

A. M. WAGNER.  
RAILWAY TIE AND CLAMP.  
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955,724.

Patented Apr. 19, 1910.

Fig. 1.

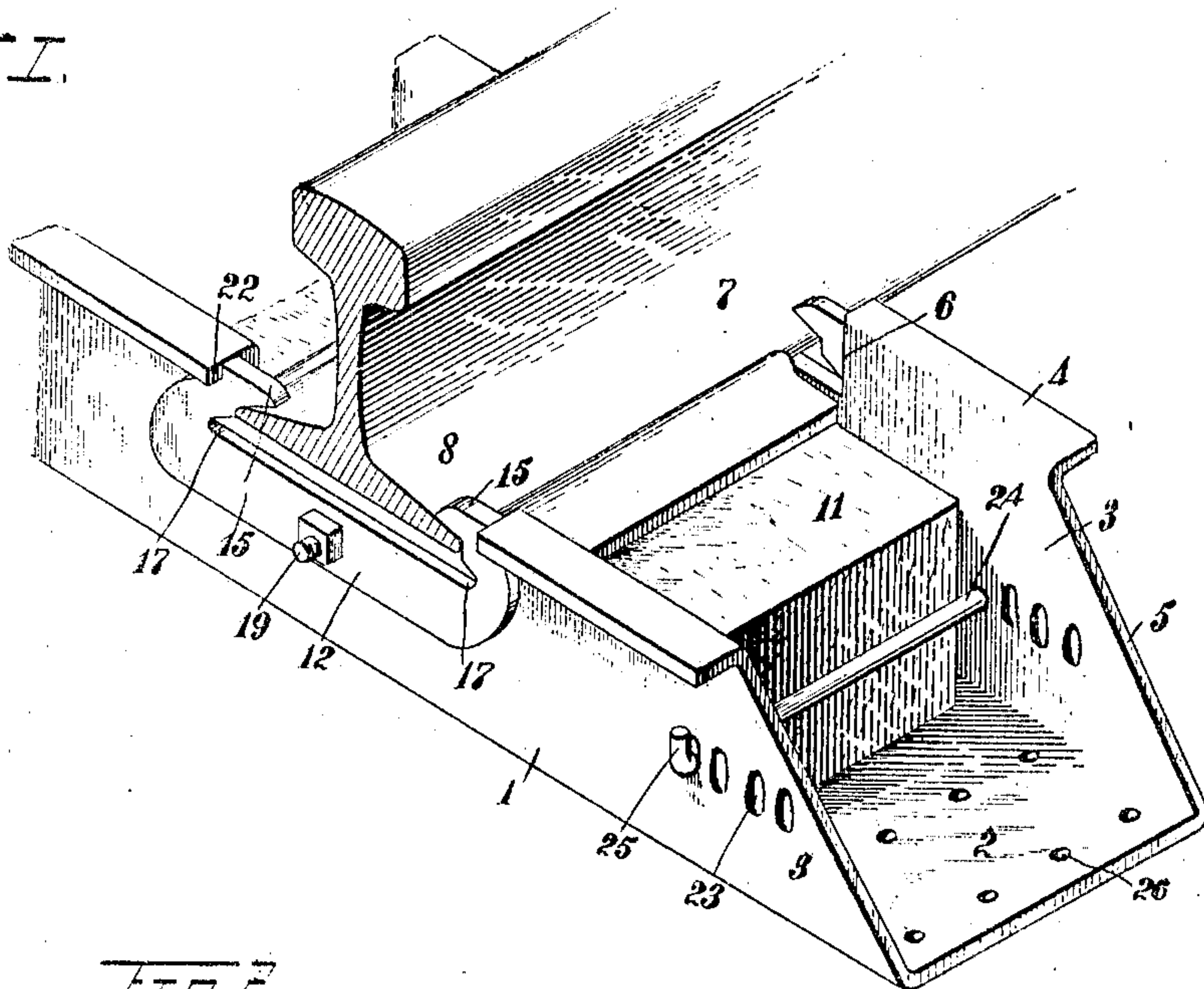


Fig. 2.

