H. WILKINS.

REINFORCED CONCRETE RAILWAY TIE.

APPLICATION FILED JULY 17, 1913.

Patented Mar. 3, 1914.

1,089,301.

Fig. 1.

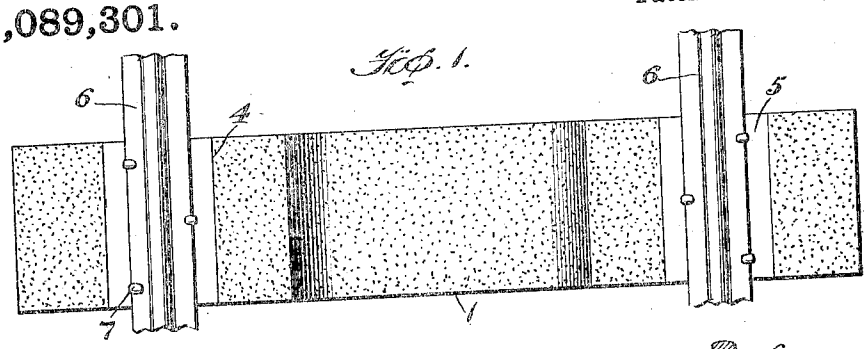


Fig. 2.

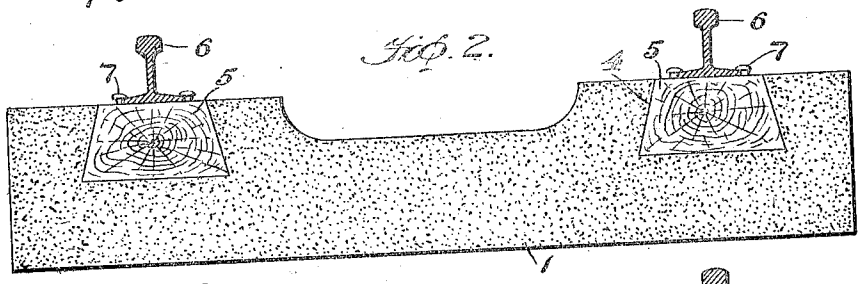


Fig. 3.

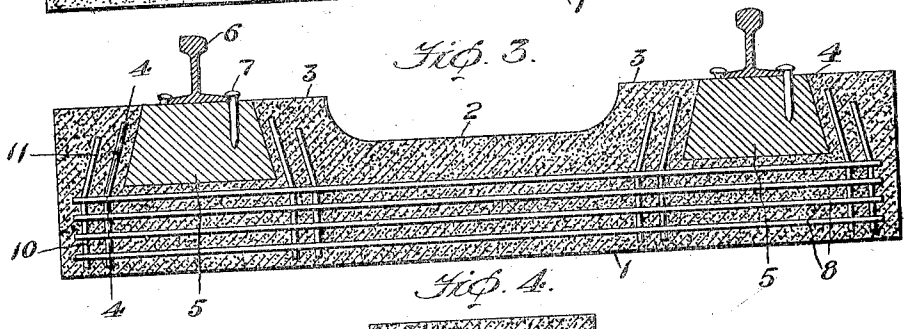


Fig. 4.

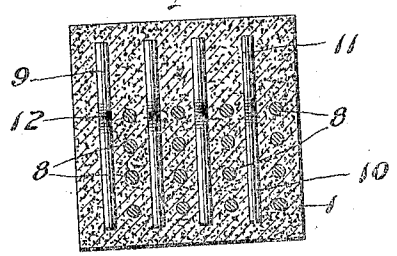
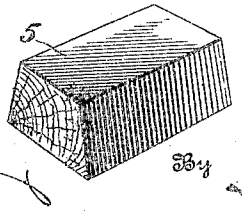


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

HARRY WILKINS, OF EVANSVILLE, INDIANA.

REINFORCED-CONCRETE RAILWAY-TIE.

1,089,301. Specification of Letters Patent. **Patented Mar. 3, 1914.**

Application filed July 17, 1913. Serial No. 779,543.

To all whom it may concern:

Be it known that I, HARRY WILKINS, a citizen of the United States, residing at Evansville, county of Vanderburg, and State of Indiana, have invented certain new and useful Improvements in Reinforced-Concrete Railway-Ties, of which the following is a specification.

This invention relates to reinforced concrete railway ties.

My object is to provide a concrete or molded railway tie having, first, an improved reinforcement; second, improved replaceable rail chairs; third, rail chairs and reinforcing means arranged in novel combination with each other.

The invention consists of those novel features of construction and combinations of parts appearing more fully hereinafter and set forth in the appended claim.

In the accompanying drawings:—Figure 1 is a plan view; Fig. 2, a side elevation; Fig. 3, a longitudinal section; Fig. 4, a section on line 4—4, Fig. 3; and Fig. 5, a detail perspective of one of the rail chairs.

The tie 1 is of concrete or other molded material, preferably the former, and it is provided with a depressed central part 2 and raised ends 3. The raised ends 3 have dove-tailed seats 4 extending from side to side of the tie and in these seats are wooden rail chairs which are placed in position by sliding them in said seats 4, but, originally, the chairs 5 may be molded in the tie. The rails are shown at 6 and they rest upon the chairs 5 and are directly spiked thereto by the spikes 7. By seating the rails 6 on wooden chairs 5, I obtain all the advantages of the cushioning action obtained by the ordinary wooden tie without any of its disadvantages, as the concrete tie 1 is rigid and permanent in the road-bed. By using the wooden chairs 5, the rails may be quickly and easily spiked thereto, after gaging, just as is done with the ordinary wooden tie in common use. However, when the chairs 5 become worn or the spike holes enlarged, the chairs can be knocked out laterally from their seats 4 and other chairs substituted and the rails spiked to them.

The tie 1 is reinforced by parallel sets of horizontal rods 8, each set being composed of a plurality of rods arranged above each other. Flanking the chairs 5 and extending into the raised parts 3 of the tie 1, are upright reinforcing rods 9 of which preferably a plurality is employed on each side of each chair 5. The upright reinforcing rods have vertical lower parts 10 and inclined upper parts 11, the latter being preferably substantially parallel to the sides of the chairs 5, the bends or angles of the upright reinforcing members being shown at 12. The upright reinforcing members 9 are arranged in alternation with the horizontal reinforcing rods 8, as shown in Fig. 4.

The foregoing reinforcing system is well adapted to resist breaking or cracking of the tie at the center below the part 2 and breaking off of any part of the ends of the tie due to any weakening thereof by the provision of the seats 4. The upper parts 11 of the rods 9 reinforce the walls of the seats 4.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

A rail tie provided with sets of upright reinforcing rods in its end parts and with longitudinal reinforcing rods arranged in series which alternate with the series of upright rods, and wooden rail chairs embedded in the tie and located between the respective sets of upright reinforcing rods aforesaid with the sides of said chairs arranged substantially parallel to parts of said upright reinforcing rods.

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

HARRY WILKINS.

Witnesses:
HARRY LUTON,
JOHN E. ROGERS.