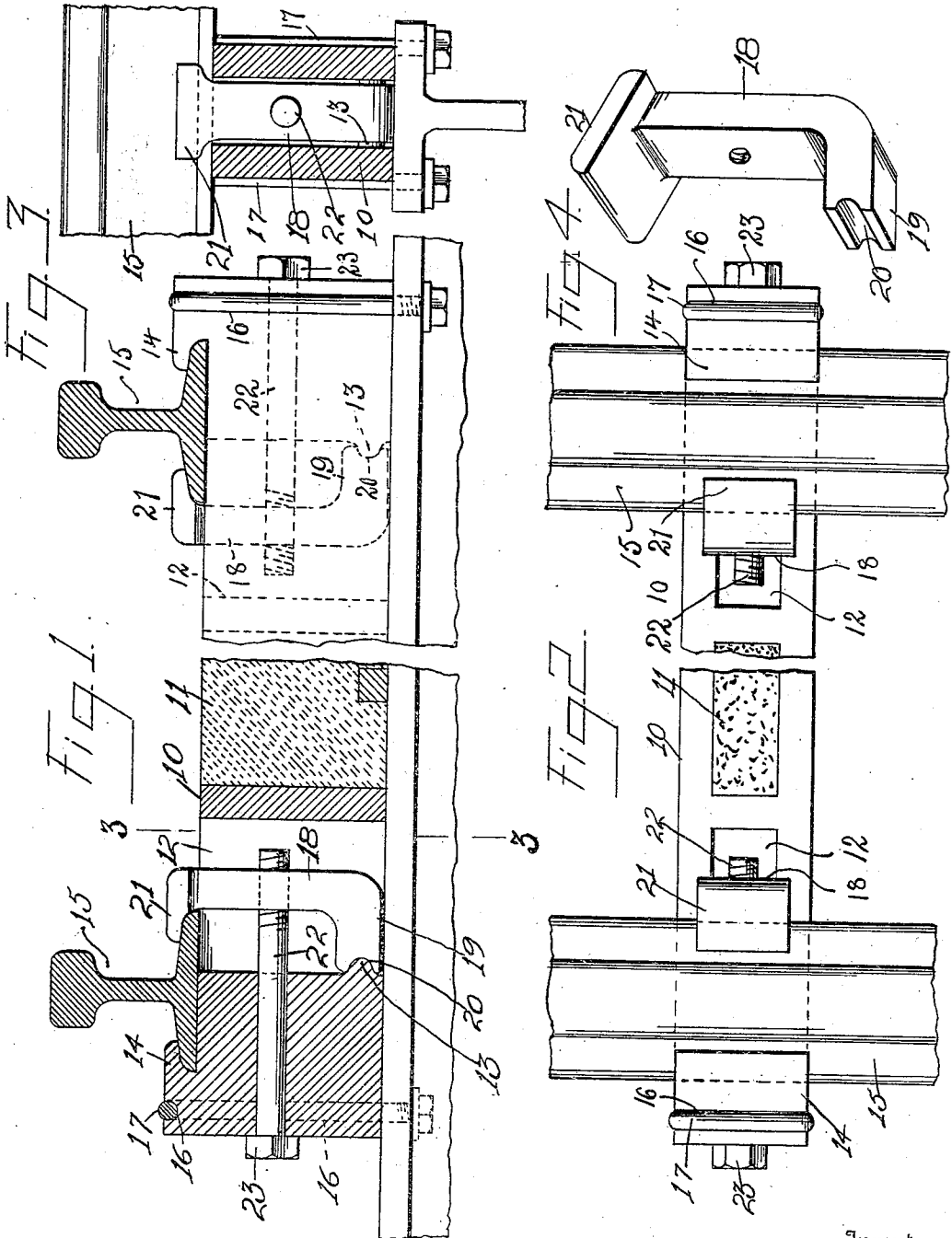


J. H. PENNEY.
METAL RAILWAY TIE.
APPLICATION FILED JULY 12, 1909.

956,779.

Patented May 3, 1910.



