(No Model.) 2 Sheets—Sheet 1.

C. H. ROGERS.

RAILWAY TIE AND RAIL CLAMP.

No. 601,105. Patented Mar. 22, 1898.

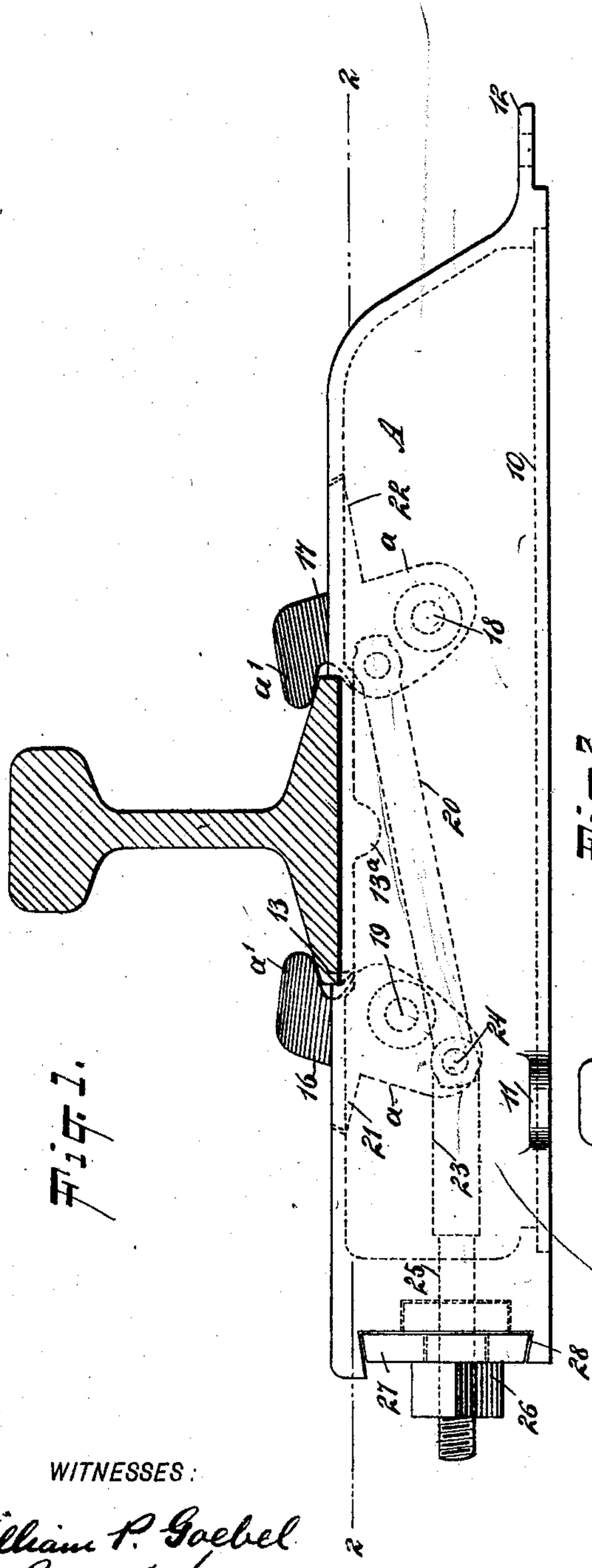

Fig. 1.

