L. H. EVANS.

RAILWAY TRACK CONSTRUCTION.

APPLICATION FILED MAR. 25, 1910.

963,364. **Patented July 5, 1910.**

Fig. 1.

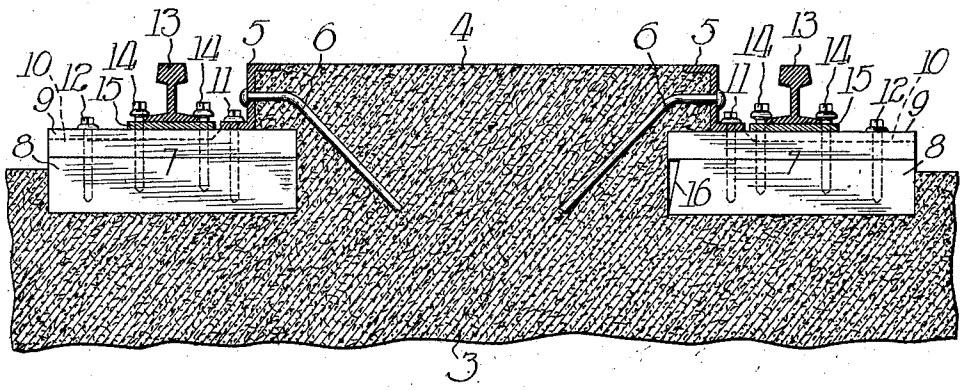
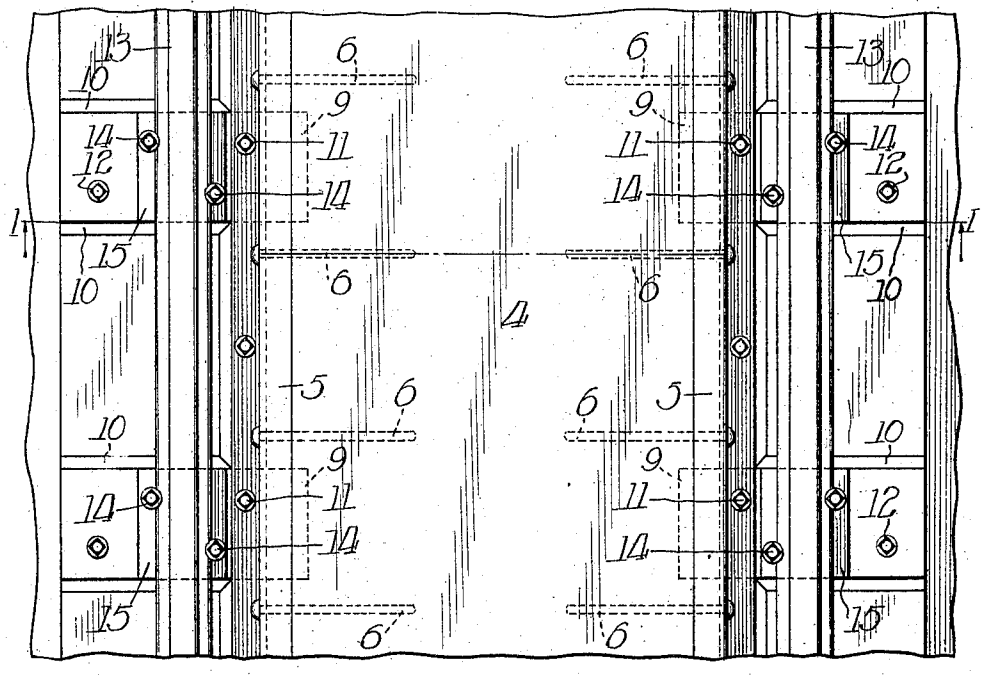


Fig. 2.



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RAILWAY-TRACK CONSTRUCTION.

963,364. Specification of Letters Patent. **Patented July 5, 1910.**

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To all whom it may concern:

Be it known that I, LOUIS H. EVANS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway-Track Constructions, of which the following is a specification.

This invention relates to railway track constructions, and more particularly to a concrete construction provided with short wooden blocks for supporting the track rails, which afford all of the advantages of an ordinary wooden tie, and at the same time produce a structure which is cheap to manufacture and possesses great durability.

