No. 809,284. PATENTED JAN. 9, 1906.

A. W. CHORMANN & L. L. COMBS.

RAIL JOINT.

APPLICATION FILED APR. 27, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

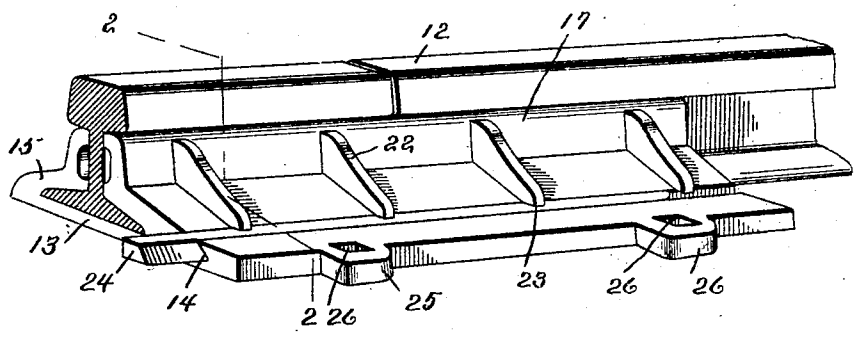


Fig. 2.

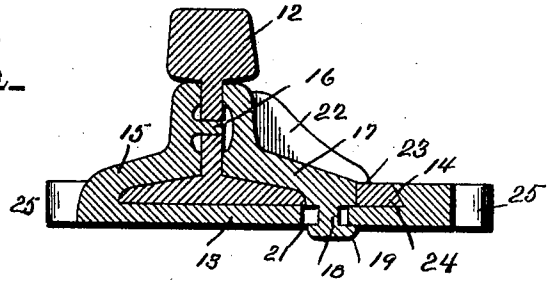


Fig. 3.

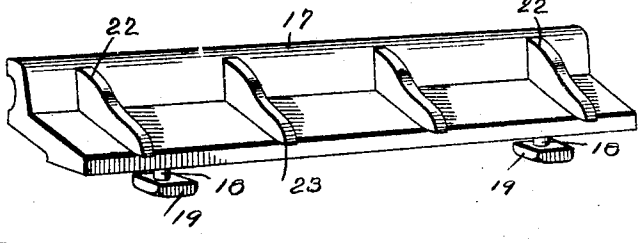


Fig. 4.

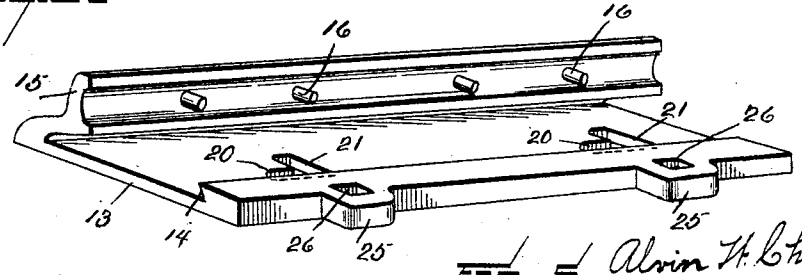
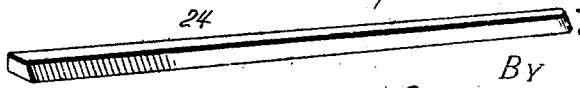


Fig. 5.



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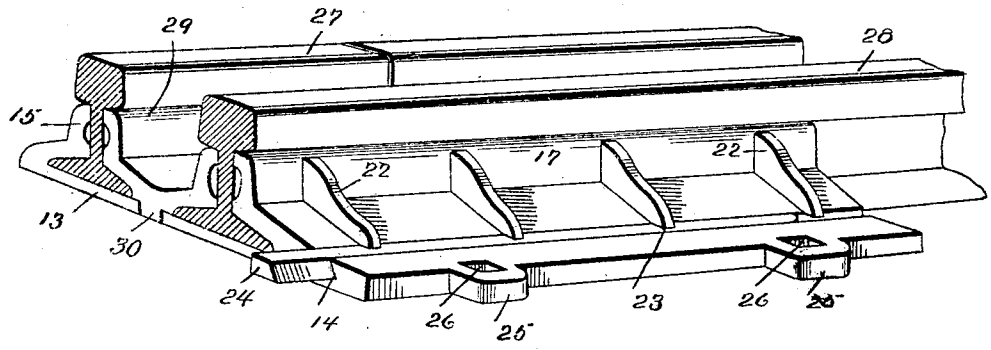
2 SHEETS—SHEET 2.

