

(No Model.)

F. LINDQUIST.

TIE PLATE AND COUPLING DEVICE FOR RAILWAY RAILS.

No. 592,751.

Patented Oct. 26, 1897.

FIG. 1.

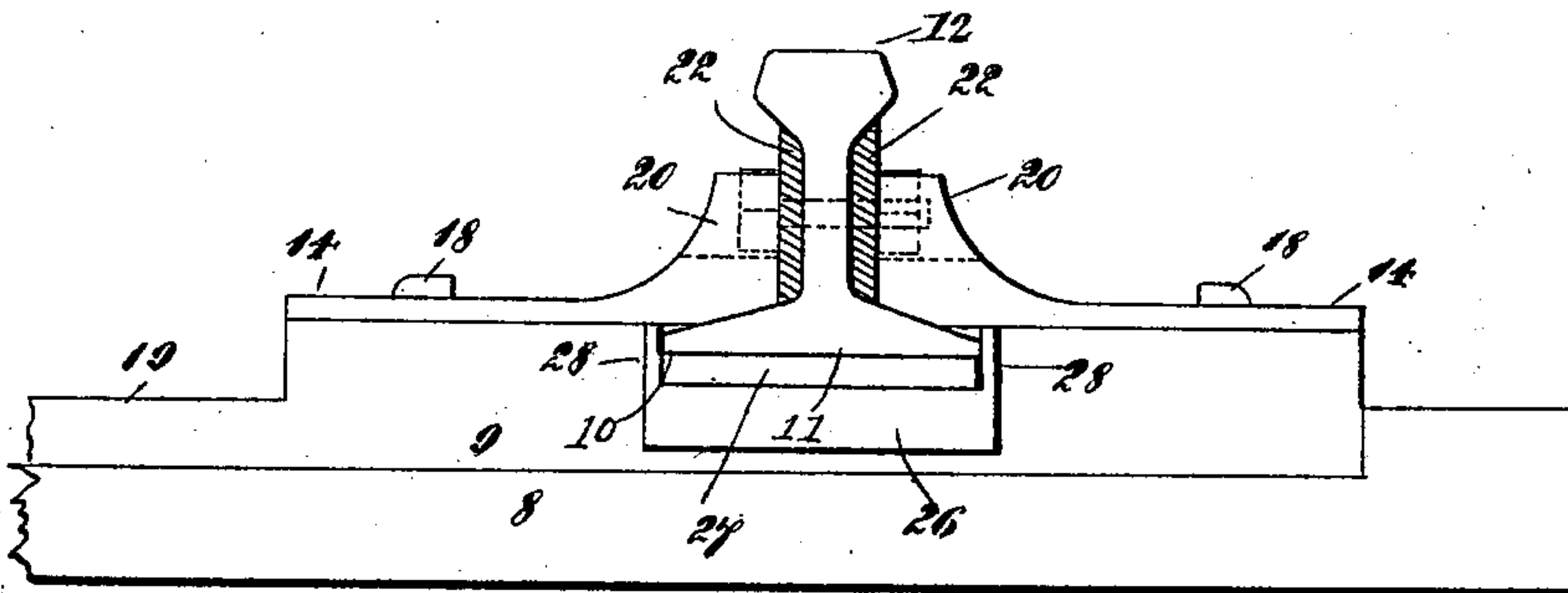


FIG. 2.

