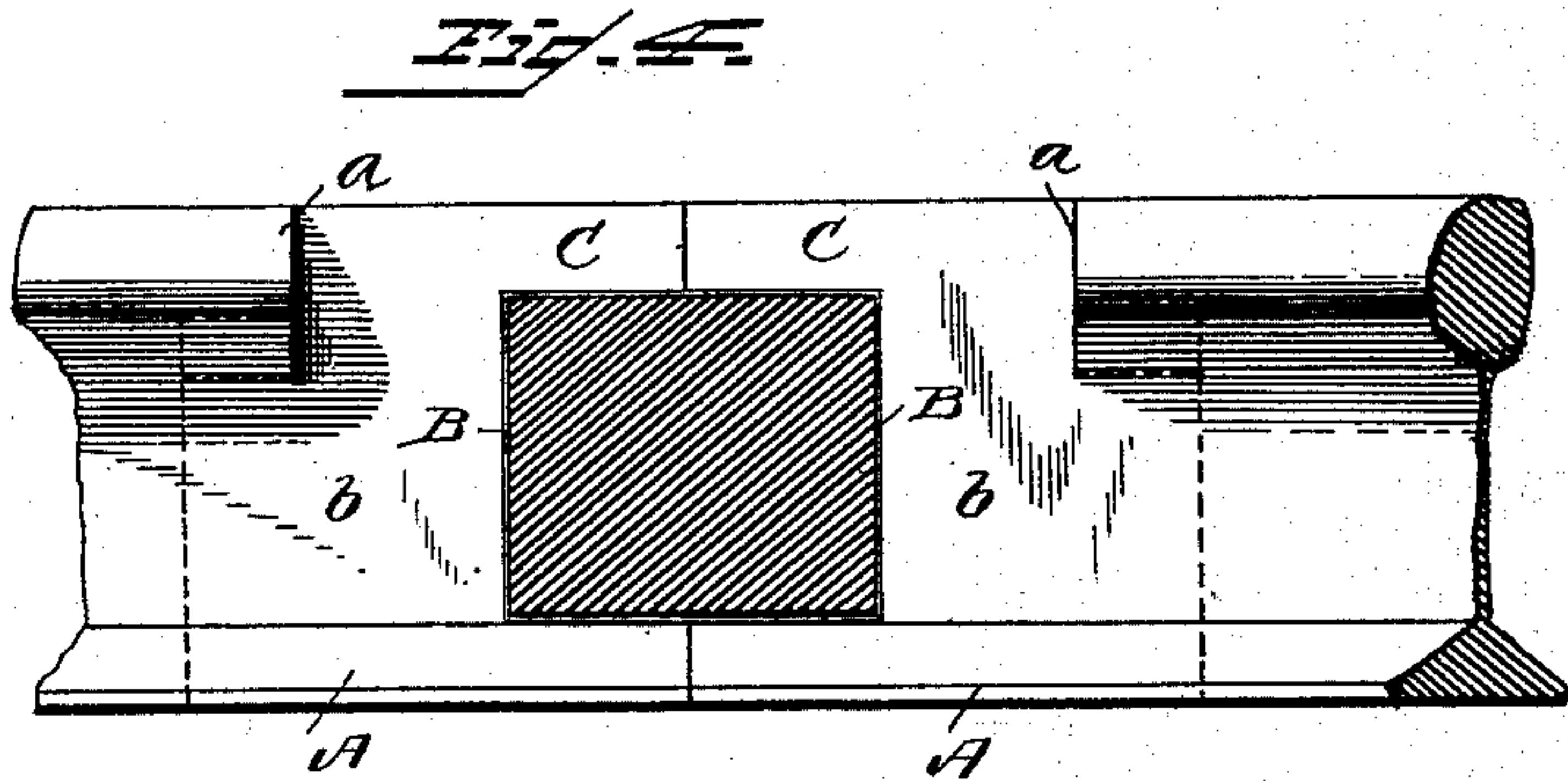
