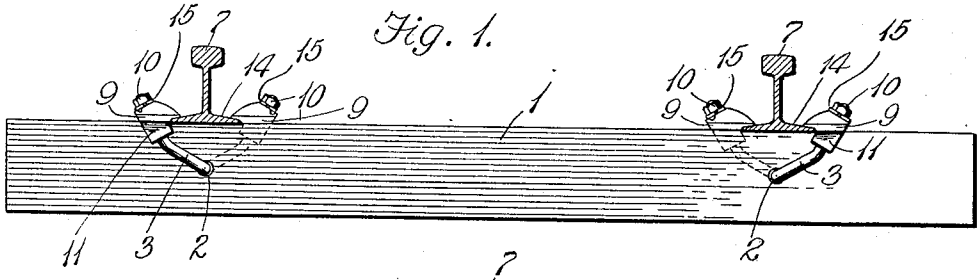
L. BLESSING.

RAIL CLAMP.

APPLICATION FILED SEPT. 10, 1913.

1,094,516. **Patented Apr. 28, 1914.**

Fig. 1.



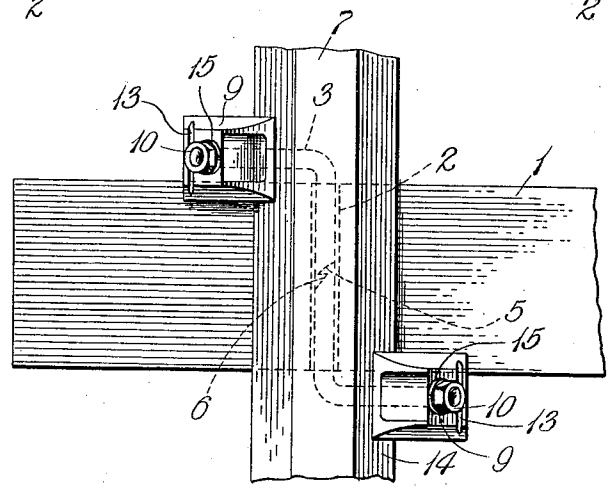


Fig. 2.

Fig. 3.

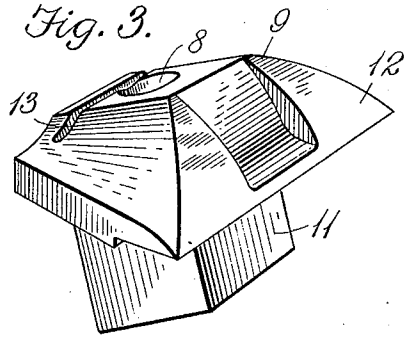


Fig. 4.

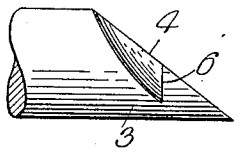


Fig. 5.

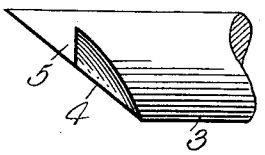


Fig. 6.

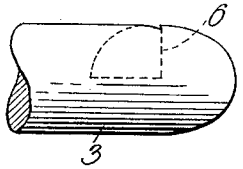
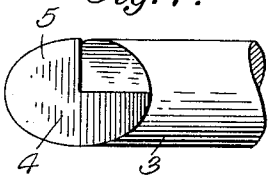


Fig. 7.



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UNITED STATES PATENT OFFICE.

LOUIS BLESSING, OF JACKSON, MICHIGAN.

RAIL-CLAMP.

1,094,516. Specification of Letters Patent. Patented Apr. 28, 1914.

Application filed September 10, 1913. Serial No. 789,031.

To all whom it may concern:

Be it known that I, LOUIS BLESSING, a citizen of the United States of America, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Rail-Clamps, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements for clamping track rails to ties of cementitious material or the like in such manner as to utilize the entire bearing surface of the tie without weakening the latter, the parts being arranged to interlock against displacement when in position.

The invention consists in the matters hereinafter set forth and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a view in side elevation of a tie provided with clamping means that embodies features of the invention; Fig. 2 is an enlarged view in detail and in plan of a portion of a track rail, track tie and the clamping members; Fig. 3 is a view in detail of a preferred form of clamping head; and Figs. 4, 5, 6 and 7 are views in detail of the interengaging end portions of the locking members.

