

No. 661,759.

Patented Nov. 13, 1900.

E. FRANTZ & A. J. LANG, JR.

RAIL JOINT.

(Application filed Aug. 21, 1900.)

(No Model.)

Fig. 1.

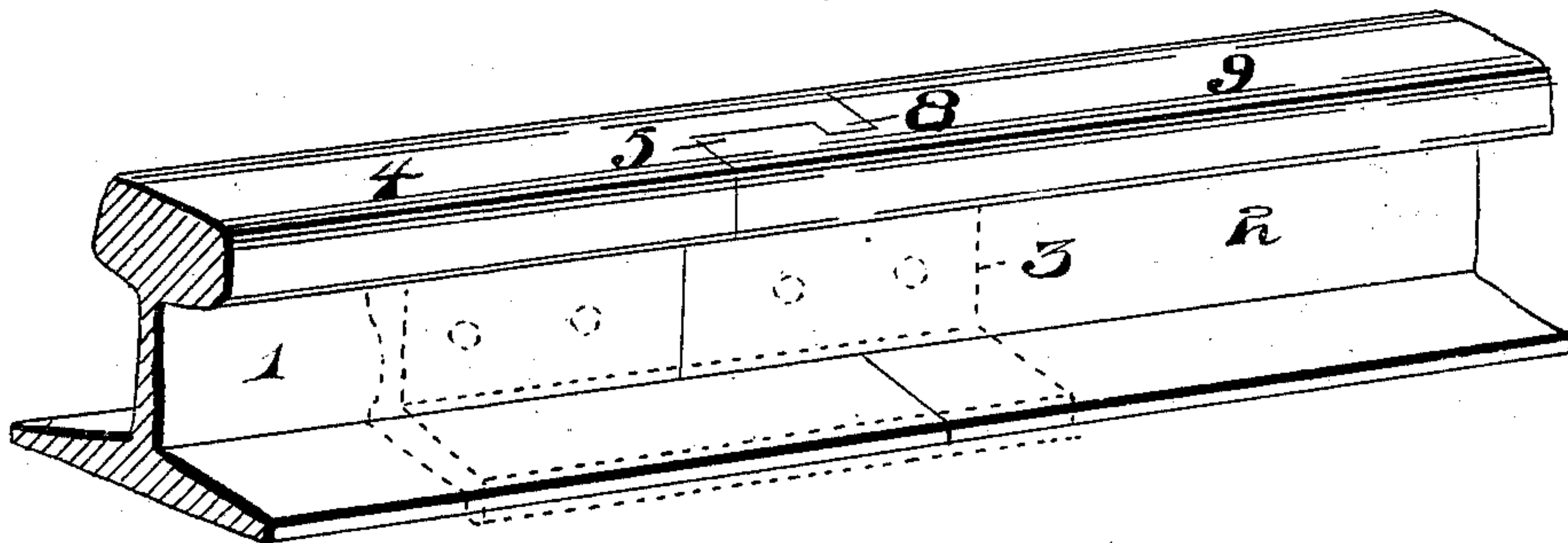


Fig. 2.

