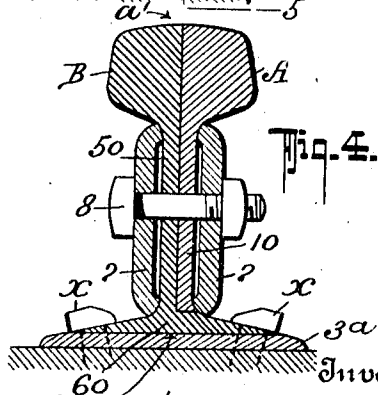
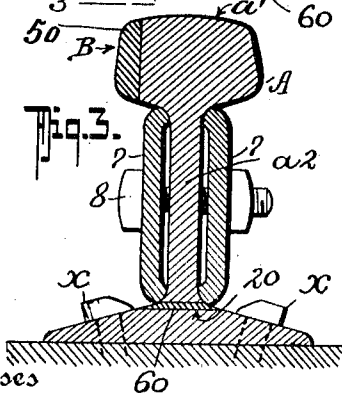
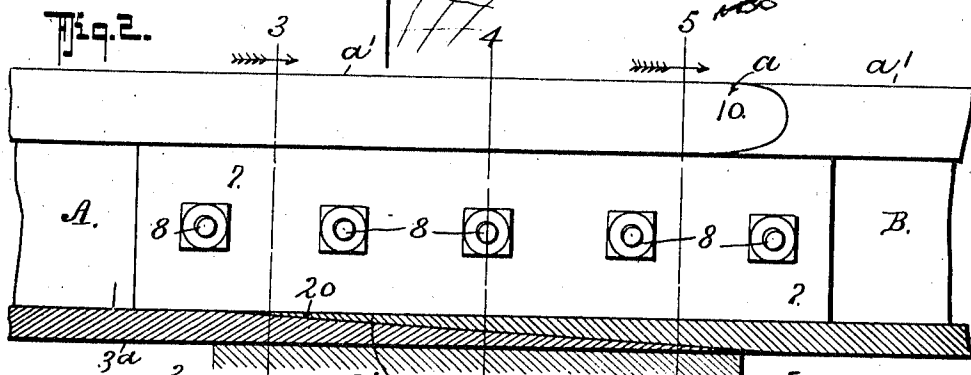
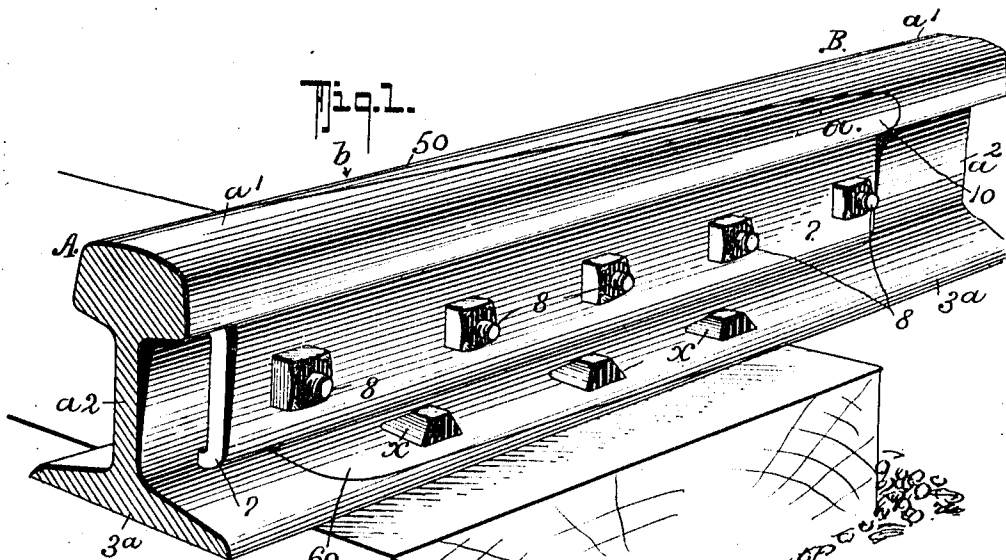


989,014.

C. JAMES.
RAIL JOINT.
APPLICATION FILED OCT. 27, 1910.

Patented Apr. 11, 1911.