Fig. 6.



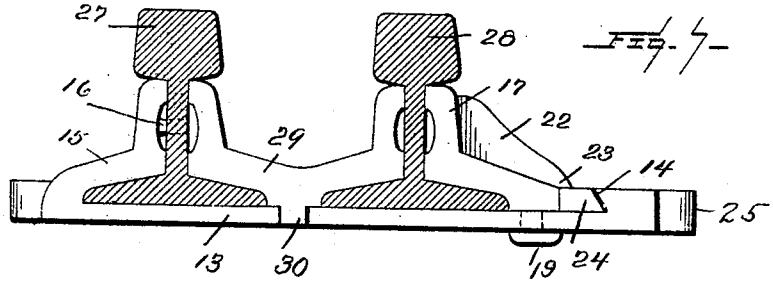


Fig. 4.

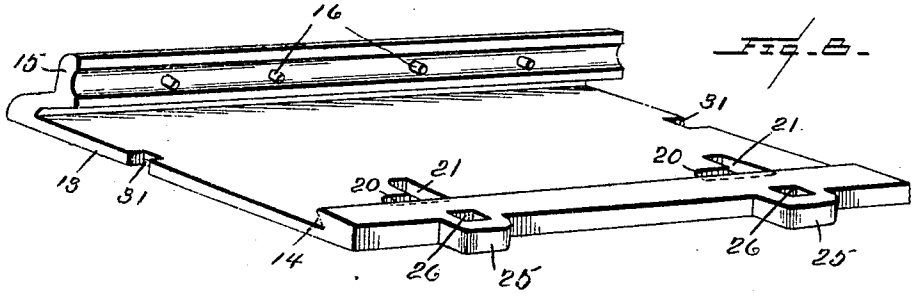


Fig. 5.

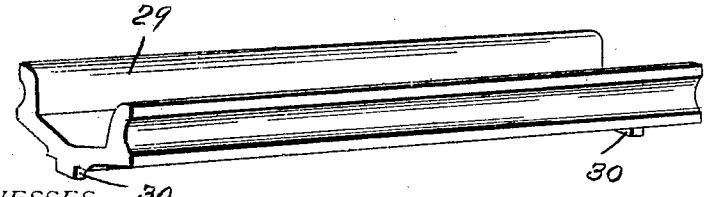


Fig. 3.

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UNITED STATES PATENT OFFICE.

ALVIN W. CHORMANN AND LOGAN L. COMBS, OF HICKORY, PENNSYLVANIA.

RAIL-JOINT.

No. 809,284. Specification of Letters Patent. Patented Jan. 9, 1906.

Application filed April 27, 1905. Serial No. 257,614.

To all whom it may concern:

Be it known that we, ALVIN W. CHORMANN and LOGAN L. COMBS, citizens of the United States, residing at Hickory, in the county of Washington and State of Pennsylvania, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail-joints, and has for its object the production of a joint whereby the abutting ends of two rails will be securely fastened.

The invention consists in certain novel features of construction hereinafter described and claimed, and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of the joint. Fig. 2 is a transverse section on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of the inside splice-bar. Fig. 4 is a perspective view of the rail-chair and the outside splice-bar, which is formed integral therewith. Fig. 5 is a perspective view of the key for securing the parts to be hereinafter described. Fig. 6 is a perspective view of a modification. Fig. 7 is an end view thereof. Fig. 8 is a perspective view of the rail-chair, and Fig. 9 is a perspective view of the spacing-block employed in the construction illustrated in Figs. 6 and 7.

