

J. B. MARTIN & E. W. KATZER:

RAILWAY TIE.

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962,908.

Patented June 28, 1910.

Fig. 1.

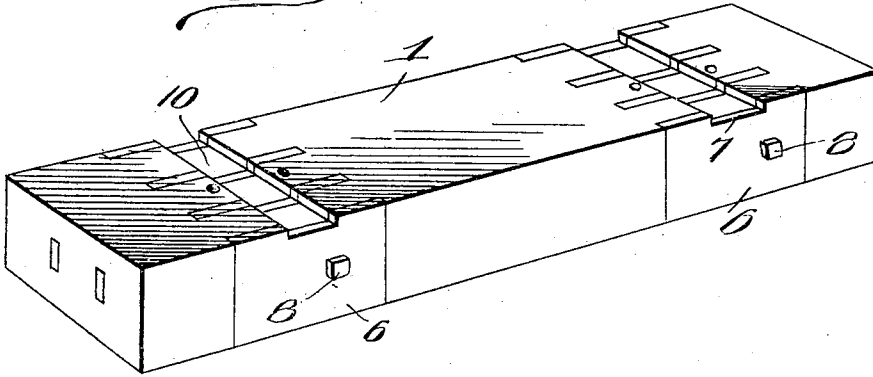


Fig. 2.

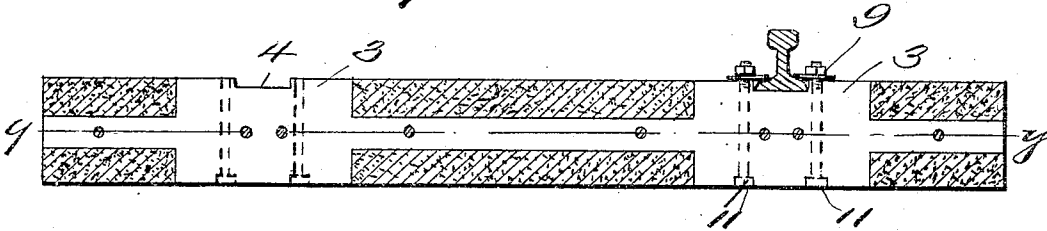
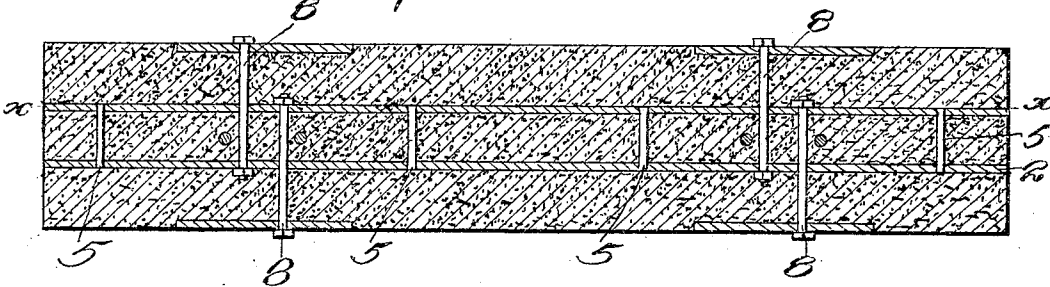


Fig. 3.



Witnesses

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JOHN B. MARTIN AND EDWARD W. KATZER, OF WALLACE, IDAHO.

RAILWAY-TIE.

962,908.

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To all whom it may concern:

Be it known that we, JOHN B. MARTIN and EDWARD W. KATZER, citizens of the United States, residing at Wallace, in the county of Shoshone and State of Idaho, have invented new and useful Improvements in Railway-Ties, of which the following is a specification.

This invention relates to certain new improvements in railway ties, and it consists in the novel construction, combination and arrangement of parts as will be hereinafter more particularly described and pointed out in the claims.

Referring to the drawings: Figure 1 is a perspective view of our invention. Fig. 2 is a vertical longitudinal section taken on line $x-x$ of Fig. 3. Fig. 3 is a horizontal longitudinal section taken on line $y-y$ of Fig. 2.

