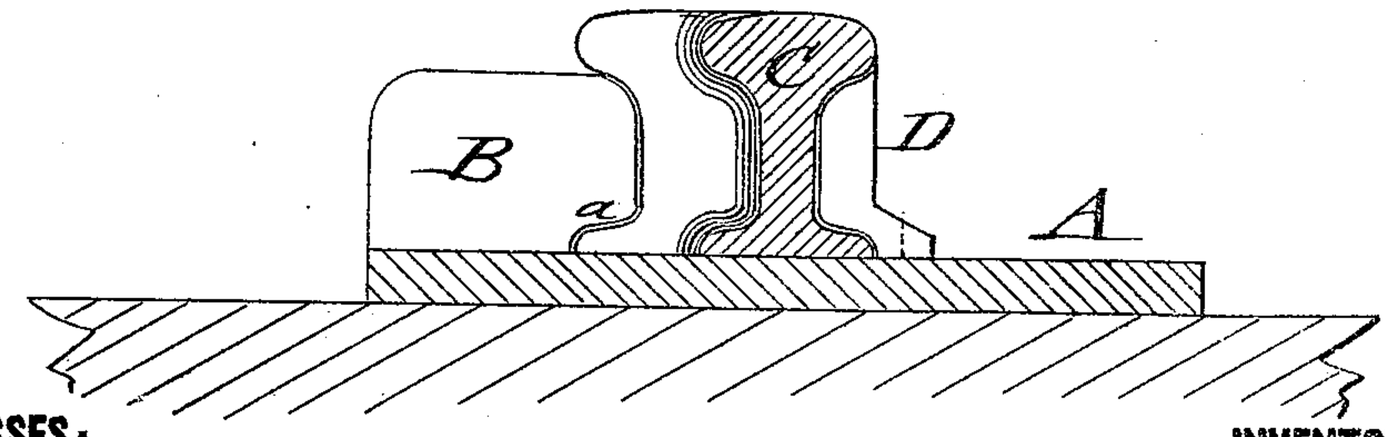


Fig. 3.



WITNESSES:

E. Wolff.
Chrgniek

INVENTOR:

A. B. Johnson

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANSON B. JOHNSON, OF WASHINGTON, ASSIGNOR TO L. JOHNSON, OF VINCENNES, INDIANA.

IMPROVEMENT IN RAILWAY-RAIL JOINTS.

Specification forming part of Letters Patent No. **151,290**, dated May 26, 1874; application filed April 4, 1874.

To all whom it may concern:

Be it known that I, ANSON B. JOHNSON, of Washington, in the county of Davis and State of Indiana, have invented a new and Improved Rail-Joint, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation of my improved rail-joint; Fig. 2, a top view; and Fig. 3, a vertical transverse section of the same on the line *c c*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of my invention is to produce a cheaper and more durable rail-joint, by which the fish-bars, bolts, and taps of the present joints are dispensed with, the breaking, battering, and getting loose of the rails prevented, and a continuous rail of strong and even surface at the joint is obtained.

The invention consists in the improvement of rail-joints, as hereinafter described, and pointed out in the claims.

In the drawing, A represents the base-plate, of suitable material, to which the shoe-piece B is cast or otherwise attached in a direction parallel to the rails. A base-recess, *a*, of shoe B, faces rails C, and serves to take up the base-flanges of the rail-ends, which are curved outwardly into the shape of a quadrant of a circle. The top parts of rail-ends project over the shoe B, and allow, together with the base-recess, the contraction or expansion of the rails without getting displaced. A metallic tongue, D, of curved T shape, with central-projecting shoulders *b*, fits exactly into the space between the curved end of the rails C, and projects by base and top flanges *d* in similar manner as the rails into and over shoe. The shoulders *b* form a support for the top parts of the rails, and give thereby additional strength to them, so as to prevent their giving way by the hammering of the wheels. The top part of the tongue D forms a continuous connection with the top part of the rails C, and allows the smooth passage of the car-wheels, without battering or otherwise injuring the rails. The rails, tongue, and base-plate are firmly fastened to the cross-tie by spikes placed into grooves of the base-flanges of the rails and tongue, in the usual manner, passing through perforations of the base-plate.

A loose horizontal bolt may be used to still further connect the rails and tongue, for preventing any possibility of their separation, while admitting the free expansion and contraction of the parts.

A strong, cheap, and durable joint for railroads is thus furnished, which obviates the defects of the present system, and gives an easier motion to the cars, and increases the comfort of railroad travel.

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

1. As an improvement in railroad-joints, rails having outwardly-curved ends, substantially as specified.

2. The combination of two end-curved rails, C C, with an intermediate piece, D, fitted thereto, substantially as and for the purpose described.

3. The shoe B and plate A, combined with end-curved rails C C and tongue-piece D, the former supporting the latter, in the manner specified.

ANSON B. JOHNSON.

Witnesses:

ZACHARIAH JONES,

JOHN B. LOUIS.