(No Model.)

B. SMITH.

RAILROAD TIE.

No. 451,295. Patented Apr. 28, 1891.

Fig. 1.

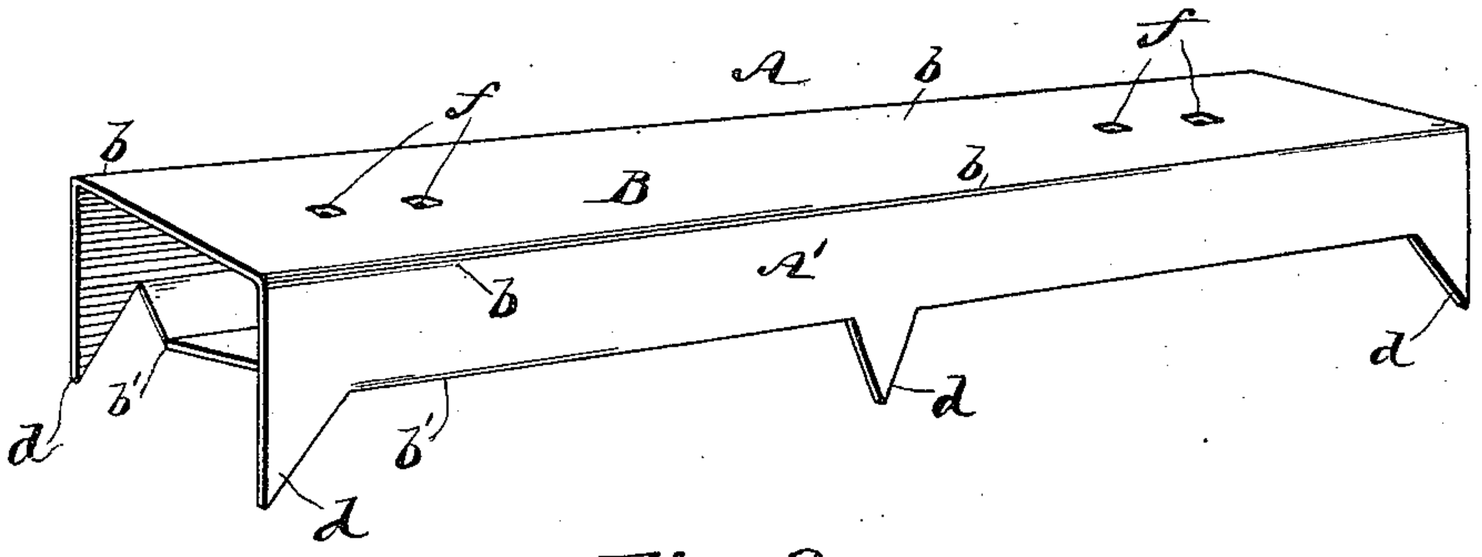


Fig. 2.

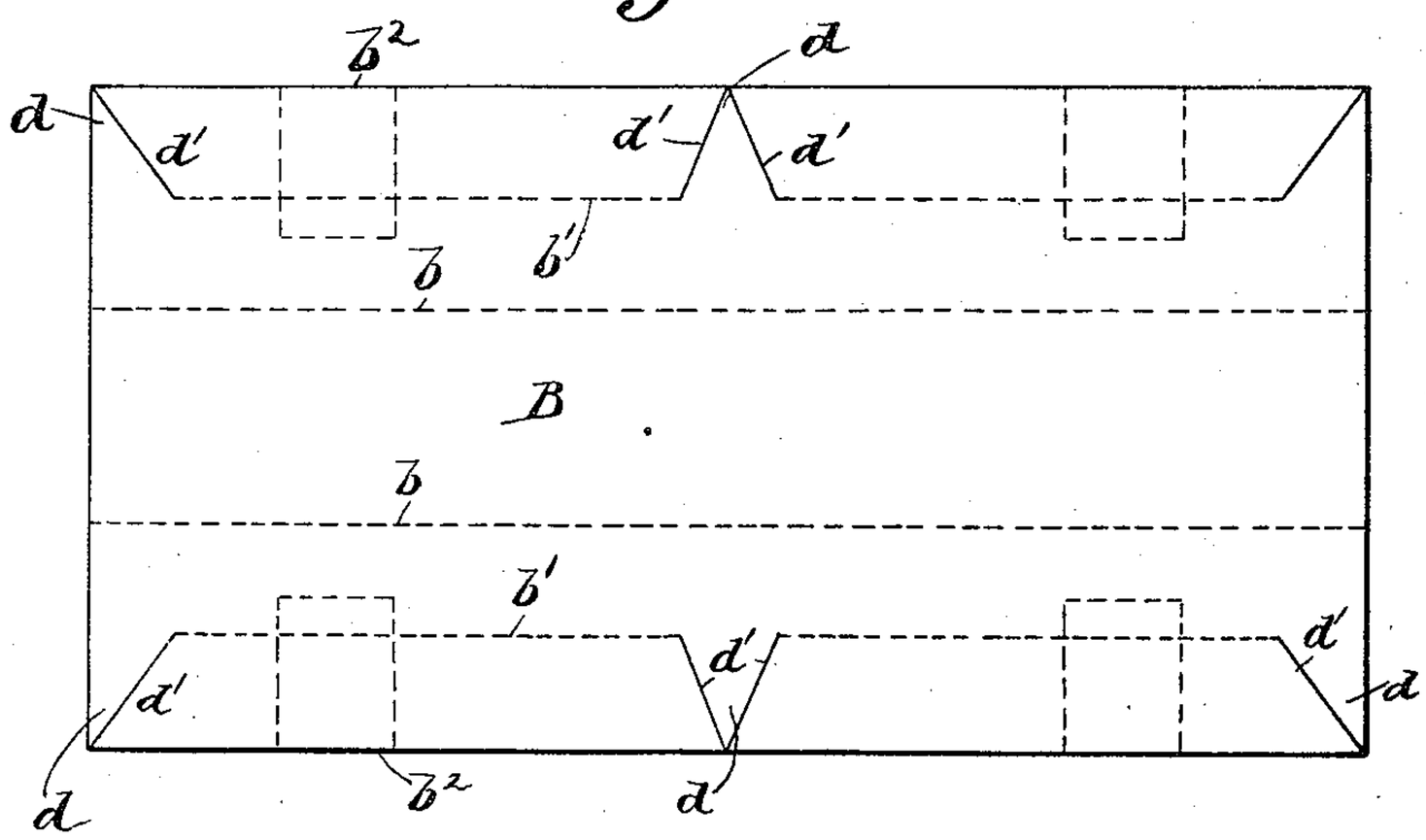
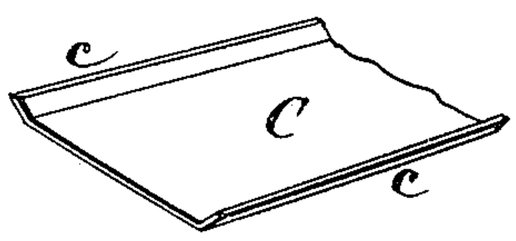


