(No Model.) 2 Sheets—Sheet 1.

A. J. & G. W. CURRY.

RAILWAY RAIL OR OTHER JOINT.

No. 415,290. Patented Nov. 19, 1889.

Fig. 1.

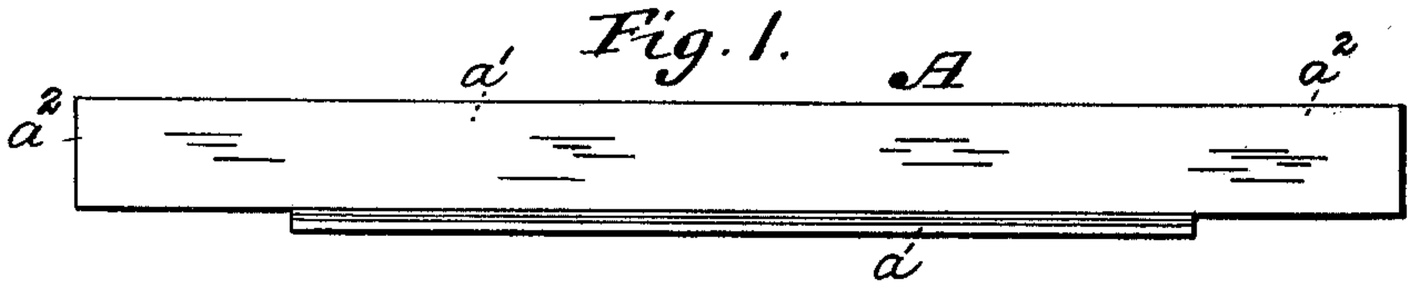


Fig. 2.

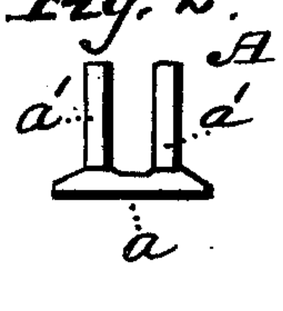


Fig. 3.

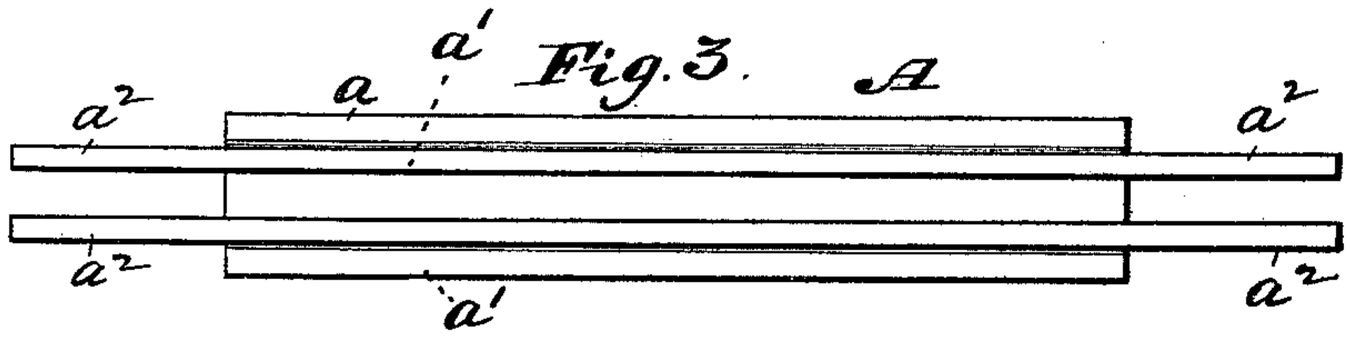


Fig. 4.

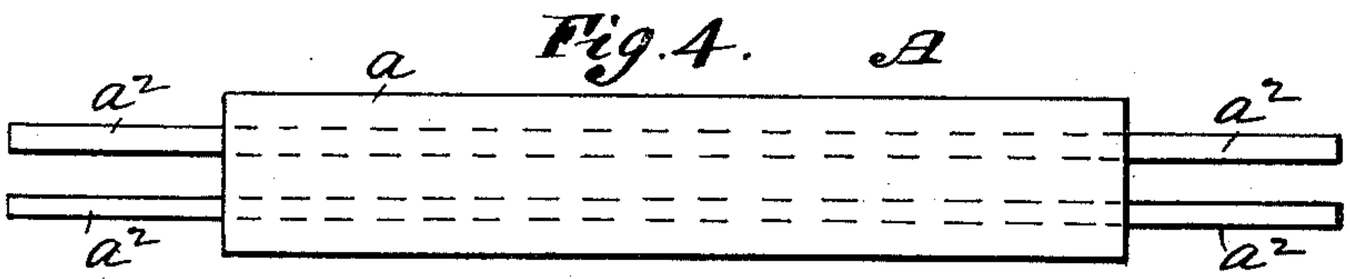


Fig. 5.

