

No. 788,991.

PATENTED MAY 2, 1905.

E. A. BARRY.

RAIL JOINT.

APPLICATION FILED DEC. 31, 1904.

Fig. 1.

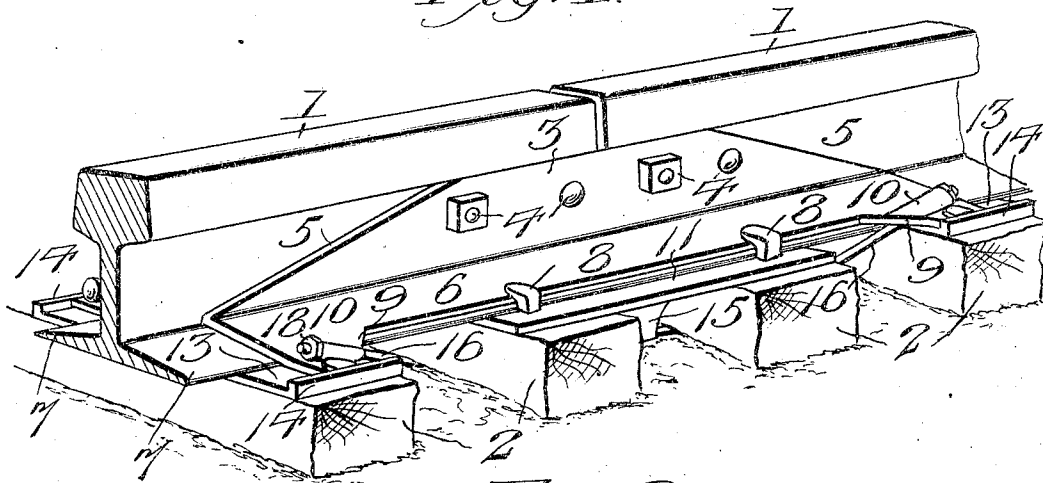


Fig. 2.

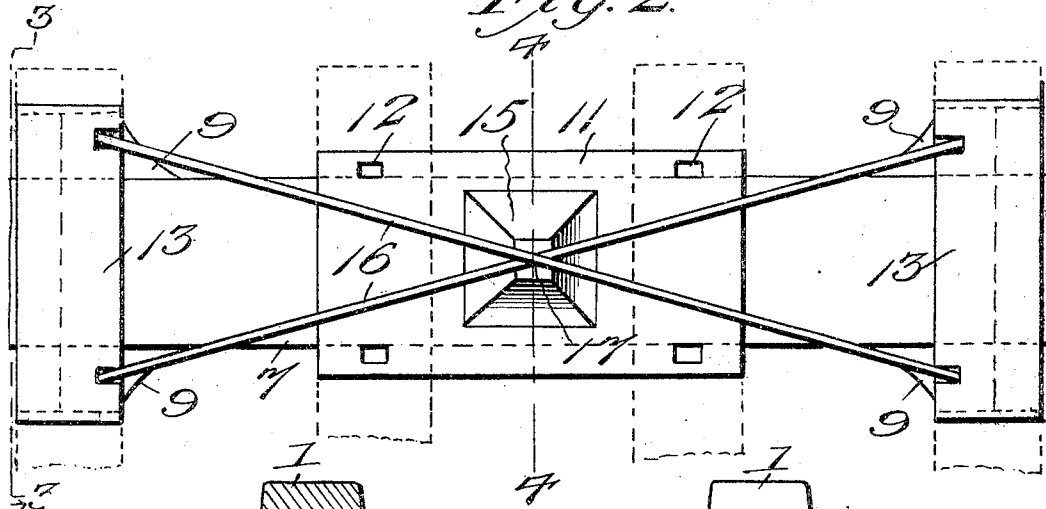


Fig. 3.

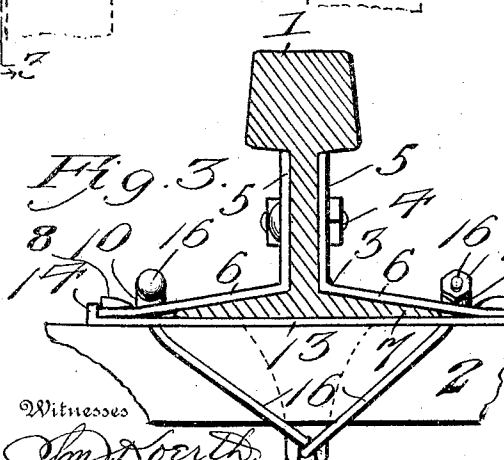
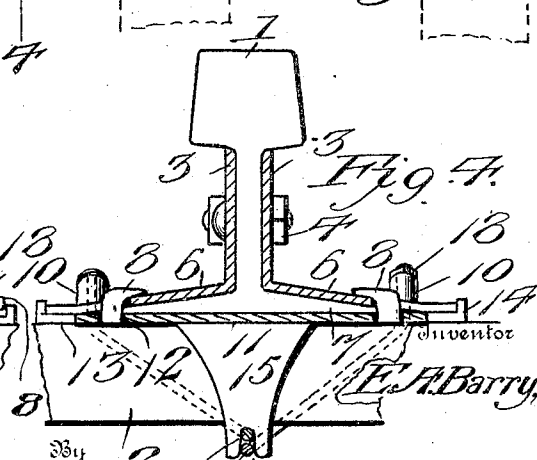


Fig. 4.



