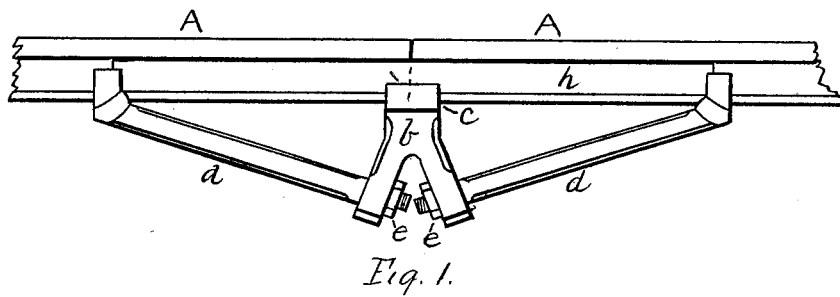
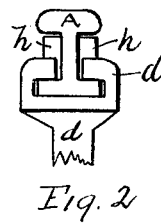
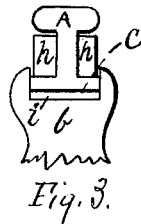


J. O. BROWN.  
Rail-Joint.

No. 219,905.

Patented Sept. 23, 1879.



Witness  
John C. Mason  
George H. Fidler.

Inventor  
James O. Brown  
by Wm. Franklin Leavy Atty

# UNITED STATES PATENT OFFICE.

JAMES O. BROWN, OF BENTON, MAINE.

## IMPROVEMENT IN RAIL-JOINTS.

Specification forming part of Letters Patent No. **219,905**, dated September 23, 1879; application filed April 19, 1879.

*To all whom it may concern:*

Be it known that I, JAMES O. BROWN, of Benton, in the county of Kennebec and State of Maine, have invented certain new and useful Improvements in Joints for Railroad-Rails; and I do hereby declare that the following is a full, clear, and exact description of the invention, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 shows a side elevation of my invention; Fig. 2, an end elevation; Fig. 3, section through joint.

My invention consists of an improved device for connecting the rails of railroads, and is designed to make a firm and solid connection, preventing the wear usual upon the ends of the rails and the consequent jar to the train.

With the ordinary sleeper, even if the fish-joint is used, the continual passage of trains wear into the wood, soon wearing a hollow at the junction of the rails.

My invention will be best understood by reference to the drawings, in which A A show contiguous rails. The sleeper ordinarily placed beneath the joint is removed, and a metallic support, *b*, substituted therefor, grooved at *c*, so as to clasp the lower flanges of the rails, the ends of which rest upon it. The lower end of the support *b* is bifurcated, each arm being provided with a hole, through

which pass the ends of metallic arms or rods *d*, secured and tightened by nuts *e e*. The upper ends of these rods clasp the lower flanges of the rails A A, extending into the side grooves and bearing against the ends of bars *h h*, fitting said grooves on both sides of the rails and extending across the joint; or, if preferred, lugs or projections may be cast on the rails at the points where the ends of the rods *d* clasp them for such rods to act against and the bars dispensed with; but I should consider such device an equivalent for the bars. In order to avoid too much rigidity in the joint a thin piece of rubber, *i*, or similar material may be placed between the rails and support *b*, if desired.

It will be observed that my device is in effect a truss, the rails forming the chord, the support *b* the king-post, and the rods *d d* the tie-rods.

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

In combination with the rails A A, the support *b*, bars or fish-plates *h h*, and tie-rods *d d*, forming a truss having said rails for its chord, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of April, 1879.

JAMES O. BROWN.

Witnesses:

JOHN R. MASON,  
WM. FRANKLIN SEAVEY.