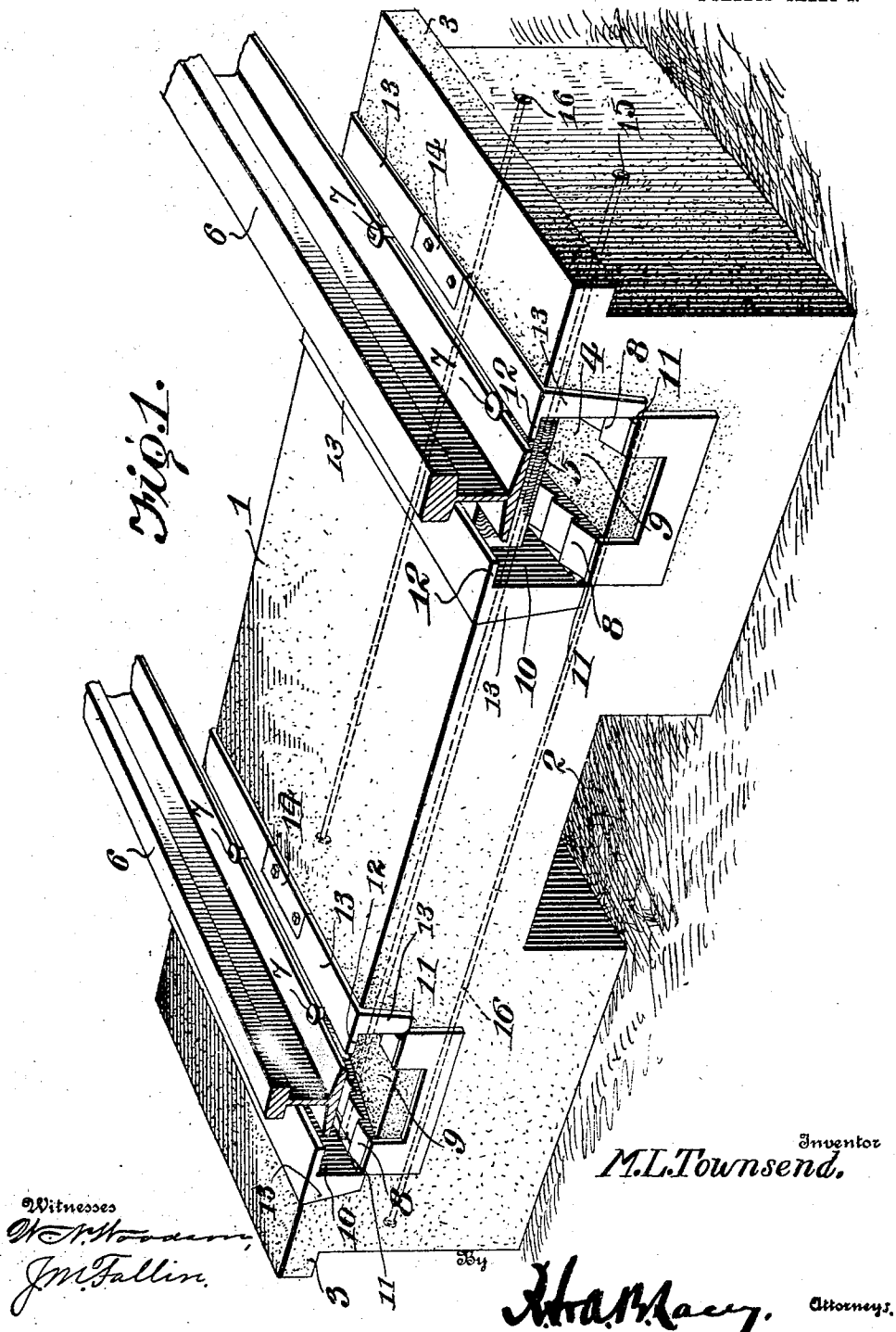


M. L. TOWNSEND.
RAILWAY TIE.
APPLICATION FILED APR. 5, 1909.

935,433.

Patented Sept. 28, 1909.
2 SHEETS—SHEET 1.



