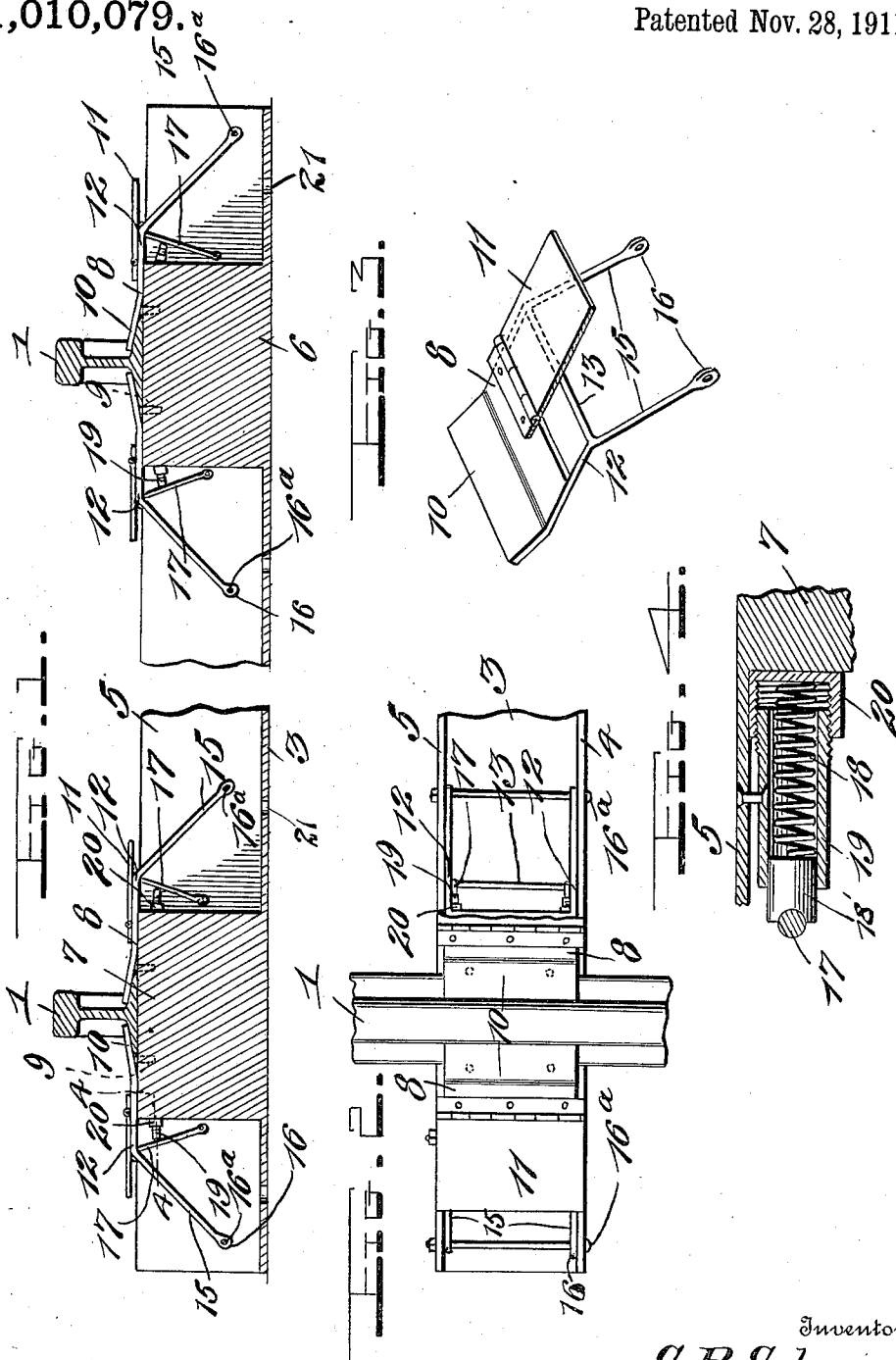


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RAIL TIE AND MEANS FOR FASTENING RAILS THERETO.
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Witnesses

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RAIL-TIE AND MEANS FOR FASTENING RAILS THERETO.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, SAMUEL B. SCHORY, a citizen of the United States, residing at New Waterford, in the county of Colum-
biana and State of Ohio, have invented certain new and useful Improvements in Rail-Ties and Means for Fastening Rails There-
to, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to new and useful improvements in railroad ties and fasten-
ing means for securing the rails to the ties, and my object is to provide a tie of trough-
like design having portions thereof cast solid for the support of the rails.

A further object is to provide securing plates adapted to engage the rails and rest upon said solid portions of the ties to secure
said rails thereto.

A still further object is to provide means for positioning the securing plates on the ties.

With these and other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts as will hereinafter be referred to and more particularly pointed out in the specification and claims.

