

M. J. SHANNON.
METALLIC RAILWAY TIE AND RAIL FASTENING THEREFOR.
APPLICATION FILED MAR. 12, 1912.

1,035,753.

Patented Aug. 13, 1912.

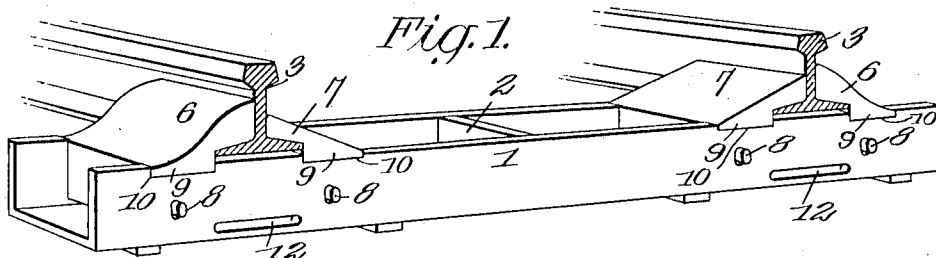


Fig. 6.

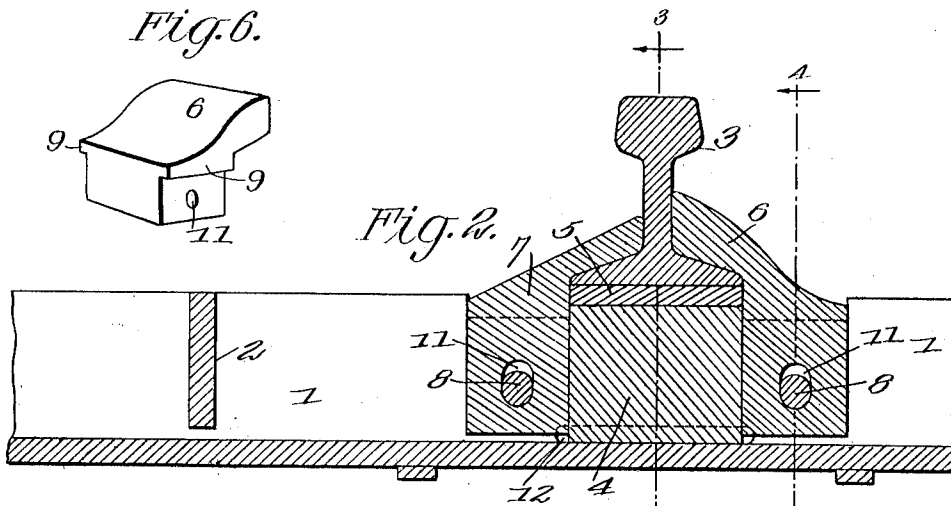
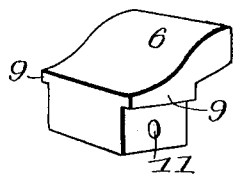


Fig. 3.

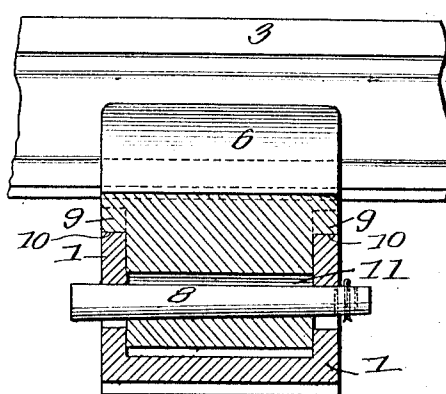
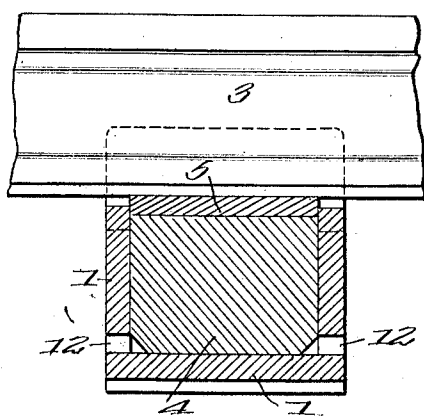
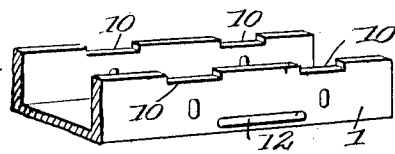


Fig. 5.



