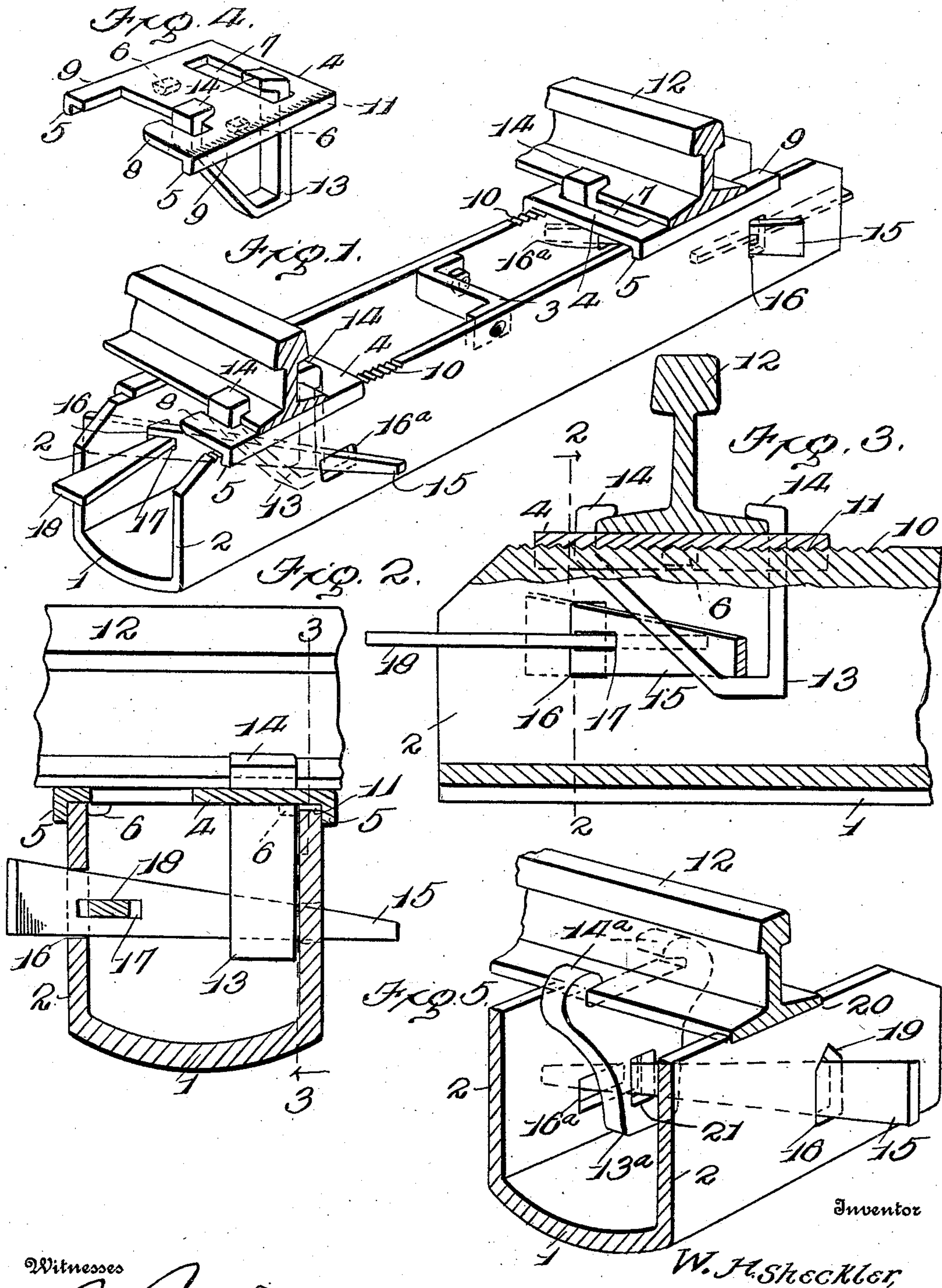


W. H. SHECKLER.  
METALLIC RAILWAY TIE.  
APPLICATION FILED AUG. 5, 1908.

929,334.

