W. F. HETRICK.

RAIL CLAMP.

APPLICATION FILED AUG. 12, 1911.

1,008,542. Patented Nov. 14, 1911.

Fig. 1.

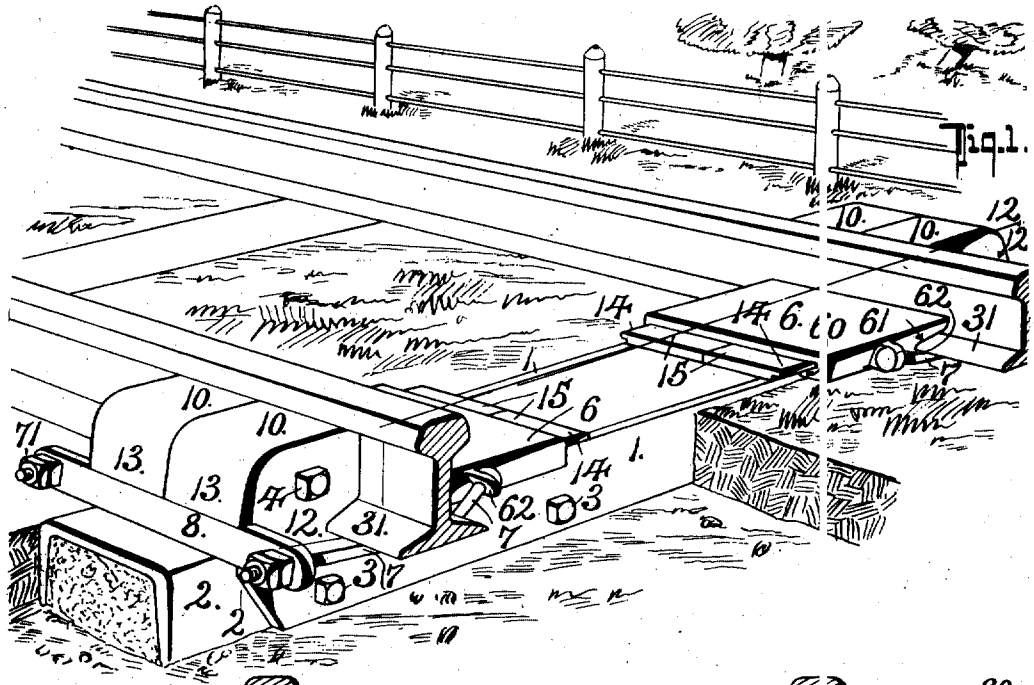


Fig. 2.

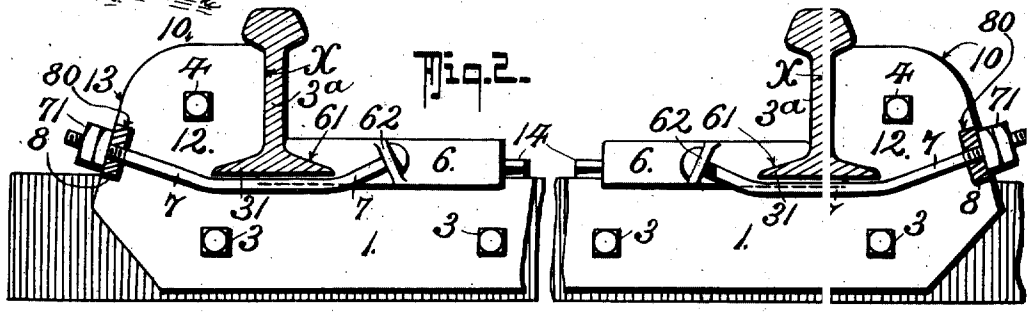
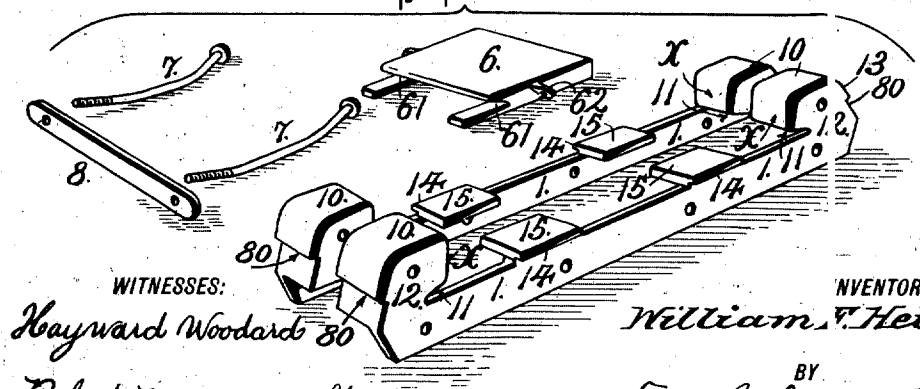


