

UNITED STATES PATENT OFFICE.

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DEVICE FOR ATTACHING RAILROAD-RAILS TO METAL TIES.

SPECIFICATION forming part of Letters Patent No. 546,810, dated September 24, 1895.

Application filed June 15, 1895. Serial No. 552,948. (No model.)

To all whom it may concern.

Be it known that we, FREDERICK F. EMRICH and JASON ROLLINS, citizens of the United States, residing at Little Rock, in the county of Pulaski and State of Arkansas, have invented certain new and useful Improvements in Devices for Attaching Railroad-Rails to Metal Ties; and we 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.

Our invention relates to improvements in devices for attaching railroad-rails to metal ties, switch-bars, or bridles, the invention having for its object to provide clamping mechanism between the rail and tie, switch-bar, or bridle, by means of which the two parts may be readily connected and disconnected, and the two parts of the clamp may be adjusted for the purpose of taking up the wear between the bearing parts of the rail and said clamp.

The invention consists of the combination with a metal tie provided with a T-shaped slot, and one or more bolt-holes therein, of a clamping device made in two parts, each provided with a projecting ledge adapted to fit over the flange of the rail, one of said parts having a pair of parallel laterally-extending arms with wedge-shaped recesses in their upper faces, and longitudinal grooves extending from said recesses to the end of said arms, and the other part having a laterally-projecting tongue adapted to fit between the arms on the other part, said tongue having a horizontal slot near one end thereof, a downwardly-projecting lug having a T-shaped head adapted to fit the T-shaped slot in said metal tie, and lugs adapted to engage the grooves in the laterally-extending arms of the first part. A bolt secures the metal tie and one of said clamping-pieces in place. The flanges of the rail are secured by the overhanging ledges in the two clamping-pieces and a split wedge fits the aligning slots and recesses in the two parts of the clamping device.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 represents a perspective view of our device shown applied. Fig. 2 is a verti-

cal longitudinal section through the same. Fig. 3 is a detached perspective view of one of the clamping-pieces, partly broken away. Fig. 4 is a similar view of the other clamping-piece. Fig. 5 is a plan view of the metal tie, and Fig. 6 is a detail perspective view of the locking-key.

Like reference-numerals indicate like parts in the different views.

The metal tie 1 is formed with a T-shaped slot 2 therein and with one or more bolt-holes 3 near one end thereof. Fitting the slot 2 is a lug 4 on the under side of one of the clamping-pieces 5, which is formed with a T-shaped head 6, which passes through the metal tie 1, and is adapted to secure the clamping-piece 5 to the under side of said metal tie. The clamping-piece 5 is formed with an overhanging ledge 7, and has a laterally-extending tongue 8, having lugs 9 extending downwardly therefrom and a horizontal slot 10 at one end. The tongue 8 fits between two parallel laterally-extending arms 11, 11, projecting inwardly from the other clamping-piece 12, these arms being formed with wedge-shaped recesses 13 in their upper faces, and longitudinal grooves 13^a extending from said recesses to the ends of said arms. The clamping-piece 12 has an overhanging ledge 14, and is provided with a bolt-hole 15, through which projects from the under side of the tie 1, through one of the bolt holes 3 in said tie, a threaded bolt 16 having a nut 17 on its upper end.

The ledges 14 and 7 of the two clamping-pieces are adapted to fit around the flanges 18 of the rail 19, and the two clamping-pieces are secured in place by means of a split wedge-shaped key 20, as clearly shown, the said key fitting the recess 13 and slot 10 in the two clamping-pieces. As has been described, the clamping piece 12 is held firmly in place by means of the bolt 16, and the clamping-piece 5 is adapted to be moved for the purpose of tightening the hold upon the rail 19. This is done by means of the wedge-shaped key 20 referred to. When this key has been inserted in place, the two split parts are separated by means of a wedge 21, which prevents said key from becoming displaced. Spreading of the arms 11 when the key 20 is inserted is prevented by reason of the en-

gagement of the lugs 9 9 with the grooves 13^a. If it is desired to remove the clamping device from the rail, it can be conveniently done by first removing the key 20 and then the bolt 16. If it is desired to tighten the clamping-pieces to take up the wear between the bearing parts of the rail and said clamping-pieces, the same may be done by simply driving the key 20 farther into its seat.

10 Having thus described the invention, what is claimed as new is—

1. The herein described device for attaching railroad rails to metal ties, switch bars or
 15 metal tie having a slot therein, of a clamping device made in two parts, each formed with ledges adapted to surround the flange of the rail, one of said parts bolted or otherwise
 20 secured to the metal tie and the other formed with a lug on its underside having a T-shaped head adapted to fit the slot in said tie, and means for adjusting said movable clamping
 25 piece relatively to the other and for securing the same in its adjusted position, substantially as and for the purpose described.

2. The herein described device for attaching railroad rails to metal ties, switch bars or

bridles consisting of the combination with a metal tie having a slot therein, of a clamping device made in two parts, each formed with
 30 ledges adapted to surround the flange of the rail, one of said parts having laterally projecting arms formed with recesses near their ends in the upper surface thereof, and the
 35 other part having a laterally projecting tongue fitting between said arms provided with a horizontal slot near one end aligning with the recesses in said arms, a lug on the under side thereof of a shape corresponding
 40 to the shape of the slot in said tie, a bolt for securing one of said clamping pieces to the tie, and a wedge shaped key fitting the recess in said arm and the aligned slot in the other clamping piece, substantially as and for
 45 the purpose described.

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

FREDERICK F. EMRICH.

JASON ^{his} × ROLLINS.
 mark

Witnesses:

JNO. D. SHACKLEFORD,
 W. F. HILL.