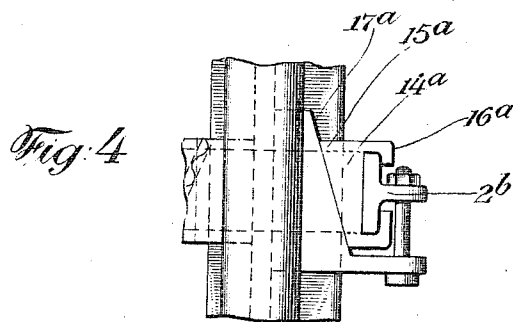
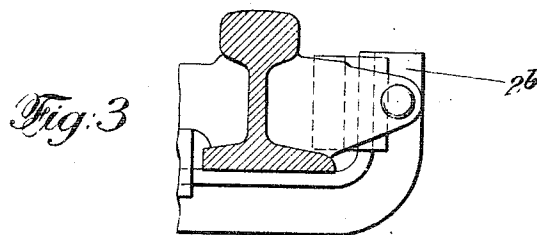
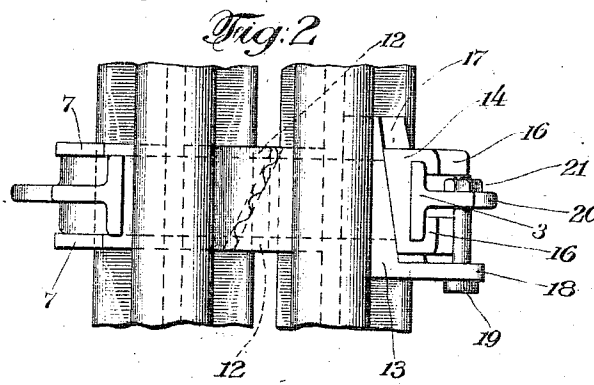
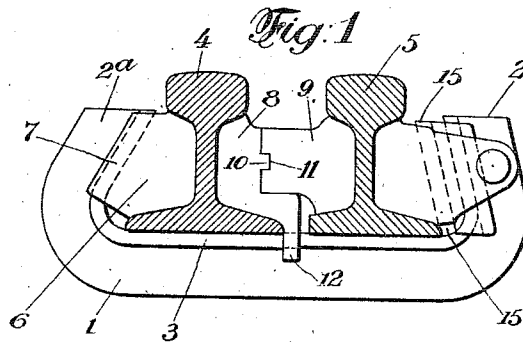


G. L. HALL.
 GUARD RAIL CLAMP.
 APPLICATION FILED JUNE 11, 1910.

979,477.

Patented Dec. 27, 1910.

2 SHEETS—SHEET 1.



Witnesses:
F. R. Miller
A. E. Peterson

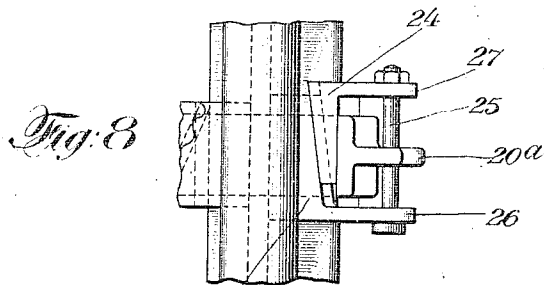
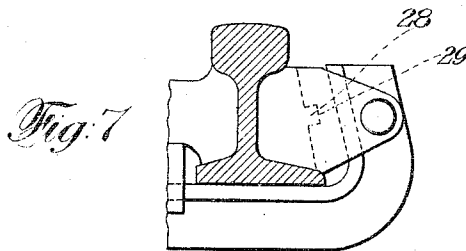
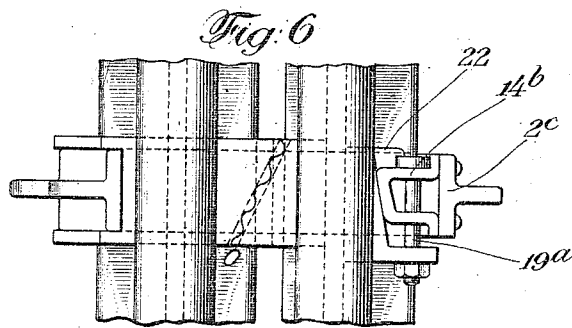
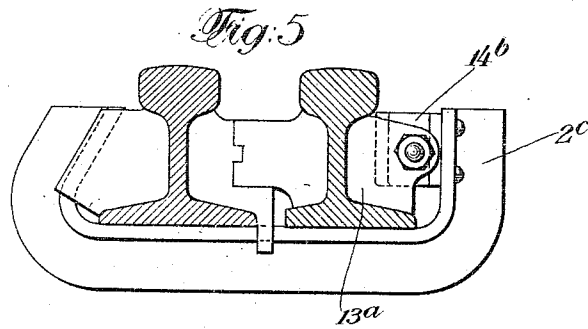
Inventor
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 By *his Attorney*
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

