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D. A. BRUTON.
RAIL JOINT.

APPLICATION FILED MAY 15, 1906.

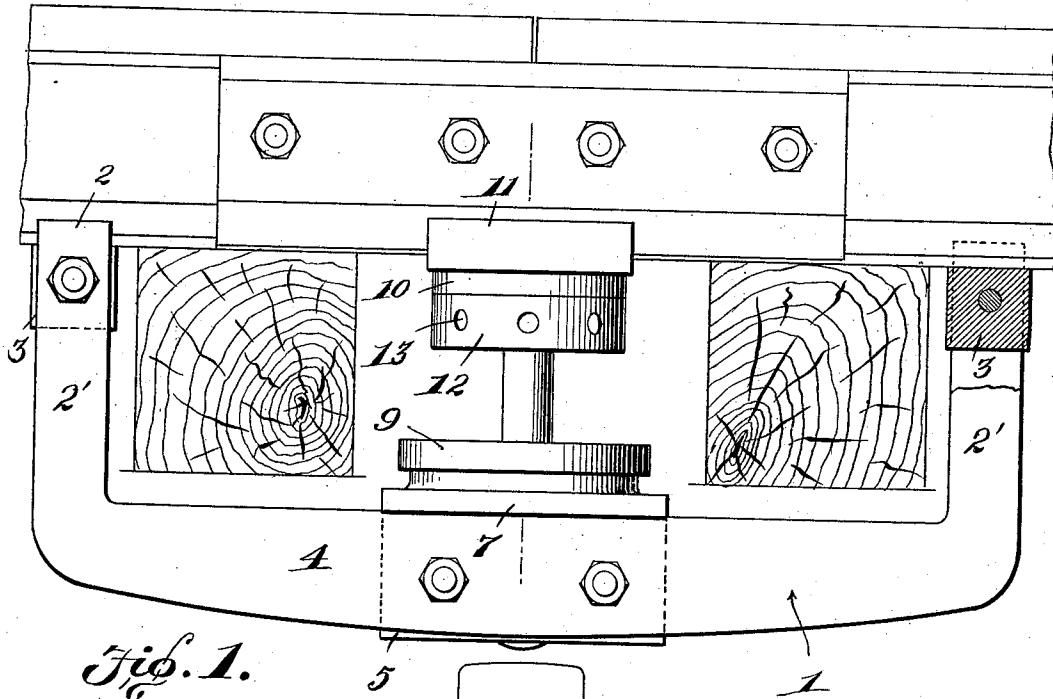


Fig. 1.

