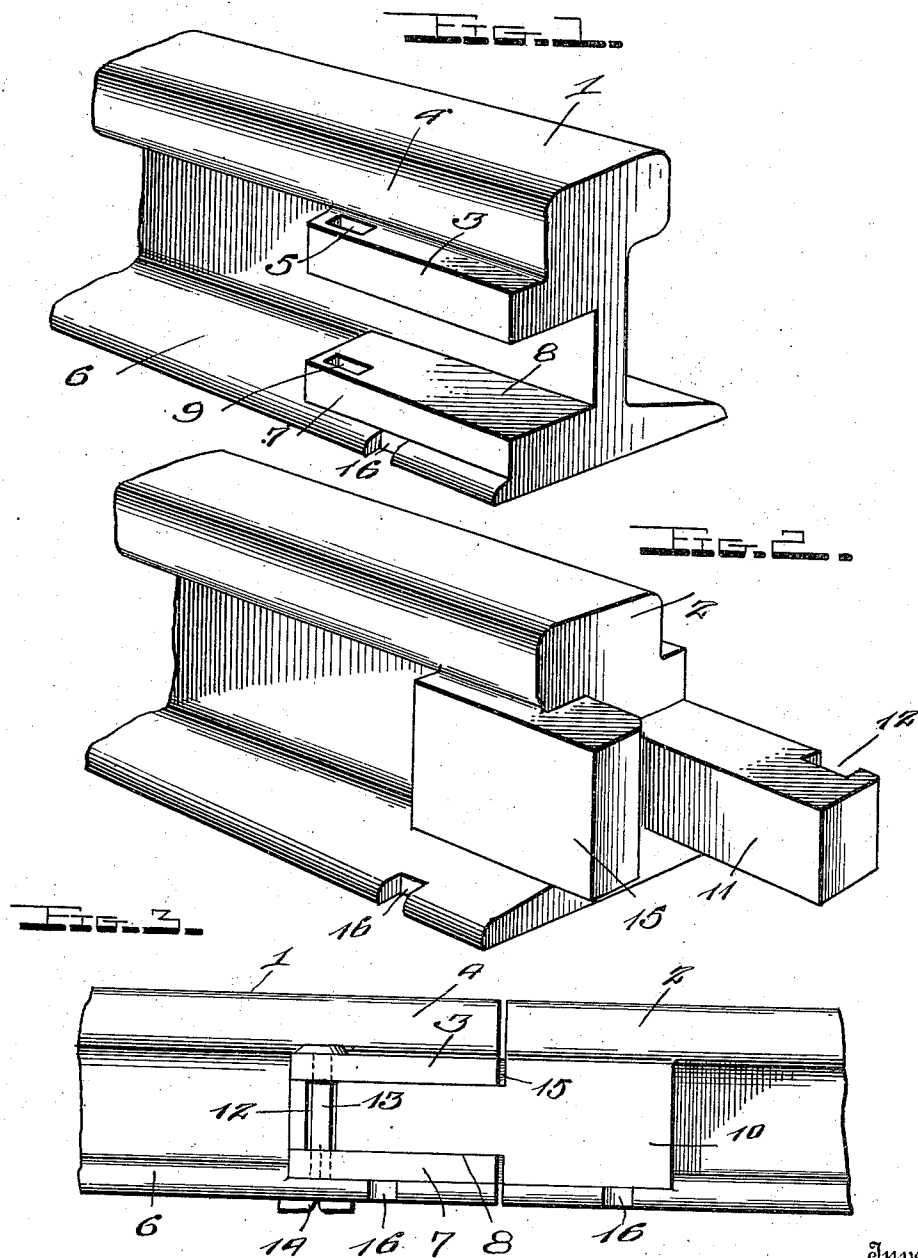


J. S. STEPHENS.
RAIL JOINT.
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1,045,453.

Patented Nov. 26, 1912.



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Witnesses

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JAMES S. STEPHENS, OF BONO, ARKANSAS.

RAIL-JOINT.

1,045,453.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES S. STEPHENS, a citizen of the United States, residing at Bono, in the county of Craighead and State of Arkansas, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to new and useful improvements in rail joints and has for its object to provide means for effectively connecting the meeting ends of two rails without the use of the usual fish plates and bolts.

