

A. MEHARRY.  
Rail-Joint,

No. 205,287.

Patented June 25, 1878.

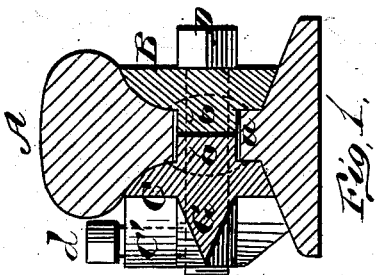
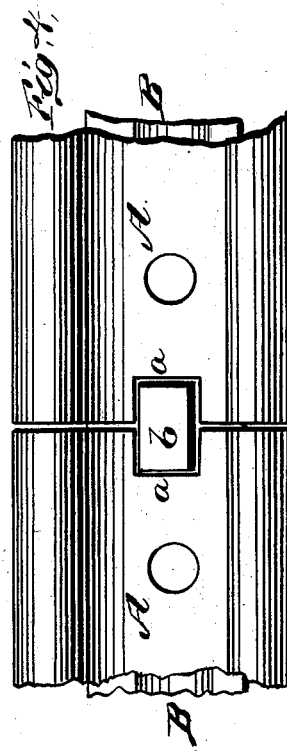
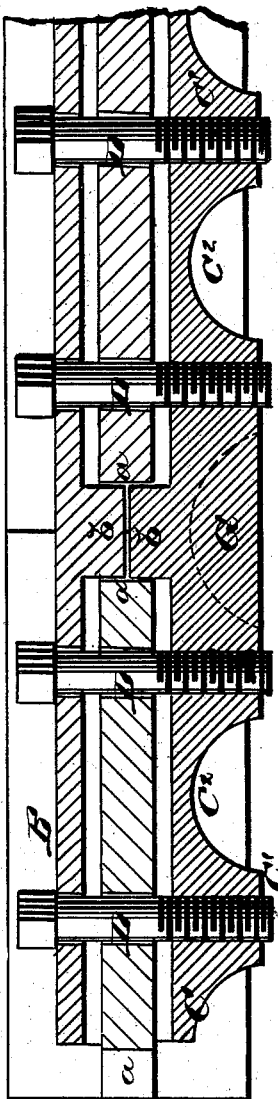
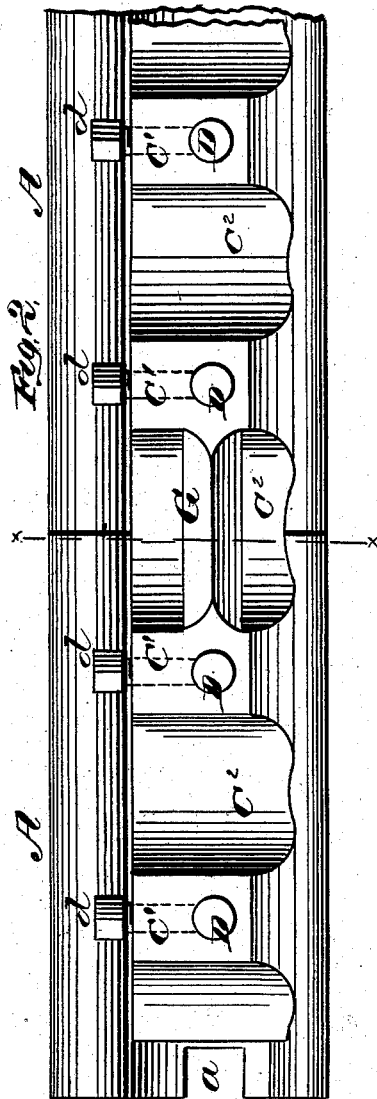


Fig. 5

WITNESSES  
*A. Bates*  
*George E. Upham*

INVENTOR.  
*Alexander Meharry.*  
*Gibmore, Smith & Co.*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

ALEXANDER MEHARRY, OF LA FAYETTE, INDIANA.

## IMPROVEMENT IN RAIL-JOINTS.

Specification forming part of Letters Patent No. 205,287, dated June 25, 1878; application filed August 11, 1877.

*To all whom it may concern:*

Be it known that I, ALEXANDER MEHARRY, of La Fayette, in the county of Tippecanoe and State of Indiana, have invented a new and valuable Improvement in Railroad-Joints; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a transverse vertical sectional view of my railroad-joint. Fig. 2 is a side view. Fig. 3 is a longitudinal vertical sectional view, and Fig. 4 is a modification view thereof.

The nature of my invention consists in the construction and arrangement of a railroad-joint, as will be hereinafter more fully set forth, and pointed out in the claim.

Heretofore ordinary T-shaped railroad-rails have been united by means of dovetail slots cut in the ends of the web portion of the rails, and plugs with corresponding flanges fitting said dovetail openings, and said rails and plugs have been secured together by a single bolt; but this style of joint is objectionable for the reasons that the cold of winter, while shortening the rails, is liable to break the flanges, and the contiguous metallic parts are liable to displacement by the expanding force of summer's heat. It is further objectionable by reason of the want of bracing or holding devices on each side of the joint.

The object of my invention is to overcome the objections to such joints.

The annexed drawings, to which reference is made, fully illustrate my invention.

A A represent two ordinary T-rails, provided at their ends with rectangular slots or mortises *a* through the web of the rail, as shown. B and C represent the two fish-bars, placed on opposite sides of the rails, over the joints, and said fish-bars are on their inner sides, in the center, provided with rectangular lugs or flanges *b b*, which meet and fit in the mortises *a a* in the adjacent ends of the two rails. These lugs or flanges form additional security to prevent the end of one rail from rising above the end of the other rail.

The fish-bar B is an ordinary straight bar, made to fit against the web, between the head and base of the rail, in the usual manner. The fish-bar C is made to fit in like manner against the opposite side of the rail; but it is,

on its outer side, formed with a series of enlargements, *C' C'*, which are tapped horizontally for the passage of the fastening-bolts D, and vertically for the passage of the screws *d*, for locking the bolts D.

The bolts D are passed through holes in the fish-bar B and rails A, and then screwed into the enlargements *C'* of the fish-bar C, said enlargements or swells thus taking the place of the nuts heretofore used on the ends of the bolts. When the bolts D have been screwed up tightly the screws *d* are run down through the top of the swells *C'* onto the bolts, and thereby locking the same, so that they cannot come loose by jarring, &c.

The fish-bar C thus combines with it, in one, the nuts and the nut-locks, so that there will be but a single piece taking the place of a number, as heretofore used.

The outer surface of the fish-bar C, between the swells *C'*, is made with concavities *C''*, as shown, making the bar on this side somewhat in corrugated form, reducing its weight, while in no wise impairing its strength.

If desired, the bar C may, in these concavities, be formed with a longitudinal strengthening-rib, G. This would be especially beneficial in the center, where the strain will be the greatest, as it is opposite the joint.

By the foregoing construction and union of the railroad-rails, a uniform strain on all the parts is obtained, and all unnatural yielding in every possible direction is resisted, and at the same time a rigid fastening device for the rails is formed.

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

The combination, with ordinary T-shaped rails, having the tread entire, and provided with rectangular slots at their ends through the web portion, of the fish-plates arranged on opposite sides of the rails, over the joint, and provided with rectangular lugs, which meet and fit into the slots of the adjacent ends of the two rails, the said fish-plates and rails being fastened together by means of suitable bolts on each side of the rail-joint, substantially as shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALEXANDER MEHARRY.

Witnesses:

EDWARD GROENENDYKE,  
CHARLES GROENENDYKE.