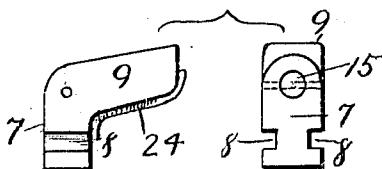
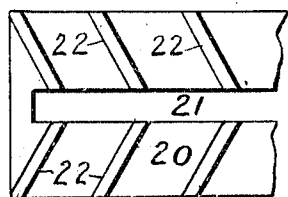
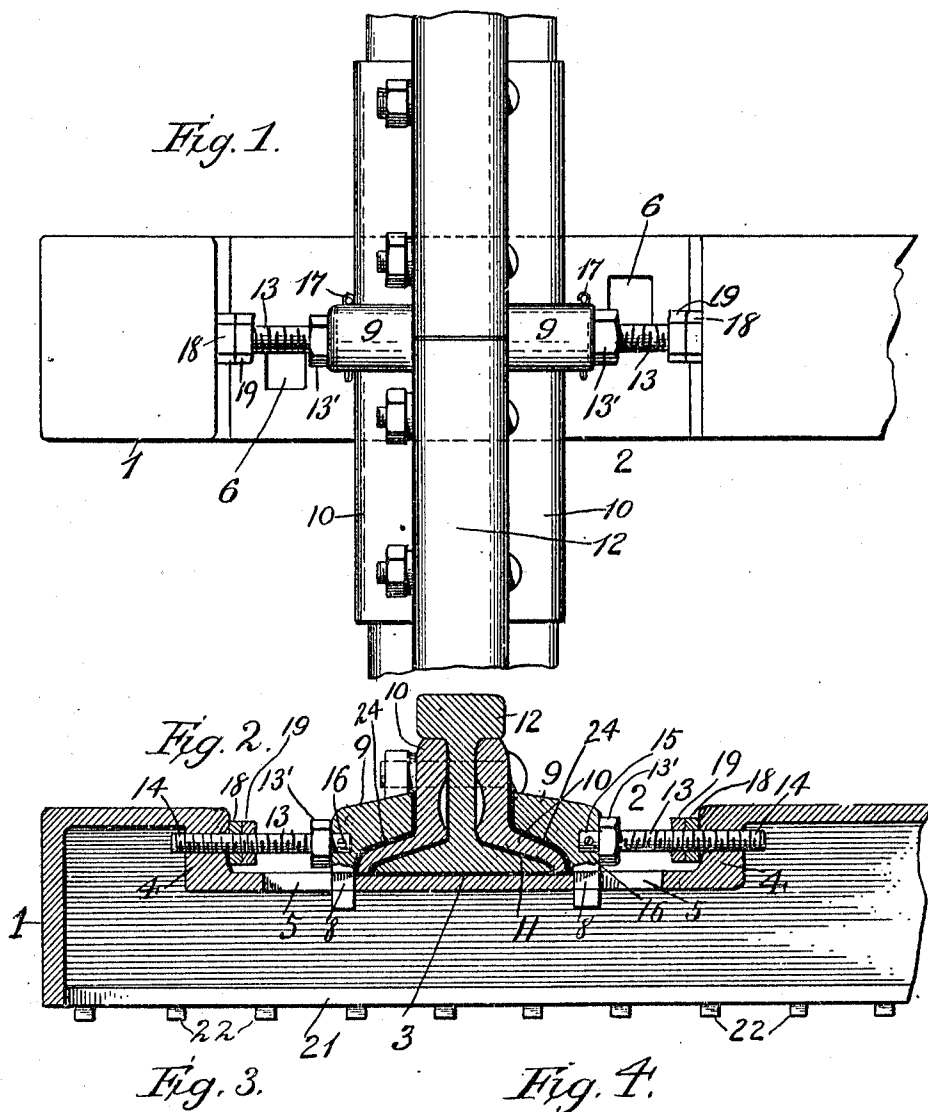


W. U. & S. J. GAMBLE.
 L. GAMBLE, ADMINISTRATRIX OF W. U. GAMBLE, DEC'D.
 METALLIC RAILROAD TIE.
 APPLICATION FILED OCT. 11, 1909.

953,004.

Patented Mar. 22, 1910.



Witnesses
 J. L. Orvand.
 W. Paul Rimohle.

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 By D. C. Rimohle, Attorney

UNITED STATES PATENT OFFICE.

WILLIAM U. GAMBLE, DECEASED, LENA GAMBLE, ADMINISTRATRIX, AND SIDNEY J. GAMBLE, OF MASSILLON, OHIO.

METALLIC RAILROAD-TIE.

953,004.

Specification of Letters Patent. Patented Mar. 22, 1910.

Application filed October 11, 1909. Serial No. 522,247.

