B. BRILL, Jr. & A. A. THOMPSON.

RAIL AND JOINT THEREFOR.

APPLICATION FILED SEPT. 7, 1909.

962,740.

Patented June 28, 1910.

2 SHEETS—SHEET 1.

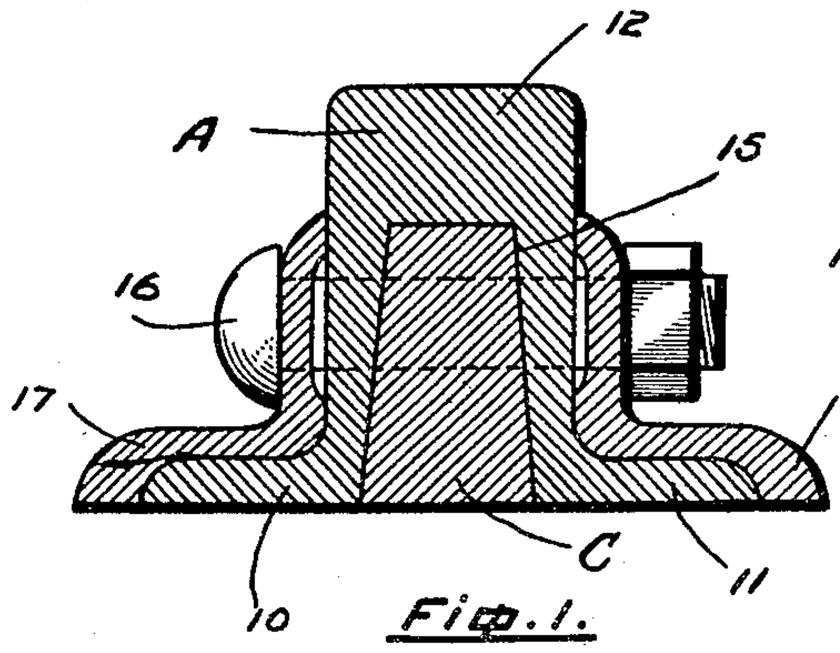

Fig. 1.

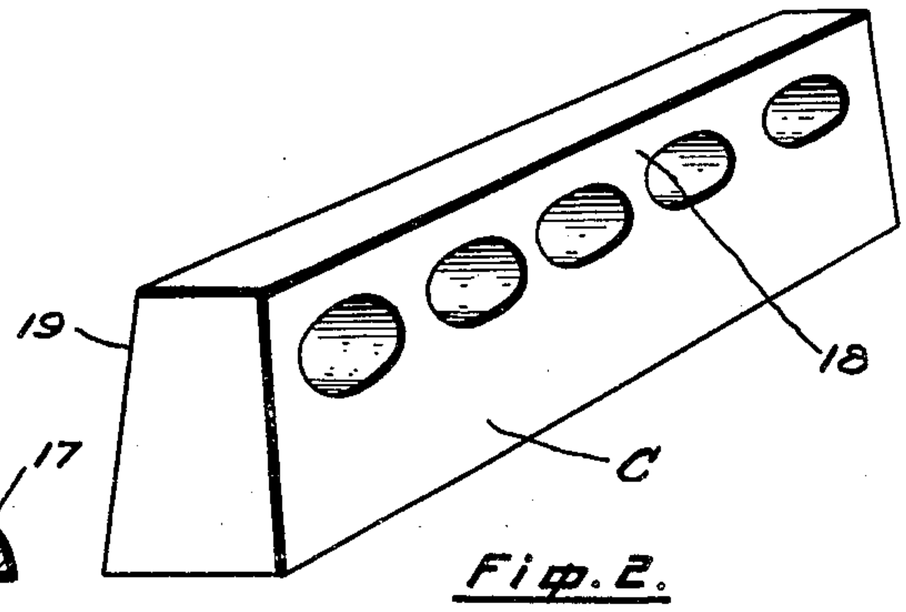

Fig. 2.