GEORGE L. HALL, OF NEW YORK, N. Y.

GUARD-RAIL CLAMP.

979,477.

Specification of Letters Patent.

Patented Dec. 27, 1910.

Application filed June 11, 1910. Serial No. 566,351.

To all whom it may concern.

Be it known that I, GEORGE L. HALL, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Guard-Rail Clamps, of which the following is a specification.

In the drawings: Figure 1 is a side elevation of the clamp, the guard rail and track rail being shown in transverse sectional view; Fig. 2 a plan view of the clamp applied to the rails; Fig. 3 a side elevation of a portion of a clamp showing a slight variation in the arrangement of the yoke and the clamping wedges, the guard rail being shown in vertical sectional view; Fig. 4 a plan view of the construction shown in Fig. 3; Fig. 5 a view similar to Fig. 1 showing a slight and different arrangement of the clamping wedges; Fig. 6 a plan view of the construction shown in Fig. 5; Fig. 7 a view similar to Fig. 3 showing still another variation in the arrangement of clamping wedges; Fig. 8 a plan view of the device shown in Fig. 7.

The main object of this invention is to provide a guard rail clamp composed of a rolled T-beam section bent to form a yoke, and to arrange within the said yoke suitable longitudinally movable clamping means.

A further object of the invention is to provide means whereby the clamp wedge or wedges may be moved longitudinally, the wedge moving means being connected to the yoke and to the wedge or wedges.

Another object of the invention is to simplify the construction of the yoke and thereby cheapen the cost of manufacturing the same, and at the same time form a very strong, durable and efficient clamp.

Other objects and advantages of the invention will more fully hereinafter appear.

Referring to the various parts by numerals, 1 designates a yoke formed of a rolled T-beam section, the ends 2 and 2^a of the yoke being bent upwardly to receive the clamping wedges and filler or the spacing blocks. In Figs. 1 and 2 both ends of the yoke incline upwardly and inwardly. The yoke is so bent that the horizontal web 3 of the T-beam forms a support for the track rail 4 and the guard rail 5, and also forms the inner side of the upwardly extending arms of the yoke against which inner side

the spacing blocks and clamping wedges bear.

The filler block 6 is arranged between the arm 2^a and the track rail, the outer surface of said filler block inclining from its upper edge outwardly and downwardly to adapt it to bear against the correspondingly inclined inner face of the arm 2^a. This filler block is formed at its edges with the outwardly extending flanges 7 which embrace between them the web 3 of the arm 2^a, and thereby hold the filler block against longitudinal movement. It is manifest that this spacing block must be placed in position on the yoke before the yoke is secured in position by means of the clamping wedges.

Between the guard rail and the track rail are arranged the usual spacing blocks 8 and 9 said blocks meeting on a diagonal line, and said meeting edges being ribbed to prevent independent longitudinal movement of said blocks. The block 8 is provided with a horizontal rib 10 which fits a corresponding groove 11 in the block 9 to prevent independent vertical movement of the blocks. The block 8 is formed with depending lugs 12 which engage the edges of the web 3 and prevent longitudinal movement of said block 8. These lugs manifestly prevent longitudinal movement of either of the blocks 8 or 9, the ribbed faces of the blocks locking them together.

The clamp means consist of two wedges 13 and 14. The wedge 14 has a surface 15 which inclines from the upper edge of the block outwardly and downwardly. This block is also formed with flanges 16 at its edges which embrace the edges of the web 3 of the arm 2 of the yoke. The wedge 13 is formed with an outer surface 17 which inclines from the upper surface of the wedge outwardly and downwardly, to correspond to the surface 15 of the wedge 14, and the inner surface of said wedge bears against the web of the guard rail; the upper surface thereof engages under the head of the rail and the lower surface thereof engages the upper surface of the rail base.