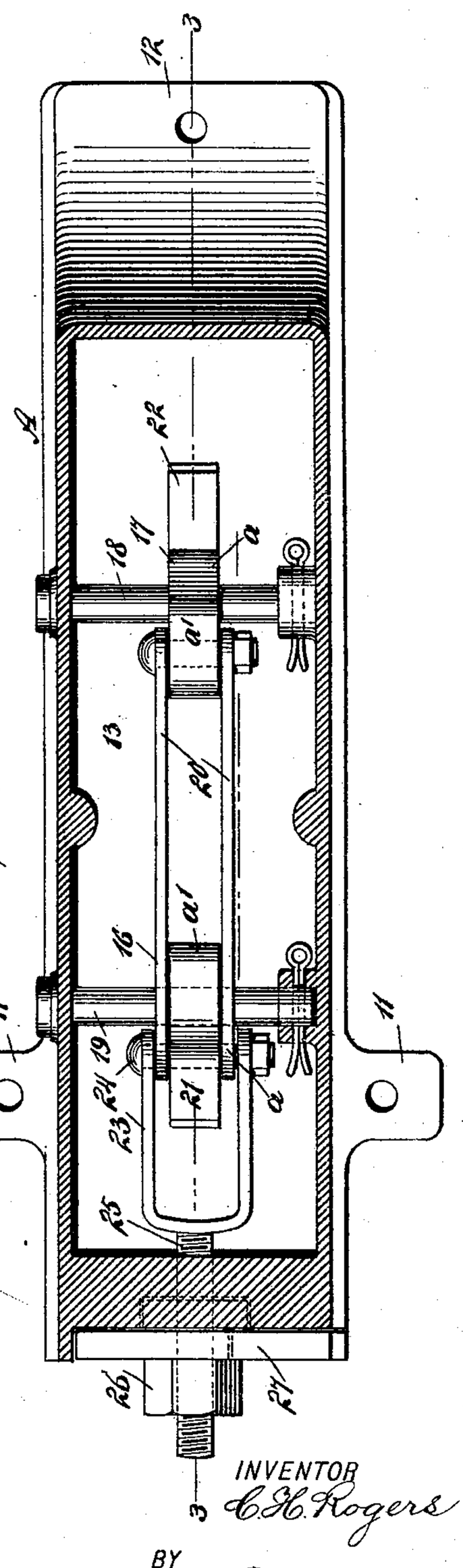

Fig. 2.

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RAILWAY TIE AND RAIL CLAMP.

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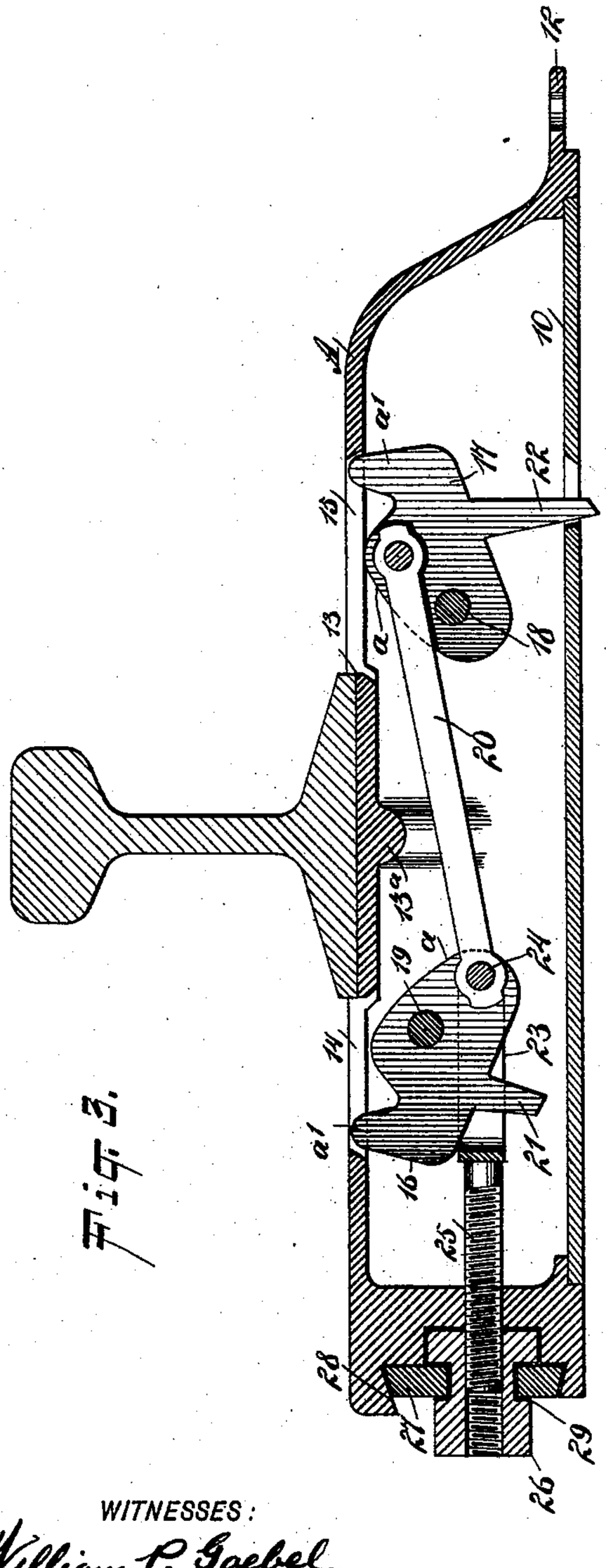

Fig. 3.

