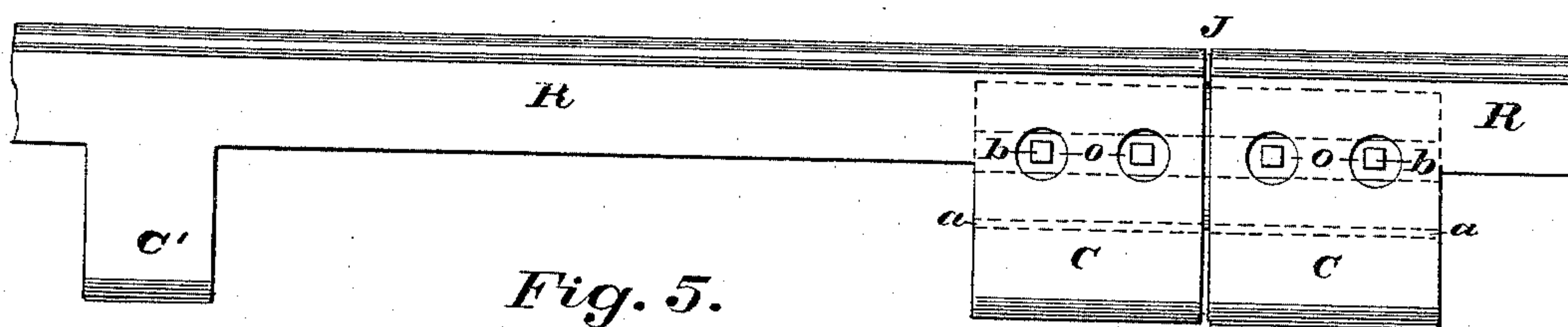
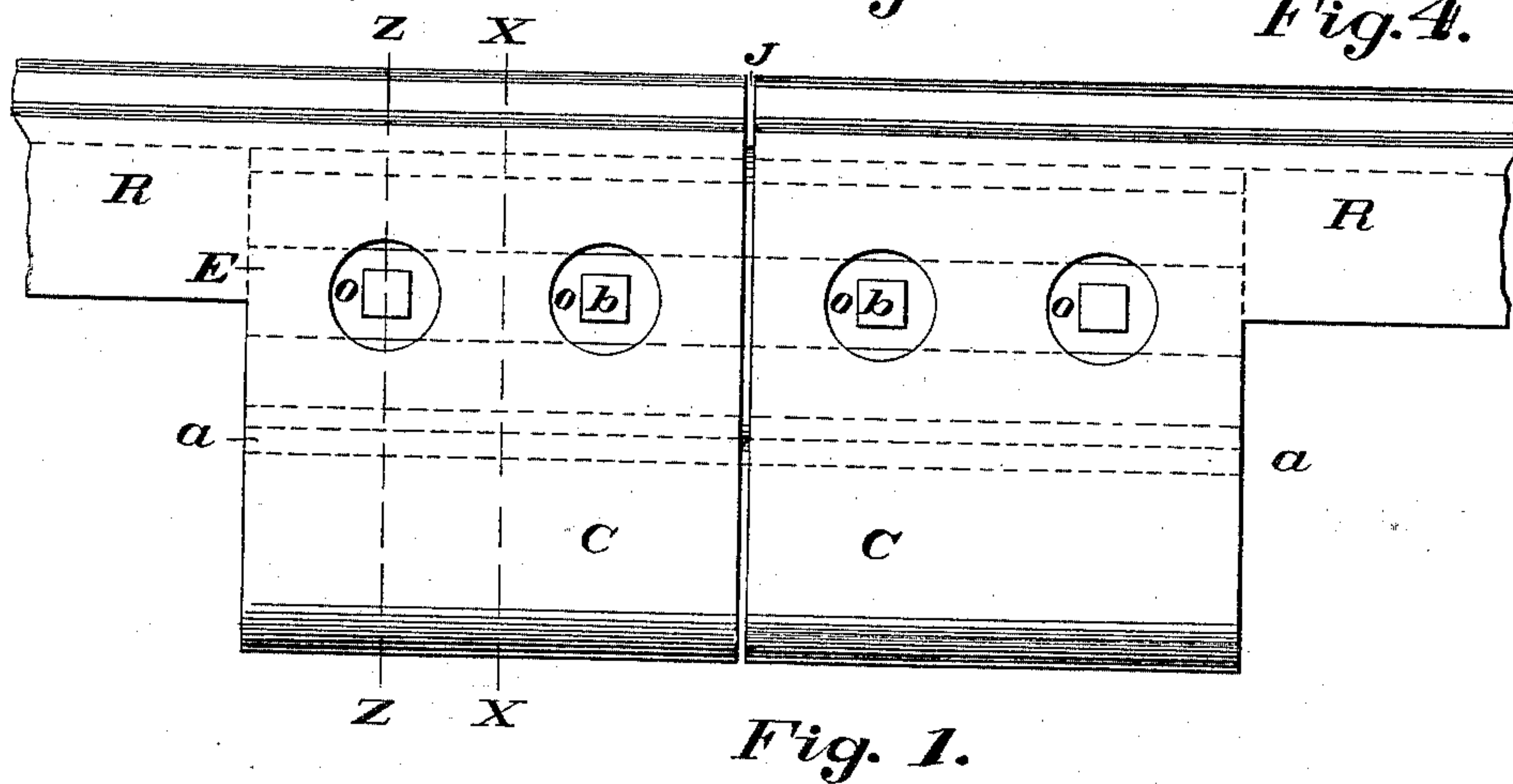