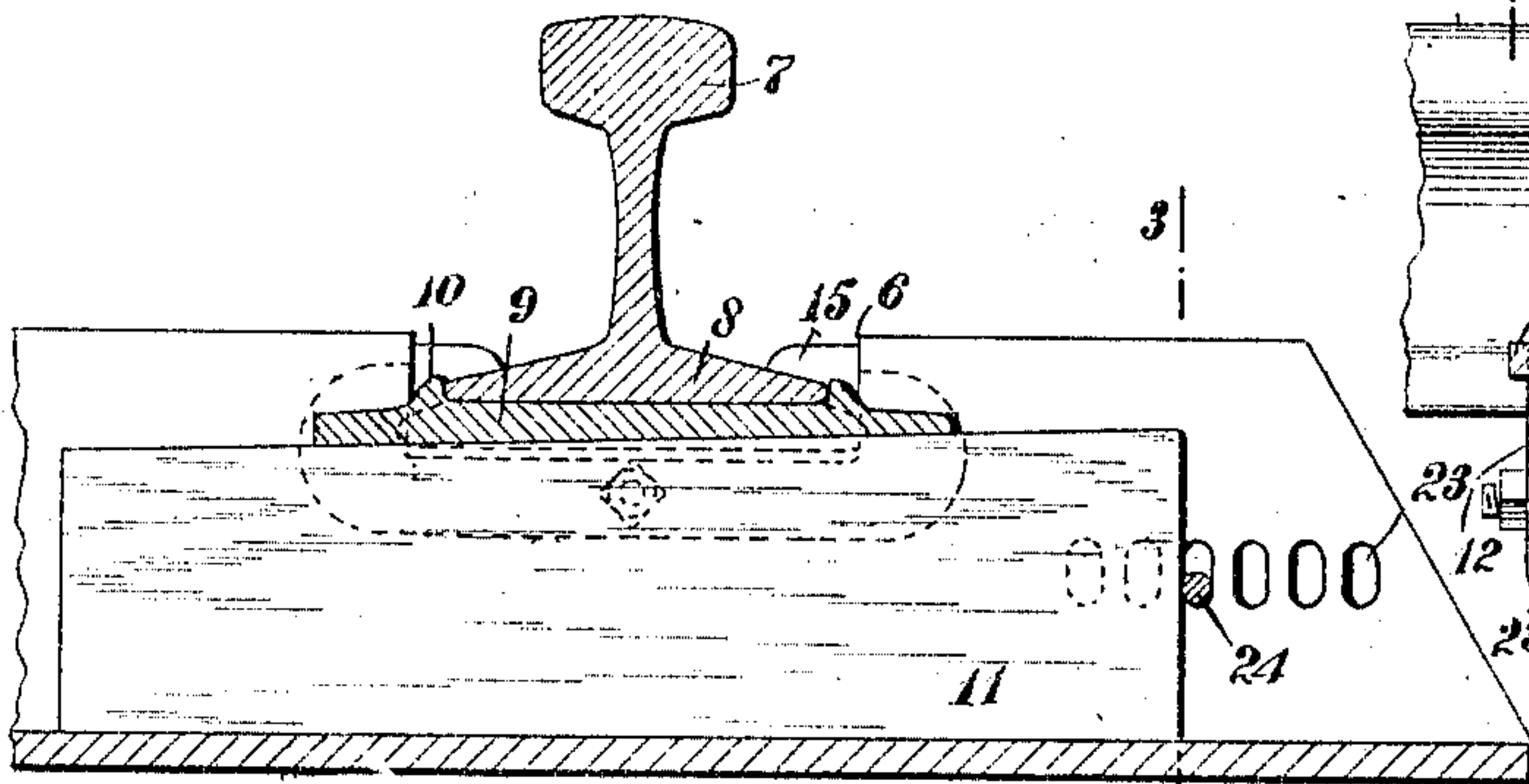


Fig. 3.

