

J. C. HANCOCK.
BOLT LOCK.

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1,054,291.

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Fig. 1.

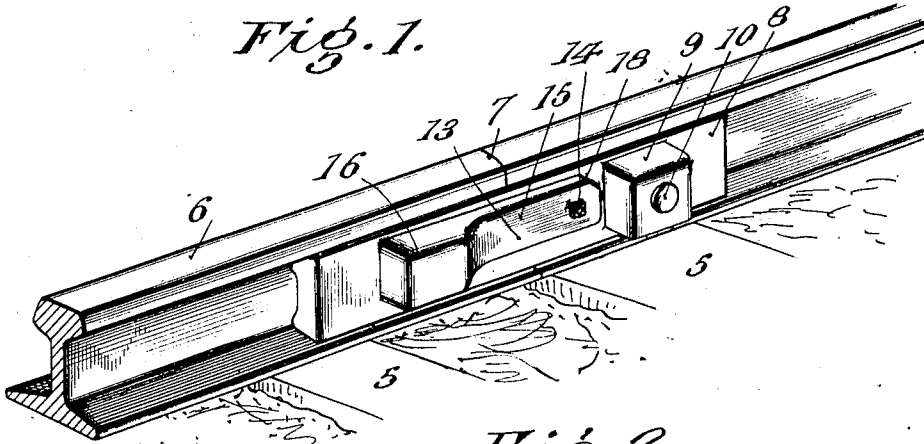


Fig. 2.

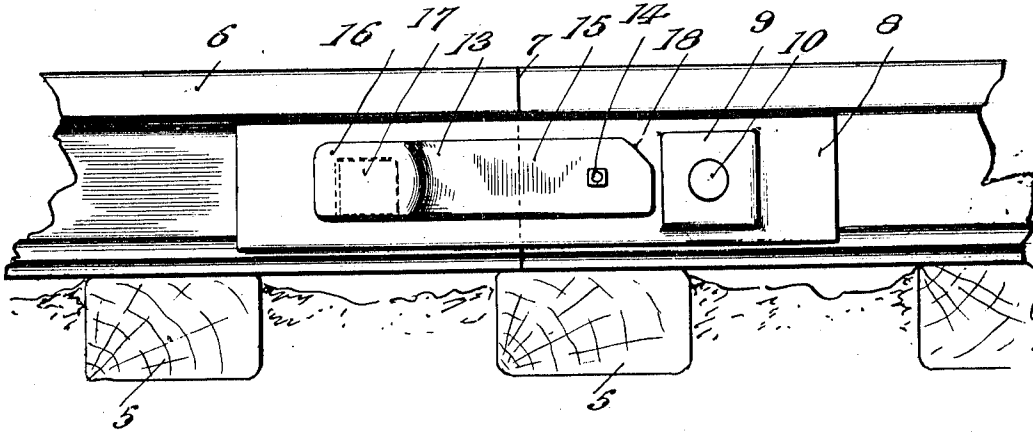
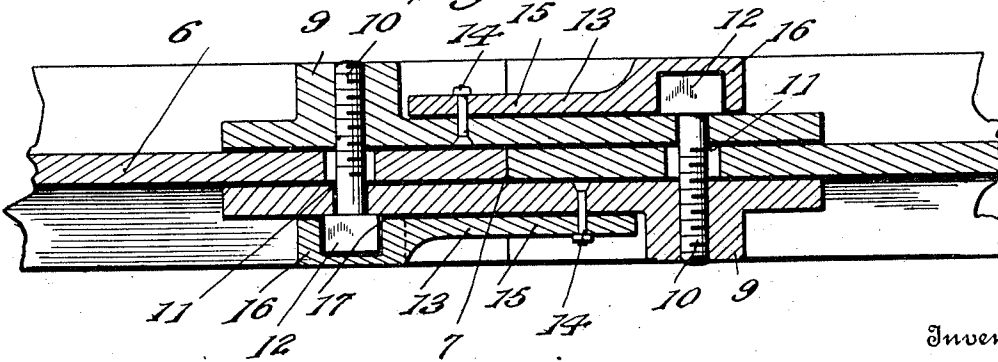


Fig. 3.



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Witnesses

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UNITED STATES PATENT OFFICE

JAMES C. HANCOCK, OF KEYSTONE, WEST VIRGINIA, ASSIGNOR OF ONE-HALF TO
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BOLT-LOCK.

1,054,291.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES C. HANCOCK, citizen of the United States, residing at Keystone, in the county of McDowell and State of West Virginia, have invented certain new and useful Improvements in Bolt-locks, of which the following is a specification.