It is an object of this invention to provide a construction in which the rail supporting blocks can be readily removed and replaced when occasion requires, and in which the blocks will be securely and firmly retained in position and prevented from accidental displacement.

Another object of this invention is the provision of a track construction which is elevated between the track rails to serve as guard-rails, thus obviating the necessity of providing the track with the additional guard-rails usually employed.

Further objects and advantages of my invention will become apparent to those skilled in the art, as it is better understood by reference to the following description when taken in connection with the accompanying drawings illustrating a preferred embodiment thereof.

Referring to the drawings—Figure 1 is a section on the line 1—1 of Fig. 2, and, Fig. 2 is a plan view of a preferred embodiment.

Referring to the drawings, 3 designates generally, the concrete bed or foundation of the track, which may be reinforced, if desired, in any preferred manner. The concrete foundation is raised between the track rails as at 4, to a plane substantially flush with the top of the track rail, and the sides of the raised portion are reinforced and protected by suitable Z-bars 5, which are securely fixed to the concrete structure by means of bent retaining rods 6.

7 represents suitable wooden supporting blocks located in the concrete bed and composed of two pieces, 8 and 9. The recesses in which these blocks are located are preferably rectangular in shape and the inner ends thereof extend into the center portion of the concrete construction, providing a pocket, the upper wall of which is substantially flush with the lower edges of the Z-bars 5. The outer end walls of the recesses are made preferably about 4 inches lower than the top of the block 9, so that said block may be removed by withdrawing it longitudinally from the recess. The concrete, forming the sides of the recesses, is preferably raised in bevel-formation to protect the blocks from moisture by directing water which may fall thereon, away from the side of the blocks. The blocks are securely maintained in position and the upper block 9 is prevented from longitudinal displacement by screw-spikes 11 which extend through the lower wing of the Z-bars 5, the blocks 9, and into the blocks 8, as shown. The blocks may be further fastened together by screw-spikes 12 located near the outer ends of the blocks. The track rails 13 are fastened upon the blocks in the usual manner by means of spikes or screws 14, and tie-plates 15 may be interposed between the rails and the supporting blocks, if preferred, although the use of tie-plates is not essential to the success of my invention.

In constructing a track bed of this character, the blocks 8 and 9, which are substantially rectangular in shape, as shown to the left in Fig. 1, are properly positioned, and the concrete is filled in around them, the Z-bars forming the side walls of the raised central portion of the construction, and the retaining rods serving to securely maintain the bars in position when the concrete sets. The concrete in plastic condition is molded around the supporting blocks to form the bevel-beads 10, and the portion thereof outside the ends of the block is made lower than the top of the lower block 8.

When it becomes necessary to repair the track, by replacing the supporting blocks, the spikes or screws 11, 12, and 14 are removed, which frees the upper block 9 from the block 8. The upper block may now be withdrawn longitudinally from the recess, whereupon the block 8 may be removed. The new block 8, which is to replace the old block 8 which has been removed, is beveled off at 16 as shown at the right in Fig. 1, so that the block can be placed in position. The necessity of beveling off the end of the block is obvious, from the fact that the block can not be slid longitudinally into place, but the inner end must first be in-

serted into the recessed pocket, and the outer end subsequently lowered into position. The block 9 may now be inserted longitudinally into the recess from the outer end thereof, whereupon the screw-spikes may be replaced to hold the blocks together and in position, and secure the rails thereto.

The initial cost of track construction embodying my invention, is relatively small, and the structure is very durable, thereby greatly reducing the usual cost of maintenance. When it becomes necessary to replace the supporting blocks the old ones can be readily removed and the new ones quickly placed in position, whereby the question of track repairs resolves itself into a simple and inexpensive item.

What I claim is:

1. A railway track construction, comprising a concrete bed provided with a recess disposed transversely to the track, and a block having upper and lower sections disposed in said recess, the outer end wall of the recess being of a height sufficient to prevent longitudinal displacement of the lower block section, but permitting the upper block section to be withdrawn horizontally from the recess.