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METALLIC RAILWAY-TIE AND RAIL-FASTENING THEREFOR.

1,035,753.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, MICHAEL J. SHANNON, a citizen of the United States, and a resident of Wallace, in the county of Shoshone and State of Idaho, have invented an Improvement in Metallic Railway-Ties and Rail-Fasteners Therefor, of which the following is a specification.

My invention is an improvement in metallic ties and devices adapted to support rails thereon and secure the supports and rails themselves thereto.

Figure 1 is a perspective view of the tie and rail clamps, together with rails shown in section. Fig. 2 is a longitudinal section of one end of the tie, together with the rail and rail clamps applied thereto. Fig. 3 is a vertical cross section on the line 3—3 of Fig. 2. Fig. 4 is a vertical cross section on the line 4—4 of Fig. 2. Fig. 5 is a perspective view of one of the ends of the tie. Fig. 6 is a perspective view of one of the rail clamps.

The steel or iron tie 1 is trough-shaped, or of double angle form, it being entirely open on the upper side, but provided with a central transverse partition 2. Rails 3 extend across the tie 1 and rest on metal blocks 4 which are seated in the tie, a cushion plate 5 being interposed in order to relieve jar or concussion. Clamps 6 and 7 are applied on each side of each rail 3 and secured detachably to the tie by means of tapered keys or pins 8. Each rail clamp is formed with a lateral extension adapted to rest against the web of the rail and upon the adjacent portion of the flange, as shown in Figs. 1 and 2, and the body or pendent portion of the clamp is rectangular and adapted to pass down between the sides of the tie. The top portion is extended sufficiently to form shoulders 9 which overhang the sides of the tie and are adapted to enter notches 10 formed in the latter—see especially Fig. 5. The pendent portions of each clamp are provided with longitudinal openings 11 which are elongated vertically, as indicated plainly in Fig. 2.

When the keys or pins 8 are inserted, as shown, particularly in Figs. 2 and 4, they bear against the lower side of the elongated openings 11 in the clamps and against the upper side of the elongated openings formed in the tie, and, being tapered as aforesaid,

they thus tend to draw the clamps down. The construction and relation of the parts are such that the shoulders 9 of the clamps are thus brought down into the notches 10 in the tie and are thereby firmly seated in contact with the rails. It is apparent that when thus seated, lateral movement of the clamps is impossible, and they therefore absolutely prevent spreading of the rails. The wedging action of the tapered keys, when driven into place, causes them to hold as a rule, but cotter pins may be employed, the same being inserted through holes in the keys. The latter are driven out when it is required to remove the clamps and detach the rails from the tie. The blocks 4 which support the rail are held in place longitudinally of the tie by means of the pendent portions of the rail clamps through which the pins 8 pass.

As shown in Figs. 1 and 3, the tie is provided directly under each rail with an elongated opening 12 through which access may be had to the base of the blocks 4 whose adjacent corners are beveled or cut away. This construction permits the introduction of a shim or wedge to raise the block 4 in case it should become lowered by wear; also to compensate for compression and wear of the cushion plate 5. The latter may be made of paper and will serve to deaden sound and also to prolong the life of the rails. The block 4 may be made of wood, steel, or iron.

What I claim is:—

1. The combination with a trough-shaped metallic tie having upwardly projecting parallel side portions provided with notches in the upper edge, rail clamps having inwardly projecting top portions adapted to engage a rail base and having end shoulders which enter the notches in the ties and also pendent portions which lie between the sides of the tie and have openings which are elongated vertically and tapered pins passing through openings in the sides of the tie and through the bores of the clamps, the lower sides of the bores being at such height relative to the side openings in the tie that the pins bear down upon the lower sides of the bores and draw the rail clamps into firm engagement with a rail and tie, and a block arranged between the clamps and beneath the rails, so that it serves as a support for the

latter, the pendent portions of the clamps abutting the adjacent sides of the block and thus serving to hold it in place, as described.

2. The combination with a metallic tie
5 which is trough-shaped and provided with a lateral opening at a point beneath the rail, of a rail supporting block adapted to rest in the trough of the tie and having its lower

side angles cut away to adapt it for introduction of a wedge, as and for the purpose 10 specified.

MICHAEL J. SHANNON.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."