

No. 785,623.

PATENTED MAR. 21, 1905.

D. J. MACDONALD.

RAIL JOINT.

APPLICATION FILED JULY 1, 1904.

Fig. 1.

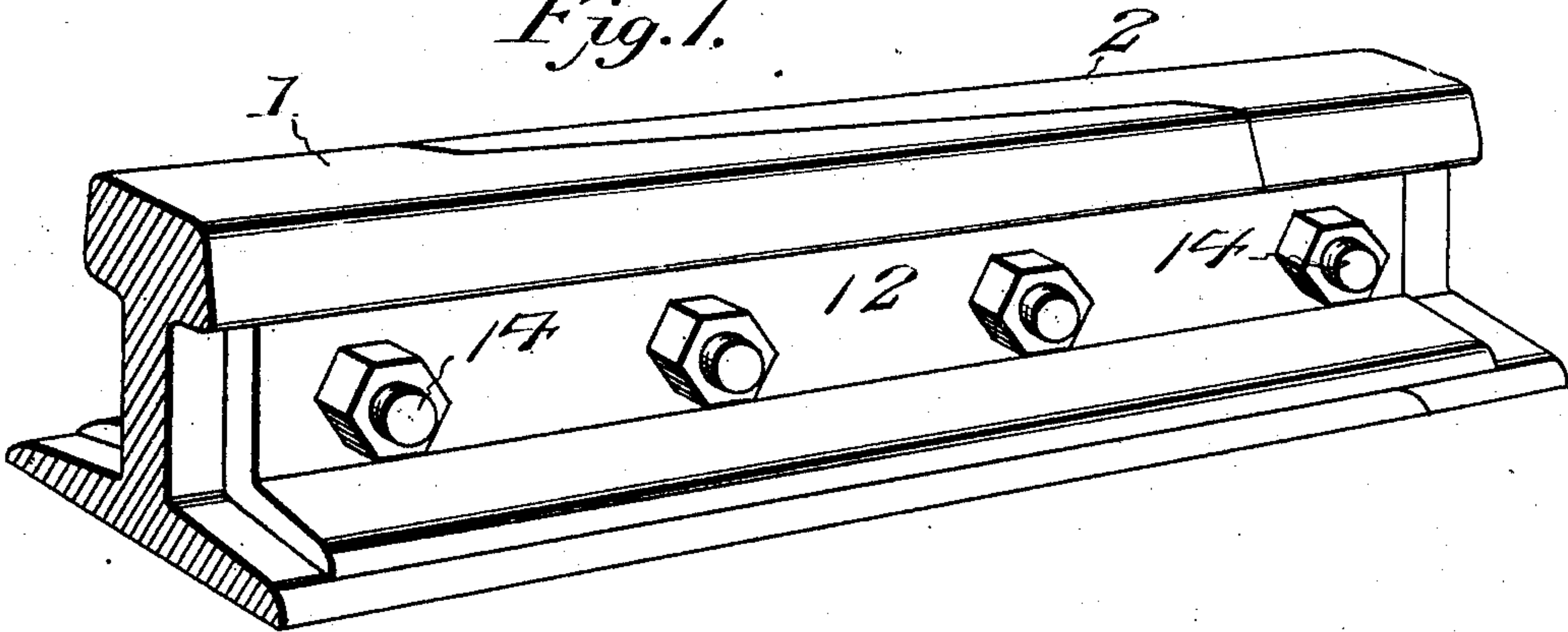


Fig. 2.