Witnesses

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RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 788,991, dated May 2, 1905.

Application filed December 31, 1904. Serial No. 239,104.

To all whom it may concern:

Be it known that I, EDWIN A. BARRY, a citizen of the United States, residing at Sutherland, in the county of O'Brien and State of Iowa, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail-joints designed especially as an improvement on the construction disclosed in Letters Patent No. 774,642, granted to me October 20, 1904, and has for its objects to simplify the construction disclosed in said patent and to provide a device of this character in which the meeting ends of the rails are more firmly supported to prevent sagging and one wherein the joint will be stronger and more durable and the strains to which it is subjected in practice effectually equalized between the parts.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described

In the accompanying drawings, Figure 1 is a perspective view of a rail-joint embodying the invention. Fig. 2 is a bottom plan view of the same. Fig. 3 is a vertical transverse section taken on the line 3 3 of Fig. 2. Fig. 4 is a vertical sectional elevation, the section being taken on the line 4 4 of Fig. 2.

Referring to the drawings, 1 1 designate the rail-sections assembled, as usual, in endwise relation and sustained by ties 2, there being disposed upon opposite sides of the rails at their meeting ends fish-plates 3, secured in place by means of transverse bolts 4 entered through the fish-plates and rail-webs, as customary.

The fish-plates 3, which have the ends of their vertical portions downwardly and outwardly beveled or inclined, as at 5, are formed with horizontally-disposed flanges 6, adapted to seat upon the upper faces of the base-flange 7 of the rail and to be engaged at their outer edges by the spikes or other fastening members 8, employed for securing the rail-sections to the underlying ties 2, while the flange 6 of each fish-plate terminates adjacent the ends of the latter in transverse extensions 9, which project beyond the adjacent outer edge of the base-flange 7, there being formed upon

each of these extended portions a diagonally-inclined tubular lug 10.

Arranged upon a pair of the ties 2, which are adjacent the meeting ends of the rail-sections 1, is a horizontal plate 11, which lies beneath the base-flanges 7 of the sections at their point of meeting and is provided with suitable openings or perforations 12, through which the spikes 8 are entered into the underlying ties, whereby the spikes serve the further function of securing the plate in place, while upon the upper faces of the ties 2 at the ends of the fish-plates are arranged wear-plates 13, likewise secured in place by means of the adjacent spikes 8 and having upturned end flanges 14, against the inner faces of which the outer ends of the extensions 9 bear, thus to relieve the spikes of a portion of the strains incident to transverse movements of the rails.

Situated between the inner ties 2 and directly beneath the meeting ends of the sections 1 is a bearing block or chair 15, which bears at its upper face upon the lower face of plate 11 and is secured in place by a pair of crossed bracing and tensioning rods or elements 16, which at their point of intersection enter an appropriately-formed seat or recess 17, provided in the lower face of the chair 15, the terminals of these rods being threaded through the tubular bearing-lugs 10 and secured in place by means of adjustable nuts 18, tapped onto the ends of the rods. It is to be particularly observed in this connection that the rods 16 extend beneath the lower faces of the pair of ties 2, which are adjacent the inner ends of the rail-sections, and, furthermore, that the ends of each rod are connected, respectively, with the fish-plates at opposite sides of the rail, whereby when the rods are tensioned the meeting ends of the rails will be drawn tightly downward toward the adjacent underlying ties and the strains upon either of the rods will be borne in part by each of the fish-plates, while owing to the rods being crossed the strain thereon incident to pressure upon one rail-section will be transmitted through both rods to the fish-plates at the opposite end of the rail-joint. It is further apparent that the rods may be tensioned by manipulating the nuts 18 for pressing the

block or chair 15 firmly upward beneath the rails at their point of meeting.

Having thus fully described the invention, what is claimed as new is—

5 1. In a rail-joint, a pair of rail-sections assembled in endwise relation, cross-ties beneath the rails, fish-plates attached to the rails, a block or chair disposed to bear beneath the meeting ends of the rail-sections, and a pair
10 of crossed tension elements having their ends connected with the fish-plates and engaged between their ends with the block for maintaining the latter in place.

2. In a rail-joint, a pair of rail-sections assembled in endwise relation, cross-ties beneath
15 the rails, a block or chair arranged to bear beneath the meeting ends of the rail-sections and having a seat, and a pair of crossed tension elements engaging said seat and having their
20 ends operatively connected with the opposite rail-sections, the elements being extended beneath the ties on opposite sides of the block.

3. In a rail-joint, a pair of rail-sections assembled in endwise relation, cross-ties beneath
25 the rails, fish-plates secured to the rails and provided with lateral extensions carrying lugs,

a block or chair arranged to bear beneath the meeting ends of the rails, a pair of tension elements crossed beneath and in engagement with the block or chair, said elements being extended beneath the ties on opposite sides of the block and having their ends engaged with the lugs on the fish-plates.

4. In a rail-joint, a pair of rail-sections assembled in endwise relation, cross-ties beneath
35 the rails, wear-plates disposed between a pair of the ties and rails and having upturned flanges, fish-plates attached to the rails and bearing adjacent their ends on the flanges of the wear-plates, a block or chair arranged to
40 bear beneath the meeting ends of the rails, and crossed tension elements operatively engaged with the block and having their ends connected with the fish-plates, said elements being extended beneath the ties on opposite
45 sides of the block.

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

EDWIN A. BARRY.

Witnesses:

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