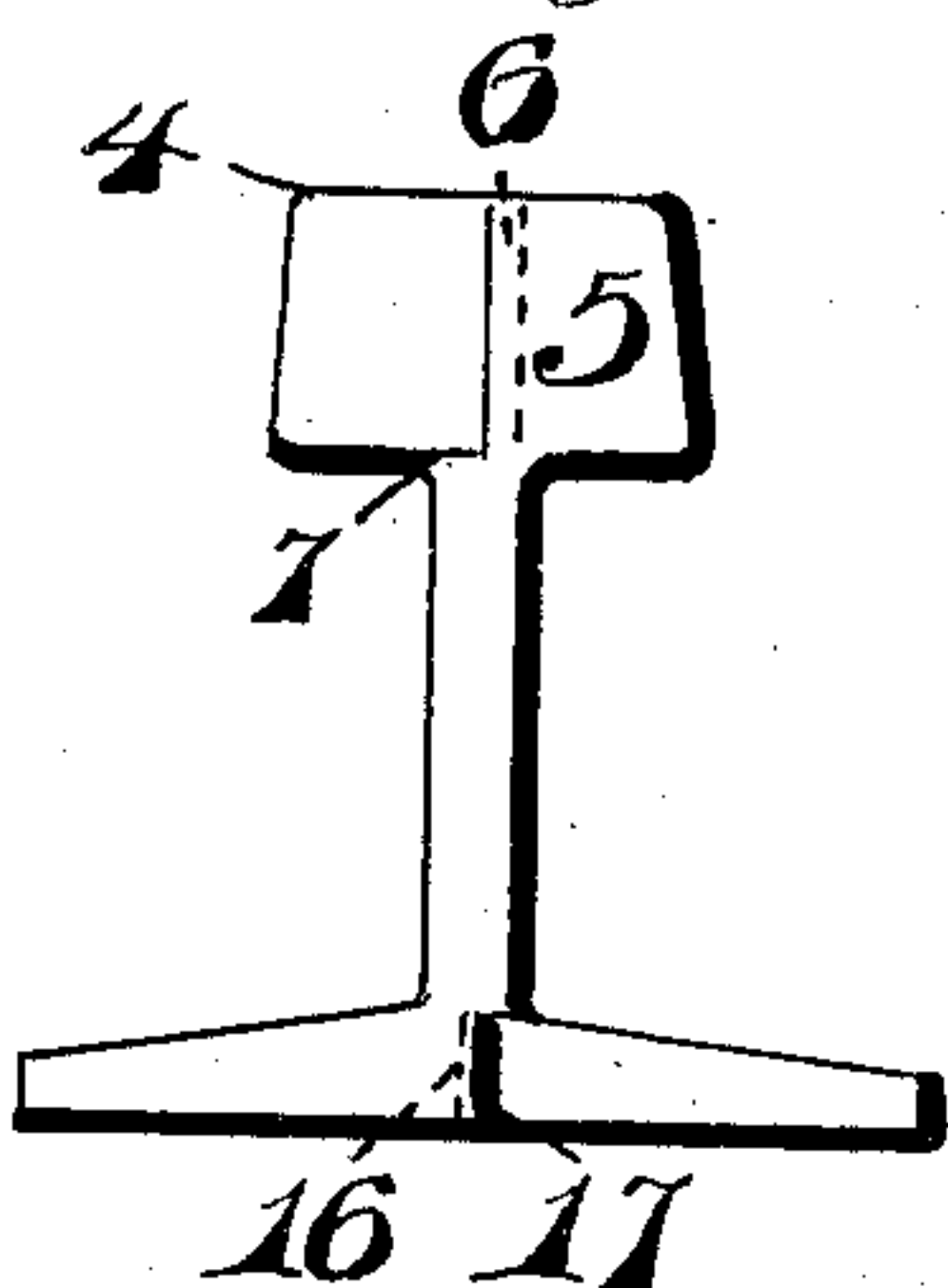


Fig. 3.