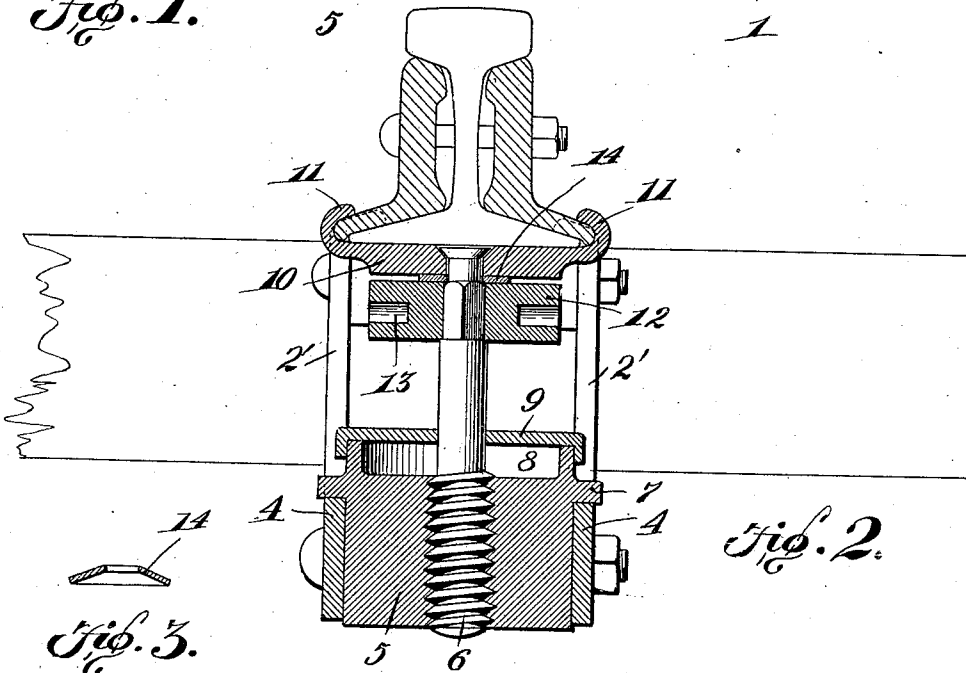


Fig. 2.

Fig. 3.

WITNESSES:

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DAVID ALONZO BRUTON, OF CLARKSVILLE, TEXAS.

RAIL-JOINT.

No. 828,378.

Specification of Letters Patent.

Patented Aug. 14, 1906.

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To all whom it may concern:

Be it known that I, DAVID ALONZO BRUTON, a citizen of the United States, residing at Clarksville, in the county of Red River and State of Texas, have invented a new and useful Rail-Joint, of which the following is a specification.

My invention relates to rail-joints; and it has for its objects the provision of a strong simple structure with as few bolts or other fastenings as possible and the provision of an oil-cup whereby the rail-fastening screw may always be kept free from rust and in good condition.

With the above and other related objects in view, as will hereinafter appear, my invention consists in the novel improvements and combination of parts hereinafter set forth and pointed out in the claims, it being understood that various changes in the form, proportion, and arrangement of parts may be resorted to without departing from the principle of my invention or sacrificing any of its advantages.

In this specification and in the accompanying drawings, forming a part thereof, the same reference characters are applied to the same parts throughout.

In the drawings, Figure 1 is a side elevation, partly in section, of one form of rail-joint embodying my invention, the same being shown in position upon a railway-track. Fig. 2 is a central cross-sectional view of the device shown in Fig. 1. Fig. 3 is a sectional view of the washer detached.

Reference character 1 designates the longitudinally-extending brace-bars, two in number, one being secured at each side of the rail. The upper ends of the bars 1 project inwardly at 2 to rest upon the top of the bottom flange of the rail at each side of the rail-joint. Immediately beneath the rail the downwardly-extending portions 2' of the brace-bars 1 are connected together by bolts or equivalent fastenings, the said fastenings passing through blocks 3, whose length is equal to the width of the rail. The lower horizontal portions 4 of the brace-bars are widened intermediate their ends to provide greater strength and are perforated for the passage of bolts which secure the block 5 between the brace-bars beneath the rail-joint.

In the block 5 is a screw-threaded opening to receive the screw 6. Outwardly-projecting flanges 7 on the block 5 rest upon the brace-bars at each side of the block. On the

top of block 5 is an oil-cup 8, surrounding the screw 6 and adapted to be filled with oil to keep the screw in good condition and free from rust. A cover 9, perforated for the passage of the screw, prevents evaporation of the oil in the cup.

The head of the screw 6 is received in a countersunk opening in the rail-clasp 10. The said clasp is reinforced at its bottom where perforated for the passage of the screw 6 and is provided at its upper portion with inwardly-extending portions 11. When the clasp is made of malleable material, the portions 11 of the clasp may be bent downward upon the flanges of the rail when my improved joint is applied. In this manner it is possible to apply my joint without disturbing the rail in any manner.

Upon screw 6 and immediately beneath the clasp 11 is rigidly secured a ring 12, provided with perforations 13 about its periphery to receive a rod by which the screw 6 may be rotated.

As a means for reinforcing the screw and locking the ring 12 against rotation a yieldable cup-shaped washer 14 is interposed between the base of the clasp 10 and the adjacent face of the ring 12, so that when the latter is rotated to clamp the clasp in contact with the rail the washer will be depressed or flattened, and thus exert a yieldable pressure between the plate and ring and prevent accidental rotation of the latter.