Fig. 3.



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BRIDGES SMITH, OF MACON, GEORGIA.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 451,295, dated April 28, 1891.

Application filed July 7, 1890. Serial No. 357,975. (No model.)

To all whom it may concern:

Be it known that I, BRIDGES SMITH, of Macon, in the county of Bibb and State of Georgia, have invented a new and Improved Railroad-Tie, of which the following is a full, clear, and exact description.

My invention relates to improvements in railroad-ties; and the object of my invention is to produce a metal tie that will be strong and durable, that will be simple and cheap, that will be self-ballasted, that will possess the necessary amount of elasticity, that may be easily and rigidly fastened in the soil, and that will have means for easily securing the rail thereto.

My invention consists in certain details of construction which will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the tie embodying my invention. Fig. 2 is a diagram of the blank from which the tie is formed. Fig. 3 is a broken perspective view of the plate which is inserted in the tie when water is to run through the same.

The tie A is formed from a sheet-metal blank B, which is cut inwardly diagonally at its edges on the lines d' to produce the points d, as shown in Fig. 2. The blank is then bent on the lines b, and the bent-down parts A′ are bent inwardly on the lines b' between the points d, so that the edges b^2 of the blank meet but do not lap, forming a mainly rectangular body having the downwardly-extending points d, as shown in Fig. 1. By forming the tie in this manner there will be a small amount of elasticity to it, thereby overcoming the objection to many forms of metal ties that they are too rigid. The tie is provided on its upper side with holes f, there being a pair of said holes near each end of the tie, and the holes are a sufficient distance apart to allow an ordinary rail to rest between them, and the rail may be attached to the tie by bolts extending through the holes f or by any desired form of fastening.

When the tie A is laid in the soil, it may be filled with earth, clay, or other suitable material, thus affording ballast for the tie and keeping it rigidly in place. If the tie is laid in a water-gap or in a place where water is liable to find an outlet through the railroad embankment, the filling may be omitted from the tie and a plate C inserted therein, said plate being adapted to fit closely in the bottom of the tie and having upwardly-turned edges c, adapted to cover the apertures caused by cutting the points d from the blank B, and the water will flow through the tie. It will thus be seen that the water will be conducted away from the road without injury thereto. The tie is made preferably of sheet metal, which may be easily shaped, and from the foregoing description it will be readily seen that the tie is extremely cheap, that it may be very easily applied, and when once in place will remain firmly in position.

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

1. As a new article of manufacture, a hollow metallic railroad-tie made from a sheet-metal blank having diagonal cuts in its edges and bent to form a hollow rectangular body having depending points, substantially as shown and described.

2. The combination, with a hollow rectangular railroad-tie formed in a single piece with meeting edges at the bottom, of a plate adapted to fit closely in the bottom of the tie, substantially as described, and for the purpose set forth.

BRIDGES SMITH.

Witnesses:
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