H. M. LEVINSON.

RAILROAD TIE.

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948,589.

Patented Feb. 8, 1910.

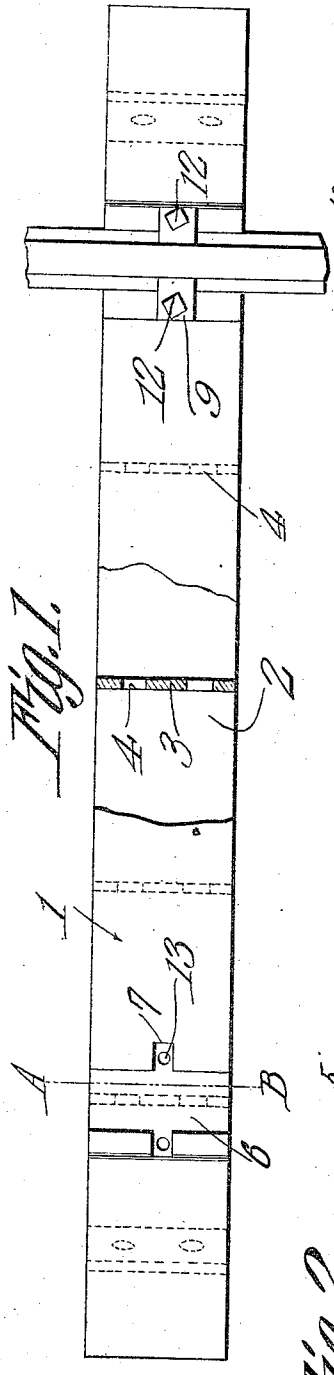

Fig. 1.

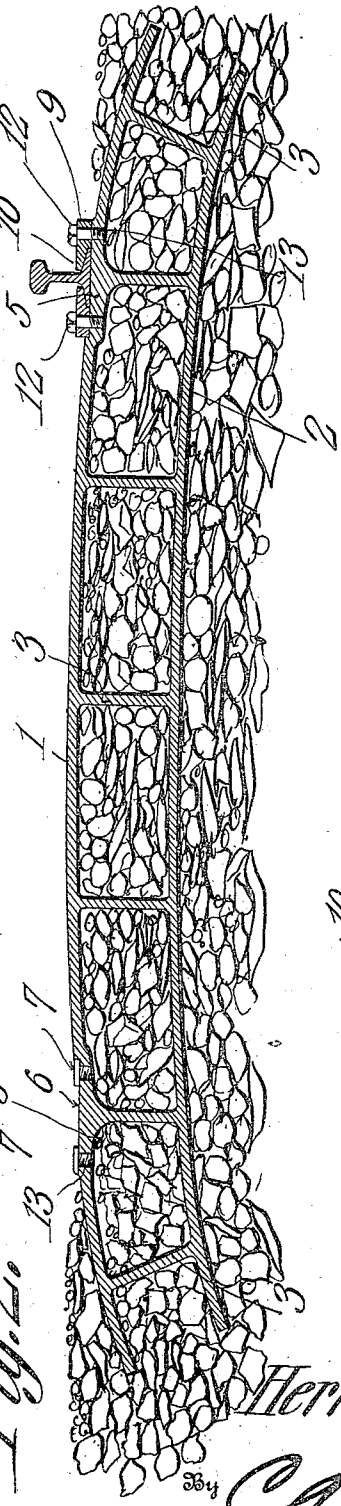

Fig. 2.

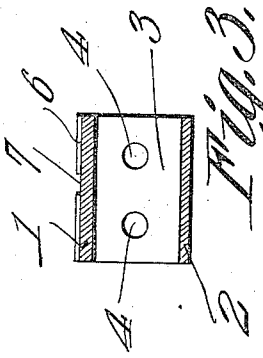

Fig. 3.

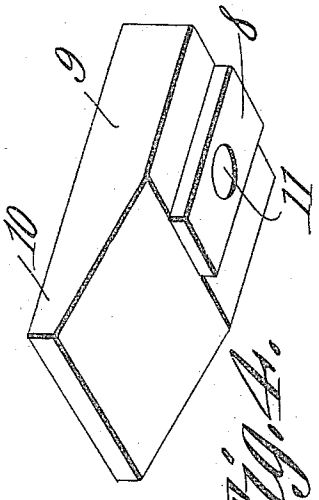

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

HERMAN MOSES LEVINSON, OF EL PASO, TEXAS, ASSIGNOR OF ONE-HALF TO ANDERSON M. WALTHALL, OF EL PASO, TEXAS.

RAILROAD-TIE.

948,589. Specification of Letters Patent. Patented Feb. 8, 1910.

