

J. MONK.
Railway-Rail Joints.

No. 146,935.

Patented Jan. 27, 1874.

Fig. 1.

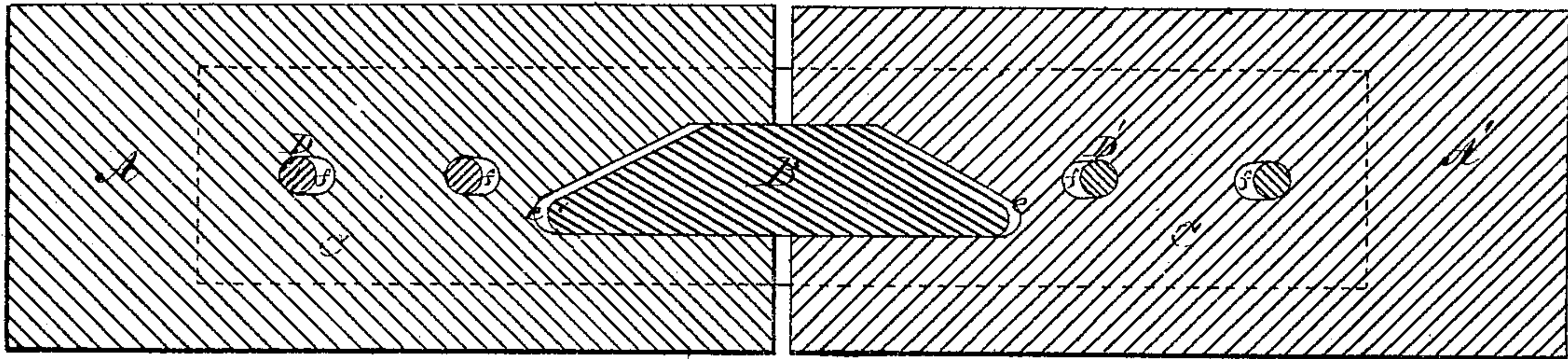
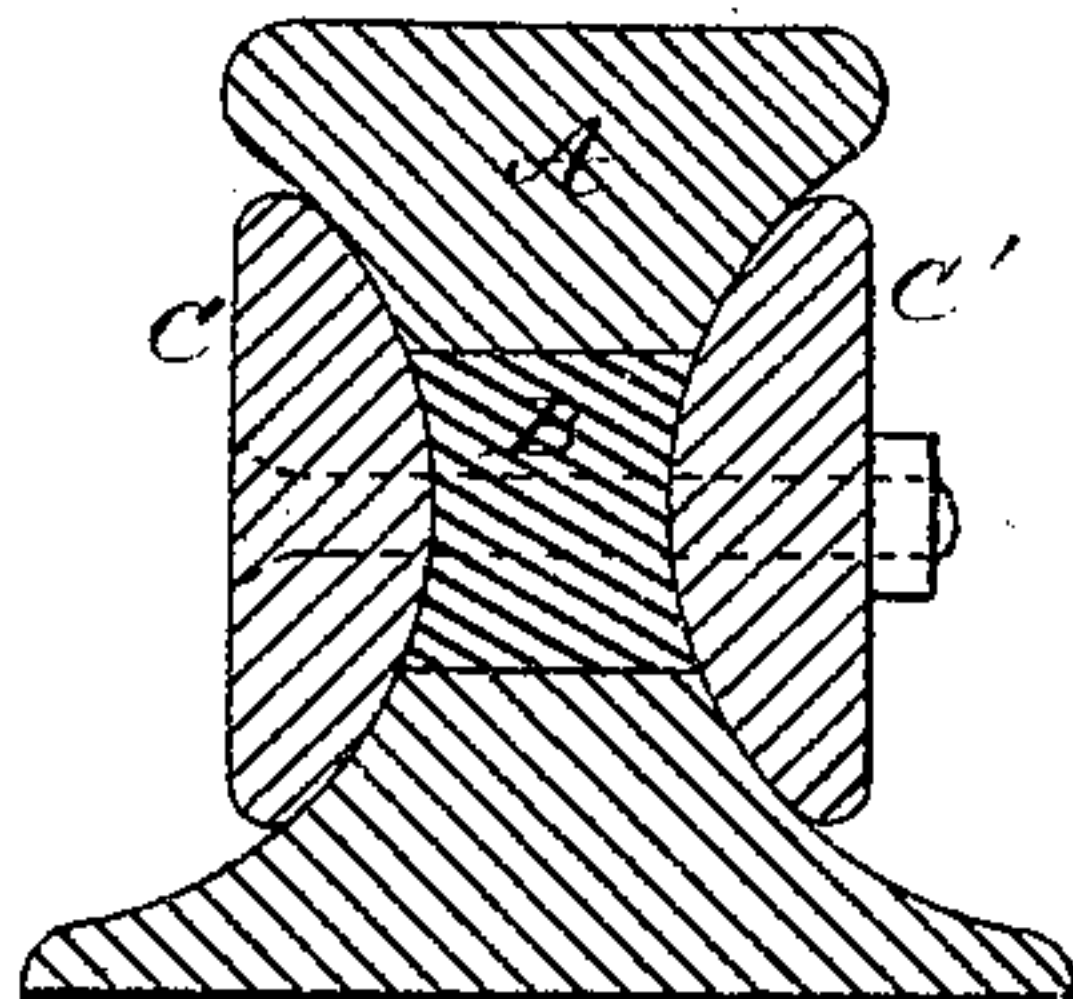


