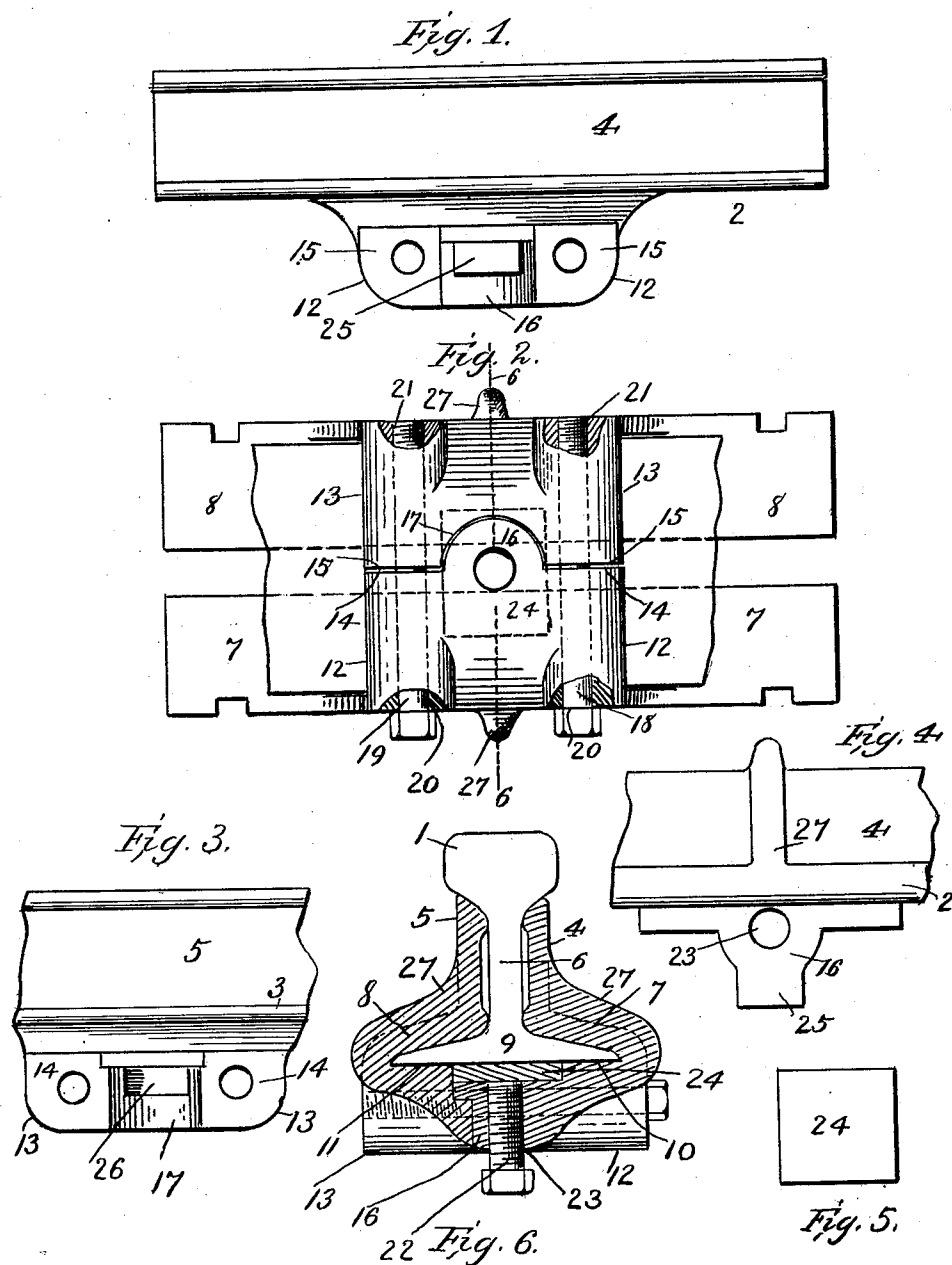


J. J. SOUDER.
RAIL JOINT.
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Patented July 18, 1911.



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UNITED STATES PATENT OFFICE.

JACOB J. SOUDER, OF WASHINGTON, DISTRICT OF COLUMBIA.

RAIL-JOINT.

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To all whom it may concern:

Be it known that I, JACOB J. SOUDER, a citizen of the United States, residing at Washington, in the District of Columbia, 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.

