No. 778,625. PATENTED DEC. 27, 1904.

D. C. BASSETT.

RAIL JOINT.

APPLICATION FILED JULY 18, 1903.

2 SHEETS—SHEET 1.

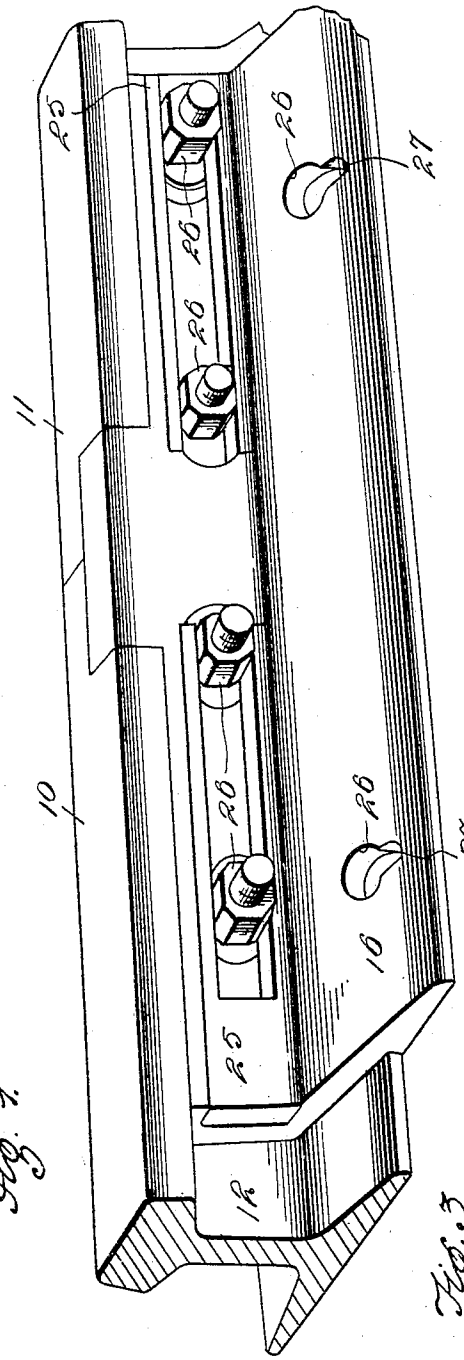


Fig. 1.

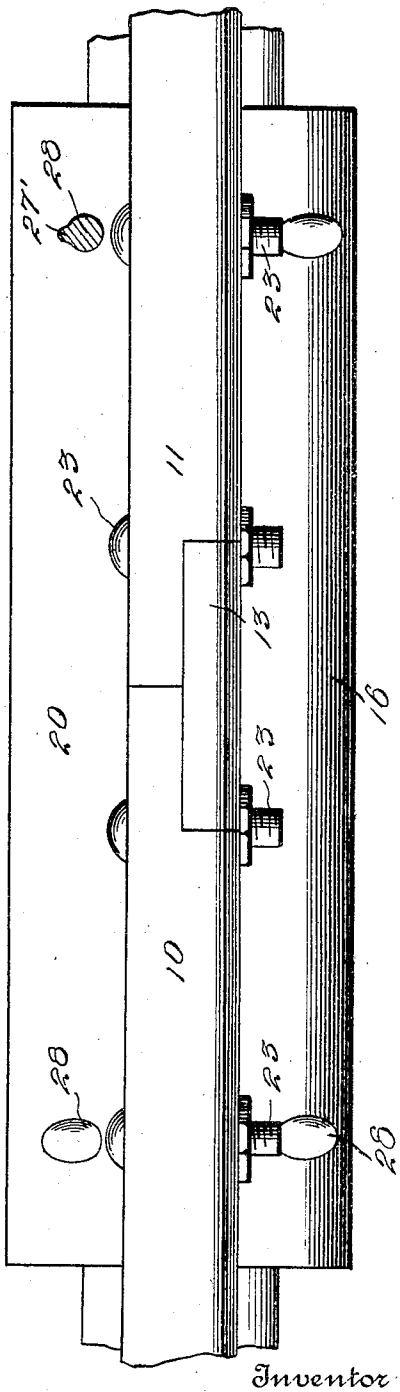


Fig. 3.

Witnesses

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2 SHEETS—SHEET 2.

