P. H. HELLNER.

RAIL FASTENING.

APPLICATION FILED SEPT. 19, 1912.

1,050,457. Patented Jan. 14, 1913.

Fig. 1.

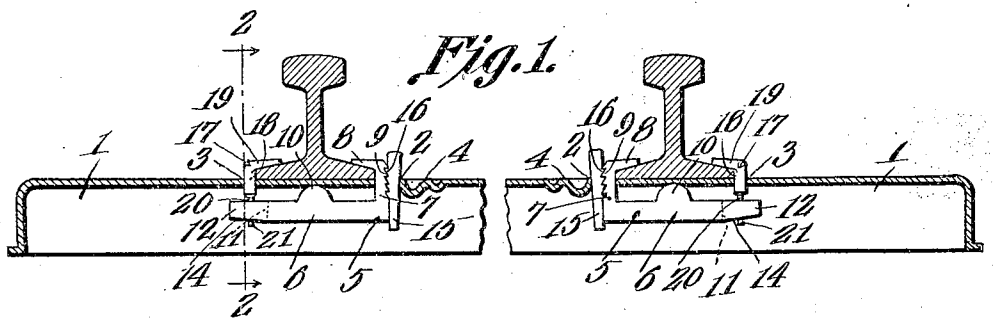


Fig. 2.

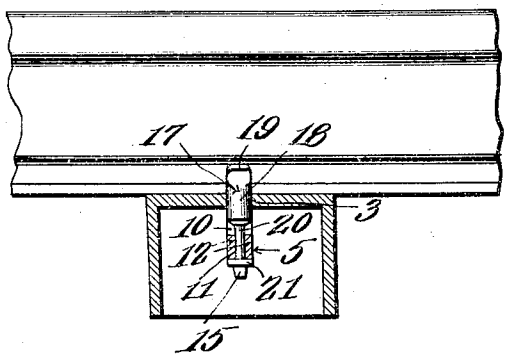


Fig. 3.

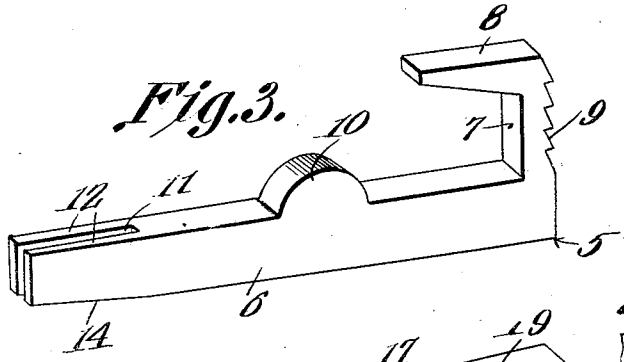


Fig. 4.

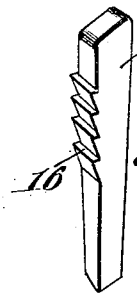


Fig. 5.

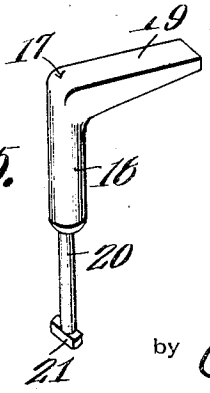
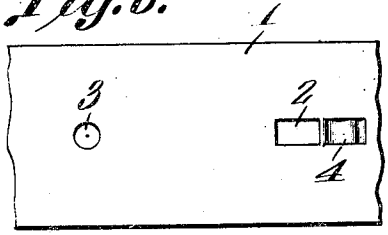


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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RAIL-FASTENING.

1,050,457. Specification of Letters Patent. Patented Jan. 14, 1913.

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To all whom it may concern:

Be it known that I, PETER H. HELLNER, a citizen of the United States, residing at Marshall, in the county of Harrison and State of Texas, have invented a new and useful Rail-Fastening, of which the following is a specification.

The present invention aims to provide novel means whereby a railroad rail may be secured to a tie without the use of spikes, the construction being such that a metallic tie may be employed.

It is one of the objects of the invention to provide primary and secondary rail engaging clamps of novel form, and to provide novel means for interlocking the clamps.

The invention aims further to improve, generally, and to enhance the utility of devices of the type to which the present invention appertains.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 shows in vertical section, a tie to which has been applied the rail fastening means constituting the subject matter of this application. Fig. 2 is a section on the line 2—2 of Fig. 1; Fig. 3 is a perspective of the primary clamp; Fig. 4 is a perspective of the wedge which is assembled with the primary clamp; Fig. 5 is a perspective of the secondary clamp; and Fig. 6 is a fragmental top plan of the tie.

In carrying out the invention, there is provided a tie 1 preferably fashioned from metal. The tie 1 is a trough like structure the ends of which are preferably closed, the bottom of the tie 1 being open. Duplicate mechanisms are provided for securing the rails to the tie, and but one of these mechanisms will be described. In the tie 1 there are fashioned spaced openings 2 and 3, the openings 2 preferably being elongated longitudinally of the tie, and the openings 3 being circular openings. The top of the tie 1 may be corrugated as shown at 4, adjacent the inner edge of the opening 2, for a purpose which will be set forth hereinafter.