To apply my improved joint to the rail, I place the clasp 11 about the joint, the clasp having the screw 6 therein and having the internally-screw-threaded block 5 upon the screw. I then place the brace-bars 1 on each side of the rail, the bars being made of such length that one cross-tie will be positioned between the end of the brace-bar and the joint of the rail, thus supporting the joint from four cross-ties. Having thus positioned the several parts, I proceed to bolt them together, introducing the blocks 3 into place as I do so. The screw 6 may now be turned by means of a rod inserted in the opening 13 in the ring 12 until the clasp 10 is pressed firmly against the bottom of the rail, ring 12, which is rigidly secured to the screw 6, operating to prevent the screw from sliding upwardly in the clasp.

The device may be placed beneath any kink in the rail and not necessarily at a joint, in which case the parts 11 would not necessarily be bent inwardly and the rail strength-

ened by screwing upon screw 6. In this manner it is adapted to serve as a rail-jack as well as for a permanent rail-joint.

It will thus be seen that I have provided
 5 a strong, simple, and durable joint; but four bolts are necessary in applying it to the rail. The skeleton construction made possible by placing a brace-bar on each side of the rail makes it possible to secure great strength by
 10 means of simple and inexpensive parts.

Having thus described my invention, what I claim is—

1. In a device of the class described, the combination of longitudinally-extending
 15 brace-bars arranged at each side of the rail, the bars being secured to the rail at their ends, a block supported by said bars, and a rail-supporting screw in said block.

2. In a device of the class described, the
 20 combination of a block perforated for the passage of a screw, means dependent from a rail for supporting said block, a screw in said block and adapted to be screwed upwardly to support the rail, an oil-cup on said block
 25 and surrounding the screw, and a cover for the oil-cup.

3. In a device of the class described, the combination of a block a skeleton support therefor dependent from a rail, the block
 30 having a screw-threaded perforation, a screw therein, a clasp engaging the rail above said block, said clasp being perforated to receive the head of the screw, and means on the screw for maintaining the latter in place in
 35 the clasp and whereby the screw may be turned.

4. In a device of the class described, the combination with a clasp adapted to receive a rail-section, of spaced longitudinal bars
 40 disposed one on each side of the rail and engaging the latter, a block interposed between the bars, a clamping-screw threaded in the block and engaging the clasp, a member secured to the bolt for rotating the latter, and
 45 a yieldable washer interposed between the clasp and said member.

5. In a device of the class described, the combination with a clasp adapted to receive a rail-section and provided with an aperture,
 50 a pair of spaced longitudinal bars disposed one on each side of the rail and provided with terminal hooks adapted to engage said rail, a block interposed between the bars, an adjusting-screw one end of which is seated in the aperture in the clasp and the opposite
 55 end thereof threaded in said block, a ring provided with peripheral perforations adapted to receive a tool for rotating the latter to thereby adjust the screw, and a yieldable washer interposed between the clasp and
 60 said ring.

6. In a device of the class described, the combination with a clasp adapted to receive a rail-section, of spaced longitudinal bars
 65 disposed one on each side of the rail and adapted to engage the latter, a block interposed between the bars and provided with lateral flanges adapted to engage the latter, and a screw threaded in the block and engaging the clasp.
 70

7. In a device of the class described, the combination with a clasp adapted to receive a rail-section and provided with an aperture,
 75 spaced longitudinal bars disposed one on each side of the rail and provided with laterally-extended hooks adapted to engage said rail, a block interposed between the bars and formed with an oil-cup, an adjusting-screw seated in the aperture in the clasp and having its opposite end passing through the oil-
 80 cup, an intermediate portion of said bolt being angular in cross-section, a ring engaging the angular portion of the screw for rotating the latter and a yieldable dish washer interposed between the clasp and the ring.
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In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

DAVID ALONZO BRUTON.

Witnesses:

A. D. LENNOX,
 W. F. WREN.