Witnesses
W. P. Woodman
J. M. Fallon

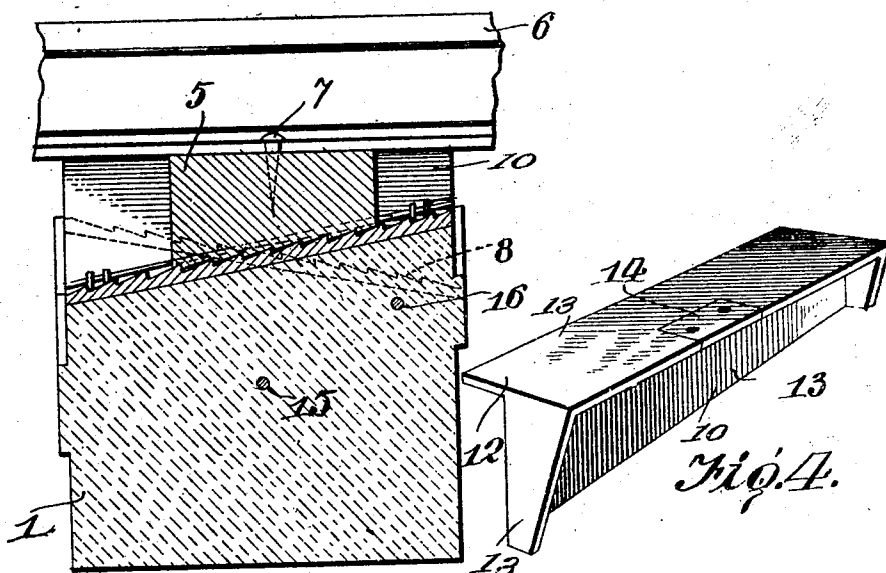
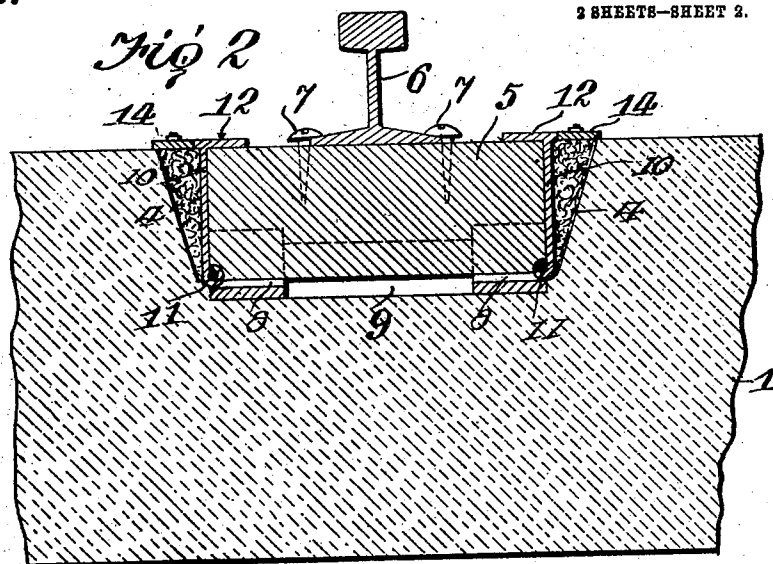
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UNITED STATES PATENT OFFICE.

MONTREVILLE L. TOWNSEND, OF POTOSI, MISSOURI.

RAILWAY-TIE.

935,433.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed April 5, 1909. Serial No. 487,905.

To all whom it may concern:

Be it known that I, MONTREVILLE L. TOWNSEND, citizen of the United States, residing at Potosi, in the county of Washington and State of Missouri, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

This invention comprehends certain new and useful improvements in track equipment for railways, and the invention has for its object an improved tie which is designed to be permanently positioned in the road bed and is provided with peculiar means for supporting the rail, whereby the latter may be raised or lowered at will without disturbing the tie.

A further object of the invention is a tie having rail supporting means which are susceptible of adjustment independently thereof, the adjusting operation being adapted to be positively and conveniently effected with a minimum expenditure of time and labor.