The invention includes a primary clamp which is denoted generally by the numeral 5, the clamp 5 including a body 6 which extends longitudinally of the tie 1, within the tie, the body 6 terminating in an upright arm 7 which extends outwardly through the opening 2, the arm 7 terminating in a laterally projecting finger 8 which is adapted to engage the upper edge of the flange of the rail. That face of the arm 7 which lies toward the center of the track is provided with a plurality of teeth 9. The body 6 is equipped intermediate its ends with an upstanding lug 10 adapted to bear against the underface of the tie 1 beneath the rail, to serve as a support. At its free end, the body 6 is equipped with a vertical slot 11 defining arms 12. The lower edge 14 of the body 6, below the slot 12 slants upwardly and outwardly toward the free ends of the body. The wedge 15 is inserted between the arm 7 and an edge of the opening 2, the wedge 15 being provided with teeth 16, slanting in an opposite direction to the teeth 9 of the arm 7, the teeth 9 and 16 coöperating to hold the wedge 15 in place.

The invention includes a secondary clamp of angular form shown most clearly in Fig. 5. The secondary clamp 17 comprises a shank 18 which is circular in cross section, there being an arm 19 extended laterally from the upper end of the shank 18. The shank 18 is journaled in the opening 3 in the tie 1 and the arm 19 overlies one flange of the rail. Connected with the shank 18 and extending downwardly therefrom is a stem 20 which is of circular cross section. Formed upon the lower end of the stem 20 is a transverse head 21 located at right angles to the arm 19. The stem 20 lies in the slot 11 of the body portion 6 of the primary flange 5 and the head 21 extends transversely of the inclined edge 14. The head 21 is of greater length than the width of the slot 11, but the width of the head 21 is slightly less than the width of the slot 11.

In practical operation, the primary clamp 5 is mounted to place in the tie as shown in Fig. 1, and as hereinbefore described. The wedge 15 is then tapped lightly in place so as to prevent the free end of the body 6 of the primary clamp from dropping downwardly. The rail is then thrown inwardly toward the center of the track until one edge of the rail is engaged beneath the finger 8 and abuts against the arm 7. The

secondary clamp 17 is then positioned with the arm 19 parallel to the rail, the secondary clamp being thrust downwardly into the opening 3, the head 21 passing through the slot 11 of the body 6 of the primary clamp. The secondary clamp 17 is then rotated until the arm 19 extends transversely of the track H and engages one flange of the rail, whereupon the head 21 will extend transversely of the lower edge of the body 6 of the primary flange. The wedge 15 is then driven to a firm seat, the interengaging teeth 9 and 16 serving to prevent a withdrawal of the wedge, and the corrugations 4 serving as an abutment for the wedge during the driving operation. When the wedge is thus seated, the primary clamp 5 will be moved longitudinally to a slight extent, the slant edge 14 of the portion 6 of the primary clamp engaging the transverse head 21 of the secondary clamp 17 and drawing the secondary clamp downwardly so that its arm 19 will engage with one flange of the rail, it being recalled that the secondary clamp 17 cannot move transversely, because the shank 18 of the secondary clamp is engaged in the opening 3.

Having thus described the invention what is claimed is:—

1. In a device of the class described, a tie; a primary clamp comprising angularly disposed parts, one of which parts extends through the tie, the other of which extends longitudinally of the tie within the tie; and an angular, secondary clamp extended through the tie and engaged with the primary clamp.

2. In a device of the class described, a tie; a primary clamp comprising angularly disposed parts, one of which parts extends through the tie, the other of which extends longitudinally of the tie within the tie; and an angular, secondary clamp extended through the tie and engaged with the primary clamp, that part of the primary clamp which extends longitudinally of the tie being provided intermediate its ends with an upstanding supporting boss adapted to bear against the under face of the tie.

3. In a device of the class described, a tie having spaced openings; a primary clamp comprising angularly disposed parts, one of which extends through one opening, the other of which parts extends longitudinally of the tie within the same; and an angular, secondary clamp extended through the other opening and engaged with the primary clamp; there being a wedge inserted between the primary clamp and an edge of the first specified opening.

4. A rail clamp comprising a pair of angle members, one of which is slotted, the other of which extends through the slot and is provided with a transverse head, engaging the lower edge of the first specified member.

5. A rail clamp comprising a pair of angle members one of which is provided with a slot, the other of which extends through the slot, said other member having a transverse head engaging the lower edge of the first specified member, said first specified member being provided intermediate of its ends with an upstanding boss.

6. A rail fastening comprising an angular primary member provided with a slot; an angular secondary member which extends through the slot and is provided with a transverse head adapted to engage the lower edge of the primary member, the lower edge of the primary member being beveled to engage with the head; and means for actuating the primary member to cause the beveled edge thereof to travel transversely of the head and effect the depression of the secondary member.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

PETER HERM HELLNER.

Witnesses:
FRANK E. MARSH,
PAUL R. EHRIG.