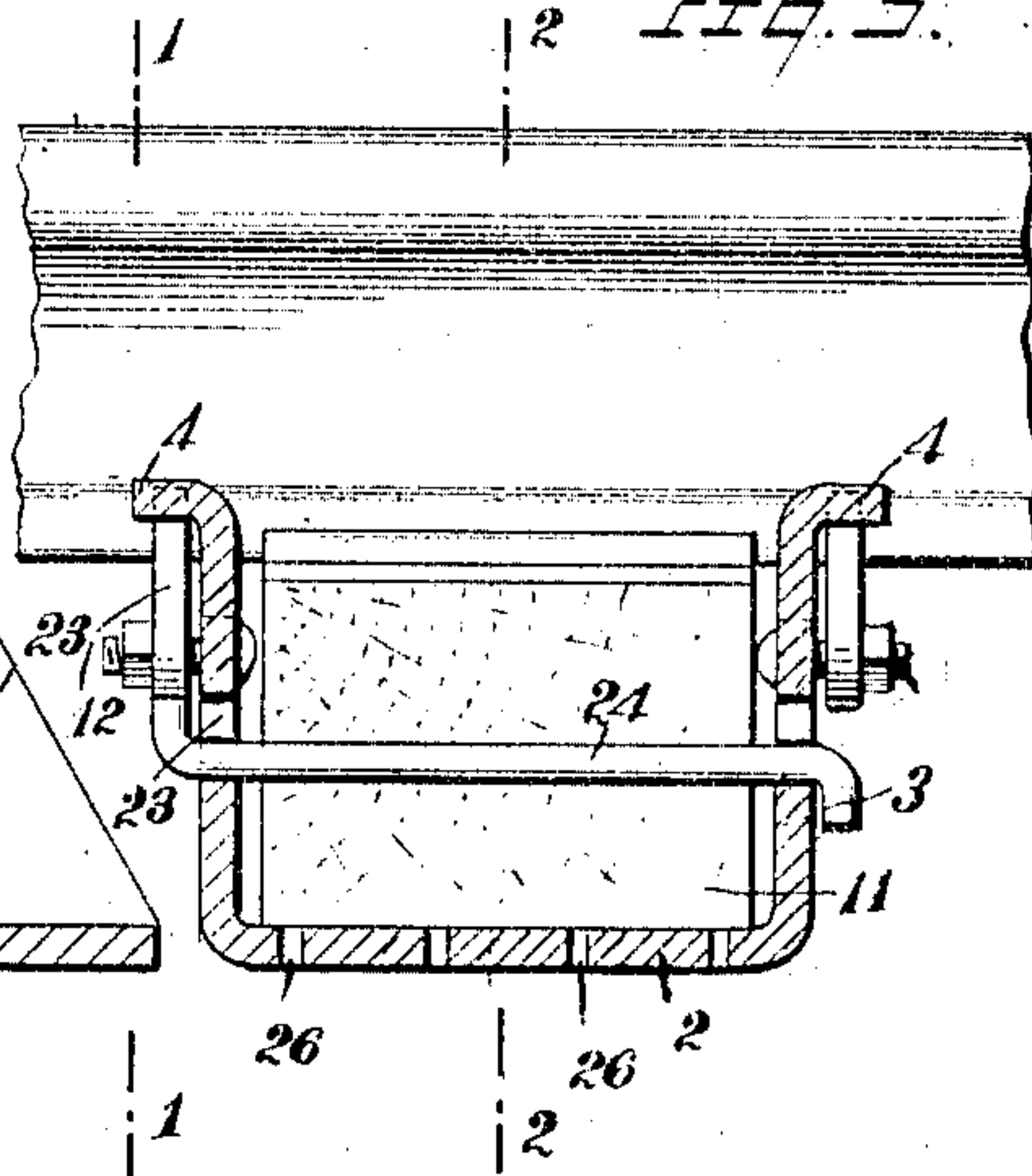


Fig. 4.