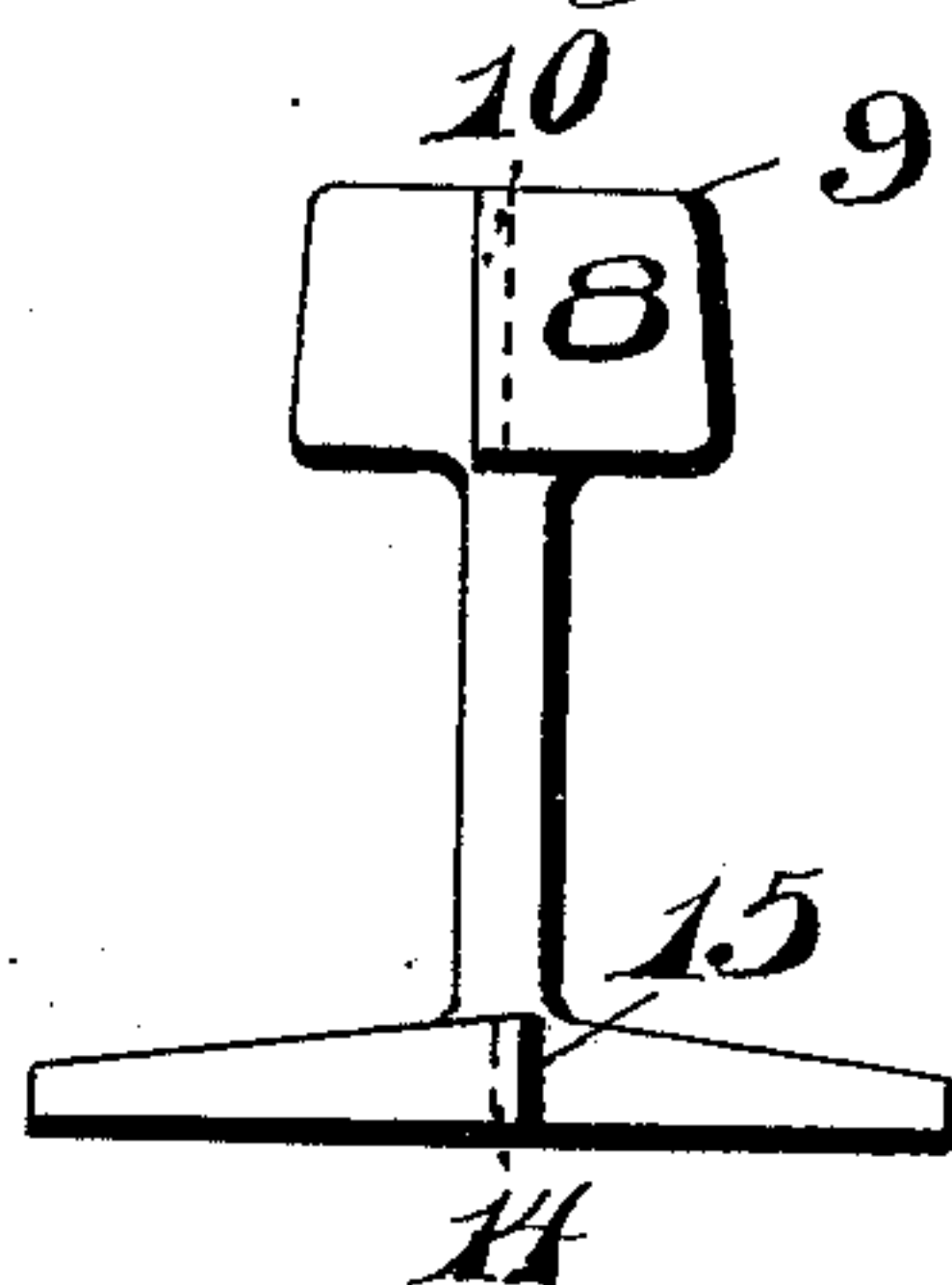


Fig. 4.