The object of our invention is to construct a durable, and practical railway tie, which is preferably composed of metal in connection with concrete or other compositions, and constructed in a manner hereinafter described, whereby the spreading of the rails and other difficulties heretofore experienced are entirely avoided as will more clearly appear from the detailed description.

Referring to the drawings, the numeral 1 represents our completed tie which is composed preferably of two longitudinal metallic bars or stringers 2, extending the full length of the tie and having enlarged portions 3, the lower edges of which are on a line with the lower edges of the flat surfaces of the completed tie and having their opposite or upper surfaces provided with grooves or recesses 4 for the reception of the base of the ordinary rails. Said bars or stringers 2 are held and suitably supported at a suitable distance from one another by short rods 5, as clearly shown in Fig. 3 of the drawings, the intermediate spaces between said bars being filled with cement or other composition of matter in any well known or mechanical manner.

At the opposite sides of the completed tie are located plates 6, which are embedded therein and are also provided with grooves or recesses 7 which likewise receive the base of the rails in a manner previously described in order to hold the same in relation to one another, and to secure the same rigidly in place there are bolts 8 which pass through said plates and also through the

longitudinal bars or stringers 2 below the grooves, as clearly shown in Fig. 2 of the drawings. It is to be noted in this connection that the grooves formed in the longitudinal bars and plates for receiving the base of the rails are in alinement with one another, and the cement or composition of matter used for building up the completed tie is filled between said plates and bars in a manner clearly shown in Fig. 3.

By referring particularly to Fig. 3 of the drawings, it will be seen that the bolts have their shanks extending through the bars and the said composition of matter, and their outer ends passing through the plates 6 located on the opposite sides of the completed tie, the threaded ends of said bolts receiving the usual nuts for binding the several parts together, said bolts being located adjacent to one another but properly separated at a suitable distance in order to bind said plates about the bearing portion of the tie upon which the ordinary rails rest or bear.

In order to secure the ordinary rails to our improved tie, we preferably employ washers or other suitable devices which are brought in binding contact with the rails after the same have been located within the continuous grooves 10 of the tie, which washers are held in rigid contact with the base of the said rails by bolts 11 passing entirely through the tie thus constructed and through said washers, the usual nuts being employed to bind the several parts together, in which instance it will be seen, by referring particularly to Fig. 2 of the drawings, the binding bolts 8 are located between the bolts 11 for securing them in position within said grooves, all of which operate to make a most complete railway tie.

It is readily to be observed that a railway tie constructed in a manner herein described has advantages too numerous to mention and is practically indestructible, and therefore we do not limit ourselves to the precise construction herein shown and described, for instance, the same may be made of scrap material or metal, and after the parts have been properly arranged or separated in respect to one another, the spaces between the said parts are to be filled with concrete or other composition of matter.

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

1. A railway tie comprising longitudinal bars having intermediate enlarged por-

- tions, the upper edges of which are provided with grooves, plates located on the opposite sides of said bars but separated therefrom and also provided with similar grooves registering with the grooves formed on said bars, and means for securing the several parts together out of contact with one another and plastic material for completing the tie as and for the purpose described.
- 10 2. A railway tie comprising longitudinal bars extending the full length of said tie and having intermediate enlarged portions, the upper edges of which are provided with grooves, rods separating said bars and holding the same rigidly opposite in relation to one another, plates located on the opposite sides of the tie and having grooves formed in their upper edges registering in alinement with the grooves formed in the upper edges of the enlarged portions of the longitudinal bars, bolts passing through the bars and through the plates, and suitable means for holding the base of the rails within the grooves thus formed as and for the purpose described.
- 15 In testimony whereof we affix our signatures in presence of two witnesses.
- 20 JOHN B. MARTIN.
EDWARD W. KATZER.
- Witnesses:
D. LEWIS HUNT,
IRVIN J. THOMPSON.