In the accompanying drawing, forming a part of this application, Figure 1 is a longitudinal section through the tie, showing my rail securing means applied; Fig. 2 is a fragmentary top plan view thereof; Fig. 3 is a detail perspective of a securing plate, and means for connecting the same to the tie, and showing a covering plate partly in section. Fig. 4 is a section as seen on line 4-4, Fig. 1.

In carrying out my invention, I shall refer to the drawing, in which similar reference characters designate corresponding parts throughout the several views, and in which 1 indicates rails of the usual T-type adapted to rest upon my improved ties, which ties are substantially of trough-like design, composed of the base, or bottom 3, and the vertical side walls 4 and 5. These ties may be cast of metal, or made of wood, but in either case said ties are provided adjacent their ends with the solid portions or supporting blocks, 6 and 7, formed integral with the walls 4 and 5, which extend to the upper edges of said side walls to form rests or supports for the rails. These solid portions 6 and 7 for the support of the rails,

are of a width greater than the bases of said rails, so that the securing means may be applied thereto, which will be hereinafter described.

The fastening means for the rails upon these ties consists of the plates 8 having the pins 9 thereon adapted to register with similar openings in the solid portions 6 and 7 of the ties, said plates being each provided with an upwardly inclined portion 10, the inclination of which is coincident to the inclination of the upper face of the base flange of the rail, whereby when said plates are properly positioned, said inclined portions will fit tightly upon the base flanges of said rails. Each of the solid portions of the tie is adapted to receive a pair of these plates, so as to engage opposite sides of a rail, and when the bolts or pins 9, have been inserted in the solid portions of the tie, said plates will be adapted to secure the rail to the tie.

To additionally provide for the securing of these plates, a frame is formed integral with said plate on the opposite side to that carrying the inclined portion, which is composed of the longitudinal arms 12 and transverse arm 13, and upon the ends of said arm 13, are the depending arms 15, which latter arms, are provided at their lower ends with openings 16. A bolt 16^a extending transversely through the side walls 4 and 5 of the tie, passes through the openings of said depending arms, and thereby secures the same, but allows pivotal movement of the complete frame thereon, when the plate carried thereby is not secured to the tie. Hooks 17 pivoted at one end thereof to the side walls of said tie are adapted to engage the transversely extending arm 13 of the frame, and in order to force said hooks into engagement with said transversely extending arm, I provide the spring members 18. These spring members are inclosed in casings 19, which are also pivotally mounted in the side walls of the tie back of the hooks 17, and when properly positioned, said casings have one end thereof forced against a wall of the solid portion of the tie. The one end of the springs has mounted thereon the blocks 18' which project through the opposite ends of the casings and are adapted to engage the hooks 17, thereby forcing the same downwardly and into engagement with the transverse arm. The ends of the casings 17, adapted to contact with a

wall of the solid portions of the tie, are threaded to receive internally threaded sleeves or nuts 20, which have one end thereof closed, and as said closed end receives one end of the spring 18, said spring may be adjusted in its yielding capacity through the medium of said sleeves 20. These securing devices are provided on each side of each of the solidly cast portions of the tie, so that the four securing plates used on each tie will be securely held, and when the spring members have been positioned so as to force the hooks into engagement with the transverse arms carried by the plates, said hooks are not adapted to become loosened from their fastenings, through the customary jolts caused by traffic over the rails.

In operation the rails are first positioned to extend across the tie and are supported upon the solidly cast portions thereof, and the plates 8 are then positioned on the supporting blocks, so that the pins thereof register with the openings of the blocks, whereupon said pins are inserted through the registering openings. This securely engages the upwardly inclined portions 10 of the plates with the base flanges of the rails, and to secure the plates in position, bolts 16^a, are extended transversely through the side walls of the tie, and engage the openings 16 in the depending arms 15. Hooks 17 are then brought into engagement with the transverse arms 13 and the springs are positioned so as to force said hooks downwardly and into secure engagement with said transverse arms, thereby preventing the loosening thereof. With this operation completed it will be seen that the rails will be securely held to the ties.

From the foregoing, it will be seen that I have provided an improved tie of trough-like design having supporting blocks for the rails thereon formed integral with the side walls of said tie. It will be further seen that I have provided an improved means for securing rails to ties of this type, and it will still further be seen that this improved means is simple in construction, but nevertheless effective in operation.

In order to prevent the various parts of the securing means for the device from becoming rusty from the rain and snow, or otherwise damaged, I provide the plates 8 with hinged covering plates 11, which plates extend over and rest upon the arms 12 and 13 when properly positioned.

I have also provided the base 3 of the tie with a plurality of openings 21, whereby it will be seen that all rain and snow will be drained therefrom.

What I claim is:

1. The combination with rails; of a tie therefor of trough-like design provided with rail supporting blocks adjacent the ends thereof, means pivotally carried between the

side walls of the tie for retaining the rails on said blocks, and additional means pivotally carried on the inner faces of said side walls for locking said other means in its effective position.

