

C. FISHER.
Rail-Joint.

No. 214,032.

Patented April 8, 1879.

Fig. 1

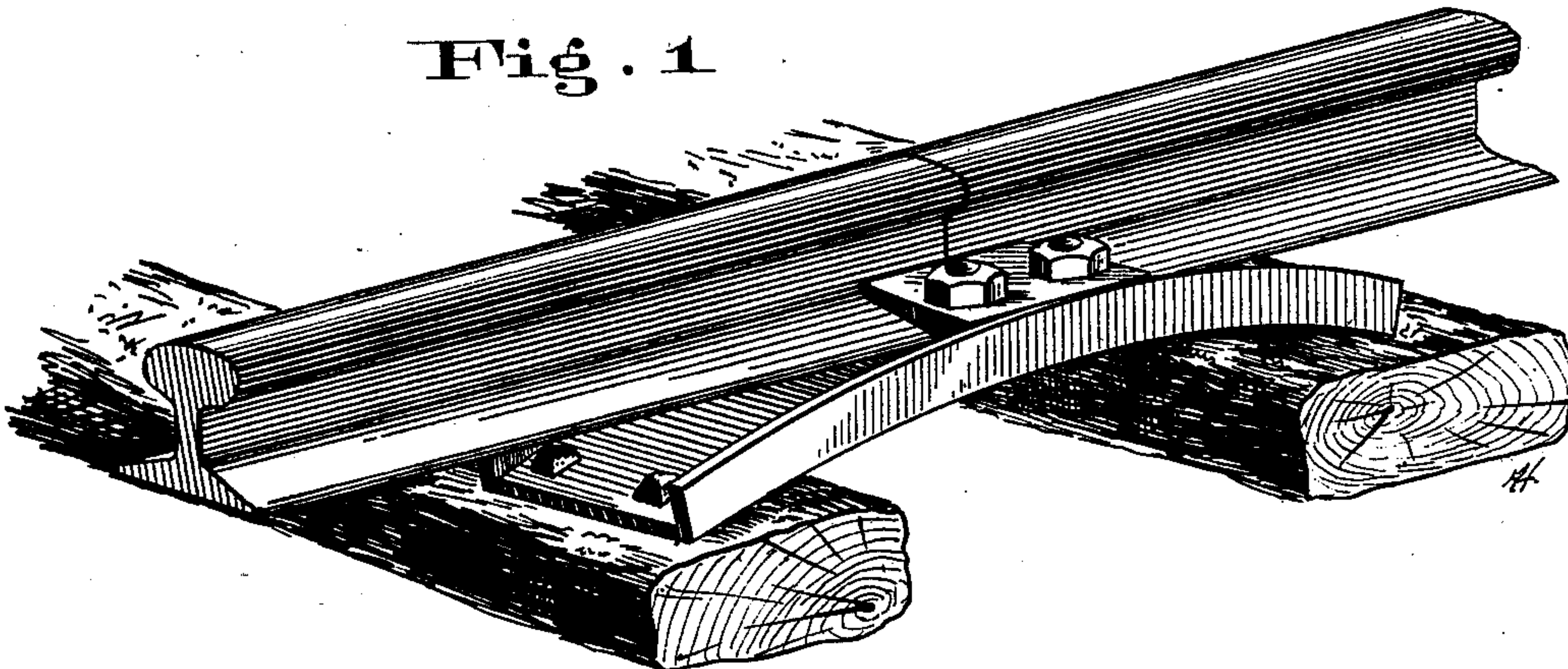