With these and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe and then point out the novel features of in the appended claims.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a railway tie constructed in accordance with my invention; Fig. 2 is a fragmentary longitudinal section thereof; Fig. 3 is a transverse section; and, Fig. 4 is a detail perspective view of one of the side plates.

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

Referring to the drawings, the numeral 1 designates the tie which may be constructed of metal or cement, and in the present instance is shown as formed of the latter. This tie is designed to be permanently positioned in the road bed, and is preferably provided in its lower face with an intermediate cut away portion 2 which assists in maintaining the tie against accidental displacement. For

convenience in manipulation the tie is provided at its opposite ends with outstanding projections or ribs 3.

4 designates two recesses which are formed in the upper surface of the tie in proximity to the opposite ends thereof, and which extend transversely with respect to the tie and longitudinally in relation to the track, the side walls of the recesses being substantially parallel, while the bottom walls are oppositely inclined, as best seen in Fig. 3. The recesses are adapted to accommodate supporting blocks 5 that are inserted therein from the opposite sides of the tie and that are preferably wedge-like in form and are composed of wood or like material. Rails 6 rest upon the respective supporting blocks intermediate of the ends thereof and are attached thereto by screws 7, or like fastening elements. Each of the blocks rests upon two substantially parallel spaced series of teeth 8 that are arranged similarly as shown, and provided on the bottom wall of the recess, the teeth facing in the direction of the inclination of such bottom wall, whereby to prevent the block from sliding down the incline. A channel 9 is disposed intermediate of the spaced series of teeth and is arranged just below that portion of the block to which the rail is secured, such a construction being advantageous in that the block is permitted to yield sufficiently to absorb the shocks incident to travel. In order to further retain the block in adjusted position, I employ side plates 10 which are located at the opposing side walls of the recess and are hinged at their lower ends to pintle rods 11, the latter extending transversely with respect to the tie and being inclined similarly to the bottom wall of the recess. Flanges 12 are formed at the upper or free ends of the plates and project inwardly therefrom and overhang the block to preclude the possibility of the same becoming withdrawn upwardly from the recess. In addition to the above function, the side plates are adapted to be adjusted inwardly toward each other to frictionally engage the adjacent side edges of the block and take up wear. This object is attained by the use of packing or wedges which are introduced between the side plates and the adjacent walls of the recess. The plates 10 are also formed at their top and side edges with flanges 13 which overlap the corresponding faces of the tie and provide

a cavity within which the packing is contained to prevent the possible displacement thereof. For convenience removable doors 14 are placed in the top flanges 13 to afford ready access to the cavity and admit of the packing being quickly introduced therein or removed therefrom as required.

When occasion demands that the rails 6 be adjusted vertically, as for instance when the track is being graded, the screws 7 are loosened in the blocks 5, after which the rails are jacked up with the usual tools employed for this purpose. The blocks are then shifted up or down the inclined bottom walls of the recesses until the proper level is obtained. It is to be understood, of course, that the side plates 10 may be adjusted as found necessary, by removing or inserting packing through the doors 14. The screws 7 are then tightened to fasten the rails rigidly to the supporting blocks, and the adjusting operation is thereby completed without disturbing the tie in the road bed. It is to be further observed that this operation may be accomplished with expedition and with a minimum expenditure of time and labor, whereby it is possible to effect the adjustment of a considerable length of track at a comparatively small cost.

Where the tie 1 is constructed of concrete, it is preferably reinforced by a plurality of bars 15 and 16, the bar 15 extending centrally and longitudinally throughout the entire length of the tie, while the bars 16 are arranged in the upper portion of the tie and extend only partially throughout the length thereof, as will be observed by reference to Fig. 1.

From the foregoing description in connection with the accompanying drawings, it will be apparent that I have provided an improved tie which may be advantageously employed in railway tracks, and when once positioned is not again disturbed to change the level of the track; which embodies to a marked degree the characteristics of simplicity, durability and efficiency in construction and operation; and which consists of comparatively few parts that may be easily and cheaply manufactured and readily assembled.

