W. H. HORNUM.

Railroad-Rail Joint.

No. 169,266. Patented Oct. 26, 1875.

Fig. 1.

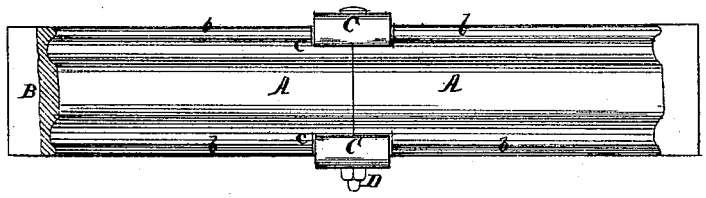


Fig. 2.

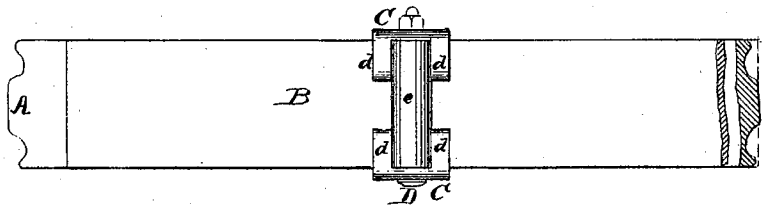


Fig. 3.

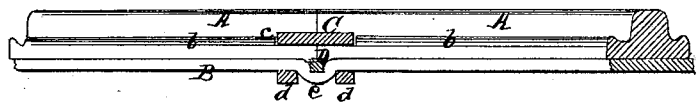
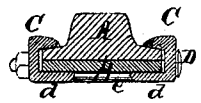


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM H. HORNUM, OF NEW YORK, N. Y.

IMPROVEMENT IN RAILROAD-RAIL JOINTS.

Specification forming part of Letters Patent No. **169,266**, dated October 26, 1875; application filed October 4, 1875.

To all whom it may concern:

Be it known that I, WILLIAM H. HORNUM, of the city, county, and State of New York, have invented a new and Improved Railroad-Rail Joint, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a plan or top view. Fig. 2 is an inverted plan. Fig. 3 is a sectional side view. Fig. 4 is a transverse section.

Similar letters indicate corresponding parts.

This invention consists in the combination, with the ends of two rails at their joint, of a flat supporting-plate, provided with a depression below the joint and of two U-shaped jaws, the upper branches of which are placed in recesses in the side flanges of the rails, while their lower branches are bifurcated and made to straddle the depression of the supporting-plate, said jaws being clamped to the rails and to the supporting-plate by a bolt extending through the jaws and through the depression of the supporting-plate, so that by the action of the bolt and clamp the ends of the rails and the supporting-plate are firmly united, and that by the depression of the supporting-plate, and by the recesses in the side flanges of the rails, the clamps are effectually prevented from moving in the direction of the length of the rails, thereby rendering the joint firm and permanent, and at the same time the rails can be readily passed over by wheel vehicles; and my joint is therefore of particular value for street-railroads.

In the drawing, the letters A A designate the ends of two railroad-rails, beneath which is placed a flat plate, B, equal in width to the bottom surfaces of the rails, and about twenty inches (more or less) in length. The side flanges of the rails A A are provided with raised rims *b b*, which are partially cut away at the ends of the rails, so as to form recesses *c* for the reception of the upper branches of U-shaped jaws C C. The lower branches *d d* of these jaws are bifurcated, and when the joint is to be made these bifurcated branches straddle a depression, *e*, which is formed in the supporting-plate, and which extends transversely across said plate beneath the joint of the rails. When the jaws are in the proper position they are fastened by means of a bolt, D, which extends through said jaws and through the depression in the supporting-plate, and which is secured by a nut or by a key, or by any other suitable fastening. By this arrangement the ends of the rails are evenly supported by the plate B, and at the same time the clamps are prevented from moving in the direction of the length of the rail, while the rails may be left free to expand and to contract without throwing their ends out of a level position. At the same time the upper branches of the jaws being embedded in the recesses *c* of the rims *b* form level surfaces with said rims, and the rails when laid down in the streets of a city or town do not materially interfere with the passage of ordinary wheel vehicles.

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

The flat supporting-plate B, provided with a transverse depression, *e*, in combination with rails A A, having raised rims *b*, with recesses *c*, and with U-shaped jaws C C, the lower branches of which are bifurcated and made to straddle the depression in the supporting-plate, while their upper branches lie in the recesses *c* of the rims *b*, substantially as and for the purpose shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 18th day of September, 1875.

WILLIAM H. HORNUM. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.