Referring specifically to the drawings, the two abutting rails are indicated at 12. They are supported on a chair, comprising a base 13, which is formed at one edge with a longitudinal undercut groove or key-seat 14 and at the opposite edge with a splice-bar 15, which extends around the rail-base and engages the web of the rails, as usual. The splice-bar has projecting pins 16, which enter holes in the web when the parts are assembled. A splice-bar 17, supported on the chair, engages the opposite sides of the rails. Near its outer edge this splice-bar is formed with depending lugs 18, having enlargements or heads 19. The chair has angular apertures to receive the lugs. The apertures are shaped to extend lengthwise of the chair, as at 20, and then transversely thereof, as at 21. The parts 20 are made wide enough to admit the heads 19, while the parts 21 are made sufficiently narrow to retain the head and prevent withdrawal of the lugs. The splice-bar 17 is also formed with strengthening-ribs 22, the lower ends of which project beyond the outer edge of the splice-bar, as at 23, for a purpose to be hereinafter described.

At 24 is indicated a longitudinally-tapering key, which is driven into the seat 13 against the outer edge of the splice-bar 17 to secure the same. The projecting portions 23 of the ribs 22 overlap the key, which with the undercut portion of the seat 13 prevents vertical displacement of the key. At the outer edges of the chair are lugs 25, provided with spike-holes 26 for fastening the chair on the ties. The joint is assembled by placing the rails on the chair with the pins 16 extending into the holes in the web of the rails. The splice-bar 17 is then placed on the chair with the lugs entering the parts 20 of the apertures in the chair. The splice-bar is then driven forwardly until the lugs enter the parts 21 of the apertures, after which the splice-bar is driven toward the rails until it firmly engages the same. The heads of the lugs, by reason of the restricted parts 21 of the apertures, prevent withdrawal of the lugs, and the splice-bar is thus held against vertical displacement. This also prevents vertical movement of the rails. The key is now inserted and driven home, thus forcing the splice-bars to firmly grip the rails. The undercut key-seat and the overlapping ends 23 of the ribs 22 prevent vertical displacement of the key. Longitudinal movement of the rails is prevented by the pins 16. The holes in which said pins fit will be made slightly oblong to permit expansion and contraction of the rails. The splice-bar 15 will engage the outer side of the rail.

A curve brace and joint for securing the traction and the guard-rails on the same chair is shown in Figs. 6 to 9. In this form the chair is made sufficiently wide to support the traction-rails 27 and also the guard-rail 28. The integral splice-bar 15 engages the traction-rails, and the splice-bar 17 engages the guard-rail. The same fastening means as heretofore described are employed. A block 29 is placed between the rails to separate or space them. This block rests on the chair and engages the rails in the same manner as the splice-bars. At the ends of the block are depending lugs 30, which fit in recesses 31 in the chair to prevent longitudinal displacement of the block. The recesses are made slightly wider than the lugs to permit sufficient lateral

movement upon tightening the rails when the key is driven home.

By the construction herein described a smooth and efficient joint is had. If the joint becomes loose from wear or otherwise, it can be readily tightened again by driving the key farther in.

Having thus described our invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. A rail-chair comprising an apertured base-plate having rail-engaging means at one edge; a splice-bar supported on the chair, and engaging the opposite side of the rails; lugs extending from the splice-bar, and entering the apertures in the base-plate; and means for securing the splice-bar against lateral displacement.

2. A rail-chair comprising an apertured base-plate having rail-engaging means at one edge, and a key-seat at its opposite edge; a splice-bar supported on the chair; lugs extending from the splice-bar, and entering the apertures in the base-plate; and a key driven into the seat, and engaging the outer edge of the splice-bar, to prevent lateral displacement thereof.

3. A rail-chair comprising an apertured base-plate having rail-engaging means at one edge, and a key-seat at its opposite edge; a splice-bar supported on the chair, and having projections overhanging the key-seat; and a key driven into the seat under said projections, and engaging the outer edge of the splice-bar, to prevent lateral displacement thereof.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ALVIN W. CHORMANN.
LOGAN L. COMBS.

Witnesses:
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MARGARET DONALDSON.