2 SHEETS—SHEET 1.



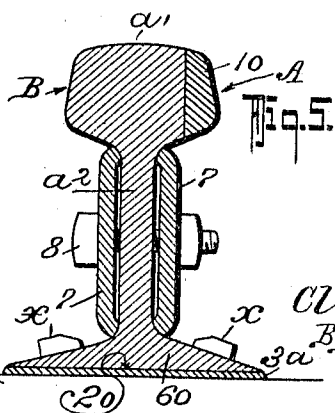
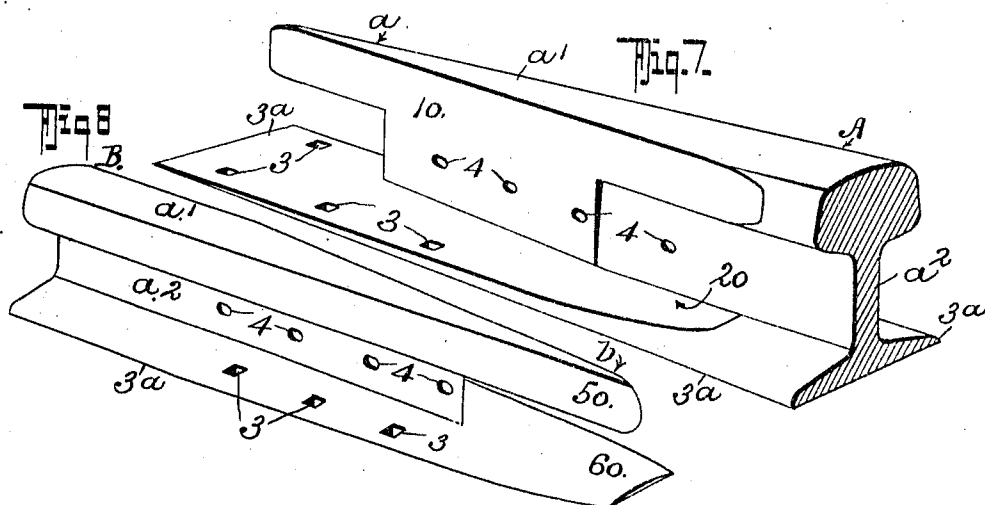
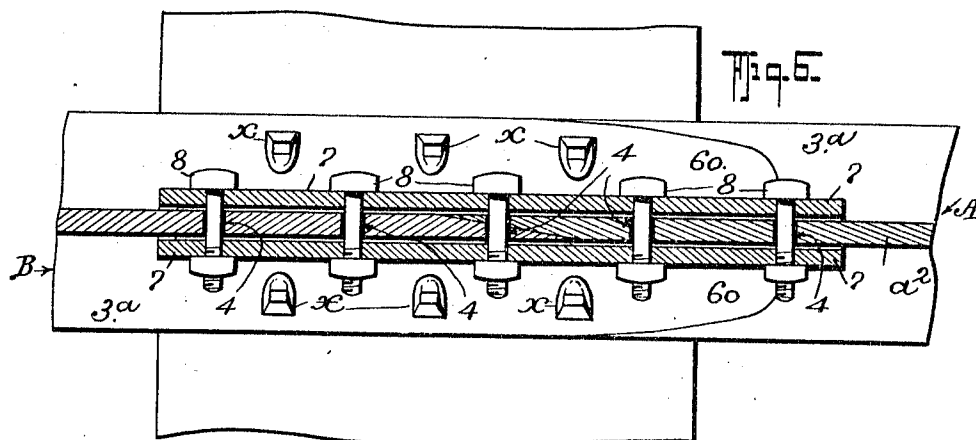
Witnesses
Hayward Woodard
John T. Schrott

Inventor
Clark James
By Fred G. Dietrich & Co.
Attorneys

989,014.

C. JAMES.
RAIL JOINT.
APPLICATION FILED OCT. 27, 1910.

Patented Apr. 11, 1911.
2 SHEETS-SHEET 2.



Witnesses
Raymond Woodard
John T. Schrott.

Inventor
Clark James
By Fred G. Detenbeck
Attorneys

UNITED STATES PATENT OFFICE.

CLARK JAMES, OF MANHATTAN, NEVADA.

RAIL-JOINT.

989,014.

Specification of Letters Patent.

Patented Apr. 11, 1911.

Application filed October 27, 1910. Serial No. 589,339.

To all whom it may concern:

Be it known that I, CLARK JAMES, a citizen of the United States, residing at Manhattan, in the county of Nye and State of Nevada, have invented a new and Improved Rail-Joint, of which the following is a specification.