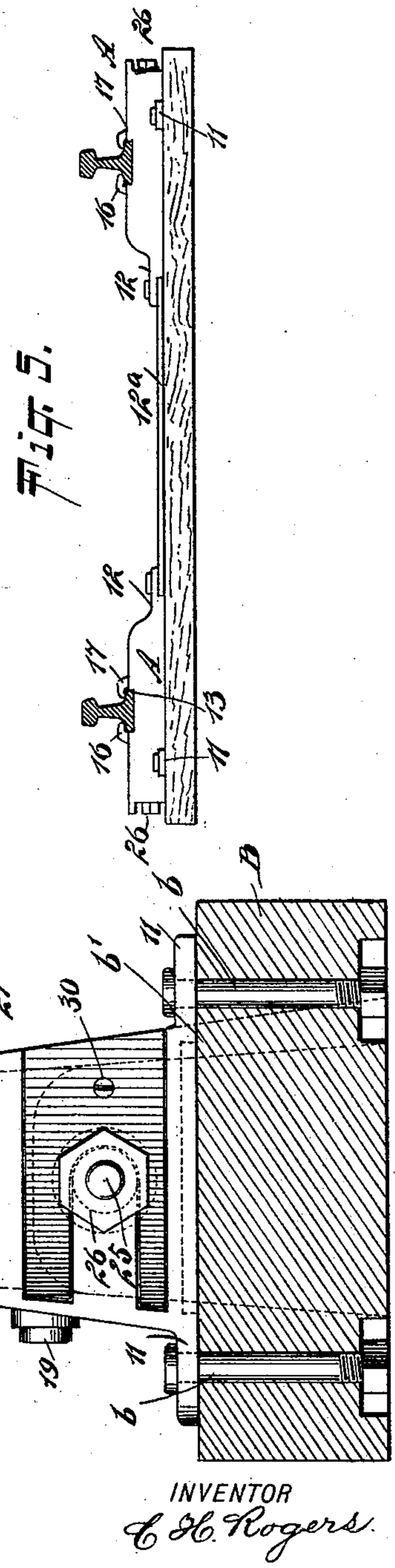

Fig. 4.

Fig. 5.

WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES H. ROGERS, OF NEW YORK, N. Y.

RAILWAY-TIE AND RAIL-CLAMP.

SPECIFICATION forming part of Letters Patent No. 601,105, dated March 22, 1898.

Application filed May 13, 1897. Serial No. 636,387. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. ROGERS, of Bedford Park, New York city, in the county and State of New York, have invented a new and useful Improvement in Railway-Ties and Rail-Clamps, of which the following is a full, clear, and exact description.

The object of the invention is to provide a metallic railway-rail tie having mechanically-operated rail-clamps capable of being manipulated from one end of the tie in a manner to carry the clamps in locking engagement with the flanges of the rail or to an engagement with the tie, so as to offer no obstruction to the operation of laying the rails.

Another object of the invention is to provide a bed for the rail upon the tie depressed or otherwise formed in such manner as to dispense with the necessity of a gage and, further, to construct the improved tie in a simple and economic manner and so that it may be used in connection with a wooden sleeper or foundation or a foundation of concrete or a like substance.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out 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 side elevation of the improved tie, showing the clamps carried thereby in position to hold a rail on the tie. Fig. 2 is a horizontal section on the line 2 2 of Fig. 1. Fig. 3 is a vertical section through the improved tie, the clamps being freed from engagement with the rail and carried within the tie. Fig. 4 is an end view of the tie, the foundation thereof being in section; and Fig. 5 is a side elevation of two opposing ties connected.

The body A of the tie is made from metal and is hollow, the bottom 10 being preferably removable, and at the sides of the tie lugs 11 are formed, enabling the tie to be secured to a wooden sleeper B through the medium of bolts *b*, as shown in Fig. 4, or attached to any similar foundation. When, however, a wooden sleeper or foundation is not used, the side walls of the tie may be carried downward below the bottom solidly or in part, as shown in dotted lines at *b'* in Fig. 4, so that the tie may be secured in a foundation of cement or material of a similar character.

The inner end of the tie is shown as beveled or inclined downward, terminating in an apertured foot 12, and two opposing ties may be connected by a plate 12ª, as shown in Fig. 5, bolted to the under faces of the feet 12; but I do not restrict myself to this manner of connecting the pair of ties.

At the central top portion of the tie a transverse depression 13 is made, which is usually strengthened by an arched rib 13ª, formed upon its under face, as shown in Fig. 3. The depression 13 is made of sufficient width to receive between its side walls the side portions of the flange of a railway-rail, as shown in Figs. 1, 3, and 5. Under this construction it is obvious that a gage need not be employed, since when the ties have been properly placed in position and the rails are placed in the depression on the ties the gage between them will be true.