Patented July 27, 1909.



Witnesses

*W. H. Sheckler*  
*W. H. Sheckler*

By

*W. H. Sheckler*  
*W. H. Sheckler, Attorney's*



# UNITED STATES PATENT OFFICE.

WILLIAM H. SHECKLER, OF WELLSVILLE, OHIO.

## METALLIC RAILWAY-TIE.

No. 929,334.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed August 5, 1908. Serial No. 447,093.

*To all whom it may concern:*

Be it known that I, WILLIAM H. SHECKLER, citizen of the United States, residing at Wells-ville, in the county of Columbiana and State  
5 of Ohio, have invented certain new and useful Improvements in Metallic Railway-Ties, of which the following is a specification.

The present invention has relation to in-  
destructible railway ties of the variety con-  
10 structed of metal and has for its object to provide a tie which may be cheaply manu-  
factured and when in position admits of the rails being firmly and securely fastened there-  
to, the rail fastening means serving to brace  
15 the tie.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference  
20 is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without de-  
25 parting from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which:

Figure 1 is a perspective view of a metallic  
30 railway tie and rail fastening means embodying the invention. Fig. 2 is a trans-  
verse section of the tie on the line 2—2 of Fig. 3, looking in the direction of the arrows. Fig. 3 is a section on the line 3—3 of Fig. 2,  
35 looking in the direction of the arrows. Fig. 4 is a detail perspective view of a rail chair and coöperating rail clamp. Fig. 5 is a per-  
spective view of a modification.

Corresponding and like parts are referred  
40 to in the following description and indicated in all the views of the drawings by the same reference characters.

The tie proper comprises a bottom 1 and  
45 side pieces 2, of integral formation, being constructed of a metal plate bent by rolls or other means into the required shape. The bottom of the tie is rounding and the sides parallel and having the upper corners sheared off. The tie is of trough or channel form and  
50 is arranged with the open side facing upward. A brace 3 connects the sides of the tie at their upper edges at an intermediate point and strengthens the same.

A rail chair is provided for each end por-  
55 tion of the tie and consists of a plate 4 having pendent flanges 5 to embrace the outer sides

of the parts 2 and thereby prevent spreading thereof. Lugs 6 pendent from the plate 4 engage with the inner faces of the side pieces 2 and prevent inward movement thereof. A  
60 slot 7 is provided in the plate 4 near one edge and an arm 8 is provided at the opposite edge and extends inward from one side and terminates short of the opposite side of the plate. Extensions 9 are provided at the side  
65 of the plate opposite that having the slot 7 to enable the chair to obtain an extended bearing upon the upper edges of the side pieces 2. The arm 8 projects inward from one of the extensions 9. The chair is placed  
70 upon the upper edges of the side pieces 2, the latter being confined between the flanges 5 and lugs 6. To prevent movement of the chair upon the tie, the upper edge of one of the side pieces has a series of teeth 10, and  
75 the lower side of the plate 4 is provided with corresponding teeth 11 to match with the teeth 10. The teeth 10 and 11 are fine, thereby providing for a nicety of adjust-  
80 ment of the rail chairs when assembling the parts. The rail 12 is secured to the chair by means of a clamp 13, which is of yoke form, one member being vertical and the other in-  
clined, and both members terminating in  
85 hooks 14 which engage over the foot of the rail. The vertical member of the clamp passes through the slot 7 of the chair, whereas the inclined member occupies the space formed between the arm 8 and the ad-  
90 jacent edge of the plate. The clamp is held in place by means of a key 15 which passes through the yoke and through openings 16 and 16<sup>a</sup> provided in the side pieces 2, the openings 16 and 16<sup>a</sup> for each key having a  
95 diagonal arrangement, thereby securing the best results possible, since there is no tendency of the key to loosen by vibration. After the ties have been placed in position on the roadbed, the rail chairs are laid upon the  
100 ties, after which rails 12 are properly positioned upon the rail chairs, the latter being adjusted to properly space the rails according to the gage of the track. The clamp yokes are next placed in position by passing  
105 the hooked ends of the vertical members through the slots 7 of the plates 4 and engaging the hooks 14 with the foot of the rail upon one side, then swinging the yoke to cause the hooked end of the inclined mem-  
110 bers to engage with the foot of the rail upon the opposite side. The clamp yoke, after its hooked ends 14 have been engaged with the



foot of the rail, is moved to cause the inclined end to enter the space formed between the arm 8 and the adjacent end of the plate, said arm 8 preventing accidental disengagement of the clamp from the rail. The key 15 is now placed in position by being passed through the openings 16, 16<sup>a</sup>, and through the yoke.