Fig. 2.



Witnesses:

Amos H. Anderson
F. H. Rutter, Jr.

Inventor:

John Monk

UNITED STATES PATENT OFFICE.

JOHN MONK, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN RAILWAY-RAIL JOINTS.

Specification forming part of Letters Patent No. **146,935**, dated January 27, 1874; application filed July 3, 1873.

To all whom it may concern:

Be it known that I, JOHN MONK, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Continuous or Fish Joints for Railways; and that I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The object of my invention is to provide a "continuous or fish joint" for railways, which is more durable; easier applied, and more useful than any heretofore known; and it consists in mortising or cutting out of the ends of the joining rails a recess, into which a piece or dowel-block is inserted, by which the two ends of the rails are more easily connected, and at the same time prevented from sliding vertically up and down, thereby leaving the tops of the two ends of the rails always in line with each other. These dowel-blocks are inserted in the ends of the rails. The common fish-plates which are bolted to the sides of the rails by bolts and nuts prevent the dowel-blocks from moving laterally. The ends of said dowel-blocks are rounded off, and are made a little shorter than the mortises, so as to allow for the expansion and contraction of the rails.

I will now more definitely describe my invention, reference being had to the accompanying drawing forming a part of this specification.

In the drawing, Figure 1 is a longitudinal section of the two ends of the rails with my continuous dowel-block in position. Fig. 2 is a cross-section of the same.

In the drawing, A A' are the ends of the two adjoining rails with my connecting dowel-block B in position. The common fish-bars C C' (shown in Fig. 2) are placed on each side of the rails, and keep the dowel-block B in place, preventing it from moving laterally. The ends of the rails may be punched out by a punch of the proper form, into which the

dowel-pieces snugly fit, excepting the ends, which have a little clearance, to allow the rails to expand and contract. When they are expanded to their fullest extent, they completely fill up the mortise or recess.

I prefer to make the ends of this block of an inclined and rounded or elliptical form, which prevents the punches from breaking out at the corners, as would be the case with square or elongated pieces, and at the same time prevents the rails from splitting. These pieces are also much easier inserted into their proper positions than any other kind, and guide the rails into their places. They are parallel about one-half or two-thirds of their length in the center, and thereby form a good bearing-surface above and below.

The bolts D D' hold the two fish-plates C C' against the rails, and by these the dowel block or piece B is prevented from sliding laterally.

As is well known, the passing of the wheels of a train over the ends of the common rails, held together by the common fish-plates, moves them up and down as the weight of the train passes over them, by which the end of the last rail is always struck against and soon worn and rounded off, whereas in my device the ends of the said rails must move up and down together, as if the whole was one continuous rail.

To allow for the expansion and contraction of the rails, I leave a small space, *e e*, at each end of the dowel-block B, so as to prevent the bulging up of the rails, which is the case when the joints are made snug, as in most instances.

The holes *f f* for the bolts in the rails are slotted, so as to allow them to move backward and forward in them, as the rails expand and contract.

The great advantages of my invention are, great simplicity, durability, and ease in applying them to any rails, as well as cheapness and reliability. They are also very readily and easily removed and replaced.

I am aware that dovetailed pieces have been used in the ends of the rails; also,

pieces attached to the fish-plates; also, that pieces tapered laterally and riveted in place are old; but these I do not claim as my invention.

What I do claim is—

The combination, with rails A A' and fish-plates C C', of the dowel-blocks B, having rounded and beveled ends, and the bolts D, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 28th day of June, 1873.

JOHN MONK.

Witnesses:

A. S. TAYLOR,
D. O. BALL.