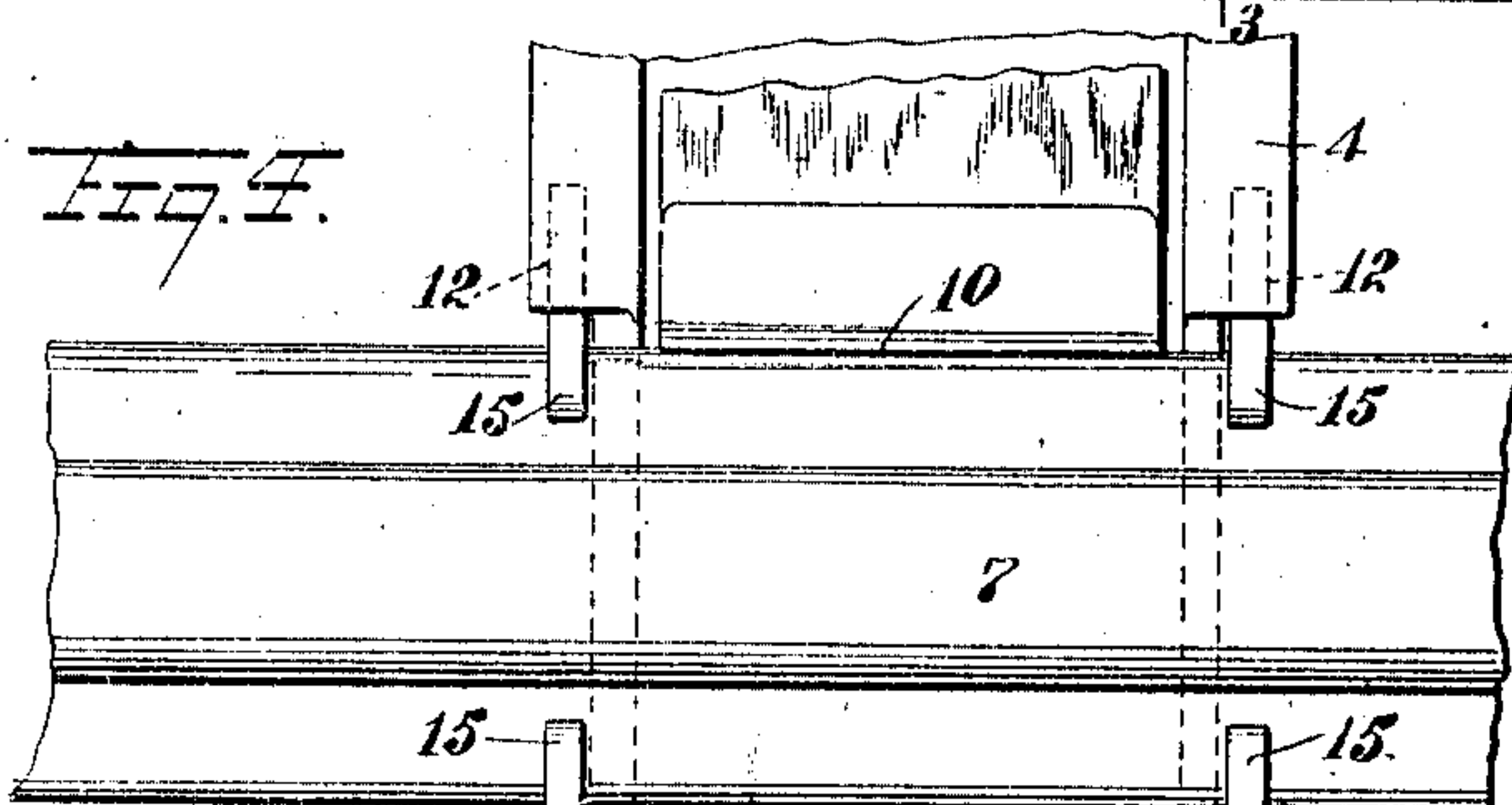