The device as herein illustrated is applied to a tie body 1 of concrete or like cementitious material having transverse openings in which are tubular sleeves 2 each beneath that portion of the tie which serves as a rail seat. A pair of oppositely disposed clamping members 3 are bent at substantially right angles between their ends so that one arm of each may be inserted in the sleeve 2 which it fits with reasonable closeness. The portions of the members 3 which are inserted in the sleeve 2 are of sufficient length so that the inner beveled faces 4 thereof are in abutment. A notch in one of the members at the margin of the inclined face forms a tongue 5 that is adapted to enter in and lock against a shoulder 6 on the companion member formed by a similar notch or gain. These notches or gains are so disposed in relation to the plane in which the outer portions of the members 3 lie that when the latter are turned below the surface of the tie, that is, out of engagement with the track rail, the tongue 5 does not lock with the shoulder 6. When, however, the outer portions are turned up into engaged relation with the track rail such as indicated at 7, the tongue 5 and shoulder 6 engage to prevent longitudinal displacement of the members. The outer end portion of each member 3 is screwthreaded and passes loosely through an aperture 8 in a clamping head 9 wherein it is secured as by means of a nut 10 or the like. The clamping head may be of any preferred type so long as it is adapted to hook over the base flange 10 of the track rail 7. As herein indicated the clamping head has a square shank 11 and a flange 12 arranged to bear firmly on the upper face of the rail flange 14. The outer portion of each member 3 may be slightly bent as shown to draw the rail downwardly with greater effect. A groove 13 may be provided for inserting a wire or bendable member for locking the nut 10. If, however, the arms of the clamps fit the transverse opening or sleeve snugly, they are so cramped when the holding nuts are forced home, that they do not tend to slip and work out under ordinary conditions, and the positive interlocking means may be omitted where the ties and track do not require safeguarding against excessive side-strain. It is also advisable to interpose a spring washer 15 between the nut and head whereby there is a yielding grip of the rail that effectually prevents any tendency of the clamp arms to work loose, and such construction is particularly advisable when the interlocking means are omitted.

As a result of this construction rail clamping members are provided which grip the rail at the extreme margins of the tie so that the full width of the tie is available as a rail seat. When in holding position the members cannot be shifted by any vibration or shock imparted to the rails. By releasing either or both nuts either or both heads may be slipped from the rail and either or both clamps turned down clear of the track, a movement of either clamp sufficing to unlock them, if the engaging means be used.

Obviously, changes in the details of construction may be made without departing from the spirit of my invention and I do not care to limit myself to any particular form or arrangement of parts.

What I claim is:—

1. The combination with a railway tie and rail thereon, of a pair of oppositely disposed clamping members separately insertible in a transverse aperture through the tie beneath the rail adapted to interlock at their

inner ends when moved into operative relation to the rail, clamping heads on the members for engaging the rail base flanges, and means for securing the clamping head on the members.

2. The combination with a track tie and a rail thereon, of a pair of members bent at substantially right angles between their ends with the corresponding arms of each inserted in a transverse opening in the tie beneath the rail, the abutting ends of the inserted arms being arranged to interlock when the outer arms are brought into operative relation to the rail, clamping heads on the outer portions of the members adapted to coöperatively grip the rail flange, and means for forcing the heads on to the members and against the rail.

3. The combination with a rail tie having a transverse opening beneath the rail seat, and a track rail on the seat, of a pair of clamping members bent at substantially right angles between their ends, the corresponding arms thereof being inserted in the tie opening in abutting relation and being adapted to interlock with each other when the outer portions of the members are brought into operative relation to the rail, clamping heads movable on the outer portions of the members adapted to coöperatively grip the base of the rail, and nuts for forcing the heads home on the members.

4. The combination of a railway track tie having a transverse opening beneath the rail seat, and a track rail on the seat, of a pair of clamping members each bent at substantially right angles between the ends thereof and having beveled and correspondingly notched end faces on the resultant arms adapted when the latter are inserted in the track opening to abut and interlock when the other portions of the members are moved into operative relation to the rail, clamping heads each longitudinally movable on the outer portion of the clamping member for bearing upon the marginal portion of the rail base, and holding means engaging the clamping members and forcing the heads toward the rails.

5. The combination with a track tie and a rail thereon, of a pair of members bent at substantially right angles between their ends with the corresponding horizontally disposed arms of each inserted in a transverse opening in the tie beneath the rail, clamping heads on the outer portions of the members adapted to coöperatively grip the rail flange, and means for forcing the heads on to the members and against the rail.

6. The combination with a rail tie having a transverse opening beneath the rail seat, and a track rail on the seat, of a pair of clamping members bent at substantially right angles between their ends, the corresponding arms thereof being inserted in the tie opening in abutting relation, clamping heads movable on the outer portions of the members adapted to coöperatively grip the base of the rail, and nuts for forcing the heads home on the members.

7. The combination of a railway track tie having a transverse opening beneath the rail seat, and a track rail on the seat, and a sleeve inserted in the opening, of a pair of clamping members each bent at substantially right angles between the ends thereof and having beveled and correspondingly notched end faces on the resultant arms adapted when the latter are inserted in the sleeve to abut and interlock when the other portions of the members are moved into operative relation to the rail, clamping heads each longitudinally movable on the outer portion of the clamping member for bearing upon the marginal portion of the rail base, and holding means engaging the clamping members and forcing the heads toward the rails.

8. The combination with a railway tie and rail thereon, of a pair of oppositely disposed clamping members separately insertible in a transverse aperture through the tie beneath the rail adapted to interlock at their inner ends when moved into operative relation to the rail, clamping heads on the members for engaging the rail base flanges, and spring-pressed yielding means for securing the clamping head on the members.

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

LOUIS BLESSING.

Witnesses:
J. H. E. BROWN,
WILTON P. DRAPER.