In some instances the key 15 may be positively secured and for this purpose said key is formed with a slot 17 through which a key 18 is passed, said key 18 being located upon the inner side of the tie. The key may also be held by a wedge action, this being accomplished by having one end of the opening 16 tapered, as shown at 19, the oppositely inclined sides binding the key when driven home and preventing slipping thereof. This construction is shown most clearly in Fig. 5. The openings 16 extend vertically, whereas the openings 16<sup>a</sup> extend horizontally, thereby admitting of the smaller end of the key 15 having a lateral movement to adapt the clamp to the rail when moving the latter to secure the proper gage. The clamps are located within the tie and are placed against the side 2 thereof having the horizontal opening 16<sup>a</sup> so as to move with the rail when it is required to adjust the same laterally within certain limits.

In the modification shown in Fig. 5, the rail chair is dispensed with, the rail 12 being placed directly upon the side members 2 of the tie, and to prevent slipping of the rail notches 20 are formed in the upper edges of the sides 2 to receive the foot of the rail. The clamp 13<sup>a</sup> is of tapered form and is provided at its upper end with hooks 14<sup>a</sup> to engage over opposite sides of the foot of the rail and its lower end is provided with an opening 21 through which the small end of the key 15 passes. The remaining parts are constructed and arranged substantially in the manner hereinbefore indicated.

Having thus described the invention, what is claimed as new is:

1. In combination, a tie, a rail chair comprising a plate having a slot near one edge, and an inwardly extended arm at the opposite edge, a rail mounted upon the chair, a yoke clamp having its members hooked and adapted to engage over the foot of the rail, one of said members passing through the slot of the plate and the other member engaging with the aforesaid arm, and a key for securing the yoke clamp to the tie.

2. In combination, a tie, a rail chair mounted upon the tie and having a slot near one edge and an inwardly extended arm at the opposite edge, a rail placed upon the chair, a yoke clamp having one member vertical and the opposite member inclined, the latter engaging with the aforesaid arm and the former passing through the slot of the chair, and a key for securing the yoke clamp to the tie.

3. In combination, a tie comprising side pieces spaced at their upper edges, a rail chair mounted upon the side pieces of the tie and comprising pendent portions embracing opposite sides of said side pieces, a yoke clamp having its members engaged with the chair and with opposite sides of the foot of the rail, and means for securing the yoke clamp to the side pieces of the tie.

4. In combination, a tie comprising side pieces spaced at their edges and having diagonally arranged openings, a rail chair mounted upon the side pieces of the tie and embracing the same, interlocking means between the rail chair and tie, a yoke clamp engaged with the rail chair and with the foot of the rail, and means for securing the yoke clamp to the tie.

5. A device of the character described, comprising a channel member having a rounded base portion and adapted to support a rail across the upper open side thereof, a plate positioned across the upper edges of said channel member having a slot formed adjacent one edge therein, pendent flanges disposed on said plate to engage the outer faces of said channel member, lugs pendent from the under side of said plate to engage the inner faces of the sides of said channel member, an arm inwardly extended from one end of said plate in parallel relation to the slot formed adjacent the opposite side thereof, a yoke having a vertical portion engaged at its upper extremity through the slot in said plate against the foot of a rail and an inclined portion extended between said arm and the edge of said plate to engage the opposite side of the foot of a rail and means for holding said yoke in rigid position.

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

WILLIAM H. SHECKLER. [L. s.]

Witnesses:

JENNIE M. RILEY,  
JNO. W. RILEY.