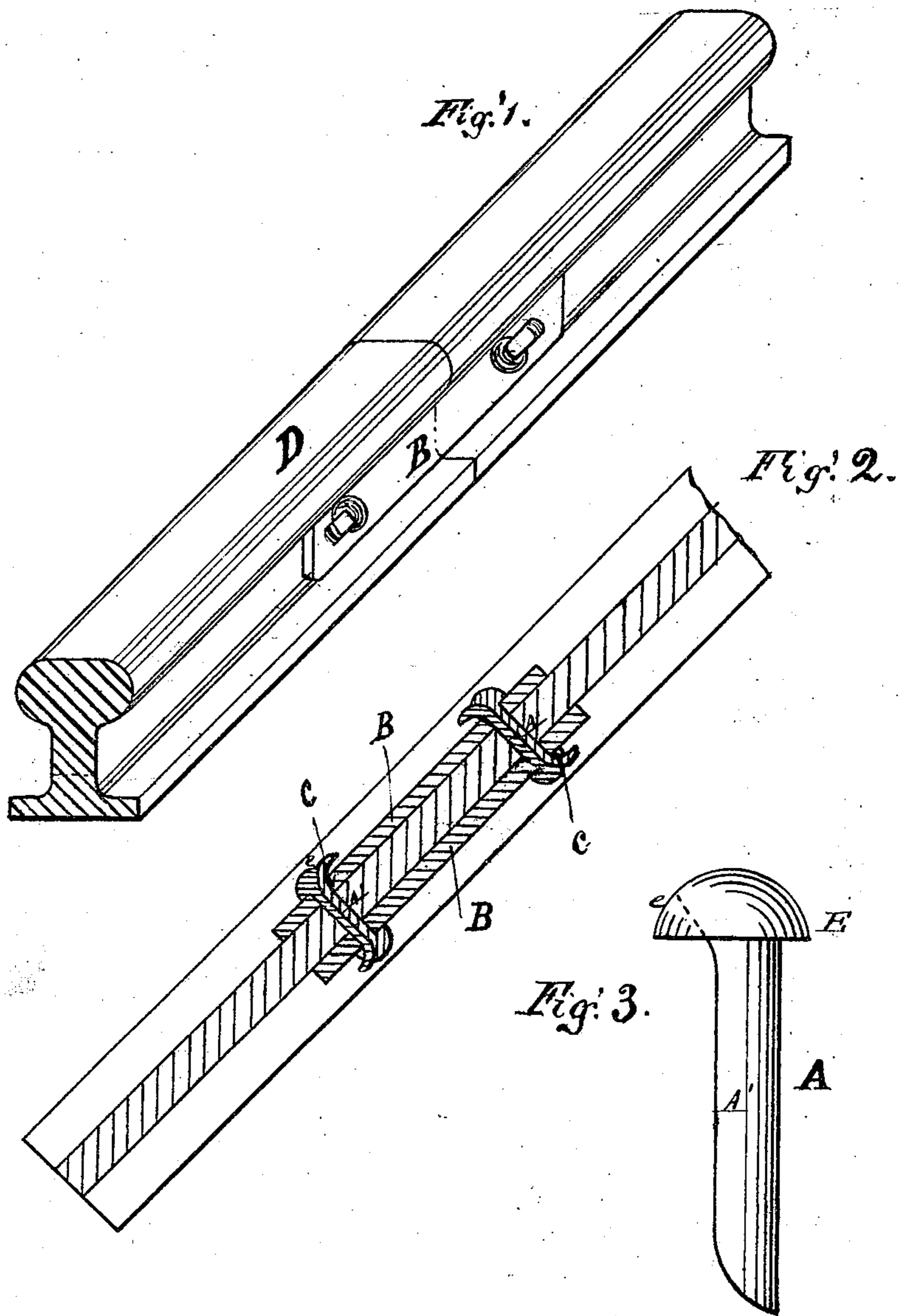


**M. H. GARSIDE.**  
**Railway Rail Joints.**

No. 151,377.

Patented May 26, 1874.



Witnesses.  
 Benjamin Hoole.  
 Geo. W. Weatherhogg

Inventor.  
 Milton H. Garside.

# UNITED STATES PATENT OFFICE.

MILTON H. GARSIDE, OF WAYNE TOWNSHIP, PASSAIC COUNTY, N. J.

## IMPROVEMENT IN RAILWAY-RAIL JOINTS.

Specification forming part of Letters Patent No. **151,377**, dated May 26, 1874; application filed April 3, 1874.

*To all whom it may concern:*

Be it known that I, MILTON H. GARSIDE, of Wayne township, in the county of Passaic and State of New Jersey, have invented certain Improvements in Lock-Bolts and Fish-Plates for Railroad-Rails, of which the following is a specification:

This invention has relation to devices for connecting together the ends of railroad-rails; and it consists in the novel construction and combination of slotted fish-plates and malleable key-bolts, applied to said rails in the manner hereinafter particularly described.

In the accompanying drawings, Figure 1 is a perspective view of two rails connected by my improvement. Fig. 2 is a horizontal section through same; and Fig. 3 is a side view of one of the key-bolts.

Referring to the drawings, A designates the key-bolts; B, the slotted fish-plates; and D, the connected rails, correspondingly slotted for the passage of the bolts. The said bolts are, for the purposes of my invention, made of malleable metal, with semi-cylindrical shanks A', beveled at the ends, as shown, and are furnished with heads E, each having a beveled notch, e, with parallel sides, formed in one side. The fish-plates are secured to the rails by passing through each slot or hole two key-bolts, which are inserted, respectively, from opposite sides of the rail, with their flat surfaces in contact, and driven until the bev-

eled end of each key passes through the beveled notch in the head of its mate, and is bent over against or toward the surface of the adjacent fish-plate, as shown in Fig. 2. To allow the ends of the keys to bend more easily, the slots in the fish-plates may be slightly elongated and reamed or beveled at the side near which the ends of the keys pass.

The peculiar feature of my invention is the provision of the beveled notch in the head of the key-bolts, and the corresponding bevel at the ends of the keys, whereby the latter are caused to bend, or clinched as they are driven through the slots, and do not require to be afterward fastened.

I am aware that key-bolts have been applied to fish-plates and railroad-rails for a similar purpose. I, therefore, do not claim broadly such devices; but

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with the fish-plates B B and rails D, of the key-bolts A, having beveled notches in their head and correspondingly beveled shanks, and applied to said rails and fish-plates, substantially as shown and described.

MILTON H. GARSIDE.

Witnesses:

GEO. N. WEATHERBY,  
BENJAMIN J. COLE.