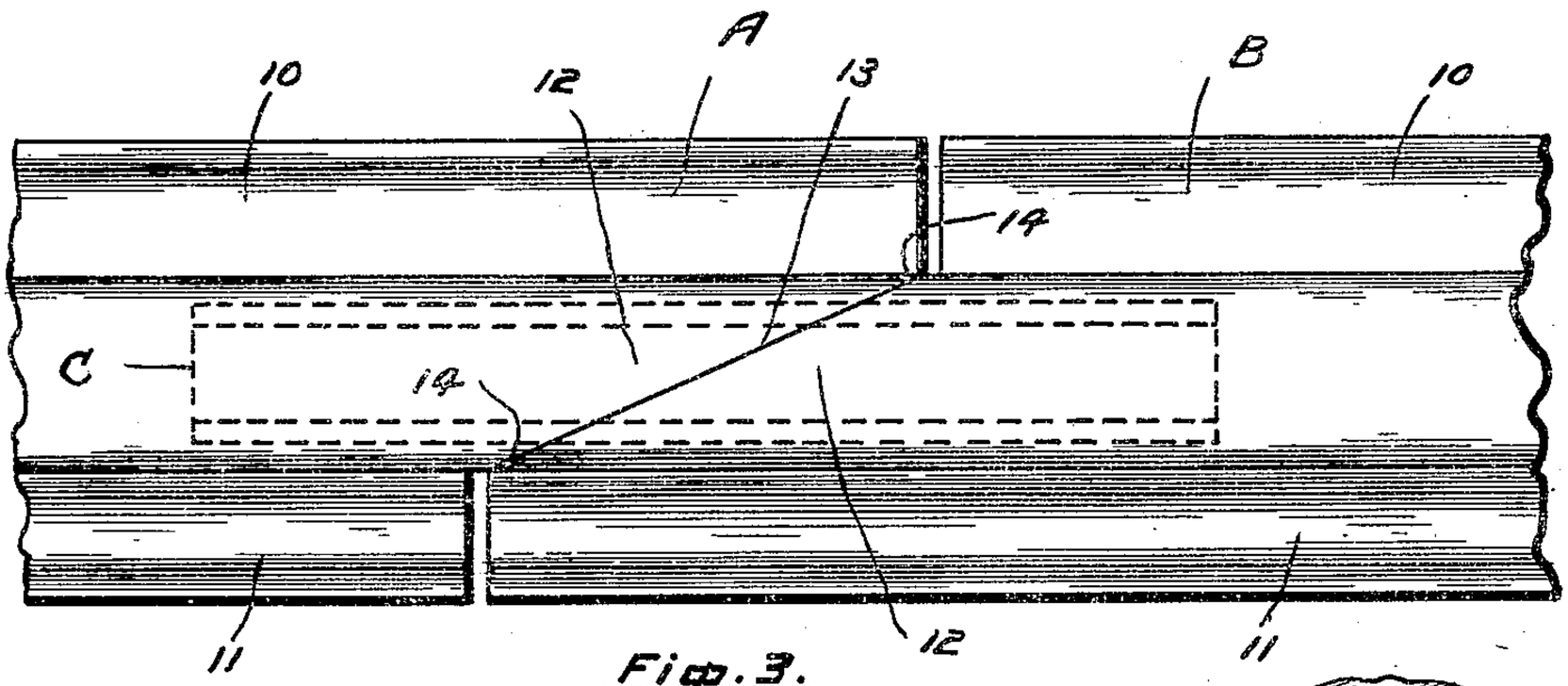

Fig. 3.