My invention relates primarily to rail-ways, has especial reference to rail-joints and means for securing the adjacent ends of adjoining rails, has for its object a cheap, effective and durable device for the purpose, and the providing of means for adjusting the adjacent ends of adjoining rails to maintain constant and perfect alinement of the rails, to prevent the occurrence of humps at the joints due to displacement of the rails by the weight of approaching trains, and at the same time allowing the rails to expand and contract without interference by the joint members.

The invention consists in certain features of construction, which will be fully disclosed in the following specification and claims.

In the accompanying drawings, which form part of this specification:—Figure 1 represents an elevation showing the inside of one of the clamping-members. Fig. 2 is a bottom plan view of a rail-joint of my improved construction. Fig. 3 is an elevation of part of the opposite clamping member. Fig. 4 is a top plan view of part of the member shown in Fig. 1. Fig. 5 is a plan view of the liner for the vertical adjusting screw, and Fig. 6 is a vertical transverse section on line 6—6 Fig. 2.

Reference being had to the drawings and the designating characters thereon, the numeral 1 indicates adjacent railroad rails of conventional form, 2, 3, are opposite clamping-members, usually called fish-plates having upwardly extending parts 4, 5, which engage opposite sides of the web 6 of the rail, but are not attached thereto, parts 7, 8, which engage the upper side of the flange 9 of the rail, and parts 10, 11, which extend under and engage the flange as shown in Fig. 6.

12, 13, indicate bosses or reinforcements having abutting adjacent faces 14, 15, and an extension 16, on one member and a like depression or recess 17 on the opposite mem-

ber, which engage each other and prevent longitudinal movement of the clamping-members on each other. 18, 19, indicate transverse bolts in said bosses 12, 13, which pass through openings 20, in one member and engage screw-threads in the openings 21 in the opposite member, as shown in Figs. 2 and 6, and serve to draw the members 2, 3 tight up to and against the web and the flange of the rail.

22 indicates a bolt which extends through the screw-threaded opening 23 in the extension 16, and is designed to adjust the adjacent ends of the adjoining rails to produce and maintain perfect alinement of the ends of the rails and present a smooth, even and unbroken surface for the wheels of an engine or cars to roll upon.

24, indicates a metallic plate or liner, supported in a recess or seat in the clamping members 2, 3, which may be inserted between the end of the bolt and the flanges of the rails to increase the bearing surface of the bolt on the rails; and to compel the two parts 7 and 8 to operate in unison, a projection 25 is formed on one member 2, and a recess or seat 26, is formed in the opposite part, which is engaged by said projection, and as pressure is applied by the bolt 22 the parts 7, 8 are drawn down evenly and regularly upon the flange of the rail on both sides of the web of the rail.

The structure may be reinforced by ribs 27, and the parts are preferably made of cast steel.

The joint as constructed secures the rails in position, and is free from the disastrous effects of vibration and displacement of the rails, can be readily applied, without drilling holes through the web of the rail, or in any manner changing the rails as they proceed from the mill.

Having thus fully described my invention, what I claim is—

1. A rail joint comprising detached clamping members engaging opposite sides and extending under a rail, means for connecting said members, and means engaging one of the clamping members for adjusting the rail vertically.

2. A rail joint comprising detached clamping members on both sides of a rail, means separate from the rail for securing said members and means beneath the joint for adjusting the rail vertically.

3. A rail joint comprising clamping

members on both sides of a rail provided with interlocking members, and a bolt for adjusting the rail vertically.

4. A rail joint comprising detached
5 clamping members on both sides and extending under the flange of a rail, a plate under the rail joint and inclosed in said members, and a vertically adjustable bolt engaging said plate.

10 5. A rail joint comprising clamping members engaging opposite sides of the web of a rail and having inwardly extending members provided with adjacent bearing
15 faces, transverse bolts for connecting the clamping members, and a bolt between said transverse bolts for alining adjacent ends of adjoining rails.

6. A rail joint comprising detached
20 clamping members engaging opposite sides of the web of a rail and having inwardly extending members to engage the lower side of the flange of the rail, a recess in one member and a projection on the opposite member engaging each other, and a bolt

vertically movable in one of the clamping 25 members for alining adjacent ends of adjoining rails.

7. A rail joint comprising detached clamping members adapted to engage both sides of the web of a rail and the upper and 30 lower sides of the flange of the rail, means for connecting said members, and a vertically movable bolt for adjusting adjacent ends of adjoining rails.

8. A rail joint comprising clamping 35 members adapted to engage both sides of the web and both sides of the flange of a rail, one of said members having screw threaded openings therein, bolts extending through the opposite member and engaging 40 said screw threads, and a vertically adjustable bolt between the former bolts.

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

JACOB J. SOUDER.

Witnesses:

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