2. In a railway track construction, the combination of a concrete bed provided with a rectangular recess disposed transversely to the track, a removable block seated in said recess, means for securing said block at its upper side to the concrete structure, and a track rail supported on said block.

3. In a railway track construction, the combination of a concrete bed provided with a rectangular recess disposed transversely to the track, a removable two-piece block located in said recess, means for securing said block pieces together and to the concrete structure, and a track rail supported on said block.

4. In a railway track construction, the combination of a concrete bed provided with a recess disposed transversely to the track, the concrete structure overhanging one end of the recess, a block seated in said recess, means for securing said block to the concrete structure adjacent the overhanging portion thereof, and a track rail supported on said block.

5. In a railway track construction, the combination of a concrete bed provided with a recess disposed transversely to the track, the portion of said concrete bed between the track rails being raised to a plane substantially flush with the top of the track rails and overhanging the inner end of said recess, a block seated in said recess and fitting under the overhanging portion of the concrete structure, means secured to said overhanging portion for retaining said block in position in the recess, and a track rail supported on said block.

6. In a railway track construction, the combination of a concrete bed provided with a recess disposed transversely to the track and extending into a portion of the concrete structure between the track rails, which is raised to a plane substantially flush with the top of the track rails, a block adapted to fit in said recess, means for preventing displacement of the block, and a track rail supported on said block.

7. In a railway track construction, the combination of a concrete bed having a raised portion between the track rails and provided with a recess disposed transversely to the track and extending into the said raised portion to provide a pocket at one end of the recess, a block seated in said recess and pocket, a second block positioned upon the first block and extending into said pocket, a Z-bar secured to the raised portion of the concrete bed adjacent the upper edge of said pocket, and means for fastening said blocks to said Z-bar to maintain the blocks in position, and a track rail supported upon said blocks.

8. In a railway track construction, the combination of a concrete bed having a raised portion between the track rails, a Z-bar forming the side of said raised portion, said concrete structure being provided with a recess disposed transversely to the track and extending into the raised portion to provide a pocket, a two-piece block located in said recess and projecting into said pocket, a screw extending through the Z-bar and into both pieces of said block to maintain the blocks in position, and a track rail supported on said block.

9. In a railway track construction, the combination of a concrete bed having a raised portion between the track rails, Z-bars secured to the sides of said raised portion and serving as guard-rails, said concrete structure being provided with recesses disposed transversely to the track, the inner ends of said recesses extending into the raised portion between the track rails, whereby a portion of the concrete structure and the Z-bars overhang the inner ends of the recesses, a two-piece block fitted into each of said recesses and projecting under the overhanging ends thereof, means for securing said blocks to said Z-bars, and track rails supported upon said blocks.

10. In a railway track construction, the combination of a concrete bed having the central portion thereof raised to a plane substantially flush with the top of the track rails, a Z-bar extending along the side of said raised portions, means for securing said Z-bar to the raised portion, said concrete structure being provided with a recess disposed transversely to the track, said recess terminating in the raised portion of the construction, whereby a pocket is formed be-

neath said Z-bar, a block of less height than said pocket located in said recess, a second block supported upon the first block and adapted to be withdrawn longitudinally from said pocket, means for fastening said blocks together and securing them to the Z-bar, and a track rail supported upon the upper block.

11. In a railway track construction, the combination of a concrete bed provided with a rectangular recess disposed transversely to the track, the inner end of said recess terminating in a pocket in the concrete construction, and the outer end wall of said recess being of less height than the pocket, a block of less height than the pocket fitted in said recess, a second block located upon the first block and adapted to be withdrawn longitudinally from the recess, a Z-bar secured to the concrete structure and forming part of the upper wall of said pocket, means for securing said blocks to said Z-bar, and a track rail supported on said blocks.

12. In a railway track construction, the combination of a concrete bed provided with a recess disposed transversely to the track, the inner end of said recess forming a pocket, a two-piece block fitted in said recess and pocket, the outer end wall of said recess being of less height than the lower block piece to permit the upper block piece to be withdrawn longitudinally therefrom, means for maintaining said block in position in said recess, and a track rail supported on the block.

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