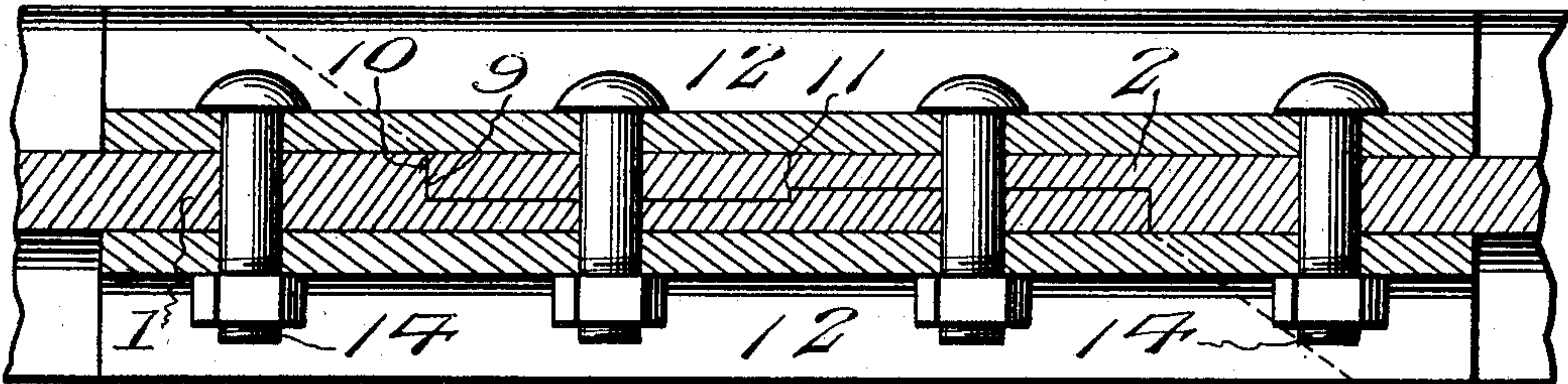
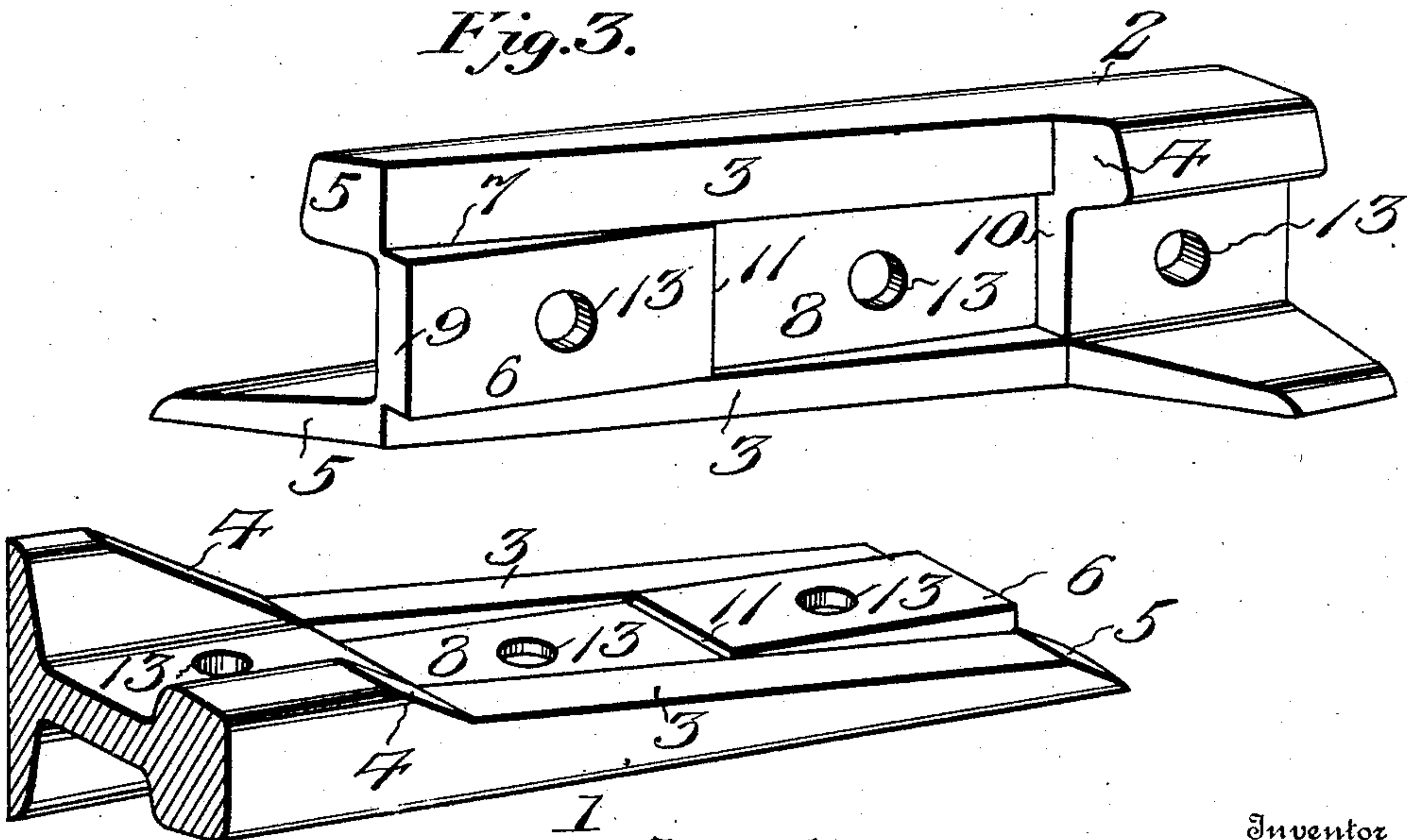