Fig. 2

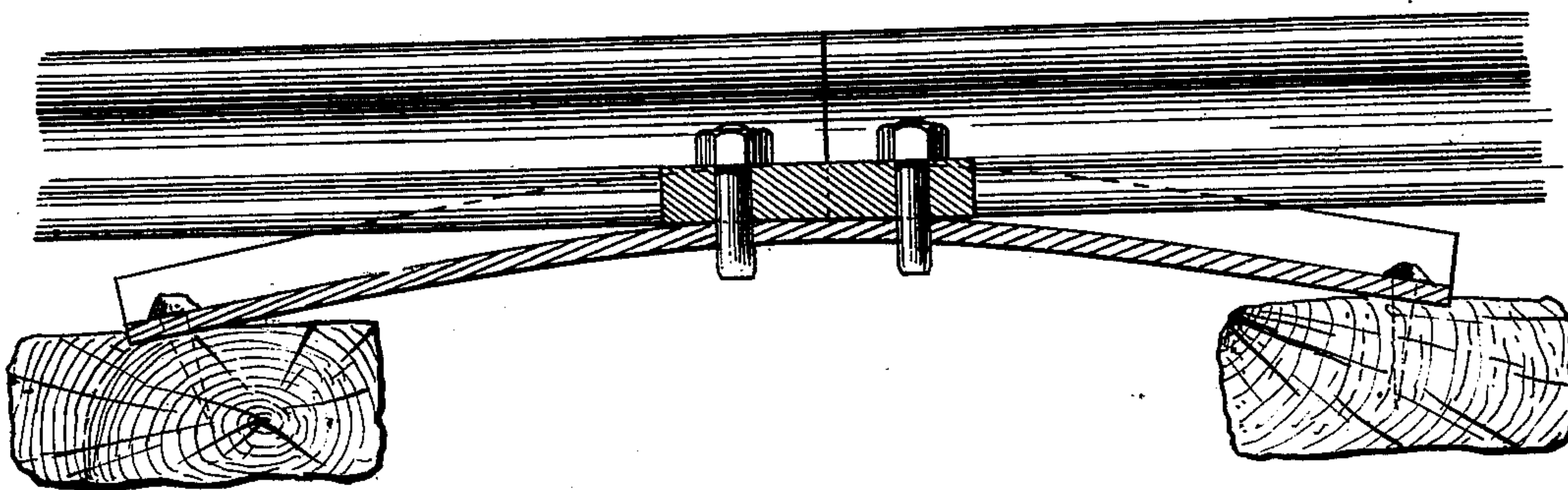
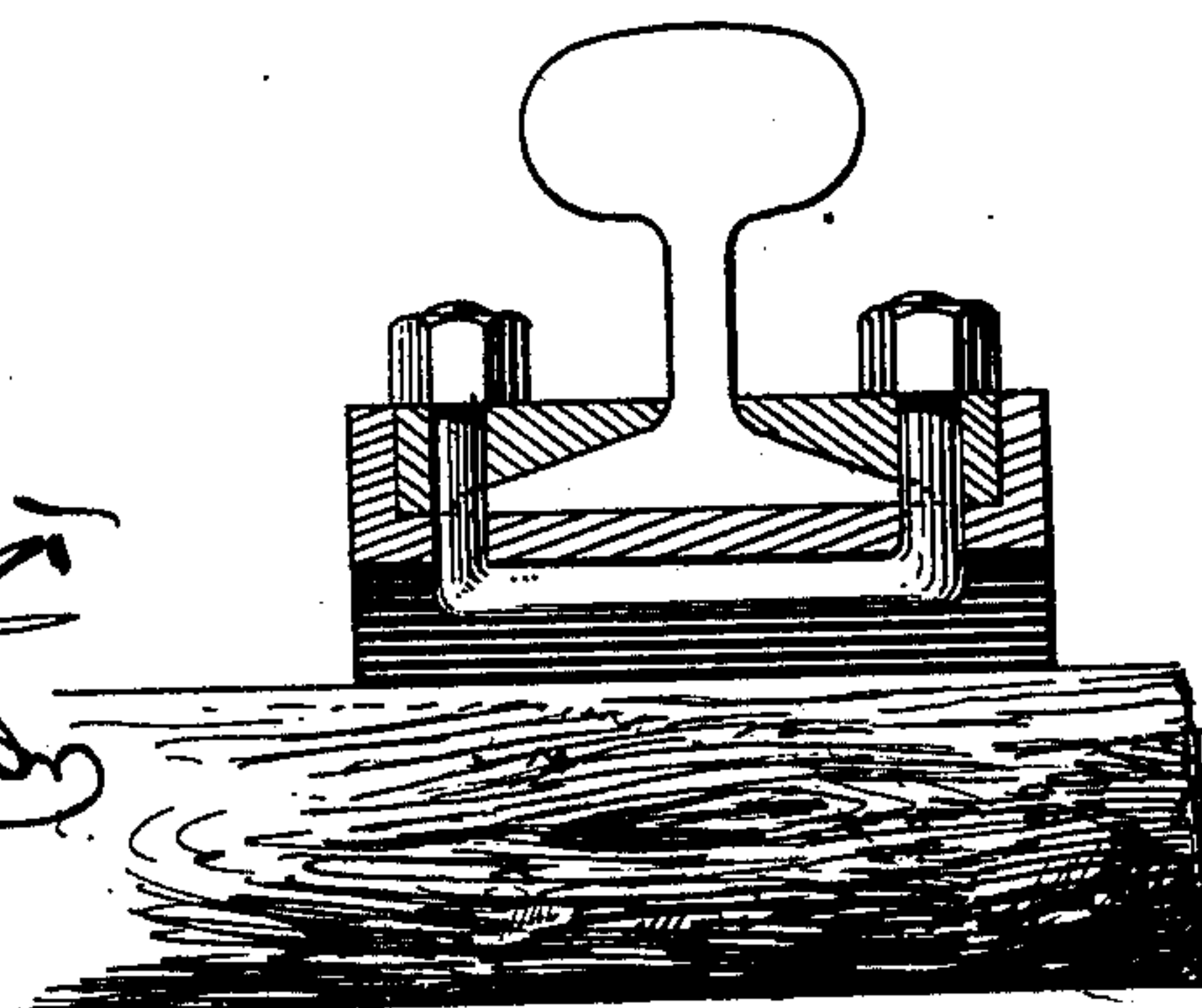