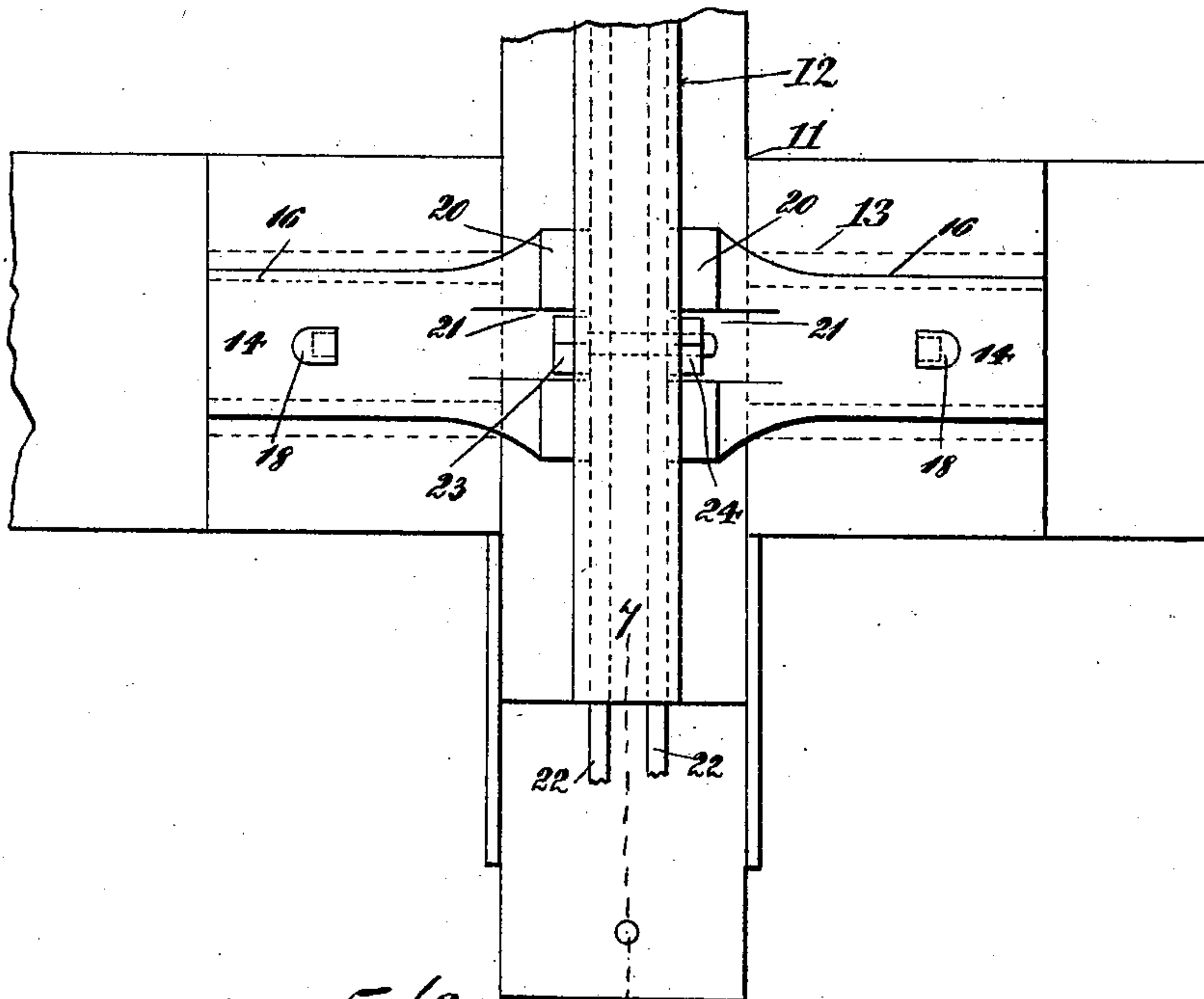
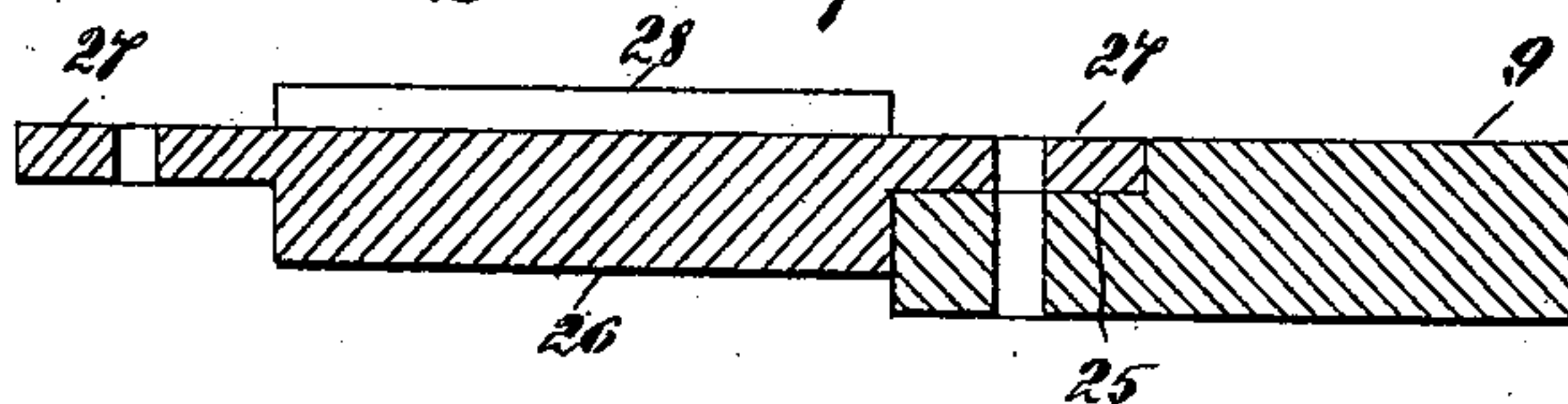