15 Another object of the invention is to provide a device of this character which will possess advantages in points of efficiency and durability, is inexpensive of manufacture and at the same time is simple in construction and operation.

20 With the above and other objects in view the invention consists in the novel features of construction and the combination and arrangement of parts hereinafter more fully described, pointed out in the claims and shown in the accompanying drawings in which,

25 Figure 1 is a perspective view of one end of the rail; Fig. 2 is the opposite end of the rail from that shown in Fig. 1; and Fig. 3 is a side elevation of a rail joint constructed in accordance with my invention showing the outer side of the rail.

30 Referring more particularly to the drawings, 1 indicates the end of a rail and 2 indicates the end of another rail arranged in alinement with the first rail and adapted to be secured thereto. An elongated projection 3 is formed on one side of the rail 1 and projects outwardly from beneath the flange 4, said projection being provided at one end with an opening 5. The base 6 of the rail 1 is enlarged at its outer end as shown at 7 to form the shoulder 8, said shoulder being arranged directly beneath the projection 3 and is of substantially the same size. An opening 9 is formed in the shoulder 8 at the inner end thereof and extends clear through to the underside of the base 6 of the rail.

35 The end of the rail 2 is enlarged as shown at 10 and an extension 11 is formed integral with the enlarged portion on the outer side of the rail. The extension 11 is of sufficient length and size to fit snugly be-

40 tween the projection 3 and the shoulder 8. A vertical recess 12 is formed in the outer end of the extension adapted for the reception of the pin 13 which is inserted into the openings 5 and 9 and having its intermediate portion arranged in the recess 12 to prevent any longitudinal movement of the rails. The pin 13 is securely held in place by having its lower end split and the ends bent upwardly onto the bottom of the base 6 of the rail 1, as shown at 14.

45 A shorter extension 15 is formed integral with the rail 2 at the end thereof and disposed between the flange and the base of the rail. The outer end of this shorter extension is arranged between the flange and the base of the rail 1 to prevent any lateral movement of the rails at the joint. It will be seen that the recess 12 is sufficiently large to permit of the expansion of the rails to a small extent. The rails are secured to the ties by means of spikes driven into the ties and arranged in the recesses 16 formed in the base of the rail on each side thereof.

50 From the above description taken in connection with the drawings it will be readily seen that I have provided a rail joint which eliminates the weakness caused by the use of the fish plates and bolts which are used at the present time and displays equal strength to any other part of the rail and will also save a good deal of time and labor raising the low joints and tamping ballast under them.

55 While I have shown and described the preferred form of my invention it will be obvious that various changes in the details of construction and in the proportions may be resorted to for successfully carrying my invention into practice without sacrificing any of the novel features or departing from the scope thereof.

What I claim is:—

1. The combination of the meeting ends of two rails, an elongated projection formed on one of said rails, a shoulder formed on the base of said rail and disposed beneath the projection, an extension formed on the second rail and disposed between said first mentioned projection and shoulder, means for securing said extension in place to prevent longitudinal movement of the rails, and a shorter extension formed on the second rail on the side opposite the first extension and adapted to be disposed between

the flange and base of the first rail to prevent lateral movement of the rails.

2. The combination of the meeting ends of two rails, an elongated projection formed on one of said rails, having an opening in its inner end, a shoulder formed on the base of said rail and disposed beneath the projection, said shoulder having an opening formed therein and arranged in alinement with the opening in the projection, an extension formed on the second rail and adapted to be disposed between said first mentioned projection and shoulder, said extension having a recess formed in its outer end, a pin disposed in the opening in the first mentioned projection and shoulder and arranged in the recess to prevent longitudinal movement of the rails, and a shorter extension formed on the second rail on the side opposite the first extension and adapted to be disposed between the flange and base of

the first rail to prevent lateral movement of the rails.

3. The combination of the meeting ends of two rails, an elongated projection formed on one of said rails and spaced from the base of the rail, an extension formed on the second rail and disposed between the projection and the base of the first rail, means for securing said extension in place to prevent longitudinal movement of the rails, and a shorter extension formed on the second rail on the side opposite the first extension and adapted to be disposed between the flange and base of the first rail to prevent lateral movement of the rails.

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

JAMES S. STEPHENS.

Witnesses:

B. E. LAMB,

T. R. SANDERSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."