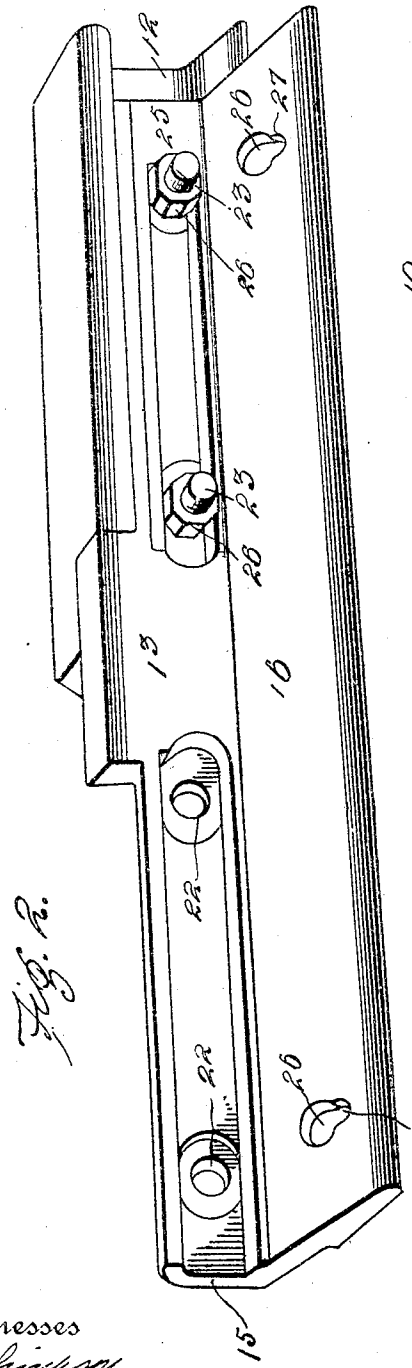


Fig. 2.

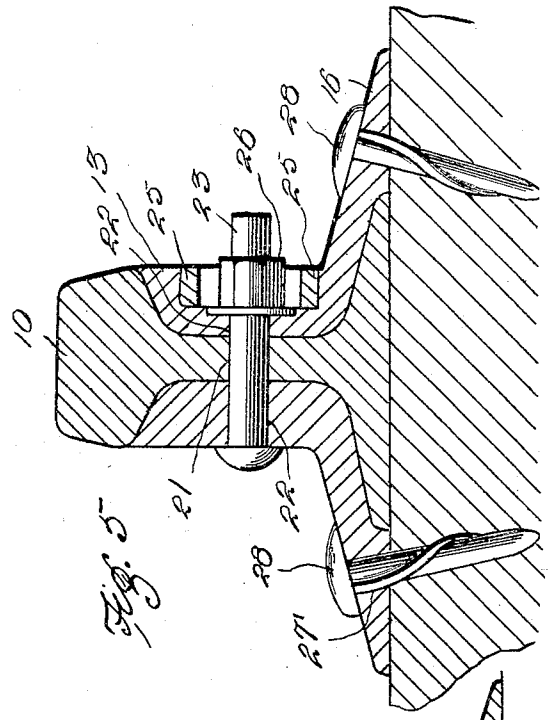


Fig. 3.

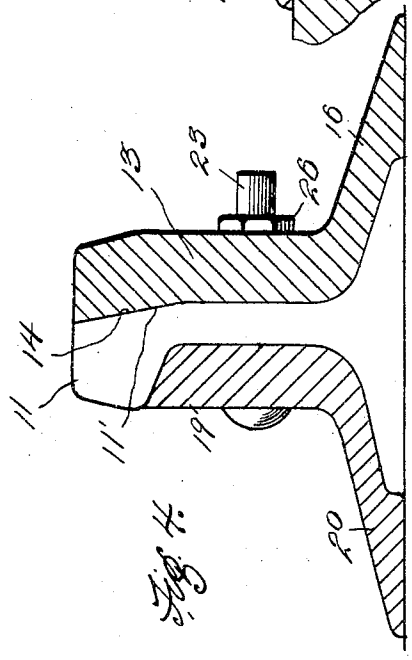


Fig. 4.

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UNITED STATES PATENT OFFICE.

DEWITT C. BASSETT, OF WOONSOCKET, SOUTH DAKOTA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 778,625, dated December 27, 1904.

Application filed July 18, 1903. Serial No. 166,111.