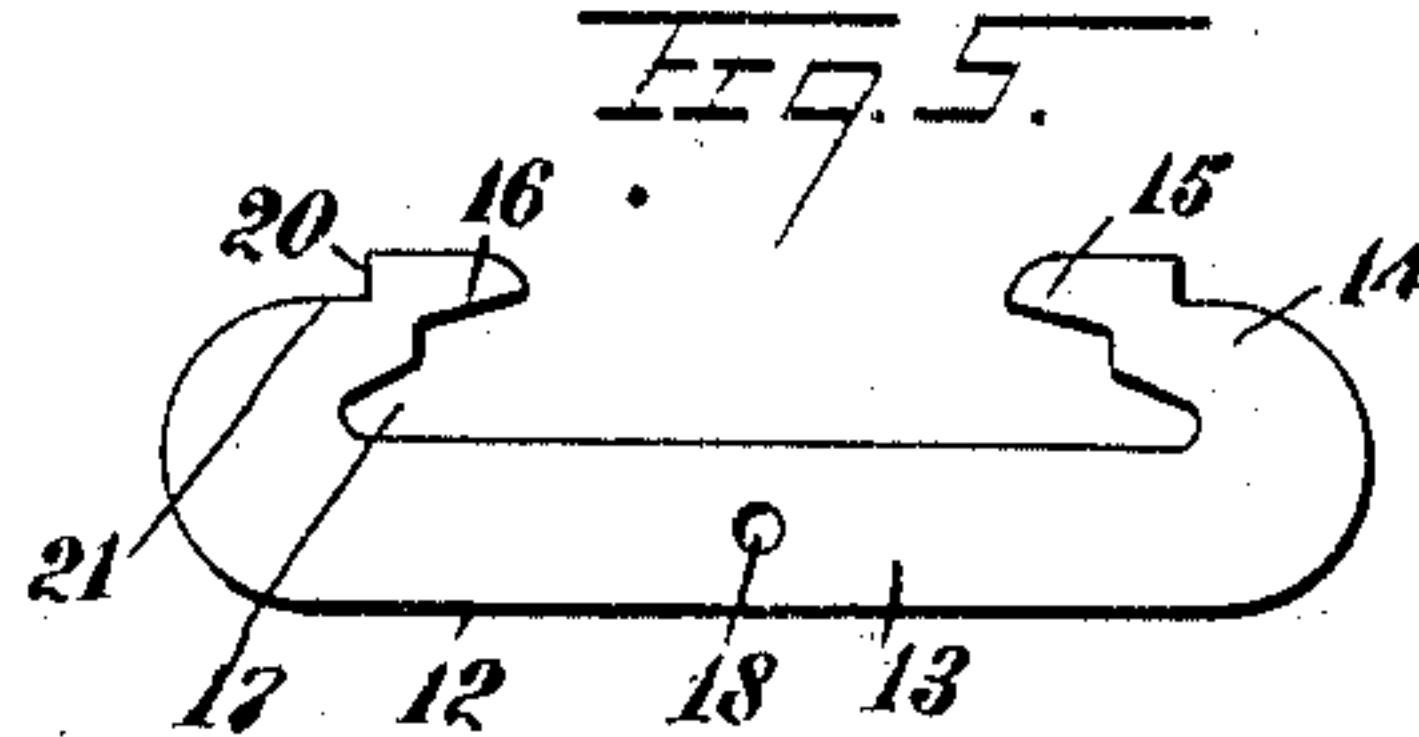