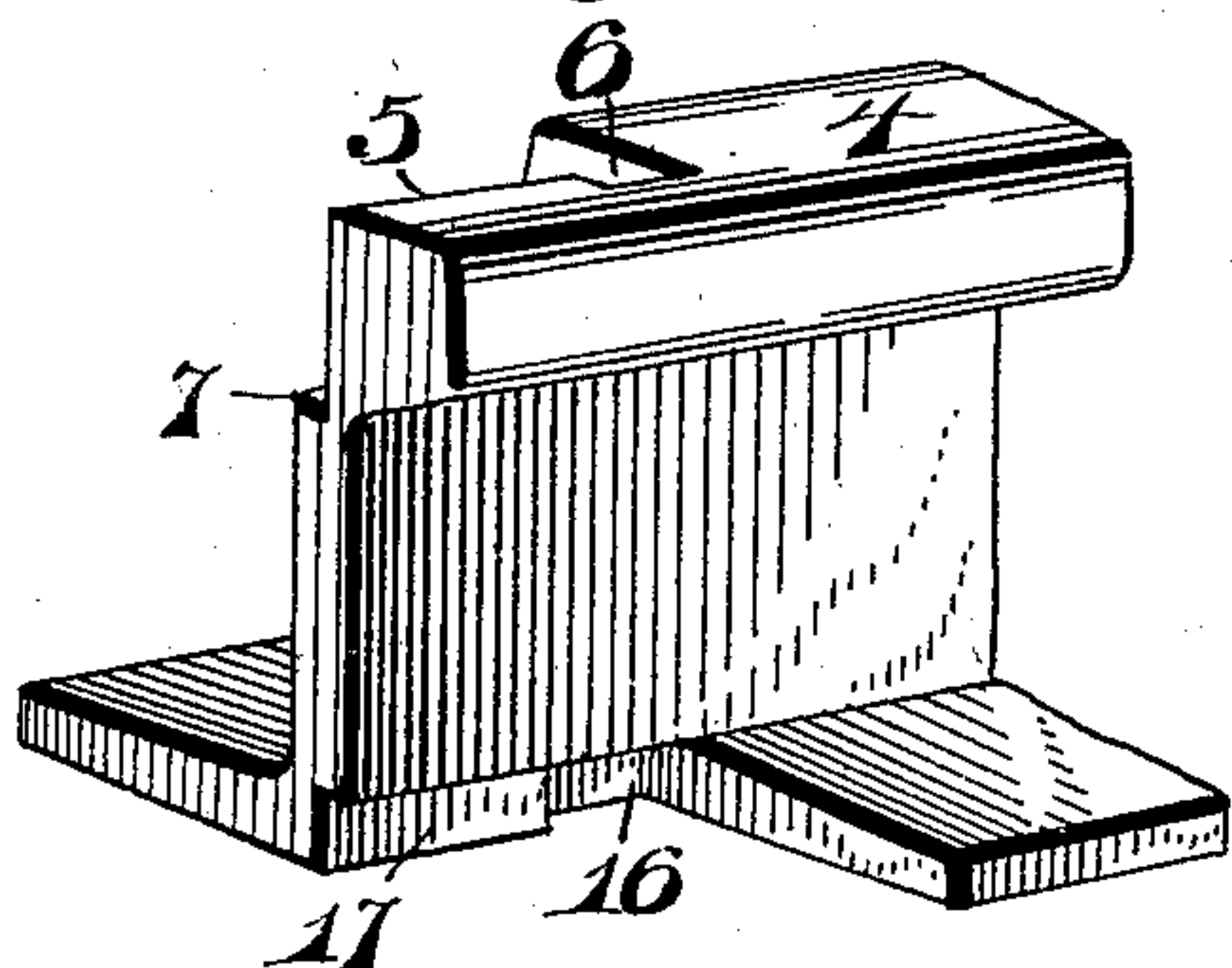