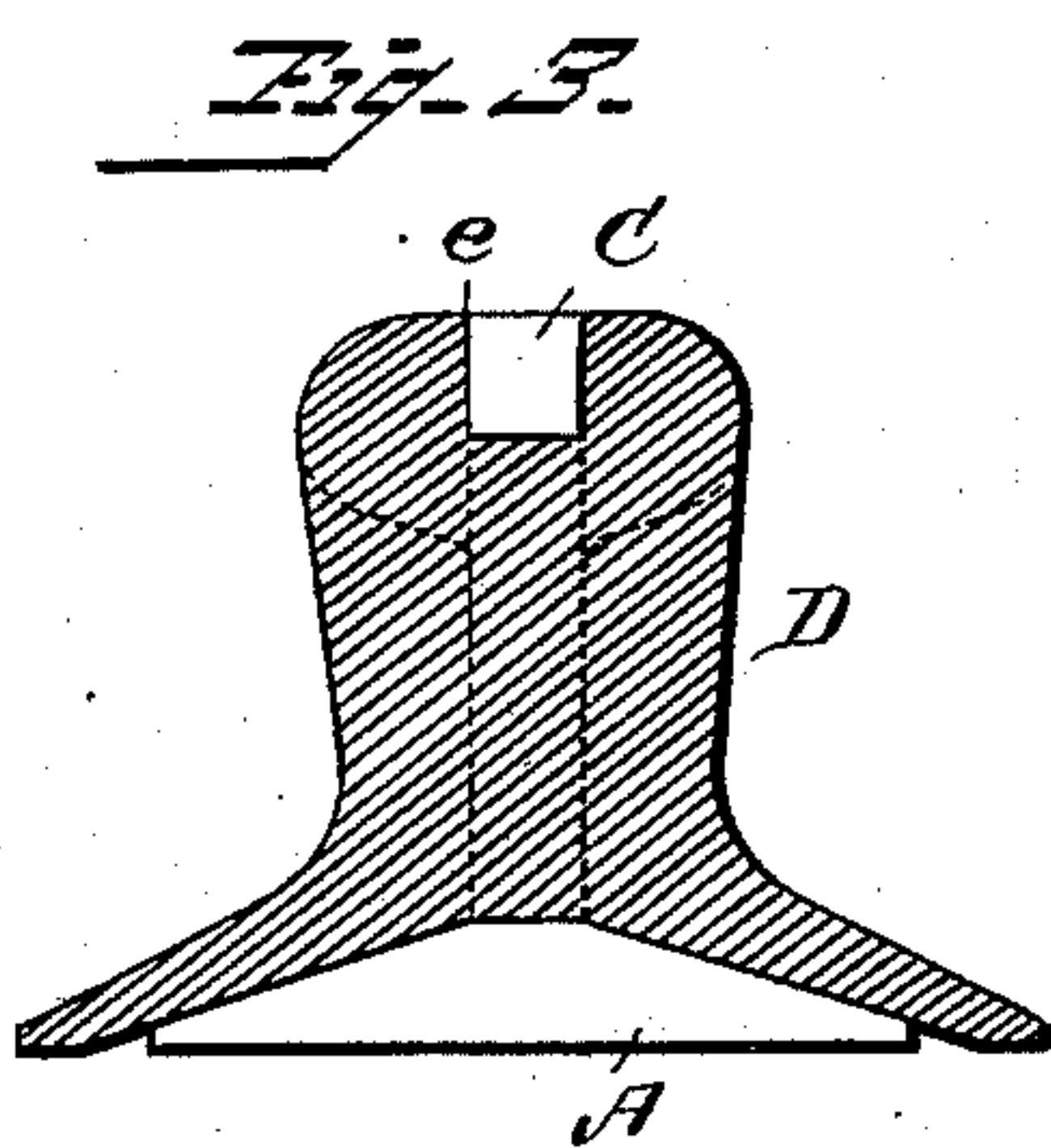
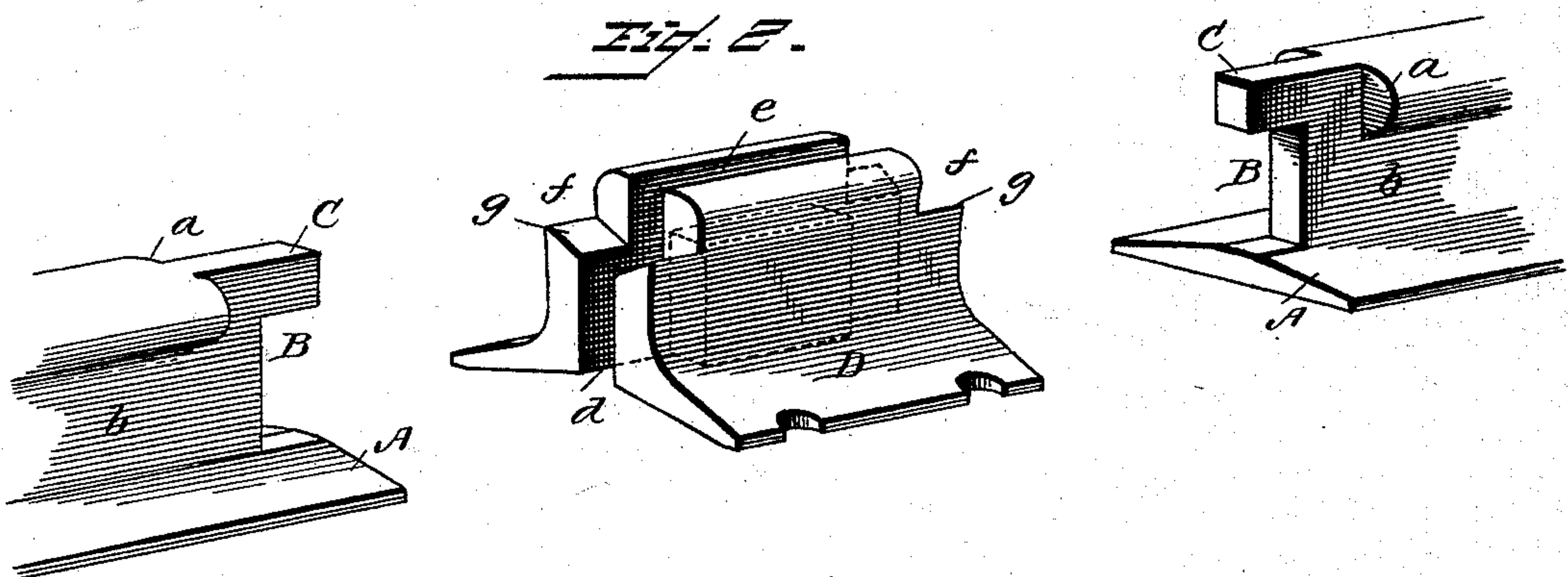