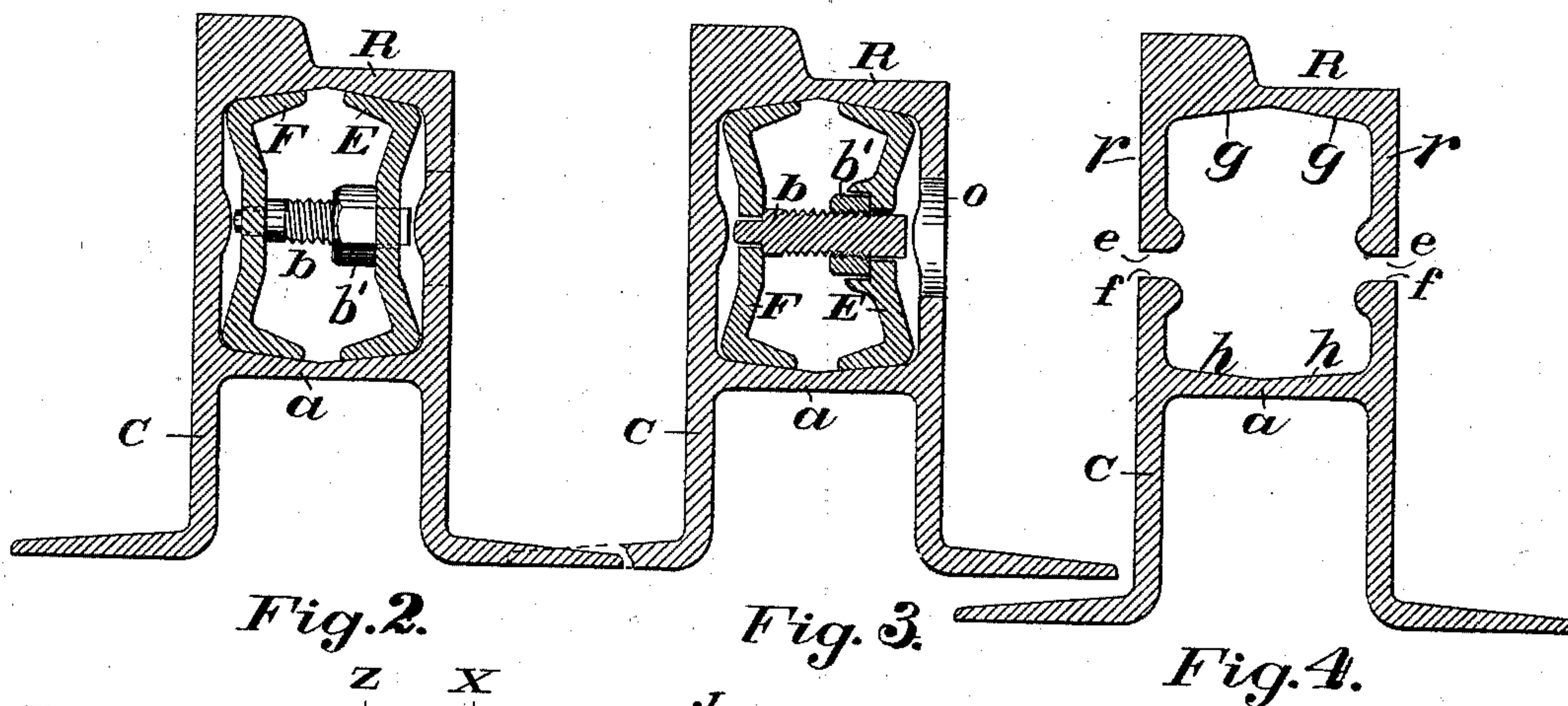