Witnesses

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JOHN H. PENNEY, OF HIXON, TENNESSEE.

METAL RAILWAY-TIE.

956,779.

Specification of Letters Patent.

Patented May 3, 1910.

Application filed July 12, 1909. Serial No. 507,117.

To all whom it may concern:

Be it known that I, JOHN H. PENNEY, a citizen of the United States, residing at Hixon, in the county of Hamilton, State of Tennessee, have invented certain new and useful Improvements in Metal Railway-Ties; and I 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.

This invention relates to combination metallic and cement railway ties, and has for one of its objects to improve the construction and increase the efficiency and utility of devices of this character.

With this and other objects in view, the invention consists in certain novel features of construction as hereafter shown and described and then specifically pointed out in the claims, and in the drawings illustrative of the preferred embodiment of the invention, Figure 1 is a side elevation of the improved tie, partly in section. Fig. 2 is a plan view of the same. Fig. 3 is a transverse section on the line 3—3 of Fig. 1. Fig. 4 is a perspective view of one of the clamp members, detached.

The improved device comprises a body 10 of cast metal and formed with a relatively long longitudinal opening 11 and smaller openings 12 near the ends, each smaller opening having an inwardly directed rib 13 at the outer side near the bottom.

Formed upon the ties at the ends are projections 14 overhanging at their inner ends to bear over the outer portion of the tie flange of the rail, the latter represented at 15. Formed in the sides of the tie and likewise extending across the projections 14 are channels indicated at 16 to receive U-bolt fastening devices 17 by which the tie is secured to the sub-structure. The U-bolts enable the ties to be securely connected to bridge, elevated railway, and like structures. The smaller openings 12 extend beneath the rails 15, and disposed within each small opening is a clamp device comprising a body portion 18, and projecting portion 19, the latter having a groove 20 to bear over the rib 13, and with a projecting head 21 ex-

tending over the inner edge of the tie flange of the rail, as shown. The head 21 is extended laterally of the member 18 to increase the bearing surface which engages the rail, as shown. Extending through the outer portion of the tie at each end is a bolt 22, the inner end of the bolt being threaded and engaging through a threaded aperture in the body 18 of the clamp member. The bolt is provided with a wrench head 23 at the outer end, so that by applying a wrench to the head the clamp member 19 may be forcibly drawn to the rail 15, and thus firmly clamp the latter in position, the pressure applied to the clamp, it will be obvious, forcing the rail against the projection 14. By this simple means the rail is firmly clamped to the tie, and any looseness that may occur may be readily "taken up" by actuating the bolt 22.

The longitudinal hollow portion 11 of the tie is filled with cement, preferably of a "concrete" nature, which not only fills the space and increases the weight and strength of the tie, but also materially increases its stiffness and durability, and effectually prevents the entrance of moisture which would otherwise deteriorate the material of the tie.

The tie may be of any required size or weight, or of any required length, but by its construction it is not required to be as long as the ordinary tie, but may be of the same length as the ordinary tie, if preferred.

What is claimed is:—

1. A metallic tie having rail engaging projections at the ends and vertical recesses near the projections with a bearing rib in each recess, a clamp member for each recess and having a bearing groove at one end engaging the rib and a laterally directed head adapted to bear over the tie flange of a rail, and means for forcibly moving said clamp member.

2. A metallic tie having rail engaging projections at the ends and vertical recesses near the projections with a bearing rib in each recess, a clamp member for each recess and having a bearing groove at one end engaging the rib and a laterally directed head adapted to bear over the tie flange of the rail, and clamp bolts operating through said clamp members and the body of the tie.

3. A metallic tie having an intermediate longitudinal recess and vertical recesses near its ends, each end recess having a bearing rib therein, a filling element for said intermediate recess, a clamp member for each end recess and having a bearing groove at one end engaging the rib and a laterally directed head adapted to bear over the flange of a

rail, and means for forcibly moving said clamp member.

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

JOHN H. PENNEY.

Witnesses:

R. F. HIXSON,

W. H. H. ARMILL.