In further carrying out the invention it is contemplated to coat the supporting blocks with tar or the like to prevent their rotting, it being observed that the channels 9 admit air beneath the blocks to keep the latter dry.

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

1. A railway tie formed in its upper face with transversely extending spaced recesses having oppositely inclined bottom walls, and rail supporting blocks fitted in the recesses and movable on the inclined bottom walls thereof to effect the vertical adjustment of the rails.

2. A railway tie formed in its upper face with a recess having an inclined bottom wall, a rail supporting block fitted in the recess and resting on the inclined bottom wall and movable thereon to effect the adjustment of the rail, and means for engaging the block to maintain the same in position.

3. A railway tie provided in its upper face with a recess having an inclined bottom wall, said wall being provided with teeth, and a rail supporting block fitted in the recess and resting on the teeth and movable on the incline to effect the adjustment of the rail.

4. A railway tie provided in its upper face with a recess having an inclined bottom wall, and a rail supporting block fitted in the recess and adjustable on the inclined bottom wall thereof, said wall being formed with an intermediate channel to admit of the block yielding for the purpose specified.

5. A railway tie provided in its upper face with a recess having an inclined bottom wall, the said wall being provided with spaced series of teeth and intermediate of said series with a channel, and a rail supporting block fitted in the recess and resting on the series of teeth and adjustable thereon, the block being adapted to yield between the series of teeth for the purpose specified.

6. A railway tie having an incline provided with teeth, and a rail supporting block resting on the teeth and adjustable thereon in the direction of the incline to effect the vertical adjustment of the rail.

7. A railway tie provided in its upper face with a recess, a rail supporting block fitted in the recess and resting on the bottom wall thereof, and hinged side plates disposed at the opposing side walls of the recess and adapted to grip the interposed block.

8. A railway tie provided in its upper face with a recess, a rail supporting block adapted to be fitted within the recess, side plates disposed at the opposing side walls of the recess and hinged at their lower ends and adapted to grip the interposed block, the plates being provided at their free ends with flanges overhanging the block to maintain the same against upward displacement.

9. A railway tie having an incline provided with spaced series of teeth extending in the direction of the length thereof, and a rail supporting block resting on the series of teeth and adjustable thereon to effect the vertical adjustment of the rail, the incline being formed intermediate of the spaced series of teeth with a channel, as and for the purpose specified.

10. A railway tie provided in its upper face with a recess, a rail supporting block fitted within the recess, movable side plates disposed at opposing side walls of the recess and adapted to grip the interposed block,

and means interposed between the plates and the corresponding walls of the recess for maintaining the plates in adjusted position.

11. A railway tie provided with a recess, 5 a rail supporting block received in the recess, movable side plates disposed at side walls of the recess, and packing interposed between the plates and the corresponding walls of the recess to adjust the plates inwardly to grip the block.

12. A railway tie having a recess, a rail supporting block received in the recess, side plates disposed at the side walls of the recess and hinged at their lower ends, and packing 15 interposed between the plates and the corresponding walls of the recess to adjust the plates inwardly to grip the block, the plates being formed at their top and side edges with flanges overlapping the corresponding faces of the tie to hold the packing against 20 displacement.

13. A railway tie having a recess, a rail supporting block received in the recess, movable side plates disposed at the side walls 25 of the recess and provided in their faces

contiguous thereto with cavities, packing interposed between the plates and the said walls to adjust the former inwardly to grip the block, the packing being contained in the cavities, and removable doors carried 30 by the plates to afford access to the cavities.

14. A railway tie having inclines extending transversely thereof and spaced a constant distance apart, and rail supporting blocks resting on the inclines and adjustable 35 in the direction thereof to effect the vertical adjustment of the rails without changing the gage of the track.

15. A railway tie having a recess extending transversely thereof and provided with 40 an inclined bottom wall, and a rail supporting block accommodated in the recess and adjustable on the incline to effect the vertical adjustment of the rail.

In testimony whereof I affix my signature 45 in presence of two witnesses.

MONTREVILLE L. TOWNSEND. [L. S.]

Witnesses:

EDW. T. EVERSOLE,

JOHN M. SLOAN.