This invention relates to bolt locks for rail joints and has for its object the provision of a comparatively simple and thoroughly efficient device of this character, by means of which the abutting ends of adjacent rail sections may be securely held against both longitudinal and lateral separation.

A further object is to provide co-acting tie plates adapted to bear against the opposite sides of abutting sections and provided with laterally extending bosses having threaded openings therein for the reception of the correspondingly threaded ends of securing bolts.

A further object is to provide the tie plates with pivoted locking members adapted to engage the heads of the securing bolts and prevent accidental rotation thereof.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency, as well as to reduce the cost of manufacture.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claim.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a bolt lock; Fig. 2 is a side elevation of the same; Fig. 3 is a longitudinal sectional view.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved bolt lock forming the subject matter of the present invention is principally designed for preventing accidental rotation of the securing bolts employed for uniting the abutting ends of railway rails, and by way of illustration is shown in con-

nection with a section of railway track of the ordinary construction in which 5 designates the cross ties, 6 the rails and 7 the abutting ends thereof.

The device comprises spaced tie plates 8 adapted to bear against the opposite sides of the rails 6 at the junction thereof, the outer face of each tie plate at one end thereof, being provided with a laterally extending boss 9 having an opening formed therein, the walls of which are threaded for engagement with the correspondingly threaded end of a securing bolt 10. The securing bolts 10 extend through suitable openings in the adjacent tie plates and also through slots 11 formed in the webs of the rail sections, each bolt being provided with a square head 12 for engagement with a pivoted locking member 13. The locking members 13 are pivotally mounted at 14 on the outer faces of the tie plates, each locking member being provided at its pivoted end with a flat shank 15 and at its free end with an enlarged head 16, there being a rectangular opening 17 formed in the head 16 and opening through the bottom and inner face of said head to accommodate the head of the adjacent securing bolt, thus to prevent accidental turning of the latter when subjected to jars or vibrations incident to the passage of trains and other railway rolling stock. It will here be noted that the flat shanks 15 of the locking members, bear flat against the outer faces of the tie plates, and span the rail sections at the meeting ends 7 thereof, thus not only serving to prevent accidental rotation of the securing bolts, but also serving to reinforce and strengthen the rails at the junction thereof. The upper edge of each shank at the corner thereof, is preferably curved or beveled at 18 so as to permit the pivoted end of said locking member to clear the adjacent boss 9 when the locking members are swung upwardly to inoperative position.

It will here be noted that by swinging the locking members 13 upwardly on their pivotal axes 14, the upper longitudinal edges of the locking members will bear against the adjacent bosses 9 so as to support said locking members in elevated position when removing or detaching the securing bolts.

In assembling the rails, the tie plates 8 are first positioned on opposite sides there-

of, after which the securing bolts 10 are passed through the openings in said tie plates and webs of the adjacent rails and screwed into the openings in the bosses 9, the free ends of the locking members being subsequently swung downwardly so as to cause the heads 16 of the securing bolts to enter the openings 17 and in which position the bolts will be securely locked against rotation. In order to disconnect the rails to effect any necessary repairs thereto, it is merely necessary to swing the locking members upwardly on their pivotal axes 14, when by applying a wrench or other suitable tool to the angular heads of the securing bolts, the latter may be readily removed and the tie plates detached from the rails, as will be readily understood.

It will here be noted that by having the head receiving recesses 17 opening through the bottom of the locking members, not only may the latter be swung upwardly to permit the attachment of the securing bolts, but the heads of said locking members form in effect housings for the heads of the securing bolts and thus in a measure assist in preventing the bolts from rusting.

It will of course be understood that as many securing bolts may be employed for effecting the union of adjacent rail sections as may be found desirable or necessary, and that an additional locking member will be employed for each additional securing bolt.

While the locking device is principally designed for preventing accidental rotation of the securing bolts and rail joints, it will of course be understood that the device may be used with equally good results for preventing accidental rotation of the bolts used on iron buildings, bridge structures or wherever a device of this character is found desirable or applicable.

Having thus described the invention, what is claimed as new is:

In a locking device, the combination with a support having a boss extending laterally from one side thereof, of a bolt extending through the support, and a locking member pivotally mounted on the outer face of the support near said boss and having its free end formed with an enlarged head having an angular recess therein and opening through the bottom and inner face thereof only for the reception of the angular head of the securing bolt, the upper longitudinal edge of the locking member being adapted to rest on the boss when said locking member is swung upwardly on its pivotal connection to elevated position.

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

JAMES C. HANCOCK. [L. S.]

Witnesses:

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