Fig. 5.



WITNESSES

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# UNITED STATES PATENT OFFICE.

ALLEN MONROE WAGNER, OF PENDLETON, INDIANA.

RAILWAY TIE AND CLAMP.

955,724.

Specification of Letters Patent.

Patented Apr. 19, 1910.

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*To all whom it may concern:*

Be it known that I, ALLEN M. WAGNER, a citizen of the United States, and a resident of Pendleton, in the county of Madison and State of Indiana, have invented a new and Improved Railway Tie and Clamp, of which the following is a full, clear, and exact description.

This invention relates to railway ties and clamps, and the object of the invention is to produce a tie adapted to be formed of metal and provided with means for supporting and clamping the rail.

A special object of the invention is to provide a simple construction having few parts, and to provide also for giving the rail a certain amount of desirable resiliency under a passing load.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective showing an end of a tie constructed according to my invention and showing a portion of a rail seated thereupon, this view showing the rail as though cut on the line 1—1 of Fig. 3; Fig. 2 is a vertical cross section through the rail and passing longitudinally of the tie, this view being taken on the line 2—2 of Fig. 3; Fig. 3 is a cross section through the tie taken near the end thereof, showing a portion of the rail and other parts in side elevation; Fig. 4 is a plan of a portion of the tie at the rail, a part of the tie being broken away; and Fig. 5 is a side elevation of a clamp which constitutes a feature of the invention.

Referring more particularly to the parts, 1 represents the tie which is in the form of a channel, and constructed of steel, or similar metal. The web or bottom 2 of the channel is disposed horizontally, and the flanges 3 of the channel project upwardly. At their upper edges they are bent outwardly so as to form cleats 4 extending longitudinally of the tie. The ends of the tie are cut on an incline so that the flanges 3 present inclined edges 5 at their ends. At suitable points the flanges 3 are provided on their upper edges with deep notches 6. The rail 7 passes

across the upper side of the tie through these notches, as indicated. The flange 8 of the rail is supported directly upon a seat 9 in the form of a plate, which is slightly tapered in the direction of the longitudinal axis of the tie, as indicated in Fig. 2. This seat 9 is provided on its upper edge with ribs or nibs 10 which engage the edges of the flange so as to assist in holding the rail against lateral displacement or a "spreading" movement. The thin end of the seat 9 is disposed toward the adjacent end of the tie and the seat is supported on a wedge block or wedge 11 which is adapted to be driven under it from the end of the tie, as indicated.

In order to hold the rail down, I provide clamps 12, one of which is clearly shown in Fig. 5. Each of these clamps comprises a bar 13, at the ends of which upwardly and inwardly extending jaws 14 are formed. The extremities of these jaws 14 are formed into upwardly offset tongues 15 and these tongues present inclined edges 16 on their under sides which are adapted to engage the upper side of the flange 8 of the rail, as indicated most clearly in Fig. 2. On account of the inward projection of the jaws 14, near their roots, that is, near their point of connection with the bar 13, deep notches 17 are formed, and these notches may receive the edges of the flange 8 when the clamps are being applied to the rail. Each bar 13 is provided at its middle point with a bolt opening 18 through which a fastening bolt 19 is applied, said fastening bolt passing through the flanges 3 of the tie, as indicated in Fig. 3. At their rear ends the tongues 15 present vertical shoulders 20, and horizontal edges or seats 21 adjacent these shoulders. The shoulders 20 are adapted to engage the edges 22 of the cleats 4 which are formed at the notches 6, and the edges 21 are adapted to seat against the under sides of the cleats, as will be readily understood.

It should be understood that there is a certain amount of play at the bolts 19, that is, they do not fit tight in their openings in the flanges 3, hence, they will permit a slight upward movement of the clamps when the rail is forced upwardly as the wedge block 11 is driven home. The purpose of the bolts 19 is simply to prevent any possibility of the clamps from moving longitudinally along the rail so as to become disengaged from the cleats 4. In the flanges 3, at oppo-



site points, I provide slots 23, and after the wedge block 11 has been driven home, a cross bar 24 is inserted in the near slot at the butt end of the block so as to prevent the block from working out. This bar 24 has its ends turned laterally so as to form fingers or stops 25 which will prevent it from becoming accidentally disengaged. These fingers 25 project in opposite directions.