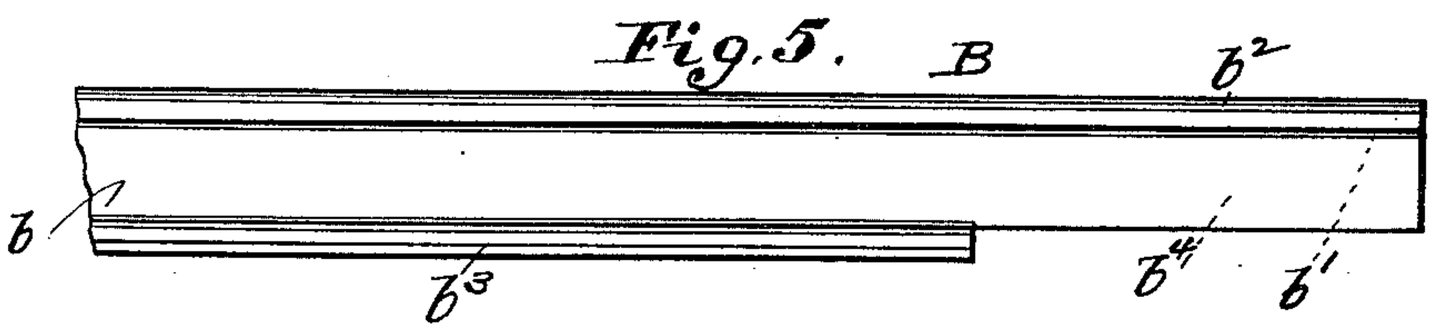


Fig. 6

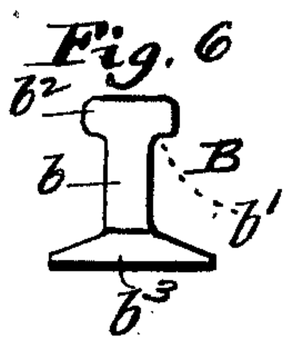


Fig. 7.

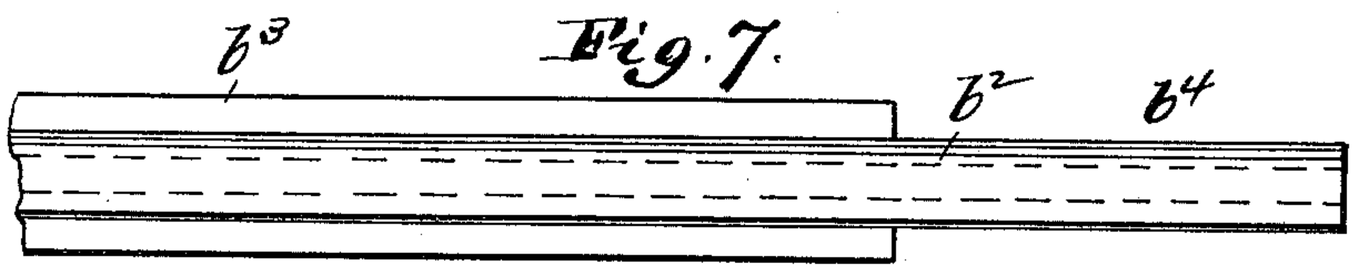
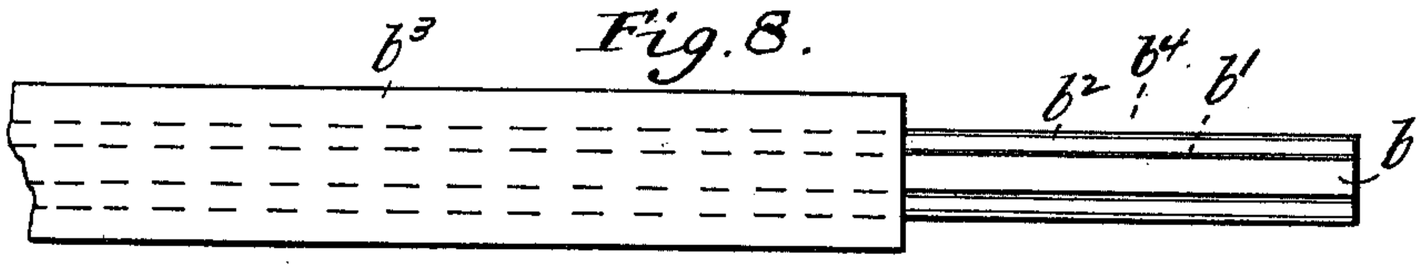


Fig. 8.



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(No Model.) 2 Sheets—Sheet 2.