Application filed January 26, 1909. Serial No. 474,310.

To all whom it may concern:

Be it known that I, HERMAN MOSES LEVINSON, a citizen of the United States, residing at El Paso, in the county of El Paso and State of Texas, have invented a new and useful Railroad-Tie, of which the following is a specification.

This invention relates to metallic railway ties and its object is to provide a device of this character cast in a single piece and which is so shaped as to pack the ballast or road-bed thereunder toward the center of the tie, a portion of the ballast being designed to extend through the tie so as to add to the weight thereof and also prevent movement of the tie relative to the road-bed and practically prevent vibration.

Another object is to provide a tie which is so constructed as to prevent water from accumulating therein or thereunder, said tie being so shaped as to cause water to promptly drain therefrom.

With these and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a plan view of a tie constructed in accordance with the present invention, a portion of said tie being broken away to show one of its webs or partitions in section. Fig. 2 is a longitudinal section through the tie. Fig. 3 is a section on line A—B Fig. 1. Fig. 4 is a perspective view of one of the rail-fastening devices used in connection with the tie.

Referring to the figures by characters of reference 1 and 2 designate the top and bottom plates respectively of the tie, said plates being elongated and slightly bowed from end to end. The plates are also equi-distant throughout their length and are connected at desired intervals by integral webs or partitions 3, each of which is formed with one or more openings 4, extending therethrough. The top plate 1 is preferably thickened at the points where rails are to be placed as indicated at 5, there being a transverse groove 6 in the upper face of each of these thickened portions, said grooves being of the same width as the base of a rail and constituting a seat for a rail. Recesses 7 are formed in the walls of these grooves and are designed to receive angular projections 8 formed upon the bottom faces of rail-engaging blocks 9. One of these blocks has been shown in detail in Fig. 4 and by referring thereto it will be noted that one end portion of the block is tapered as at 10 so as to lap and fit snugly upon one of the base flanges of a rail. A bolt-receiving opening 11 extends through the block and the bolt 12 used for securing it in place is designed to be screwed into an opening 13 formed in the top plate 1.

Referring to Fig. 2 it will be noted that a partition or web 3 is located directly under the center of each groove 6 so as to prevent the tie from crushing under the weight of a load upon the rails.

In using the tie herein described the same is placed on the road-bed and ballast is not only tamped thereunder but is also placed in the spaces between partitions or webs 3 and upon the end portions of the plates 1 and 2 as clearly indicated in Fig. 2. It will be seen therefore that the tie becomes firmly seated upon the road-bed and when subjected to downward pressure the bowed bottom plate 2 operates to compress the ballast thereunder inwardly toward the center of the tie. Moreover, by filling the spaces between the top and bottom plates, practically all vibrations are absorbed and the weight of the tie is considerably increased. After the ballast has been properly packed it becomes obviously impossible for the tie to become displaced relative to the road-bed. After the tie has been placed upon the road-bed in the manner described the rails are arranged within the grooves or seats 6 and fastened in place by means of the blocks 9. These blocks are arranged with their angular extensions 8 seated within the recesses 7 and the bolts 12 are inserted through the openings 11 and screwed into the corresponding openings 13 in the top plate 1.

Obviously various changes may be made in the construction and arrangement of parts without departing from the spirit or sacrificing the advantages of the invention.

What is claimed is:—

1. A metallic railway tie having its upper face convexed from end to end, said tie comprising top and bottom plates bowed longitudinally and spacing webs interposed between and integral with the plates.

2. A railway tie comprising top and bottom plates bowed longitudinally, spacing webs or partitions interposed between and integral with said plates extending transversely thereof, said webs forming ballast-receiving openings therebetween, the sides and ends of the tie being open.

3. A railway tie comprising parallel top and bottom plates bowed longitudinally, transversely extending spacing webs or partitions between and integral with the plates, said webs forming ballast-receiving openings therebetween, the tie being open at the sides and ends, and there being apertures within the webs.

4. A railway tie comprising parallel top and bottom plates bowed longitudinally, said top plate having transversely extending rail-receiving grooves provided with recessed walls, webs or partitions interposed between the top and bottom plates and extending transversely thereof, one of said webs being disposed below each grooved portion of the top plate, said tie being open at its sides and ends to receive ballast.

5. A railway tie comprising parallel top and bottom plates bowed longitudinally, the lower face of said bottom plate being concave, spacing webs or partitions interposed between and integral with the top and bottom plates, there being grooves within the top plate constituting rail seats, the walls of said grooves being recessed, rail-engaging blocks seated within the recesses and upon the top plate, and means extending through said devices and engaging the top plate for fastening the devices on the tie.

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

HERMAN MOSES LEVINSON.

Witnesses:

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