(No Model.)

A. J. MOXHAM.
RAILROAD RAIL JOINT.

No. 477,680.

Patented June 28, 1892.



WITNESSES:

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ARTHUR J. MOXHAM, OF JOHNSTOWN, PENNSYLVANIA.

RAILROAD-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 477,680, dated June 28, 1892.

Application filed September 22, 1891. Serial No. 406,500. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR J. MOXHAM, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Railroad-Rail Joint, which invention is fully set forth and illustrated in the following specification and accompanying drawings.

The object of this invention is sufficiently indicated by its title above given.

The invention will first be described in detail, and then particularly set forth in the claims.

In the accompanying drawings, Figure 1 shows the rail-joint in side elevation. Fig. 2 is a vertical cross-section taken through Fig. 1 at the line X X. Fig. 3 is a vertical cross-section taken through Fig. 1 at the line Z Z, showing a modification which may be made, hereinafter described. Fig. 4 shows in cross-section one of the rails and a supporting foot or chair before said rail and foot are united, as hereinafter described. Fig. 5 is a side elevation showing a rail-joint similar to that shown in Fig. 3, and also one of the intermediate rail feet or chairs used between the joints.

In said figures the several parts are respectively indicated by reference-letters, as follows:

The letter R indicates two track-rails of channel form, meeting at the point J. To the end of each rail is secured a foot or chair C in any suitable manner. Preferably, however, said chairs are welded to the vertical webs *r* of the rails at the points *e f*, Fig. 4, the metal being preferably thickened at the points of welding, as shown. Such welding may be done by any suitable process, method, act, or means.

The letters E F indicate two internal splice-bars located in the interior of the rails, the upper portion of each bar bearing against the under side of the heads of the rails and the lower portion of each bar bearing against the top surfaces *a* of the feet C. Said splice-bars are adjusted by means of the bolts *b*, provided with nuts *b'*. Said bolts have square heads, and a socket-wrench can be applied thereto through the holes *o* in the sides of the rails.

As shown in Fig. 2, the nuts *b'* may be set up by turning the same with a wrench, the heads of the bolts being square in a square hole in the splice-bar E. In Fig. 3 the nuts

b' enter sockets in the splice-bar E, as clearly shown in said figure, in which case each bolt is made round where it passes through a round hole in said splice-bar. The head of the bolt outside of the nut is square and the nut hexagonal or square in its socket, so that when the bolt is turned by the wrench put in through the hole *o* the nut will not turn and the turning of the bolt tightens or sets out the splice-bars. The bolts *b* may be put in place by being passed through the holes *o*, or, if made short enough, may be first inserted in the splice-bars and said bars then slipped into place at the ends of the rails.

The under sides of the heads of the rails R, against which the splice-bars bear, are beveled, as shown at *g g*, and the top surfaces *a* of the chairs C are also beveled, as shown at *h*. By this means a splice-bar fit is secured when the bolts *b* are screwed up. If desired, however, only the under sides of the heads of the rails may be beveled and the bevels omitted from the chairs, or the chairs may be beveled and the bevels omitted from the rails.

In Fig. 5 an intermediate chair C' is shown secured to the rail R. Said intermediate chairs may, if desired, be of the same form as the chairs C, or they may be of any other desired form.

By the construction above described all exterior splice-bars are dispensed with and the street-pavement may be laid true or flush with the vertical sides of the structure.

Having thus fully described my said invention, I claim—

1. A rail-joint consisting of the following-named parts, in combination: two double-webbed rails, a chair secured to the end of each of said rails, and internal splice-bars.

2. A rail-joint consisting of the following-named parts, in combination: two double-webbed rails, a chair welded to the end of each of said rails, and internal splice-bars.

3. A rail-joint consisting of the following-named parts, in combination: two double-webbed rails, internal splice-bars, and a chair secured to the end of each of said rails, provided with a seat at or near its top for said bars.

4. A rail-joint consisting of the following-named parts, in combination: two double-webbed rails, a chair secured to the end of

each of said rails, internal splice-bars, and adjusting-bolts for said bars.

5 A rail-joint consisting of the following-named parts, in combination: two double-webbed rails, internal splice-bars, a chair secured to the end of each of said rails, provided with a seat at or near its top for said bars, and adjusting-bolts for said bars.

10 6. A rail-joint consisting of the following-named parts, in combination: two double-webbed rails, a chair secured to the end of each of said rails, internal splice-bars, and adjusting-bolts for said bars, the sides of said rails being provided with holes for access to
15 said bolts.

20 7. A rail-joint consisting of the following-named parts, in combination: two double-webbed rails, internal splice-bars, a chair secured to the end of each of said rails, provided with a seat at or near its top for said bars, and adjusting-bolts for said bars, the sides of said rails being provided with holes for access to said bolts.

25 8. A rail-joint consisting of the following-named parts, in combination: two double-webbed rails, a chair secured to the end of each of said rails, and internal splice-bars having upper and lower bevel-bearings, one or both.

30 9. A rail-joint consisting of the following-named parts, in combination: two double-

webbed rails, a chair secured to the end of each of said rails, and internal splice-bars, said rails and chairs, one or both, being provided with beveled bearing-surfaces for said splice-bars. 35

10. A rail-joint consisting of the following-named parts, in combination: two double-webbed rails, a chair secured to the end of each of said rails, internal splice-bars, and adjusting-bolts for said bars, said rails and chairs, one or both, being provided with beveled bearing-surfaces for said splice-bars. 40

11. A rail-joint consisting of the following-named parts, in combination: two double-webbed rails, a chair secured to the end of each of said rails and having a top surface, as α , and internal splice-bars, the undersides of the heads of said rails and said top surfaces of said chairs, one or both, being beveled. 45 50

12. In a rail-joint, in combination with a double-webbed rail, a chair secured to said rail and provided with an inclined internal top surface.

13. In a rail-joint, the combination of a double-webbed rail having the under portion of its head beveled and a chair having its upper surface beveled. 55

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Witnesses:

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