FIG. 3.



WITNESSES

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TIE-PLATE AND COUPLING DEVICE FOR RAILWAY-RAILS.

SPECIFICATION forming part of Letters Patent No. 592,751, dated October 26, 1897.

Application filed August 6, 1896. Serial No. 601,846. (No model.)

To all whom it may concern:

Be it known that I, FREDRIK LINDQUIST, a citizen of the United States, and a resident of Lutcher, in the parish of St. James and State of Louisiana, have invented certain new and useful Improvements in Tie-Plates and Coupling Devices for Railway-Rails, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar numerals of reference indicate corresponding parts wherever found throughout the several views.

This invention relates to tie-plates for railway-rails and to means for securing the rails thereon; and the object thereof is to provide improved devices of this class which are simple in construction and operation and which are designed to securely hold the rails in position, a further object being to provide improved devices of this class for securing the ends of the rails together or for properly coupling the adjacent ends of said rails.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a side view of a railway-tie and my improved tie-plate and the key-blocks which I employ and also showing the means employed for coupling or connecting the ends of separate rails; Fig. 2, a plan view thereof, and Fig. 3 a partial section on the line 7 7 of Fig. 2.

In the drawings forming part of this specification I have shown at 8 a railway-tie, and in the practice of my invention I provide a tie-plate 9, which is countersunk therein, and said tie-plate is oblong in form and provided centrally of its upper side with a transverse angular groove 10, which is adapted to receive the base 11 of the rail 12, as clearly shown in Figs. 1 and 2.

The ends of the tie-plate 9 are provided centrally of the top thereof with a longitudinal groove 13, and I also provide a key-block 14, having a longitudinal base, which is adapted to enter the groove 13, the construction by which the key-block and the tie-plate are connected being what is known as a "tongue-and-groove" coupling, the base of the block being slid into the groove formed in the tie-plate, and said key-block is provided at its upper side with a longitudinal head 16, which over-

laps the base-flanges of the rail, as clearly shown in Figs. 1 and 2, and said key-block is also provided with a spike-hole which is formed in the body portion thereof and through which the spikes 18 are driven.

The tie-plate 9 is secured to the tie by the spikes 18, and two or more of these spikes may be employed at each end, if desired, and by means of this construction it will be seen that the rail is securely held in place and cannot move either vertically or laterally.

