

(No Model.)

S. B. JEROME.
METALLIC RAILWAY TIE.

No. 379,312.

Patented Mar. 13, 1888.

Fig. 1.

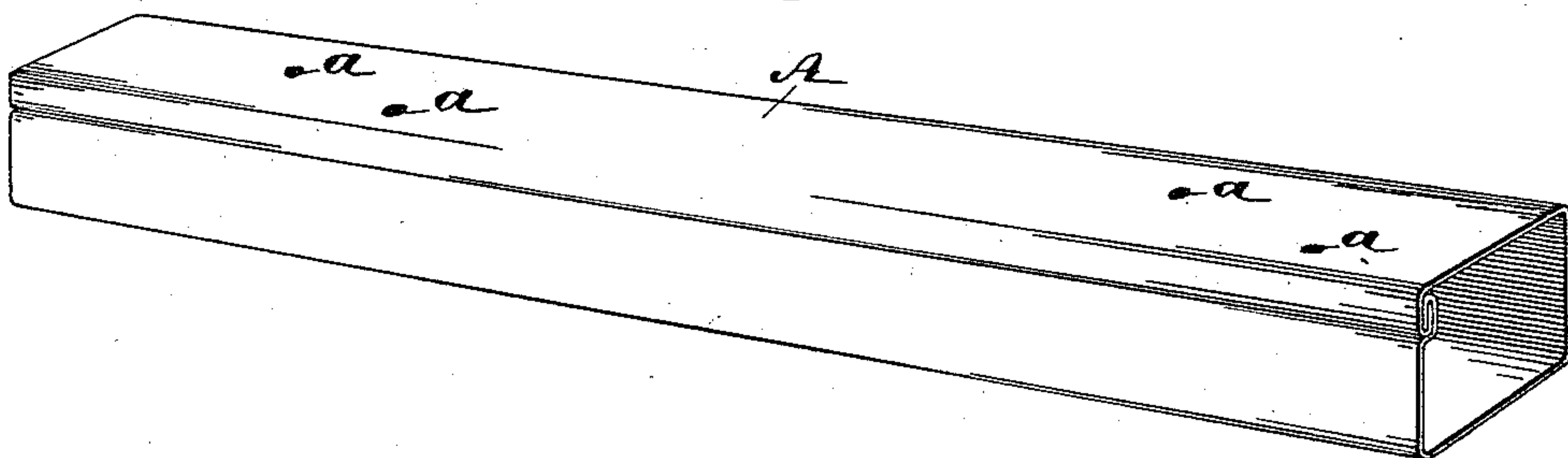


Fig. 2.

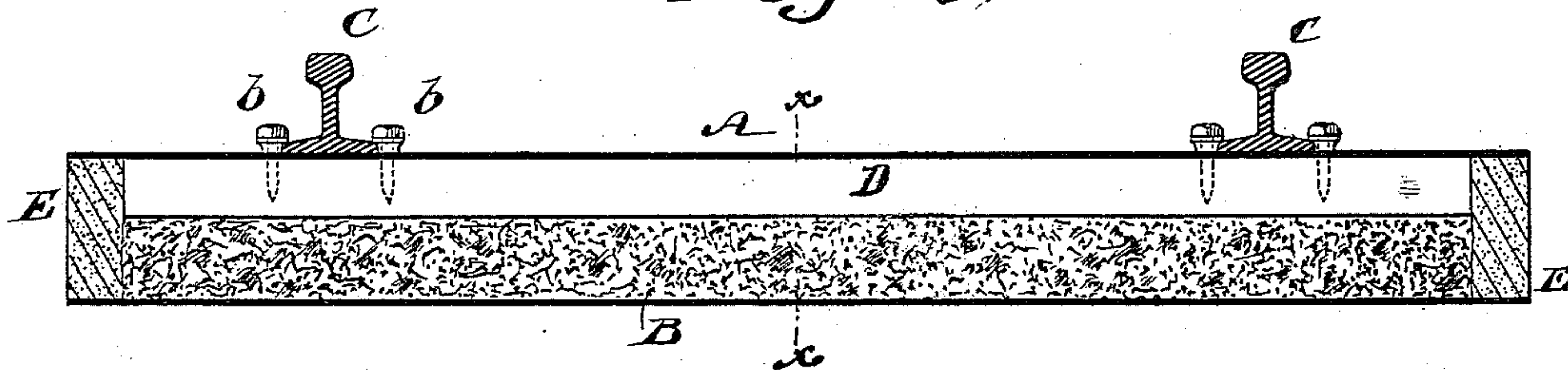
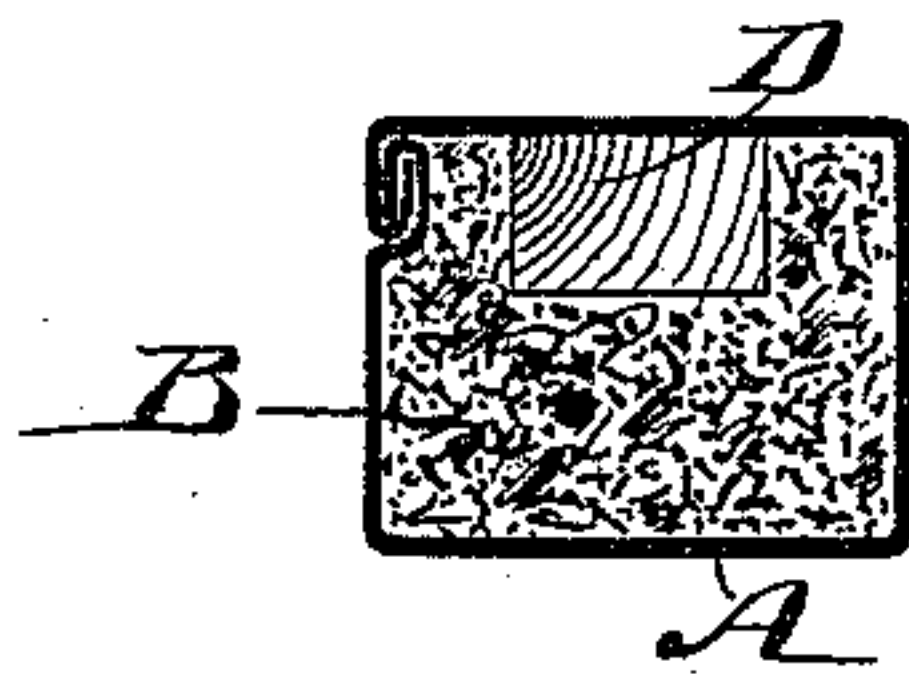