2. The combination with a pair of rails; of a tie of trough-like design having supporting blocks adjacent the ends thereof, plates pivotally carried between the side walls of the tie and adapted to engage the base flanges of the rails and retain the same on said blocks, and means pivotally carried on the inner faces of the side walls adapted for engagement with portions of said plates to lock the same in their effective positions.

3. In a device of the character described, the combination with a pair of rails; of a tie therefor of trough-like design having supporting blocks adjacent the ends thereof, plates pivotally carried by the tie for retaining the base flanges of the rails to said blocks, additional locking means for said plates, and covering plates for said locking means.

4. The combination with rails; of a tie therefor of trough-like design having supporting blocks adjacent its ends, plates pivotally carried by the tie to retain the base flanges of the rails to said blocks, additional locking means for the plates, and covering plates hingedly mounted on the retaining plates.

5. In a device of the character described, the combination with a rail, and a tie of trough-like design having supporting blocks adjacent its ends; of means to secure said rails to the blocks comprising plates mounted on said blocks, arms formed integral with plates pivotally mounted between the side walls of said tie, and locking means for the arms.

6. In a device of the character described, the combination with a rail, and a tie of trough-like design having blocks formed integral therewith adjacent its ends; of means to secure the rails to the blocks comprising plates adapted to rest upon said blocks, said plates having frames formed integral therewith comprising a pair of longitudinal arms and a transverse arm, depending arms formed integral with the ends of said transverse arm and pivotally mounted between the side walls of said tie, and means to lock said frames and securely retain said plates in position.

7. The combination with rails; of a tie therefor of trough-like design having supporting blocks formed integral therewith adjacent its ends, means to secure said rails to the blocks comprising plates adapted to be mounted on said blocks having a portion thereof inclined upwardly coincident to the inclination of the base flanges of the rails, frames formed integral with said plates and pivotally mounted between the

side walls of said tie, and means to lock said frames to securely retain said plates in position.

8. The combination with rails; of a tie therefor of trough-like design having supporting blocks formed adjacent its ends, means to secure the rails to the supporting blocks comprising plates adapted to be mounted on said blocks and engage the base flanges of said rails, frames formed integral with said plates and pivotally mounted between the side walls of said tie, and means carried by said side walls to lock said frames in position.

9. The combination with rails; of a tie of trough-like design having supporting blocks formed adjacent its ends, means to secure said rails to the blocks, comprising plates adapted to be mounted on said blocks and engage the base flanges of the rails; frames formed integral with said plates and pivotally mounted between the side walls of said tie, and yieldingly supported hooks pivotally mounted on the side walls of said tie adapted to engage said frames and lock the same in position.

10. In a device of the character described, the combination with rails; of a tie therefor of trough-like design having supporting blocks adjacent its ends, means to secure said rails to said blocks comprising plates adapted to be mounted on said blocks, frames formed integral with said plates comprising a pair of longitudinal arms, a transverse arm, and a pair of depending arms, means to pivotally mount said depending arms between the side walls of the tie, and yieldingly supported hooks pivotally mounted on said side walls and adapted to engage said transverse arm to lock the frames and plates in position.

11. The combination with rails, and a tie therefor of trough-like design having supporting blocks adjacent its ends; of means to secure said rails to the blocks comprising plates adapted to be mounted on said blocks and engage the base flanges of said rails, frames formed integral with said plates and pivotally mounted between the side walls of said tie, hooks pivotally mounted on said

side walls and adapted to engage a portion of said frame, and spring members also carried by said side walls adapted to yieldingly force said hooks into effective position.

12. The combination with rails; of a tie therefor of trough-like design having supporting blocks formed integral with the side walls thereof adjacent its ends, said supporting blocks having openings through the upper faces thereof, means to secure said rails to said blocks comprising plates having openings therein adapted to register with the openings in said blocks, said plates being provided with integral frames pivotally mounted between the side walls of said tie, means to secure said plates on said blocks through the registering openings, and additional means carried by the tie to lock said frames in position.

13. In a device of the character described, the combination with a pair of rails; of a tie of trough-like design having supporting blocks formed adjacent the ends thereof, plates pivotally carried between the side walls of said tie for securing the rails to the blocks, pivoted members carried on the inner faces of said side walls for engagement with portions of said plates to lock the same, and spring means to yieldingly force said pivoted members into their effective positions.

14. In a device of the character described, the combination with a pair of rails; of a tie of trough-like design having supporting blocks formed adjacent the ends thereof, plates pivotally carried between the side walls for retaining the base flanges of the rails to said supporting blocks, pivoted members carried on the inner faces of said side walls for engagement with portions of the plates to lock the same in engagement with the rails, and spring means also pivotally mounted on the inner faces of said side walls to yieldingly force said pivoted members into their effective positions.

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

SAMUEL B. SCHORY.

Witnesses:

S. S. WEAVER,
PEARL LYONS.