A. H. MOFFET.

CONCRETE TIE.

APPLICATION FILED MAY 4, 1911.

1,014,085.

Patented Jan. 9, 1912.

2 SHEETS—SHEET 1.

FIG. 1.

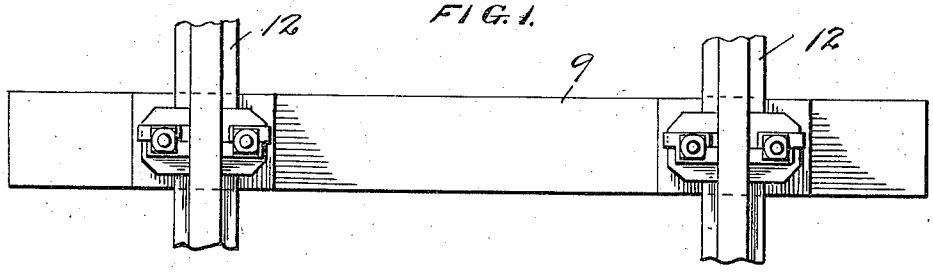


FIG. 2.

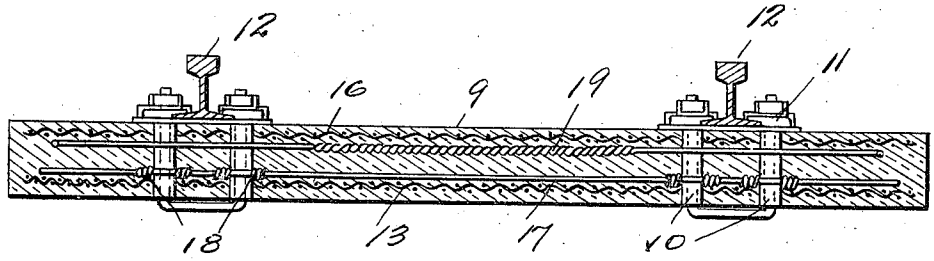


FIG. 3.

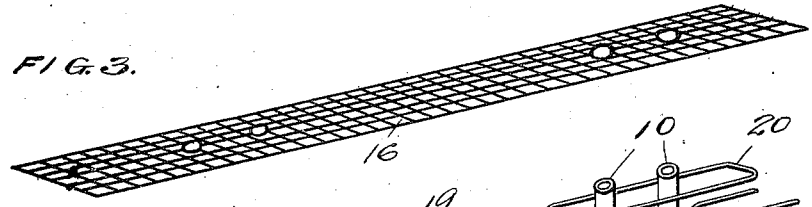
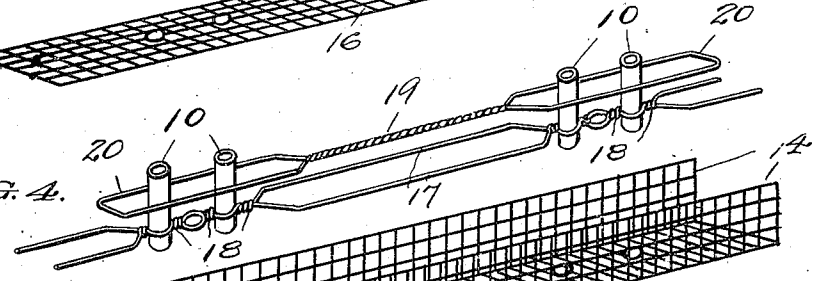


FIG. 4.



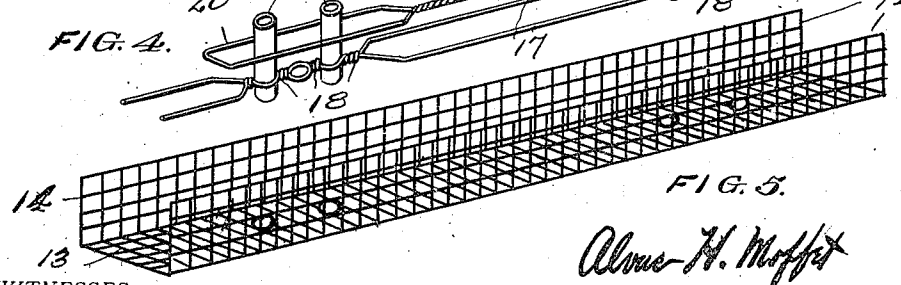


FIG. 5.

WITNESSES

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2 SHEETS—SHEET 2.

FIG. 6.

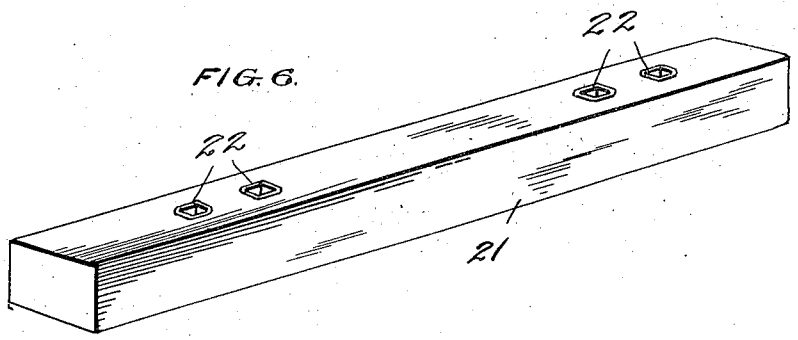


FIG. 7.