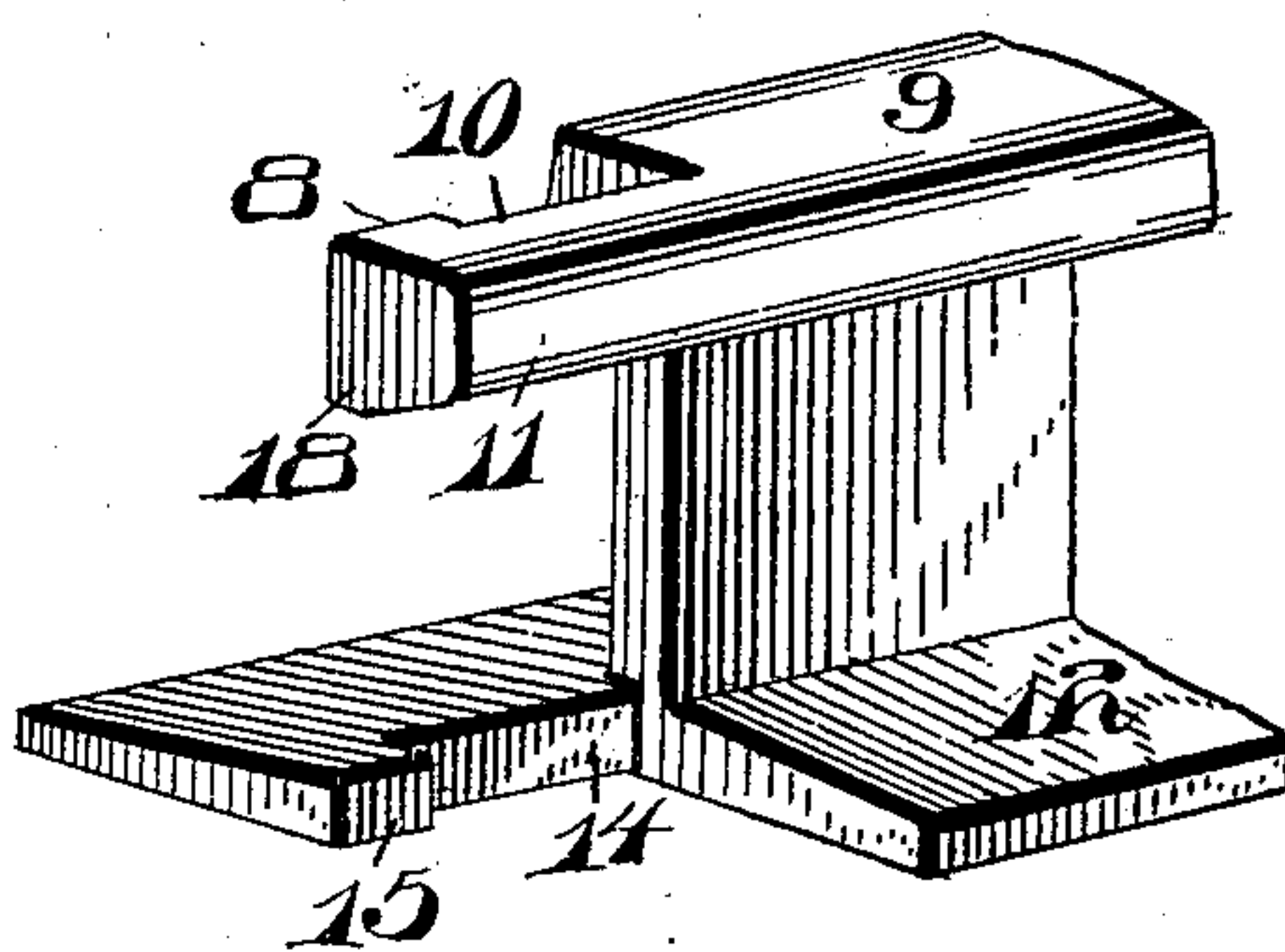