Fig. 3



Attests

John D. Kelley
John D. Kelley

Inventor

Clark Fisher
By his Attorneys
W. C. Squibb
Bonsall Taylor

UNITED STATES PATENT OFFICE.

CLARK FISHER, OF TRENTON, NEW JERSEY.

IMPROVEMENT IN RAIL-JOINTS.

Specification forming part of Letters Patent No. **214,032**, dated April 8, 1879; application filed January 25, 1879.

To all whom it may concern:

Be it known that I, CLARK FISHER, of Trenton, New Jersey, have invented a new and useful Improvement in Rail-Joints, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings, forming part hereof, and of which—

Figure 1 is a view, in perspective, of my improved joint; and Fig. 2, a longitudinal vertical section in the plane of the two bolts upon one side of the rail. Fig. 3 is a vertical transverse section in the plane of one of the U-shaped bolts.

This invention is an improvement upon that covered by Letters Patent No. 19,555, granted March 9, 1858, to M. Fisher, of Trenton, New Jersey, and known as the "Fisher Joint."

The foregoing invention relates to the class of devices known as joints or splices for the reception of the contiguous ends of railroad-rails, and commonly called "rail-joints," the same being placed beneath the base portion of the joined rails.

The Fisher rail-joint, heretofore referred to, consists of a sole-piece, provided with flanges upon either side of its upper surface, against which flanges and upon the upper face of which sole-piece clamps or forelocks to grasp the base of the rail ends rest, the forelocks being held down upon the sole-piece by one or more bolts passing through the whole, as by a reference to the Letters Patent referred to will be understood.

Heretofore these joints have been made flat, curved in neither direction; and in practical use it has been found that as the weight passes over them the pressure comes first upon one

end of the joint, the tendency of which is to spring the other end, and thereby loosen the fastenings.

My improvement consists in giving to a rail-joint a slightly arched or curved form in the direction of its length, the convexity being on top, so that the butts of the rails come together upon the highest part of the arch, whence it results that as the weight passes over the joint it is thrown from first to last upon the center thereof, distributing the pressure evenly throughout the joint, and to the ties or other bearings upon which the ends of the same are supported. The joint has the advantage of elasticity to a limited extent, and also the superior strength and the capacity to resist vertical strains, which is due to the arched form.

I am familiar with the circular spring described and claimed in Letters Patent No. 124,856, dated March 19, 1872, to Clinton Roosevelt. To such device, however, I make no claim.

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

As a new article of manufacture, a rail-joint chair arched in the direction of its length, adapted to support the rails beneath their intersections upon its highest portion, and to rest at its extremities upon the sleeper, substantially as and for the purposes set forth.

In testimony whereof I have hereunto signed my name this 16th day of January, 1879.

CLARK FISHER.

In presence of—

W. C. STRAWBRIDGE,
JOHN JOLLEY, Jr.