To all whom it may concern:

Be it known that I, DEWITT C. BASSETT, a citizen of the United States, residing at Woonsocket, in the county of Sanborn, State of South Dakota, have invented certain new and useful Improvements in Rail-Joints; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to joints for railway-rails; and it has for its object to provide a construction embodying a fish-plate having a tread portion which is fitted in corresponding recesses formed in the treads of the abutting ends of the rails, the fish-plate being provided with means for locking the nuts of the connecting-bolts and having in combination therewith screw-spikes and means for insuring rotation of the spikes as they are driven into the ties.

In the drawings forming a portion of this specification, in which like numerals of reference indicate similar parts in the several views, Figure 1 is a perspective view showing the abutting end portions of two rails secured by means of fish-plates embodying the present invention. Fig. 2 is a perspective view showing one of the rails removed and the fish-plate held to the other rail. Fig. 3 is a top plan view of Fig. 1, the head of one of the spikes being removed. Fig. 4 is a transverse section of Fig. 1 in a plane between the abutting ends of the rails. Fig. 5 is a transverse section through a fish-plate and showing in elevation a spike passed through a perforation of the fish-plate.

In the drawings there are shown the end portions of rails 10 and 11, the tread of the rails at their abutting ends being cut away at the same side of the webs thereof, so that the resultant faces 11 are beveled or lie at obtuse angles to the corresponding side faces of the webs of the rails, said webs being shown at 12. The cutting away of the sides of the treads of the end portions of the rails results in the formation of a recess and in this recess is disposed the enlargement or tread 13, which is formed at the upper edge and centrally of the web 15 of a fish-plate including also the flange 16. This fish-plate is disposed with its web portion against the webs 12 of the rails with its flange 16 resting upon the ties, the upper edge of the web of the fish-plate fitting snugly beneath the treads of the rails at both sides of the enlargement or tread portion 13. The portion 13 of the fish-plate is flush with the upper and side faces of the treads of the rails and breaks joints with the rails, so that the running of car-wheels over the joints of the rails is smooth and hammering is prevented. The inner face 17 of the tread enlargement 13 is beveled, so as to lie snugly against the faces 11 of the rails, so that any mashing of this portion 13 that occurs serves to increase the intimacy of contact between the adjacent side faces of the treads of the rails and fish-plates.

A second fish-plate 19 is provided and is fitted with its web portion against the web of the rails between the treads and flanges thereof in the same manner as the first-named fish-plate, with the exception that it has no tread portion. The flanges 16 and 20 of the fish-plates extend over and beyond the flanges of the rails and are recessed in their under faces to receive the flanges of the rails, so that the laterally-projecting portions of the flanges of the fish-plates are flush with those of the rails, and they rest flat upon the ties therewith.

Through the rails are formed the usual transverse perforations 21, which are brought into alinement with corresponding transverse perforations 22 in the fish-plate to receive clamping-bolts 23, which hold the parts together. The perforations in the fish-plates are elongated longitudinally of the fish-plates to permit of slip of the bolts therein to compensate for contraction and expansion of the rails, and the perforations of the first-named fish-plate are countersunken, as shown at 23, to receive the washers. The web 15 is recessed in the outer faces of the end portions thereof, and in these recesses are slidably fitted U-shaped plates 25, which straddle the nuts 26 on the bolts and by embracing them closely prevent their rotation and consequent disengagement.

Through the flanges of the fish-plates are formed perforations 26, having lateral narrowed extensions 27. Spikes 28 are provided

of a diameter to fit the perforation and having a helical flange 27′ disposed to engage the portion 27, so that as the spikes are driven into the ties they are rotated forcibly and are screwed into the ties. By thus screwing the spikes into the ties they are held securely against withdrawal under the influence of the usual strain on the spikes.

The upper and lower walls of the recesses in which the locking-plates are received are beveled inwardly and the upper and lower edges of the locking-plates are correspondingly beveled, so that lateral displacement of the locking-plates is prevented.

What is claimed is—

The combination with two abutting elements having alining recesses forming a longitudinal depression at the joint thereof, of a plate having a projection engaged in said depression to hold the plate against longitudinal movement with respect to said abutting elements, the plate having longitudinally-disposed recesses formed therein and extending from opposite ends and terminating adjacent to the ends of the projection, bolts piercing the abutting elements and the plate, nuts upon the bolts disposed within the recesses of the plate, and a bifurcated locking-bar fitted within each recess with its prongs engaged upon opposite sides of the nuts and the corresponding opposite edges of the recesses, whereby the nuts are locked, the said bars are frictionally sustained against displacement and the plate held against longitudinal movement.

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

DEWITT C. BASSETT.

Witnesses:

J. B. CAMERON,

R. P. BURTON.