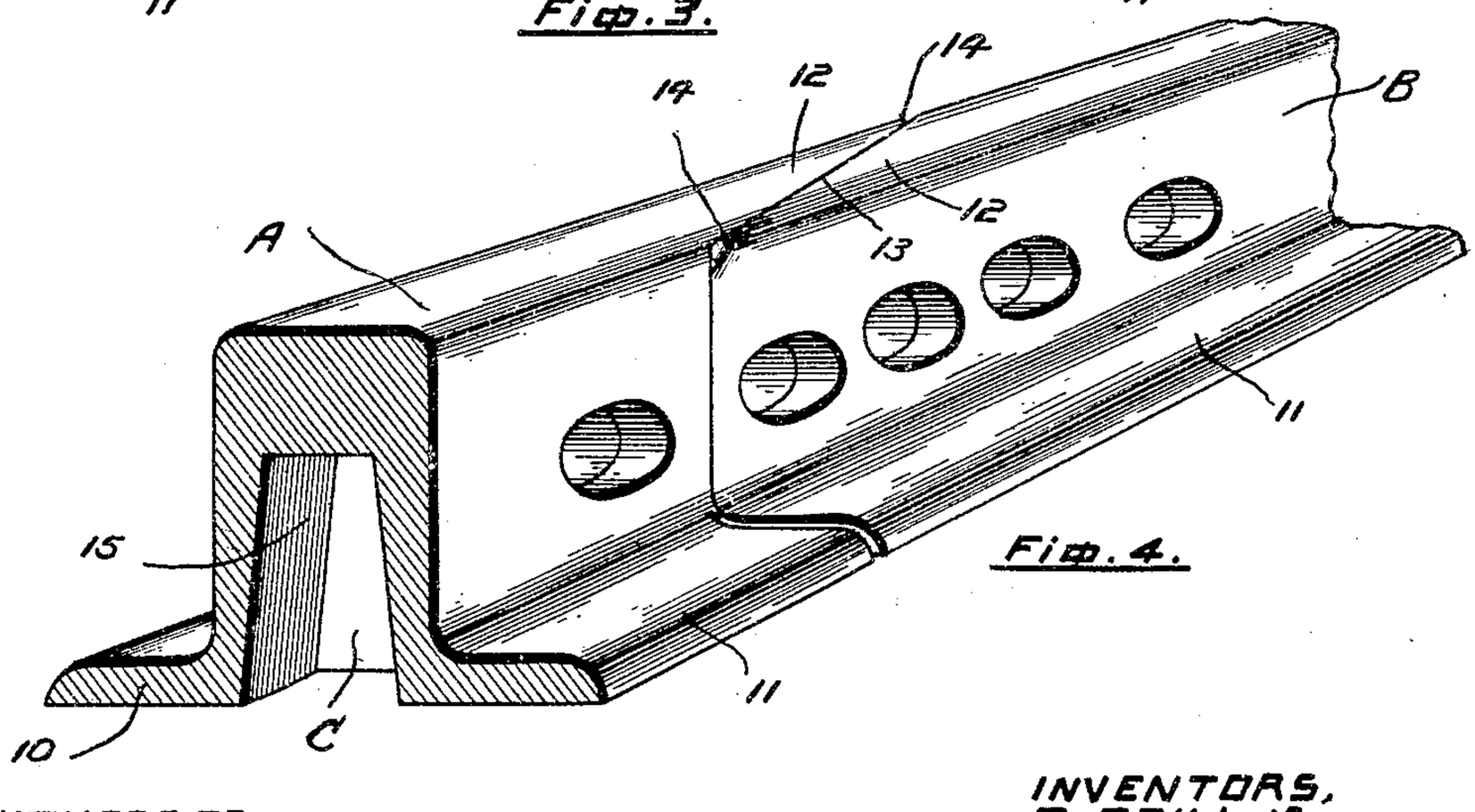

Fig. 4.

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2 SHEETS—SHEET 2.

