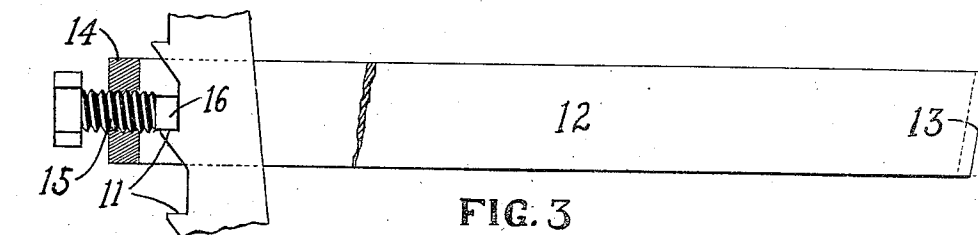
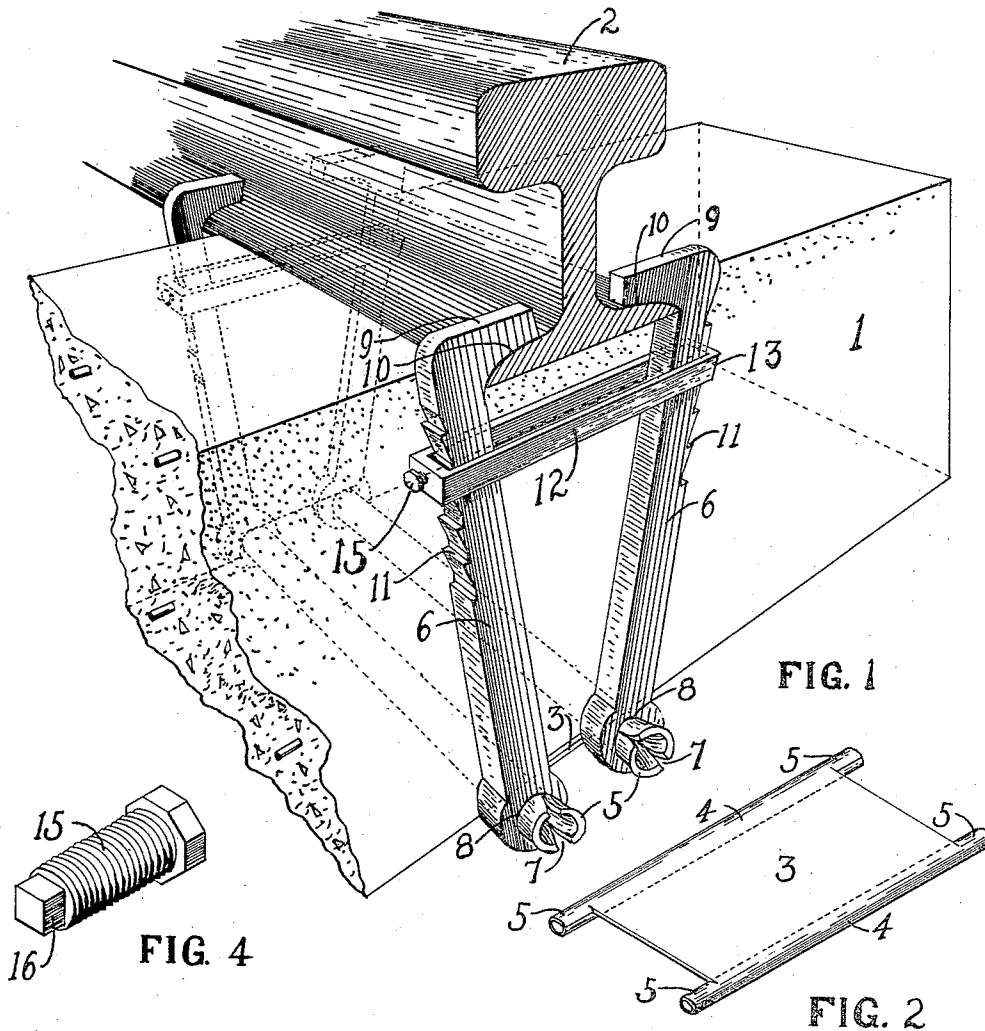


E. J. ROSENCRANS & H. SANDERSON.
 DEVICE FOR SECURING RAILROAD RAILS TO TIES.
 APPLICATION FILED FEB. 10, 1913.

1,057,779.

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WITNESSES

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ERNEST J. ROSENCRANS AND HENRY SANDERSON, OF SAN JOSE, CALIFORNIA, ASSIGN-
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DEVICE FOR SECURING RAILROAD-RAILS TO TIES.

1,057,779.

Specification of Letters Patent.

Patented Apr. 1, 1913.

Application filed February 10, 1913. Serial No. 747,366.

To all whom it may concern:

Be it known that we, ERNEST J. ROSENCRANS, a citizen of the United States, and HENRY SANDERSON, a British subject, residing at San Jose, in the county of Santa Clara and State of California, have invented a certain new and useful Improvement in Devices for Securing Railroad-Rails to Ties, of which the following is a specification.

Our invention relates to an improvement in device for securing railroad-rails to ties, and especially to means for adjusting and locking the locking-bar of said device.

One object of our invention is to provide a means for unlocking the clamps in said device without removing any of the clamps from their pivots, and another object of our invention is to provide a self-locking means for adjusting the clamps after the locking-bar has been drawn upward into position.

Further objects and advantages will appear in the following description.