In the top of each tie A at each side of the depression 13 a longitudinal opening is made, communicating with the interior. These openings are designated, respectively, as 14 and 15. Beneath the opening 14 a clamp 16 is located, and beneath the opening 15 a second clamp 17 is placed. The clamp 17 is mounted to turn upon a fixed shaft 18, which extends through it near its inner end, the shaft being fixed in the side portions of the tie, while a second and similar shaft 19 is passed through the opposite clamp 16 at a point near its center, as shown in Fig. 3. Each clamp comprises a body *a* and a substantially hook-shaped head *a'*, the heads being adapted to extend over the upper surfaces of the flange of the rail and hold said rail firmly to its bed 13.

The two clamps are connected by links 20, and these links are pivotally attached to the clamp 17 at a point above its pivot and to the opposite clamp 16 at a point below its pivot, the pivot-pin 24, which connects the links 20 with the clamp 16, likewise serving to receive the members of a fork 23, the said fork having attached to it or having integral therewith a bolt 25, which is loosely passed through the outer end of the tie. The clamp 16 is provided upon what in one position will be

its under face with a lug 21, which when the clamp is carried to an engagement with the rail will completely close the opening 14, through which the head of the clamp passes, a similar lug 22 for a similar purpose being attached to the opposing clamp 17, as shown in Figs. 1 and 3.

The screw 25 is received by a nut 26, held to turn, preferably, in a recess in the outer end of the tie. The nut is prevented from end movement, yet has free vertical movement, by carrying a plate 27 in a dovetail slideway 28, made in the outer end of the tie over a recess 29, made in the nut, the guide-plate or nut being to that end bifurcated, as shown in Fig. 4. This guide plate or slide is secured to the tie by means of one or more screws 30 or the equivalents thereof.

In operation when the nut 26 is turned in one direction the clamps will be carried away from the rail and, if desired, entirely within the tie, as shown in Fig. 3, whereby no obstruction will be offered to laying the rails on the ties. After the rails have been placed properly on the ties the nut is turned in an opposite direction, bringing the two clamps upward in direction of each other and over opposite side edges of the flange of the rail, as shown in Fig. 1. Any desired form of locking device may be provided if it is found necessary to prevent the nut 26 from being turned except by an authorized person.

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

1. A metallic railway-tie provided with slots at each side of its center, clamps pivoted within the tie, one beneath each of said slots, each clamp having a head arranged for engagement with the flange of the rail, links connected with one of said clamps below its pivot and with the other clamp above its pivot, lugs projected from said clamps, adapted to close the openings through which the heads of the clamps pass when the said clamps are carried to a locking engagement with the rail, and means for shifting one of the clamps, for the purpose specified.

2. A metallic railway-tie provided with slots at each side of its center, clamps pivoted within the tie, one beneath each of said slots, each clamp having a head arranged for engagement with the flange of a rail, links connected with one of said clamps below its pivot and with the other clamp above its pivot, lugs projected from said clamps, adapted to close the openings through which the heads of the clamps pass when the said clamps are carried to a locking engagement with the rail, a yoke connected with the pivot-pin of said links, a screw connected with the said yoke, extending outward through the rail, and a revoluble nut held against end movement at the exterior of the tie, which nut receives said bolt, and through the medium of which nut the clamps are shifted, as specified.

3. The combination, with a metallic railway-tie having a transversely-depressed upper surface, a slot at each side of said depressed surface, a nut mounted to turn in the outer portion of said tie, and a device for holding the nut against end movement, of clamps fulcrumed within the tie, one below each of said slots, each clamp being provided with a head arranged to pass through one of said slots and engage with the upper surface of the flange of a rail when said rail is in its depression on the tie, one of the clamps being pivoted near its lower end and the other at a point near its center, a lug projected from each clamp, arranged to close the openings through which the heads of the clamps extend when said heads are carried over the depression in the tie, links connecting the said clamps, the links being pivoted to one of the clamps at a point above its fulcrum and to the other clamp at a point below its fulcrum, and a screw connected with the pivot-pin of the links, passed through the lower portion of the clamp, the said screw being received by said nut, for the purpose specified.

4. The combination of a railway-tie, two pivoted clamps carried thereby, a link connecting the clamps so that portions of said clamps will swing toward and from each other, a fork pivotally connected to one of the clamps, a screw attached to the fork, and a nut coacting with the screw to move the same.

CHARLES H. ROGERS.

Witnesses:
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EVERARD BOLTON MARSHALL.