To all whom it may concern:

Be it known that WILLIAM U. GAMBLE, deceased, late a citizen of the United States, residing at Massillon, Ohio, and SIDNEY J. GAMBLE, a citizen of the United States, residing at Massillon, in the county of Stark and State of Ohio, have invented new and useful Improvements in Metallic Railroad-Ties, of which the following is a specification.

This invention relates primarily to railroad ties, has especial reference to metallic ties and means for securing railroad rails thereto, has for its object the construction of a durable tie and its accessories, which can be readily manufactured at comparatively small cost.

The invention consists in certain improvements in construction, which will be fully disclosed in the following specification and claims.

In the accompanying drawings which form part of this specification:—Figure 1 represents a plan view, of part of a railroad tie embodying the invention. Fig. 2 a vertical longitudinal section of the tie and a transverse section of the rail partly in elevation. Fig. 3 a plan view of a section of the tie, and Fig. 4 a side and end view of one of the clamps.

Reference being had to the drawings and the designating characters thereon, the numeral 1 indicates a hollow metallic railroad tie of our improved construction, on the upper surface of which are depressions 2, 2, one at each end forming seats or bearings 3 for a railroad rail. On each end of the recess is a vertical wall 4 thickened or reinforced to receive a bolt as will be herein- after described.

5, 5, indicate slots in the seats 3 enlarged at their outer ends 6, for the insertion of the inner end 7 of a clamping-member, in which are formed grooves 8, 8, to engage the metal in the seat 3, and on the outer end of said member is a jaw 9 which engages the fish-plate 10 of a rail joint or the flange 11 of a rail 12 at points intervening the fish-plates.

The clamping-members are adjusted and secured in position by bolts 13, the threaded ends 14, of which engage the opposite reinforced walls 4, of the tie, and the opposite ends of the bolts engage the clamping-members, as by a recess 15, into which the part 16 of the bolt extends, and is secured against

turning after the members have been properly adjusted and the rail secured in position, by a cotter-pin 17, which extends transversely through the member and the part 16 of the bolt.

The bolts 13 are provided with a head 13' and may also be provided with a nut 18 bearing against the wall 4 and a jam-nut 19, or other suitable lock-nut device.

In the bottom 20 of the tie is a slot 21 for draining the tie of water which may enter through the slots 5, 5, and on each side of the slot are transverse projections 22, preferably arranged at an angle across the tie, for the purpose of preventing longitudinal creeping of the tie in the roadbed.

The seats 3 for the rail are made wider than the base or flange of the rail 12 to allow for proper alinement of the rail on the tie by adjusting the screw bolts 13 and the clamping-members, and when properly alined, the rails are secured in position by locking the bolts to prevent their accidentally turning and becoming loose.

When signal wires are supported in the clamping-members, suitable insulating material 24, such as hard rubber, mica or the like is interposed between the clamping-members and the rail to prevent transmission of the electric-current to the rail.

The tie thus constructed and equipped with rail securing devices forms a cheap and advantageous means for supporting railroad rails, can be readily made at comparatively small cost, and are durable and easily manipulated.

Having thus fully described our invention, what we claim is—

1. A hollow metallic railroad-tie having depressed rail-seats formed in the upper wall thereof, permanent vertical walls at both ends of the seats extending across the tie, rail-clamping members engaging said upper wall and adjustable therein, and means separate from, but engaging said clamping members and engaging the walls at the ends of said seats for adjusting and securing said members in engagement with a rail.

2. A hollow metallic railroad-tie having depressed rail-seats formed in the upper wall thereof, permanent vertical walls at both ends of the seats extending across the tie, slots in the seats, rail-clamping members having grooves in their sides engaging the

upper wall of the tie and adjustable in said slots, and bolts separate from but engaging said clamping-members, engaging the walls at the ends of said seats and adjustable therein for securing said members in engagement with the rail.

3. A hollow metallic railroad-tie having depressed rail-seats formed in the upper wall thereof, permanent vertical walls at both ends of the seats extending across the tie, slots in the seats, clamping-members in said slots and engaging the upper wall of the tie, and separate bolts adjustable in the walls at the ends of the seats and engaging said clamping-members.

4. A hollow metallic railroad-tie having depressed rail-seats formed in the upper wall thereof, a permanent reinforced wall at each end of said seats, slots in the seats, clamping-members having grooves in their sides for engaging the upper wall of the tie,

bolts separate from the clamping-members adjustable in said reinforced walls and engaging the clamping-members.

5. A hollow metallic railroad-tie having a depression forming a rail seat at each end, opposite slots in each seat, a reinforced wall at each end of each seat, a longitudinal drain slot in the bottom of the tie, and transverse projections thereon, in combination with rail-clamping members engaging the slots in the rail seats, and bolts for securing said members in engagement with a rail.

In testimony whereof we affix our signatures, in presence of two witnesses.

LENA GAMBLE,

Administratrix of estate of William U. Gamble, deceased.

SIDNEY J. GAMBLE

Witnesses:

NELLIE J. LOWE,

A. T. ELLIS.