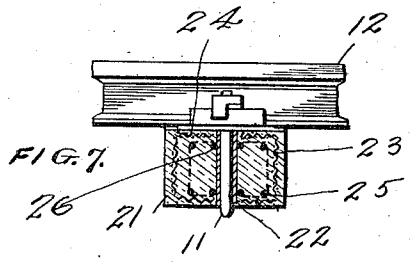
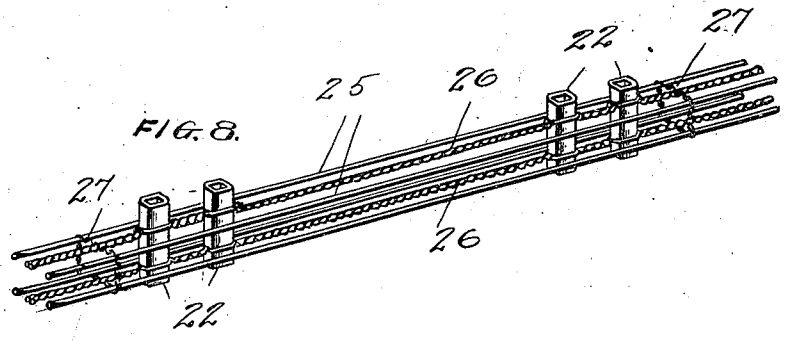


FIG. 8.



WITNESSES

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CONCRETE TIE.

1,014,085. Specification of Letters Patent. Patented Jan. 9, 1912.

Application filed May 4, 1911. Serial No. 625,039.

To all whom it may concern.

Be it known that I, ALVUS H. MOFFET, a citizen of the United States, residing at Larned, in the county of Pawnee and State of Kansas, have invented new and useful Improvements in Concrete Ties, of which the following is a specification.

The present invention relates to concrete tie structures, and more especially to the reinforcing means therefor.

The primary object is to provide a concrete body with a metal reinforcement, the latter being so arranged that it is completely embedded, and thus protected, said reinforcement moreover effectively securing the tie fastening means against spreading, even should the concrete body of the tie be broken.

Two forms of the construction are illustrated in the accompanying drawings, wherein:—

Figure 1 is a plan view of a tie, showing the rails secured thereon. Fig. 2 is a longitudinal sectional view therethrough. Fig. 3 is a perspective view of the separate wall of the reinforcing casing. Fig. 4 is a perspective view of the internal reinforcing bars. Fig. 5 is a perspective view of the other walls of the reinforcing casing. Fig. 6 is a perspective view of a tie having a modified form of reinforcement. Fig. 7 is a cross sectional view therethrough. Fig. 8 is a perspective view showing the internal reinforcing bars.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated in Figs. 1–5 inclusive, the body 9 of the tie is of concrete or analogous composite material. Extending transversely therethrough, are socket-forming sleeves 10, so arranged that the fastening means 11 for the rails 12 when secured in the sockets, formed by said sleeves, will properly coöperate with said rails.

The tie body is provided with an outer reinforcement in the form of a casing of foraminous metal, which may be woven wire or expanded sheet metal. This casing is angular in cross section, and is provided with continuous or connected bottom and side walls 13 and 14 and a separate top wall 16. The employment of a separate wall, as 16 is important in the manufacture of the tie, in order to secure the proper disposition of the parts during the molding operation. It will be noted that the socket-forming sleeves pass directly through the top and bottom walls 13 and 16 of the casing, and are engaged therewith. Located within this foraminous casing, are internal reinforcing bars. In this form of construction, a lower pair of bars 17 is employed. These bars are bent about the sleeves 10 and twisted together, as shown at 18 on opposite sides of the same. Thus the said sleeves are effectively tied together, and even if the tie body should be broken, the sleeves cannot move away from each other, and the track can therefore not spread. Preferably another internal reinforcement is located within the casing, and comprises twisted bars 19, the ends of which are formed into loops 20 that surround the sleeves 10.

A slightly different form of construction is illustrated in Figs. 6, 7 and 8. The concrete body is shown at 21, and located transversely therein, are the usual socket-forming sleeves 22. These sleeves pass through a reinforcing casing 23 embedded in the outer portions of the tie, and provided with one separate side wall 24. Arranged within this casing are reinforcing corner bars 25, and located between the upper bars and the lower bars are reinforcing bars 26 that are twisted together and are also twisted about the sleeves 22. These various bars are properly positioned by spacing wires 27 that are twisted about the same contiguous to the ends thereof.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the invention.

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

1. In a railway tie, a concrete body and a reinforcement therein comprising a casing embedded in the body and having one wall separate from the others.

2. In a railway tie, a concrete body and a reinforcement therein, comprising a casing substantially angular in cross section and

having connected bottom and side walls, and a top wall that is separate therefrom, said casing being embedded in the body.

3. In a railway tie, a concrete body and a reinforcement therein comprising a casing embedded in the body and having one wall separate from the others, and longitudinal bars located within the casing.

4. In a railway tie, a concrete body and a reinforcement therein comprising a casing formed of netting embedded in the body and having one wall separate from the others.

5. In a railway tie, a concrete body, socket-forming sleeves located therein, and reinforcing bars engaged with and twisted together on opposite sides of the sleeves.

6. In a railway tie, a concrete body, a casing of foraminous metal embedded in the body, socket-forming sleeves extending transversely in said body and having end portions passing through and engaged with opposite walls of the casing and reinforcing bars located within the casing and engaged with and twisted together on opposite sides of the sleeves.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALVUS H. MOFFET.

Witnesses:
H. A. JONES,
ALICE TICKELL.