The tie-plate 9 may extend lengthwise of the tie, so as to support both rails of the track in the same manner, in which event each end thereof will be provided with the construction herein described, and I have also shown the means which I employ for coupling the ends of adjacent rails; and in Fig. 1 the end of the tie-plate 9 is projected at 19 and broken off to indicate that said tie-plate is continued along the tie, as above described, so as to secure both rails in position by the same tie-plate, and for this purpose the inner ends thereof are provided with upwardly-directed shoulders or projections 20, in which are formed transverse angular notches or recesses 21, and the bolts by which the fish-plates 22 are secured in place are passed through these notches or recesses and through the fish-plates and the body of the rail, and the vertical walls of the notches or recesses 21 act in connection with the head 23 of said bolts and the nut 24 to prevent said bolts from turning and to prevent the ends from coming off, it being understood that the bolts are secured in place before the key-blocks are connected with the tie-plate. In this form of construction the tie-plate at one side thereof and beneath the base-flanges of the rail is cut away, as shown at 25 in Fig. 3, and I also provide a coupling-plate 26, having at each end projections 27, which rest in said cut-away portions 25, and at each side of the central portion thereof are vertical flanges 28, and it will be understood that each of the projecting ends 27 of the coupling-plate 26 rest upon one of the tie-plates, the ties and tie-plates being properly arranged for this purpose, and the abutting ends of the rails meet over the coupling-plate 26, as will be readily understood, and it will also be understood that the fish-plates 22, when this form

of construction is employed, extend along the sides of the rails at each side of the abutting ends thereof. This form of construction is particularly designed for use where the ends
 5 of the rails do not come directly over the ties, but it may be employed in all cases and is well adapted to accomplish the result for which it is intended.

It will thus be seen that I provide a substantial tie-plate and one which is adapted to
 10 securely lock the rails in position and also to form an effective coupler for the abutting ends of the rails, and it is evident that changes in and modifications of the construction herein described may be made without departing
 15 from the spirit of my invention or sacrificing its advantages.

Although I have shown and described the tie-plate as countersunk in the tie, this feature
 20 is not absolutely essential, and said tie-plate may be bolted or otherwise secured to the tie in any desired manner.

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

1. A railway tie-plate and rail-lock, consisting of a plate which is adapted to be secured to the tie, and provided with a transverse
 30 groove adapted to receive the base of the rail, the ends of the tie-plate being each provided in its upper side with a longitudinal groove, of the form used in tongue-and-groove couplings, and key-blocks which are adapted to be inserted into said grooves, and which are provided
 35 with longitudinal projections or heads which overlap the base-flanges of the rail, said key-blocks being secured in place by spikes or other devices which pass therethrough, and through the tie-plate, and said key-blocks or
 40 the heads thereof, which overlap the base-flanges of the rail, being provided with upwardly-directed shoulders or projections, in which are formed transverse notches or recesses, through which are passed the bolts
 45 which hold the fish-plates in position, substantially as shown and described.

2. A railway tie-plate and rail-lock, consisting of a plate which is adapted to be secured to the tie, and provided with a transverse
 50 groove adapted to receive the base of the rail,

the ends of the tie-plate being each provided in its upper side with a longitudinal groove, of the form used in tongue-and-groove couplings, and key-blocks which are adapted to be inserted into said grooves, and which are
 55 provided with longitudinal projections or heads which overlap the base-flanges of the rail, said key-blocks being secured in place by spikes or other devices which pass there-through, and through the tie-plate, and said
 60 key-blocks or the heads thereof, which overlap the base-flanges of the rail, being provided with upwardly-directed shoulders or projections, in which are formed transverse notches or recesses, through which are passed the
 65 bolts which hold the fish-plates in position, and said tie-plate being also provided at the side thereof, and below the base-flange of the rail with a cut-away portion, and a coupling-plate provided at each end with an extension
 70 which is adapted to enter said cut-away portion, and at the sides with vertical flanges or projections between which the ends of abutting rails are placed, substantially as shown and described.

3. A railway tie-plate and rail-lock, consisting of a plate which is adapted to be secured to the tie, and provided with a transverse
 75 groove adapted to receive the base of the rail, the ends of the tie-plate being each provided in its upper side with a longitudinal groove, of the form used in tongue-and-groove couplings, and key-blocks which are adapted to be inserted into said grooves, and which are
 80 provided with longitudinal projections or heads which overlap the base-flanges of the rail, said key-blocks being secured in place by spikes or other devices which pass there-through and through the tie-plate, and means
 85 connected therewith for coupling the abutting ends of separate rails, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 31st
 95 day of July, 1896.

FREDRIK LINDQUIST.

Witnesses:

WALTER B. BARNETT,
 GEO. C. LARSEN.