Fig. 3.



WITNESSES:

Hayward Woodard

Robert M. Grunwell

INVENTOR

William F. Hetrick

BY

Fred G. Dieterich & Co

ATTORNEYS

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM F. HETRICK, OF SOUTH CONNELLSVILLE, PENNSYLVANIA.

RAIL-CLAMP.

1,008,542. Specification of Letters Patent. Patented Nov. 14, 1911.

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To all whom it may concern:

Be it known that I, WILLIAM F. HETRICK, residing at South Connellsville, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Clamps, of which the following is a specification.

My invention seeks to provide means for firmly clamping rails of various sorts, such as railroad rails upon the ties or beams on which they are placed, and it has for its object to provide a clamping means of the character stated of a simple and inexpensive nature, adaptable for use in connection with metal, cement, or wooden ties and in which the parts are especially designed for holding the rails in such a manner as to overcome any liability to spread, tilt or turn under the strain, thrust and weight of a loaded train passing thereover.

With other objects in view to be hereinafter explained, my invention, in its generic nature embodies an improved arrangement of a tie straddling and gripping supporting base the opposite ends of which have bearings for taking up the outward or lateral thrusts of the rails, and clamp members slidably mounted on the said base for engaging the inner faces of the rails and operating as clamp members opposing the end bearings of the base, together with adjusting means for drawing up the said inner and outer clamping portions against the rail webs.

In its more subordinate features my invention consists in certain details of construction and novel arrangement of parts all of which will be hereinafter fully explained, specifically pointed out in the appended claims and illustrated in the accompanying drawing in which:

Figure 1, is a perspective view of a metallic rail tie rail and my improved clamping means as operatively applied thereto. Fig. 2, is a cross section thereof taken substantially on the line 2—2 on Fig. 1. Fig. 3, is a perspective view of the several parts that constitute my invention separated.

In its practical arrangement my invention comprises a base or supporting means consisting of two metallic stringers or side plates 1—1 of a length to extend across the trackway and with their opposite ends projected beyond the outer sides of the rails. The stringers 1 straddle the opposite sides of the tie 2 with their upper edges in a plane slightly above the tie, to which latter the plates or stringers 1—1 are firmly secured by the nutted cross bolts 3, that pass through the said stringers 1—1 and the tie, as is clearly shown in the drawings. The outer ends of the stringers 1—1 are bent upwardly as at 12 and are formed with heavy lugs or thickened portions 10—10 and these are of such width that when the said stringers are placed on the ties, they abut and form solid abutments or bearings X for engaging the outer faces of the rail webs 3, as is clearly shown in Fig 2, by reference to which it will be noticed the bearings X each have an undercut recess 11 that extends transversely of their inner faces for receiving the outer of the base flanges 31 of the rails, such recesses being of sufficient depth that the bearings X can be blocked up into a solid engagement with the rail web. To add rigidity and strength to the bearings X the thickened portions 10, of the stringer 1, are held together by the bolts 4, as shown, and the outer edge of each of the bent up portions 12 has a lug 13, the reason for which will presently appear. The stringer or side plates 1 are cast with horizontal flanges 14 at their upper edges and projected outwardly therefrom and with inwardly projecting bearing members 15, that extend over the top of the tie and abut each other when the plates 1 are clamped.