Fig. 3.



WITNESSES:

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METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 379,312, dated March 13, 1888.

Application filed May 18, 1887. Serial No. 238,621. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL B. JEROME, of the city, county, and State of New York, have invented a new and Improved Metallic Railway-Tie, of which the following is a full, clear, and exact description.

The object of my invention is to provide a metallic railway cross-tie which shall be of light weight and cheap, and also possess the requisite strength and be elastic to permit the track to yield under passing trains in a manner not greatly different from the common wooden ties.

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 a metallic shell which I use in constructing my new tie. Fig. 2 is a longitudinal sectional elevation of the complete tie, showing rails secured thereon; and Fig. 3 is a transverse sectional elevation taken on the line *xx* of Fig. 2.

In making my new metallic railway-tie I take a sheet of metal, iron or steel, about one-sixteenth of an inch thickness and of the proper length, and by means of dies and tools bend or draw the plate to form the shell A, and the edges are locked or riveted together to retain the shell always at the exact size and shape desired. The shell may be made by drawing the iron or steel in the form of a tube or cylinder, and by means of suitable dies and tools shaped to the form and size required, preferably square in cross-section. The interior of the shell thus made will be packed with shredded wood, (excelsior,) or with dried grass, straw, sawdust, or any other suitable material, as shown at B, to have any required degree of density, securing all necessary strength for support of the track and load. A small proportion of sand may be used with the packing, if additional weight for the ties is desirable.

The upper surface of the shell will be pierced with holes *a a*, through which the bolts or spikes *b b* will be turned or driven to secure the rails C C in exact position upon the tie.

Under the upper surface of the shell is placed a strip of wood, D, of suitable dimensions—

say six feet long, three inches wide, by two inches deep—which is held in position by the interior packing, B, and by the bolts, screws, or spikes *b*, which are turned or driven into the strip D, which will hold the rails firmly and securely in their proper place.

The ends of the shells A will be filled for a short distance—say two or three inches—with a suitable block, E, of wood, plastic cement, or other material to prevent water, moisture, and the action of the atmosphere from injuriously influencing the interior of the shell or the packing of the same.

The exterior of the tie will be coated with a heat, water, and oxygen-proof paint, securing prolonged service and durability of the tie, and the packing B may be creosoted or otherwise treated to prevent it from decay. The tie made as described will have a slight degree of compressibility, overcoming the tendency incident to the ordinary timber tie of becoming loosened in the road-bed.

The inherent elasticity of the tie will compel an immediate return to its normal power and height when the load is removed. The elastic element is available and of great value in frozen ground or in absolutely solid road-bed, obviating the jar and the hammering unavoidable when the ordinary unyielding ties are in use upon a hard and rigid road-bed.

The elastic quality of the tie will greatly prolong the service and the durability of the road-beds and of rolling-stock, besides immensely increasing the comfort of passengers.

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

1. A cross-tie having a shell and elastic packing with an interior strip of wood, as described, and for the purpose specified.

2. A cross-tie having a shell with elastic packing and with a strip of wood, also having the ends sealed, as described, and for the purpose specified.

SAMUEL B. JEROME.

Witnesses:

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