The surfaces 15 and 17 are oblique to the adjoining side of the guard rail and incline inwardly and forwardly toward said rail. The wedge 13 is movable longitudinally, and to secure this longitudinal movement said web is formed at its larger end with an outwardly extending lug 18, and this lug is

apertured to permit of the passage of a bolt 19. This bolt also passes through the outwardly extending flange 20 of the T-beam, a nut 21 being secured thereon to draw the lug 18 toward the yoke. It is manifest that by screwing up the nut 21 the wedge 13 will be moved longitudinally between the stationary wedge 14 and the guard rail, and said longitudinal movement will cause the yoke and all the parts carried thereby to rigidly clamp the rails in position. If desired the movable clamping wedge may be driven home by a sledge or other means and the bolt used to take up and hold the wedge in position.

In Figs. 3 and 4 the parts are of the same construction as those shown in Figs. 1 and 2 except that the arm 2^b of the yoke is vertical, the flanges 16^a of the block 14^a being also vertical to accommodate themselves to the vertical arm 2^b. The inclined faces 17^a and 15^a are also vertical. In all other respects the construction of the clamp shown in these figures is the same as that shown in Figs. 1 and 2. By forming the yoke arm 2^b vertical the two clamping wedges may be more readily and more quickly assembled.

In Figs. 5 and 6 the stationary clamping wedge 14^b is rigidly secured to the inner side of the vertical arm 2^c of the clamping yoke, and the clamping bolt 19^a passes through said stationary wedge. The movable wedge 13^a is formed with a horizontal part 22 which engages under the rigid wedge block 14^b and prevents vertical movement on the said wedge block.

In the construction shown in Figs. 7 and 8 the wedge blocks 23 and 24 are both movable longitudinally and the clamping bolt 25 extends through the web 20^a of the yoke, and also through lugs 26 and 27 on the wedges. By screwing up the nut on said bolt it will be readily seen that both of the wedges will be movable longitudinally. In this construction the wedge 23 is formed with a rib 28 which fits a corresponding groove in the wedge 24 whereby independent vertical movement of the wedges will be prevented.

It will thus be seen that I provide a very simple and strong guard rail clamp which may be cheaply manufactured, and which may be easily assembled.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is:

1. A guard rail clamp comprising a yoke formed of a T-beam section having its web on the inner side of the yoke, a filler block, a pair of spacing blocks, a pair of clamping

wedges one of said wedges being formed with side flanges adapted to engage the web on the inner side of one of the yoke arms, the other wedge being formed with an outwardly extending lug, a bolt extended through said lug and through the outwardly extending flange of the yoke arm, the contact faces of said wedges being oblique to the longitudinal axis of the guard rail.

2. A guard rail clamp comprising a yoke formed of a T-beam section the arms of said yoke inclining inwardly and upwardly, the web of the T-beam being on the inner side of the yoke, a filler block, a pair of spacing blocks, a pair of clamping wedges, one of said wedges being formed with a side flange to engage the web of one of the yoke arms, the other wedge being formed with an outwardly extended lug at its larger end, and a bolt passing through said lug and through the flange of the yoke arm.

3. A guard rail clamp comprising a yoke formed of a T-beam section, a filler block, a pair of spacing blocks, a pair of clamping wedges, one of said wedges being rigidly secured to the inner side of one of the yoke arms, the other wedge being arranged between the rigid wedge and the guard rail, and a bolt connecting this latter wedge with the rigid wedge, and adapted to move said latter wedge longitudinally.

4. A guard rail clamp comprising a yoke, a filler block, a spacing means, and a pair of clamping wedges, each of said wedges being formed with lugs, and a clamping bolt extending through said lugs and through the yoke and adapted to draw said wedges toward each other, whereby said wedges will be clamped between the yoke and the guard rail.

5. A guard rail clamp comprising a yoke, a filler block, a spacing means, and a pair of clamping wedges, one of said wedges being rail and the lower surface thereof engages one of the arms of the yoke to hold said wedge stationary, the other wedge being arranged between the stationary wedge and the guard rail, and a bolt connecting the movable wedge with the yoke, whereby said wedge may be moved longitudinally.

In testimony whereof I hereunto affix my signature in the presence of two witnesses this 6th day of June 1910.

GEORGE L. HALL.

Witnesses:

F. R. MILLER,

A. E. PETERSON