(No Model.)

J. JACOBS.

RAILWAY TIE.

No. 379,399. Patented Mar. 13, 1888.

Fig. 1.

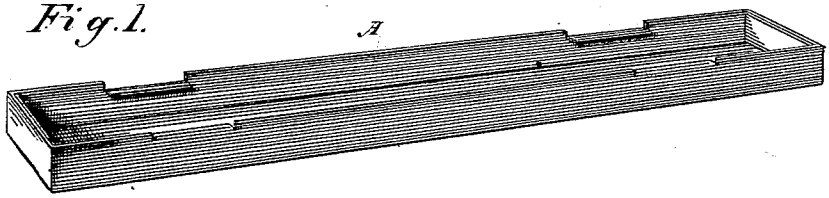


Fig. 2.

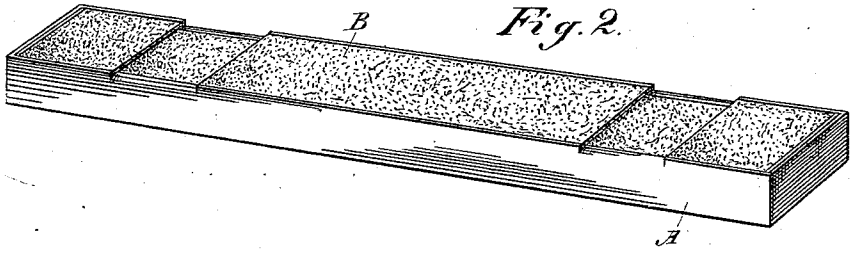
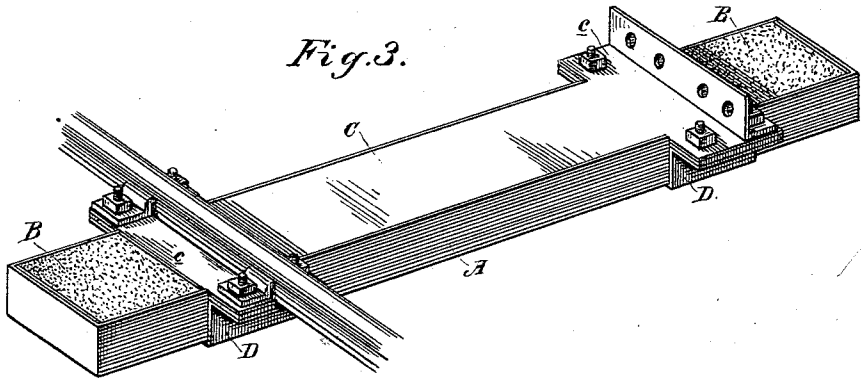


Fig. 3.



Witnesses;
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J. L. Morse.

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UNITED STATES PATENT OFFICE.

JOSEPH JACOBS, OF SAN FRANCISCO, CALIFORNIA.

RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 379,399, dated March 13, 1888.

Application filed May 7, 1887. Serial No. 237,476. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH JACOBS, of the city and county of San Francisco, State of California, have invented an Improvement in Railway-Ties; and I hereby declare the following to be a full, clear, and exact description of the same.

Heretofore hollow supporting-blocks having concrete filling and connected by a cross-tie have been devised for supporting railway-ties, and various forms of filling iron shells have been shown for this purpose. Asphalt has also been suggested as a material for railway-ties, in connection with other matters; but I do not broadly claim either the filled railway-iron as a supporting-block, or asphaltum as a filler or material for supporting railway-ties, my claims being limited to a special construction hereinafter shown.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of the metallic case, frame, or flask. Fig. 2 is a perspective view of the complete tie. Fig. 3 is a perspective view showing a top and rail plates and the clamps D.

A is a case, frame, or flask, made of metal and having the general configuration of a railway tie or sleeper.

B is the body of the tie, and consists of material originally plastic, but which subsequently becomes hard. This material is filled into the case, frame, or flask, and when hard forms the body or substance of the tie, being fully protected by the metal case, frame, or flask, which is itself stiffened and strengthened by the filling. This material may be any of the forms of concrete, artificial stone, or cement which, when first prepared, is in a plastic or liquid condition and subsequently hardens; but the particular material of this class which I prefer, for its many advantageous qualities—such as cheapness, durability, and elasticity—is an asphaltum concrete or cement, which may be made in any of the well-known ways and tempered suitably for the present purpose.

The case, frame, or flask A, though it may be constructed in any manner, as far as the first idea of my invention is concerned—namely, the filling with the material described—is preferably constructed as follows: It is made from a single piece or blank of sheet metal and is struck up, stamped, or otherwise formed or fashioned into the elongated box shape shown, in which there is a bottom, two sides, and two ends, thus making a case which will readily receive, contain, and confine the material forming the body of the tie. Though with this particular case, frame, or flask any suitable material may be used to form the filling, I prefer, of course, to use the particular material above described with this form of case, as thereby I gain the highest advantages of the invention—namely, cheapness, facility in preparation and construction, ease in handling and placing, and durability and strength—for, though the case is of sheet metal, the filling stiffens and strengthens it to the required extent.

If desirable, I may use a top plate, such as is shown by C, Fig. 3, and which may serve as a tie-plate, to further stiffen the sleeper, by having each end *c* serve as rail-plates and bolted securely to the clamps or stirrups D, embracing the bottom and sides of the case A. These clamps may be made of sufficiently heavy metal to add stiffness and strength to the tie; or, if found preferable, the clamps D may be bolted to separate rail-plates which form part of the top plate.

I claim—

1. A combination railway-tie consisting of a metal case formed of a single piece extending across the roadway and adapted to support both rails, having a closed bottom and an open top and provided with a coherent filling—such as concrete or asphalt—which will become solid and capable of sustaining the weight of the passing train, substantially as described.

2. A railway tie or sleeper composed of the sheet-metal case, frame, or flask, having a bottom, sides, and ends, and the filling to strengthen and stiffen it, in combination with rail-plates across the tie, and the clamps embracing the bottom and sides of the tie and bolted to the rail-plates, substantially as herein described.

3. A railway tie or sleeper composed of the

sheet-metal case, frame, or flask and the strengthening and stiffening filling, in combination with the top plate having its ends serve as rail-plates, and the clamps embracing the bottom and sides of the tie and bolted to the rail-plate ends of the top plate, substantially as herein described.

In witness whereof I have hereunto set my hand.

JOSEPH JACOBS.

Witnesses:
S. H. NOURSE,
J. H. BLOOD.