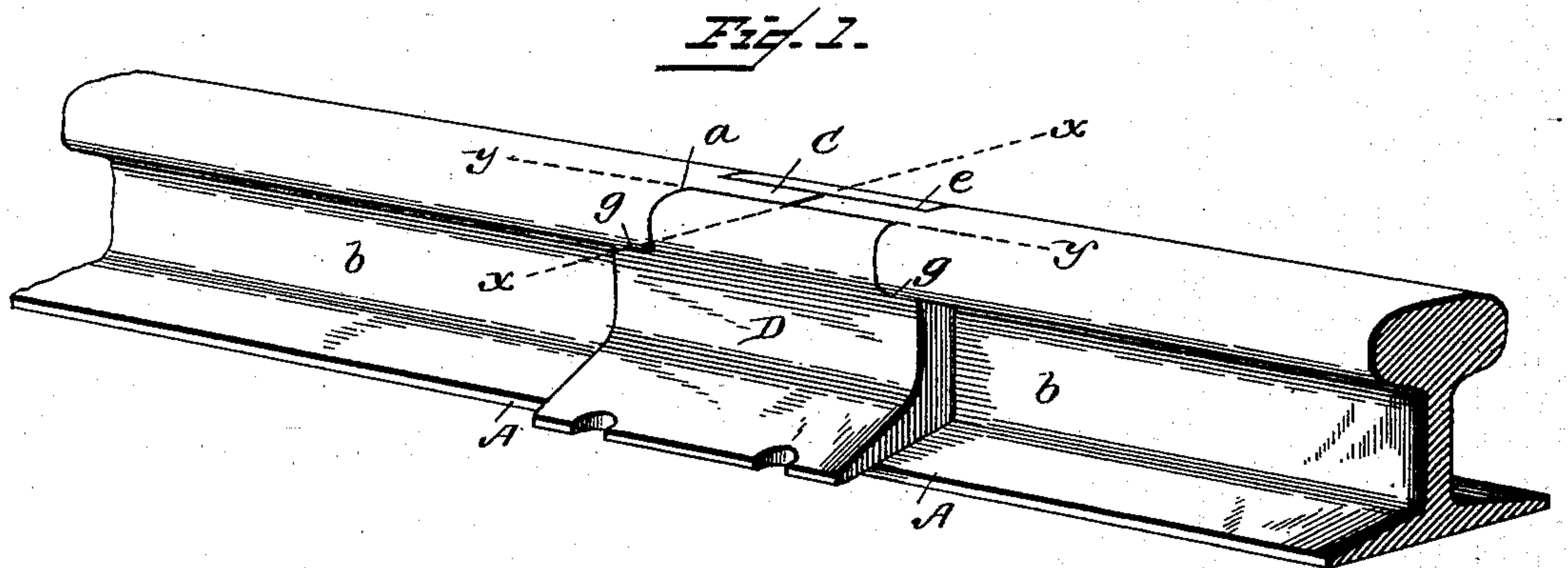