A. J. & G. W. CURRY.

RAILWAY RAIL OR OTHER JOINT.

No. 415,290. Patented Nov. 19, 1889.

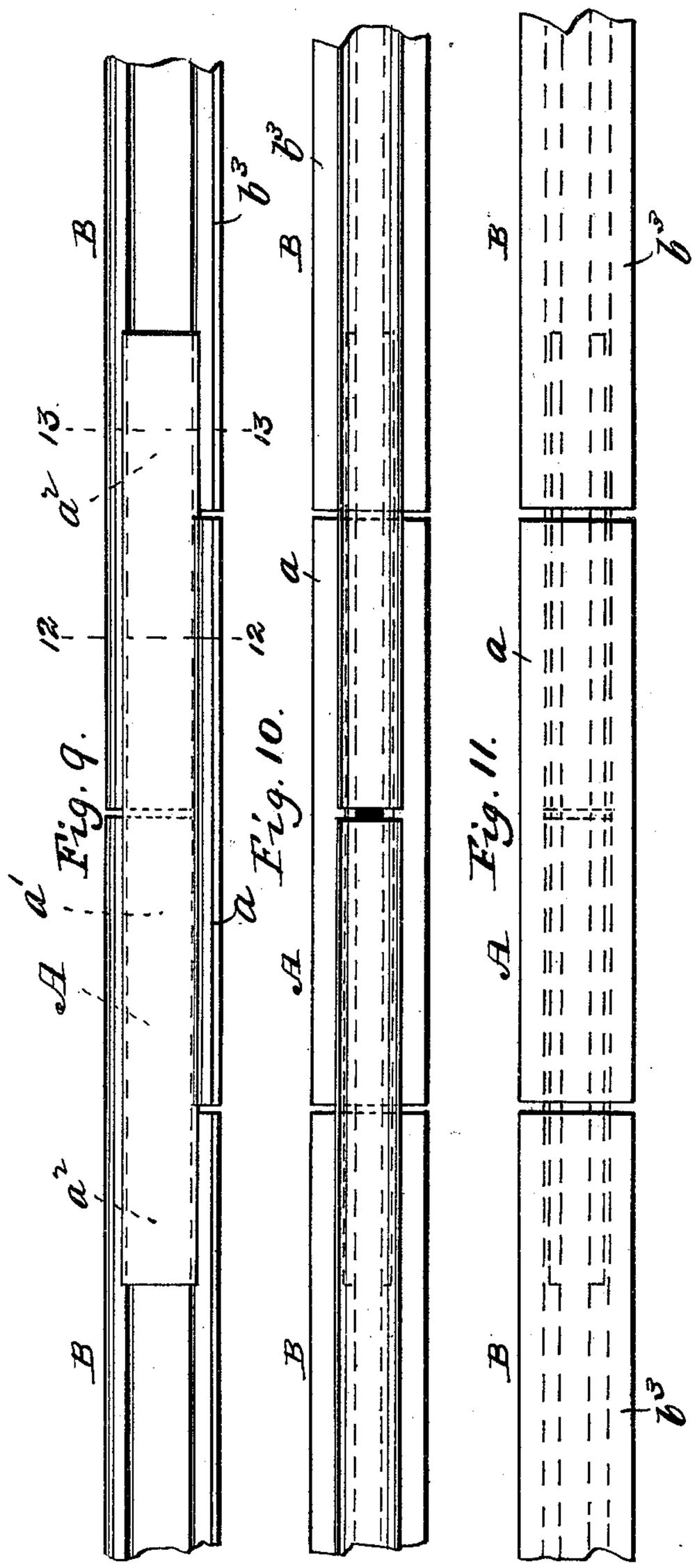

Fig. 9.

Fig. 10.

Fig. 11.

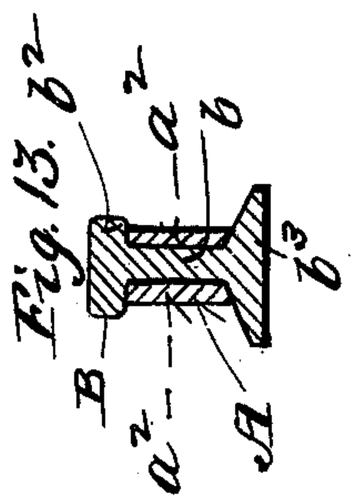

Fig. 13.

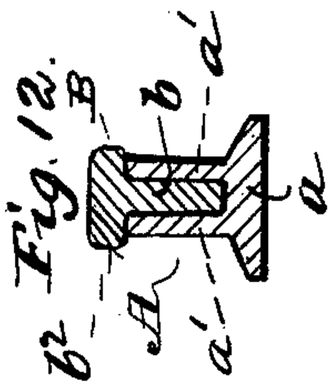

Fig. 12.