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD FRANTZ AND ALFRED J. LANG, JR., OF ALLENPORT,
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RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 661,759, dated November 13, 1900.

Application filed August 21, 1900. Serial No. 27,598. (No model.)

To all whom it may concern:

Be it known that we, EDWARD FRANTZ and ALFRED J. LANG, Jr., citizens of the United States of America, residing at Allenport, in the
5 county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in rail-joints, and has for its object to provide novel and effectual means whereby two rails may be joined together with or without the aid of the ordinary fish-plates, though preferably we employ
15 our improved joint without the aid of the fish-plates.

Briefly described, the invention consists in forming the ends of the rails in such a manner that the same will match together, the
20 tread of each rail having a tongue or offset and a groove, the tongue or offset of one rail matching in the groove of the engaging rail. The base of each rail is also constructed so
25 that the rails may be matched together, as is done in the tread of the rails.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and where-
30 in like numerals of reference indicate corresponding parts throughout the several views, in which—

Figure 1 is a perspective view of a portion of a pair of rails joined together in accordance with our invention, said view showing
35 the fish-plates in dotted lines, which fish-plates may or may not be employed in the joining of the rails. Fig. 2 is an end view of the rail. Fig. 3 is a like view of the opposite end
40 of the rail and of the matching end of the engaging rail. Figs. 4 and 5 are detail perspective views of a part of the matching ends of the rails.

Referring to the drawings by reference-numerals, 1 indicates one of the rails, and 2 indicates the engaging rail, shown in Fig. 1 as
45 joined together in accordance with our invention, and 3 denotes a fish-plate, which is shown in this view in dotted lines. However,
50 in general practice this fish-plate may be advantageously dispensed with.

The rail 1 is provided in its tread 4, at the end thereof, with a longitudinal cut 5, terminating in a transversely-extending cut 6. These two cuts 5 and 6 form an angular recess
55 which extends transversely of the tread, the cut 5 being of a depth equal to the thickness of the tread and of a width about equal to the half thereof, so that a shoulder 7 is formed at the top of the web. The cut 6 extends
60 a slightly-greater distance into the tread than the width of the cut 5, forming a recess in the tread, which is adapted to receive an offset 8, formed on the tread 9 of the engaging rail 2. This offset 8 is formed by recess-
65 ing the tread 9 of the said rail 2, as at 10, the engaging end of this rail 2 being cut away at the end of the web, so as to form an extending end or tongue 11, integral with the tread 9. The base 12 of this rail 2 is cut away on one
70 side at the end, the upper portion of the cut extending into the web, so as to form a recess 14 and a shoulder or offset 15. The rail 1 is likewise cut away on its base to form a recess 16 and shoulder 17, the latter when the ends
75 are matched together being adapted to fit into the recess 14 of the rail 2, and the shoulder or projection 15 being adapted to fit into the recess 16 of the rail 1.

In order to place the two ends of the rails
80 into interlocking engagement with each other, one or both of the rails are turned slightly to the side and the tongue or projection 11 inserted into the cut-away portion 5, the portion 12 of the base of the rail 2 at the same
85 time entering the cut-away portion of the base of the rail 1. The rails are then turned to the upright position, which will cause the projection or block 8 to engage in the recess formed by the cut 6, the shoulder or offset 15 to
90 engage in the recess 16, and the shoulder or offset 17 to engage in the recess 14. The underneath face of the projection or tongue 11 is formed with a seat 18, which will rest neatly upon the shoulder 7 of the rail 1, at which
95 time the rail ends will be locked together, requiring a partial turn of the rails in order to disengage the lock.

It will be readily observed that the lateral movement of the rail ends will be prevented
100 when this interlocking of the rail ends is accomplished, and the fish-plates may be readily

dispensed with, though this construction of the rail ends may be employed with the fish-plates if so desired.

5 It will be noted that various changes may be made in the details of construction without departing from the general spirit of our invention.

10 Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a rail-joint, the combination of the engaging rail ends, one of which is provided in the side of its tread at the end of the rail with an angular recess and is cut away in its base at

the opposite side of the rail, and the other of 15 which rail ends has a projecting tongue adapted to fit in the angular recess and is cut away on one side of its base at the end of the rail whereby the tread and base of the rails may be interlocked, substantially as described. 20

In testimony whereof we affix our signatures in the presence of two witnesses.

EDWARD FRANTZ.
ALFRED J. LANG, JR.

Witnesses:

E. M. WALTERS,
JANE SISLEY.