10 The web 2 of the tie is provided with a plurality of drain openings 26 through which the surface water or rain may pass. This will prevent water from collecting in the tie.

15 With a tie and rail clamp constructed as described, it will be evident that the rail can be readily disconnected when desired to replace the block or to enable the block to be re-treated with creosote, or a similar preservative material. Attention is called to the fact that the rail is supported on a wooden block so that a load passing the tie will have all the resiliency of an ordinary wooden tie. At the same time there is no possibility of the clamps becoming displaced. Attention is also called to the fact that the tie may be readily formed from an ordinary structural shape.

30 Having thus described my invention, I claim as new and desire to secure by Letters Patent,—

1. A railway tie having a web and upwardly projecting flanges, clamps adapted to engage the rail flange, and a wedge block seating on said web under the rail and adapted to force the rail upwardly, said flanges having parts forming seats for the upper edges of said clamps and limiting the upward movement thereof.

40 2. A railway tie of channel form presenting a bottom web and presenting upwardly extending flanges, clamps attached to said flanges and adapted to engage the flange of the rail, means for securing said clamps to said flanges, and a wedge block of compressible material resting on said web between said flanges and adapted to force the rail upwardly to engage said clamps, said flanges having projecting members forming seats for the upper sides of said clamps and limiting the upward movement thereof when said block is driven home.

3. A railway tie having a web with upwardly projecting flanges, said flanges having laterally projecting cleats on the upper edges thereof, clamps engaging the rail and having their upper edges seating against the under sides of said cleats, means for securing said clamps to said flanges, and a wedge block seated on said web under the rail and adapted to force the rail upwardly against

said clamps, said cleats affording means for limiting the upward movement of said clamps.

4. A railway tie having a web and upwardly projecting flanges at the sides thereof, said flanges having outwardly projecting cleats formed thereupon at their upper edges said flanges further having notches in the upper edges thereof adapted to receive the rail, clamps attached to the outer sides of said flanges and adapted to engage the rail flange, the upper edges of said clamps being adapted to seat against the under sides of said cleats adjacent to said notches, and a wedge block seating on said web between said flanges and adapted to force the rail upwardly against said clamps.

5. A railway tie having a web with flanges projecting upwardly therefrom, said flanges having outwardly projecting cleats formed at the upper edges thereof, said flanges having notches in the upper edges thereof to receive the rail, clamps on the outer sides of said flanges having tongues adapted to project over the rail flange, said tongues having shoulders at the butt ends thereof adapted to engage said cleats at the edges of said notches, and a wedge block seating on said web between said flanges and adapted to force the rail upwardly when driven home.

6. A railway tie having a web with flanges projecting upwardly therefrom, said flanges having outwardly projecting cleats formed at the upper edges thereof, said flanges having notches in the upper edges thereof to receive the rail, clamps on the outer sides of said flanges having tongues adapted to project over the rail flange, said tongues having shoulders at the butt ends thereof adapted to engage said cleats at the ends of said notches, a wedge block seating on said web between said flanges and adapted to force the rail upwardly when driven home, and bolts for securing said clamps to said flanges.

7. A railway tie having a web and flanges projecting upwardly therefrom, clamps adapted to engage the rail, a wedge block adapted to be driven under the rail and cooperating with said clamps to hold the same, said flanges having a plurality of oppositely disposed openings, and a bar removably mounted in said openings and adapted to be inserted behind the butt end of said block to prevent the accidental withdrawal thereof.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALLEN MONROE WAGNER.

Witnesses:

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GEO. M. FRANYTON.