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UNITED STATES PATENT OFFICE.

ANDREW J. CURRY AND GEORGE W. CURRY, OF ST. LOUIS, MISSOURI.

RAILWAY-RAIL OR OTHER JOINT.

SPECIFICATION forming part of Letters Patent No. 415,290, dated November 19, 1889.

Application filed July 24, 1889. Serial No. 318,546. (No model.)

To all whom it may concern:

Be it known that we, ANDREW J. CURRY and GEORGE W. CURRY, of St. Louis, Missouri, have jointly made a new and useful Improvement in Railway-Rail or other Joints, of which the following is a full, clear, and exact description.

In carrying out the present improvement a peculiar shape is given to the opposing ends of the rails to be joined and a peculiarly-shaped splice or shoe is combined therewith, whereby the rails are accurately and firmly joined, and without the aid of bolts or other auxiliary parts or part, substantially as is hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, in which—

Figure 1 is a side elevation of the splice; Fig. 2, an end elevation thereof; Fig. 3, a plan thereof, and Fig. 4 a bottom view thereof; Fig. 5, a side elevation of one of the opposing rail ends; Fig. 6, an end elevation thereof; Fig. 7, a plan thereof, and Fig. 8 a bottom view thereof; Fig. 9, a side elevation showing rails united by means of the improved joint; Fig. 10, a plan of the same, and Fig. 11, a bottom view; and Figs. 12 and 13, respectively, cross-sections on the lines 12 12 and 13 13 of Fig. 9.

The same letters of reference denote the same parts.

A, Figs. 1, 2, 3, and 4, represents the "splice," "fish-plate," or "cradle," as it may indifferently be termed, and which hereinafter will be styled the "splice." It consists, essentially, of a base a and two upright portions a' a', which are preferably integral. The upright portions a' a' are spaced sufficiently apart to admit between them the web b of the rail ends B B, as presently described, and in height they extend upward to reach the under side b' of the top b^2 of the rail ends B B, as presently described, and in the direction of their length the portions a' a' extend beyond both ends of the base a, substantially as is represented at a^2 a^2. These extensions are essential to the working of the device. However, the base and the upright portions may be united, whatever the width of the base, whether as wide as is the base b^3 of the rail ends B B or wider or narrower than such base b^3. The upright portions a' a' of the splice must project longitudinally beyond the ends of the base a. It is desirable for the base a in width to extend laterally outward beyond the outer side of the upright portions a' a', and in practice the base a conforms in width to the rail-base b^3. Such a widened base stiffens the splice against a lateral strain, and it adds to the strength of the splice generally.

B B represent the opposing rail ends of the rails to be joined. They are of the usual construction, saving that the lower portion of the rail ends is removed, so that the web b and top b^2 of the rail end shall project longitudinally beyond the lower portion of the rail end, substantially as is shown at b^4, Figs. 5, 7, and 8. The removed portion is preferably confined to the base b^3; but we desire not to be restricted expressly thereto. The chief object in removing this portion of the rail end is to provide room for that part of the splice—namely, the base a—which serves to unite the upright portions a' a'.

The joint is formed substantially as is represented in Figs. 9 to 13. The splice is slipped endwise onto one A of the rail end until half the length of the splice laps upon that rail end, and then the opposing rail end A is slipped into the other half of the splice. When the parts are together, the base of the splice comes between, and at the level of the bases of the two rail ends the upright portions of the splice come snugly against and inclose the opposing webs of the rail ends. The upright portions of the splice at the upper edge thereof come against the under side of the opposing tops of the two rail ends, and the extensions a^2 a^2 of the splice are interlocked with the rail ends—that is, the two extensions a^2 a^2 at one end of the splice are and respectively upon opposite sides of the rail end held between the top and base of the rail end to which that half of the splice is attached, and the two extensions a^2 a^2 at the opposite end of the splice are similarly engaged with opposite rail end. In this manner a single part suffices to perfectly unite the rails and to secure their ends against vertical and lateral displacement. No detachable parts, like nuts and bolts, are needed. There are no projections, lateral or vertical, from the rails to occasion trouble. There is

nothing to work loose, and the line of rail on its under side has substantially a continuous surface adapted as well to longitudinal as to cross ties. An indefinite amount of expansion and contraction of the line of rail is also provided for.

We claim—

In combination with the rails having the lower portion of their opposing ends removed, the herein-described splice, consisting of the base and the upright portions, said upright portions being spaced apart and being extended longitudinally beyond the ends of said base, substantially as described.

Witness our hands this 20th day of July, 1889.

ANDREW J. CURRY.
GEO. W. CURRY.

Witnesses:
C. D. MOODY,
D. W. C. SANFORD.