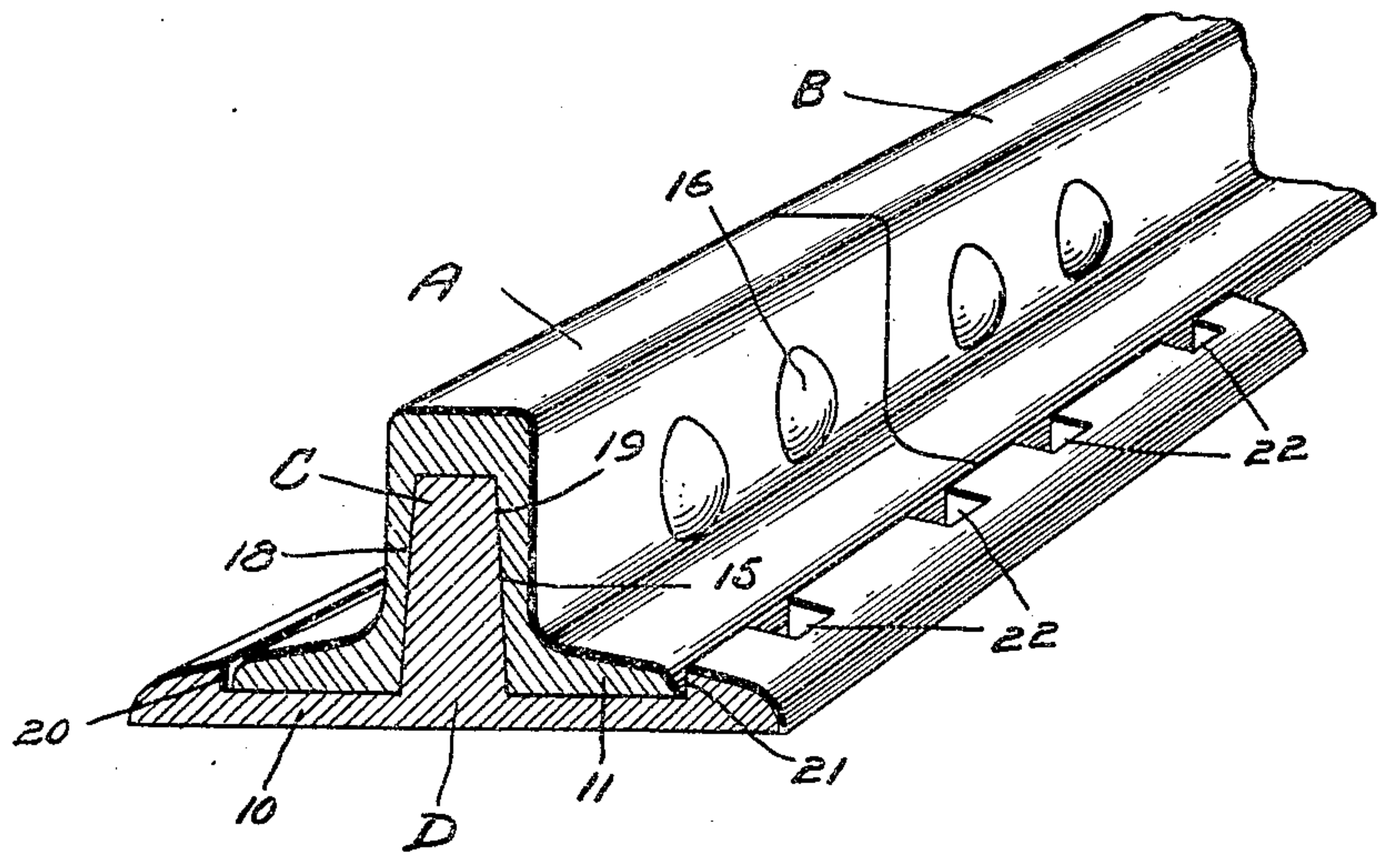

Fig. 5.

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UNITED STATES PATENT OFFICE.

BENJAMIN BRILL, JR., OF NORTH BAY, ONTARIO, AND ALFRED A. THOMPSON, OF MONTREAL, QUEBEC, CANADA.

RAIL AND JOINT THEREFOR.

962,740. Specification of Letters Patent. **Patented June 28, 1910.**

Application filed September 7, 1909. Serial No. 516,398.