We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of our device in use. Fig. 2 is a perspective view of the plate with its four split pivots. Fig. 3 is a side elevation of the locking-bar and one clamp, parts being broken away. Fig. 4 is a perspective view of the bolt-lock.

Similar numerals refer to similar parts throughout the several drawings.

In the drawings here presented, 1, Fig. 1, refers to the tie, which may be made of concrete or wood or any other suitable material; 2, Fig. 1, is a rail in position on said tie 1. On the bottom of said tie 1, and directly under said rail 2, is placed plate 3, shown in Figs. 1 and 2, either on the flat surface of said tie 1 or in a recess in said tie 1 provided to receive said plate 3. Said plate 3 may be made of metal or any other suitable material of the proper dimensions and form, having its two longer edges rolled downwardly and inwardly a distance into the form of a hollow cylinder as shown at 4, Fig. 2; said cylindrical portions 4 project beyond the ends of said plate 3 and are split back a distance from the ends thereof to form split pivots at the four corners of said plate 3, as shown at 5, Figs. 1 and 2. Said split pivots 5 are for the purpose of receiving notched clamps 6, and are spread

with a tapering tool to hold said notched clamps in place as shown at 7, Fig. 1. Notched clamps 6, Fig. 1, are made of metal of the proper dimensions, and are bored through at their lower ends to engage said split pivots 5; as shown at 8, Fig. 1. The upper ends of said notched clamps 6 are provided with arms as shown at 9, Fig. 1; said arms being beveled on their under sides to approximately the same angle as the flanges on said rail 2, as shown at 10, Fig. 1. On the outer edges of said clamps 6 are provided notches as shown at 11, Figs. 1 and 3, and preferably of the shape shown, for the purpose of receiving therein the end of locking-bar 12, and the square end of bolt-lock 15. Said locking-bar 12 is made of metal and formed as shown in Figs. 1 and 3; one end being beveled to approximately the same angle as the notches 11 in said clamps 6, as shown at 13, Figs. 1 and 3, the opposite end being made square with the upper edge of said locking-bar 12 and of the required thickness as shown at 14, Fig. 3, and bored and threaded to receive bolt-lock 15. Said bolt-lock 15, Figs. 1, 3 and 4, is threaded to correspond to the threaded bore in the end 14 of locking-bar 12; one end of said bolt-lock 15 being cut into a more or less cubical form as shown at 16, Figs. 3 and 4.

The operation of this device is as follows:—Plate 3 is placed in position on the bottom of the tie directly under the rail 2; clamps 6 are placed on split pivots 5, said split pivots being spread as shown to hold them in position; locking-bar 12 is dropped over the clamps and lies loosely at their lower ends until the rail is in position; when the rail is in position, the locking-bar is drawn upward forcing the beveled arms 9 of clamps 6 inward, and thus drawing the rail down securely to the tie. As the locking-bar 12 is forced upward, the beveled end 13 engages the notches in one of the clamps 6, and the squared end 16 of bolt-lock 15 engages the notches of the other clamp 6, thus preventing the locking-bar from slipping downward on said clamps 6. If for any reason the clamps 6 need tightening and it is not desirable, or is impossible, to draw the locking-bar 12 upward another notch, then said clamps may be tightened by turning said bolt-lock 15 inward. By reason of its square end, this bolt is a self-

locking bolt, because at each quarter turn of the bolt a flat surface of its squared end rests upon the flat surface of the notch 11 in clamp 6, and cannot be loosened except
 5 by applying force to the bolt head and forcing the squared end of said bolt to turn on said flat surface of the notch 11 in clamp 6. The width of plate 3 is such that the clamps 6 will slope outwardly toward the base of the rail, thus effectively preventing a side-
 10 wise motion of the rail. When bolt-lock 15 is turned outwardly a sufficient distance to allow the square end thereof to clear the outer edge of the notch 11 in clamp 6, the
 15 same will allow the locking-bar 12 to drop back to the lower ends of clamps 6 when said clamps 6 may be spread apart and the rail removed.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is—

1. In a device for securing railroad-rails to ties, a metallic plate having split pivots formed on the four corners thereof, notched
 25 clamps pivotally mounted on said split pivots, said notched clamps having arms formed on the upper ends thereof beveled on their under sides to approximately the same angle as the flanges on the rail, and notches
 30 formed in the outer edges of said clamps, means for fastening said notched clamps in position, and means for drawing and locking said notched clamps together and draw-

ing said rail down securely to said tie, substantially as shown and described. 35

2. In a device for securing railroad-rails to ties, a metallic plate having split pivots formed on the four corners thereof, notched
 40 clamps pivotally mounted thereon, a locking-bar having one end beveled to approximately the same angle as the notches in said notched clamps and the opposite end bored and threaded to receive a threaded
 bolt, substantially as shown and described.

3. In a device for securing railroad-rails to ties, a metallic plate having split pivots on the four corners thereof, notched clamps
 45 pivotally mounted thereon, a locking-bar adjustably mounted on said notched clamps and bored and threaded at one end, a
 50 threaded bolt to engage said threaded bore having one end rectangular in shape to engage the flat upper surfaces of said notches in said clamps, and adapted when forced
 55 inward to draw and lock said notched clamps together, or release the same when turned outward, substantially as shown and described.

In testimony whereof we have signed our names to this specification in the presence
 60 of two subscribing witnesses.

ERNEST J. ROSENCRANS.

HENRY SANDERSON.

Witnesses:

JOHN A. NAISMITH,

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