(No Model.)

J. S. CHADBOURNE & L. C. STUCKEY.
RAILWAY RAIL JOINT.

No. 410,149.

Patented Sept. 3, 1889.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH S. CHADBOURNE AND LORING C. STUCKEY, OF ROSAMOND,
CALIFORNIA.

RAILWAY-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 410,149, dated September 3, 1889.

Application filed May 4, 1889. Serial No. 309,605. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH S. CHADBOURNE and LORING C. STUCKEY, citizens of the United States, residing at Rosamond, in the county of Kern and State of California, have invented certain new and useful Improvements in Railway-Rail Joints; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in the means employed in connecting the adjacent ends of railway-rails; and it has for its object to provide a rail-joint which will in effect produce a smooth and perfect joint, in which the surface of the rail will be a continuous and smooth surface, with no broken or uneven points at the connecting ends of the rails.

The further objects of the invention are to provide a rail-joint in which the use of the ordinary fish-plate and its accompanying bolts and nuts are dispensed with, and which, while the rail is left perfectly free to the action of atmospheric influences, the smooth and uniform surface of the rail will be in no manner affected by either the expansion or contraction of the parts, and the rails at their point of connection will be rendered stronger and less liable to break than at other points upon the rail. The rails will be securely locked together in such a manner as to effectually prevent them from in any manner being accidentally disconnected.

To the above ends and to such others as the invention may pertain the same consists in the peculiar combinations and in the novel construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then specifically defined in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, like letters of reference

indicating like parts throughout the several views, and in which drawings—

Figure 1 is a perspective view of the adjacent ends of two railway-rails, the same being shown as connected by means of our improved form of joint. Fig. 2 is a similar view of the parts detached, but in their relative positions. Fig. 3 is a transverse section on line *x x* of Fig. 1, and Fig. 4 is a section on line *y y* of said Fig. 1.

Reference now being had to the details of the drawings by letter, *A A* designate the adjacent ends of two railway-rails, the tread or flange of the rail being cut away for a short distance from the end of the rail to form the shoulders *a a*, while the vertical portion *b* of the rail is cut away to form the recess *B*. The horizontal depth of this recess is substantially equal to one-half the distance from the end of the rail to the shoulder *a*, thus leaving the projection *C*, the upper face of which is a continuation of the upper face of the rail.

D is the locking or connecting block. This block is made of a single casting, and is beveled upon its lower face outwardly from the center upon either side, so as to adapt it to fit the inclined upper faces of the base portions of the rails *A*, as shown. The height of this block is such that when in position its upper surface will be flush with the upper face of the rail. It is provided at its ends with the vertical slots *d*, the depth of which is equal to the distance from the end of the rail to the shoulders *a*. The upper face of the block is provided with a central longitudinal recess *e*, the width of which is such as to receive the projections *C* of the rail. The ends of the upright portion of the block *D* are cut away, as shown at *f*, thus forming the shoulders *g*, and the lower portion of this recess *f* is beveled inwardly, so as to conform to the contour of the under face of the tread of the rail. By this construction it will be seen that the use of bolts and fish-plates is dispensed with, and that when the adjacent ends of the rails are inserted within the ends of the block *D* the base portion of the rails pass beneath the central portion of the block, while the projection *C* of the rail enters the longitudinal slot at the top of the block, and that the parts are thus held securely in

position and can only be removed by moving the rails longitudinally, thus affording a protection against derailment of trains, either through accident or malice. It will also be
5 seen that the upper faces of the block D form a portion of the tread of the rail, thus greatly strengthening the joint, and that the ends of the rail are retained within the block and protected from wear or accidental breakage.

10 What we claim as new is—

The combination, with the adjacent ends of two railway-rails the tread or flanges of which are cut away, as described, to form the
15 shoulders *a* and the vertical portion *b*, of the connecting-block D, beveled upon its lower

face to correspond with the inclined base of the rails, provided at its ends with slots *d*, upon its upper face with a longitudinal recess *e* to receive the projections C of the rail, and having its upright portions formed with a beveled recess *f* and shoulder *g*, substantially as
20 and for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSEPH S. CHADBOURNE.
LORING C. STUCKEY.

Witnesses:

E. B. KINTON,
F. C. RECTOR.