Fig. 3.



Witnesses

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RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 785,623, dated March 21, 1905.

Application filed July 1, 1904. Serial No. 215,039.

To all whom it may concern:

Be it known that I, DANIEL J. MACDONALD, a citizen of the United States, residing at Groton, in the county of New London and State of Connecticut, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to that class of rail-joints in which the opposing ends of the rails are designed to overlap.

The objects of the invention are to improve and simplify the construction of such devices.

With the foregoing objects in view the invention resides in the precise combination and arrangement of parts and in the exact details of construction hereinafter described and claimed as a practical embodiment thereof.

In the drawings, Figure 1 is a perspective view of a rail-joint embodying the invention; Fig. 2, a transverse horizontal section through the rail-webs and fish-plates, and Fig. 3 perspective views of the opposing ends of two rails separated and viewed in different positions.

Referring to the drawings, 1 and 2 indicate adjoining ends of two rails, each end being of similar form and the meeting faces of each rail being formed in opposite arrangement, as is commonly practiced in this class of joint.

In the present invention the meeting faces are formed on a bevel to cause the surface of the rail to be broken on a slant, and while preserving this well-known form of joint the same is shown modified by forming the major part of the overlapping portion of the rail with a slightly-beveled face 3, beginning from and ending in an offset 4 and 5, respectively, which are formed on an abrupt bevel and which bring said face 3 well within the central part of the rail in order to extend its bearing therein. As a result of this general formation all the advantages of a break-joint having its meeting face extending through the web of the rail and parallel therewith are pre-

served in combination with all of the advantages of a beveled joint.

The main beveled face 3 is provided with a protrusion or block 6, formed, preferably, on the web part of the rail and having an outer face parallel to the sides of the rail, which protrusion or block presents upper and lower shoulders 7. In the rear of the block 6 is formed a recess 8 of corresponding size and form to receive a similar block on the adjoining rail. In this manner vertical shoulders 9, 10, and 11 are provided within the web, which form the necessary bearing to resist contraction and expansion and prevent the beveled offset faces 4 and 5 from coming into bearing contact with their corresponding faces upon the adjoining rail.

From the foregoing it will be seen that no alterations are made in the usual lines of the rail, the perfect form of the rail being preserved in the bringing together of the overlapping ends, so that the well-known form of fish-plates 12 may be employed in the usual manner for securing the ends of the rails together, the web being drilled, as at 13, for the location of the securing-bolts 14. It will be observed that one of the perforations 13 extends through the recess 8 and another perforation 13 extends through the block 6, as shown clearly in Fig. 3. When the bolts are passed through these perforations, the block of one rail end is held securely within the recess of the other, as will be apparent, whereby a stronger joint is secured.

As herein described and shown the several features of the invention are presented as combined in a preferred construction; but it will be obvious that in practicing the invention modifications can be made without departing from the spirit and scope of the invention as to its several features.

Having thus described the invention, what is claimed is—

In a rail-joint, the combination of two rails,

having their opposing ends overlapping and having flat meeting faces beveled and terminating at each end in an offset having a flat abruptly-beveled face, each meeting face being provided with a protruding portion having a perforation, and a depression corresponding to the protruding portion and adapted to receive the protruding portion of the adjoining rail, said depression having a per-

foration therein, and bolts extending through the perforations for securing the rails together, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

DANIEL J. MACDONALD.

Witnesses:

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