To all whom it may concern:

Be it known that we, BENJAMIN BRILL, Jr., of North Bay, in the Province of Ontario, Canada, and ALFRED A. THOMPSON, of Montreal, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Rails and Joints Therefor, of which the following is a specification.

Our invention relates to improvements in rails and joints therefor, and the objects of our invention are to provide a simple and secure form of joint, which will eliminate the bumping through uneven joining surfaces, and in which the joining rails will be held accurately in proper alinement; and it consists essentially of U-shaped rails provided with outwardly turned flanges, and having the center portion of the meeting rails formed with a split joint while the flanges are adapted to form a butt joint, and a central supporting member completely filling the center part of the rail for a distance on either side of the line of juncture, and suitably secured in position as hereinafter more fully set forth and described in the accompanying specification and drawings.

In the drawings, Figure 1 is a transverse section through the rail joint. Fig. 2 is a perspective view of the central supporting member. Fig. 3 is a plan view of the joint. Fig. 4 is a perspective view of the joint with the angle bars removed. Fig. 5 is a perspective view of an alternative form of the invention.

In the drawings like figures of reference indicate corresponding parts in each figure.

Referring to the drawings, A and B represent two meeting rails which are formed substantially U-shaped in cross-section, and provided at the base, with outwardly turned flanges 10 and 11. The central portions 12 of the rail form a split joint with each other, which is accomplished by forming inclined faces 13 on their extremities. The flanges, however, are adapted to meet with a butt joint, the arrangement being such that ordinarily the flanges will not actually abut each other, but, when the rails expand they will finally abut, and prevent further sliding movement of the central portion on the rails, as this sliding movement would be detrimental in that it would project the points on the central portion outwardly and cause them to engage the wheels on a passing train. To further avoid this difficulty, the upper end 14 on the points is rounded off slightly.

C represents the central supporting member made in the form of a plug which fills the entire center space 15 of the rails, and extends a substantial distance on either side, holding the rails in proper alinement with each other, and being itself held in position by suitable means, such as the fastening bolts 16 extending through the rails, angle plates 17 and the plug. It may be observed that this plug forms a very convenient means for joining broken rails, as, if a break should occur in a rail, the plug may be inserted in it connecting the broken parts of the rail, and bolts may be inserted through the plug and rail, thus binding them effectively together.

The sides 18 and 19 of the plug are preferably tapered inwardly toward the top, whereby a wedging resistant action may be attained.

In the form of the invention shown in Fig. 5, to prevent gripping of the rail, the plug C has a bottom plate D preferably formed integral with and extending beneath the same and having flanges 20 and 21 at the sides engaging the edges of the rail, the said plate being held in position by spikes extending through suitable perforations 22 in the same to the ties.

What we claim as our invention is:

1. The combination with two meeting rails U-shaped in cross-section and having outwardly-turned flanges at the bottom, the center portion of said rails meeting on an inclined plane while the flanges are adapted to form butt joints with each other, of a supporting means extending in the central portion of the rail and connected to each rail.

2. A rail joint comprising two rails having outwardly turned flanges along their bottoms, the center portion of said rails meeting along an inclined plane, while the flanges are normally separated but are adapted to abut when the rails expand, and means connecting the rails on opposite sides of the line of juncture.

3. The combination with two meeting rails U-shaped in cross-section, of a supporting member filling the central space of the rails and extending over a distance on

each side of the line of juncture, a bottom plate integral with the supporting member having upturned flanges at the outer extremity thereof for engaging the outer edge of the bottom of the rails the said flanges being formed with perforations through which the spikes may extend, which perforations are located in that portion of the flange which lies outwardly of the rail whereby, the spike does not extend through the rail.

In witness whereof, we have hereunto set our hands in the presence of two witnesses.

BENJAMIN BRILL, JR.
ALFRED A. THOMPSON.

Witnesses as to Benjamin Brill, Jr.:
RUSSEL S. SMART,
MARY C. LYON.

Witnesses as to Alfred A. Thompson:
CHAS F. DICKERSON,
R. T. CRANE.