This invention relates to improvements in railroad rail joints, and more particularly refers to that type of rail joints in which the meeting ends have interlocking portions, and my said invention primarily has for its object to provide an improved construction of railroad rail joint of the general character stated, of a simple and inexpensive construction in which the interlocking ends are so designed that the meeting ends of the rails are effectively held against lateral or vertical separation and in which the interlocking portions of the two rails are such that sagging and hammering at the rail joint is reduced to the minimum.

My invention consists in the improved construction of rail joint hereinafter fully described, specifically pointed out in the appended claims and illustrated in the accompanying drawings, in which:—

Figure 1, is a perspective view of a pair of rail ends constructed in accordance with my invention and joined. Fig. 2, is a side elevation of the rail, the flange being in section. Figs. 3, 4 and 5 are sections on the lines 3—3, 4—4 and 5—5 respectively on Fig. 2. Fig. 6, is a horizontal section hereinafter referred to. Figs. 7 and 8 are detail perspective views of the two rail sections separated.

In the practical application of my invention each rail has a receiving end and a penetrating end, the latter end being so termed since it penetrates the receiving end of an adjacent rail section.

In the drawing I have only shown the interlocking ends of two adjacent rail members A—B, the receiving end *a* of rail member A and the penetrating end *b* of the other rail member B. The receiving end *a* of rail A (the latter except at the ends being of the usual form in cross section) at a suitable point back of the end has its tread portion *a'* and its web *a''* cut off diagonally at an angle of approximately twenty degrees whereby to form a tapered and vertically disposed penetrating tongue 10. Beginning approximately at the inner end of the tongue 10, the base of the rail is formed with a hori-

zontally extending wedge shape recess 20 disposed at right angles to the vertical tongue 10, the apex or small end of such recess being at the inner or point of beginning of the said tongue 10. The base 3^a of the rail has spike apertures 3 and the web portion has bolt apertures 4. The opposite end of the rail, the penetrating end, is likewise cut on the diagonal line to form a vertical tongue 50 for sidewise lapping the opposing tongue 10 on the receiving end of the other rail, as is clearly shown in Fig. 1. Tongue 50 on the penetrating end, extends solidly down to the base of the rail, which latter, from the base 70 or beginning of the tongue 50 is cut away on the under side to produce a tapering and horizontally disposed tongue 60, the point on the penetrating end of which is substantially in line with the base of the web portion of the rail.

7—7 designate fish plates, one of which is used at each side of the rail joint to straddle the meeting and tapered portions of the web members of the rails, and the said plates are held in position in the usual manner by the bolts 8—8.

From the foregoing, taken in connection with the drawings the complete construction and the manner in which the rail ends are joined will be readily apparent.

By reason of providing the horizontal tapered recess in the end of one rail and tapering the base of the other rail to form a tongue to enter the said recess, a substantial interlocking of the two rail ends is provided and in such manner as to hold them from vertical rattling or displacement, the side lapping of the vertical tongues with the fish plate connections securely holding the said ends from lateral displacement or spreading, it being also clear that since the base flanges of the two adjacent rail ends lap upon each other the spikes *a* that secure the rails to the ties also materially aid in firmly holding the ends of the rail joint solid on each other, and thereby avoid hammering action that usually occurs at the joints of rail sections.

What I claim is:

1. In a rail joint, the rails having reversely disposed overlapping vertical tongues at the adjacent ends, the said tongues extending from the tread face portions to the base portions of the rails, the base of one of the rails being tapered its full width and having a horizontal recess, the base of the other rail being tapered its full width and

formed with a horizontal tongue for engaging the aforesaid recess, tapered portions of the opposing ends lapping upon each other and means for clamping the opposing members together.

2. In a rail joint, the opposing rail members having diagonally tapered vertical tongues, means for clamping the tongue portions upon each other, one of the rails having a downwardly tapered tongue and an undercut tapering recess at a point below the web portion of the rail, the other rail portion having an upwardly tapered flange for riding on the tapering end of the opposing rail member and for sliding into the tapering recess of the said member.

3. In a rail joint, the opposing rail members having diagonally tapered opposing

vertical tongues, one of the rail ends having a horizontal downwardly tapering tongue and an undercut tapering recess below the web portion of the rail, the other rail portion having an upwardly tapered horizontal tongue riding on the tapering end of the opposing rail member and for sliding into the tapering recess of the said member, the said horizontal tapering tongue extending the full width of the base of the rail and the taper of the horizontal tongue being of equal length as the taper of the vertical tongue, and means for clamping the several parts together.

CLARK JAMES.

Witnesses:

JOHN F. WARD,
E. HILL.