6 designates a sliding clamp, one for each rail and these are slidably mounted on the stringers 1, they having grooves 60 for engaging the guide flanges 14, such connection of parts serving to hold the clamp 6 interlocked with the stringer 1 and in position for being readily adjusted or drawn up against the inner web faces of the rails, the said clamp 6 having undercut transversely extending grooves 61 for receiving the inner base flanges of the rails, as shown, the clamp 6 having integral apertured ears 62 at each end for receiving the headed ends of the adjusting or draw bolts 7 that pass under the rails and engage a clamp bar 8 that extends transversely across the top of the tie and engages the outer edges of the upwardly bent portions or abutments 12 of the stringers and are held from sliding upwardly by the upper edge 80 engaging the lugs 13—13.

From the foregoing description taken in connection with the drawings, the complete

arrangement of my rail clamping means and the advantages of the construction thereof will be readily apparent. By reason of the peculiar arrangement of the parts and their coöperative connection, the rail can be easily set in position or removed, relatively to the clamping devices, by simply unscrewing the nuts 71 on the draw bolts 7 so that the clamp members 6 can be slid back from engagement with the base flange of the wall, it being obvious that in placing the rails and the clamps 6 the several parts can be quickly and positively adjusted to solidly clamp the rail by simply tightening up the nuts 71. By setting the upper edges of the stringers slightly above the ties, an additional elasticity is given the rail during the passing of the cars thereover, it being understood, however, that the said stringers may be so mounted on and secured to the ties so that the rails seat directly on the tie, the latter way being shown as the preferred way of mounting the stringers on metallic ties.

What I claim is:

1. A pair of stringers securable to the tie, one on each side, said stringers including an upwardly projecting rail abutment, a single clamp member longitudinally slidably mounted on the said stringers, means for forcing the said clamp member to hold the rail against the said abutment, said last named means including a bar engaging the said abutment at the side opposite the rail engaging side and draw bolts connecting the said bar with the said clamp.

2. A pair of stringers securable to the tie, one on each side, said stringers including an upwardly projecting rail abutment, a single clamp member longitudinally slidably mounted on the said stringers, means for forcing the said clamp member to hold the rail against the said abutment, said last named means including a bar engaging the said abutment at the side opposite the rail engaging side and draw bolts connecting the said bar with the said clamp, and other means on the abutment for retaining the said bar in position.

3. In a rail clamping means, a pair of stringers of like shape, securable on the tie, one on each side thereof, said stringers including an upwardly projected rail abutment at each end, a pair of clamps, slidably mounted on the said stringers, one for each rail, and means for each clamp member for forcing the said clamp members to hold the rails against the abutments on the ends of the stringers.

4. In a clamp, a pair of stringers securable to the tie, one at each side thereof, said stringers including an upwardly projecting rail abutment, said abutment projecting inwardly to extend over the tie, said stringers having integral horizontally disposed guide flanges, a single clamp longitudinally slidably mounted on the said stringers and having grooves for engaging the aforesaid flanges, and means for forcing the said clamp member to hold the rail against the said abutment.

5. In a clamp, a pair of stringers securable to the tie, one at each side thereof, said stringers including an upwardly projecting rail abutment, said abutment projecting inwardly to extend over the tie, said stringers having integral horizontally disposed guide flanges, a single clamp longitudinally slidably mounted on the said stringers and having grooves for engaging the aforesaid flanges, means for forcing the said clamp member to hold the rail against the said abutment, said means including apertured ears on the clamp member, a cross bar engaging the outer face of the abutment and draw bolts that pass under the rail and connect the bar and the apertured ears of the clamp.

WILLIAM F. HETRICK.

Witnesses:
W. B. HELMS,
MUSSER GLESSNER.