(No Model.)

W. S. WARD.

RAILROAD RAIL AND METALLIC CROSS TIE.

No. 497,562. Patented May 16, 1893.

Fig. 1.

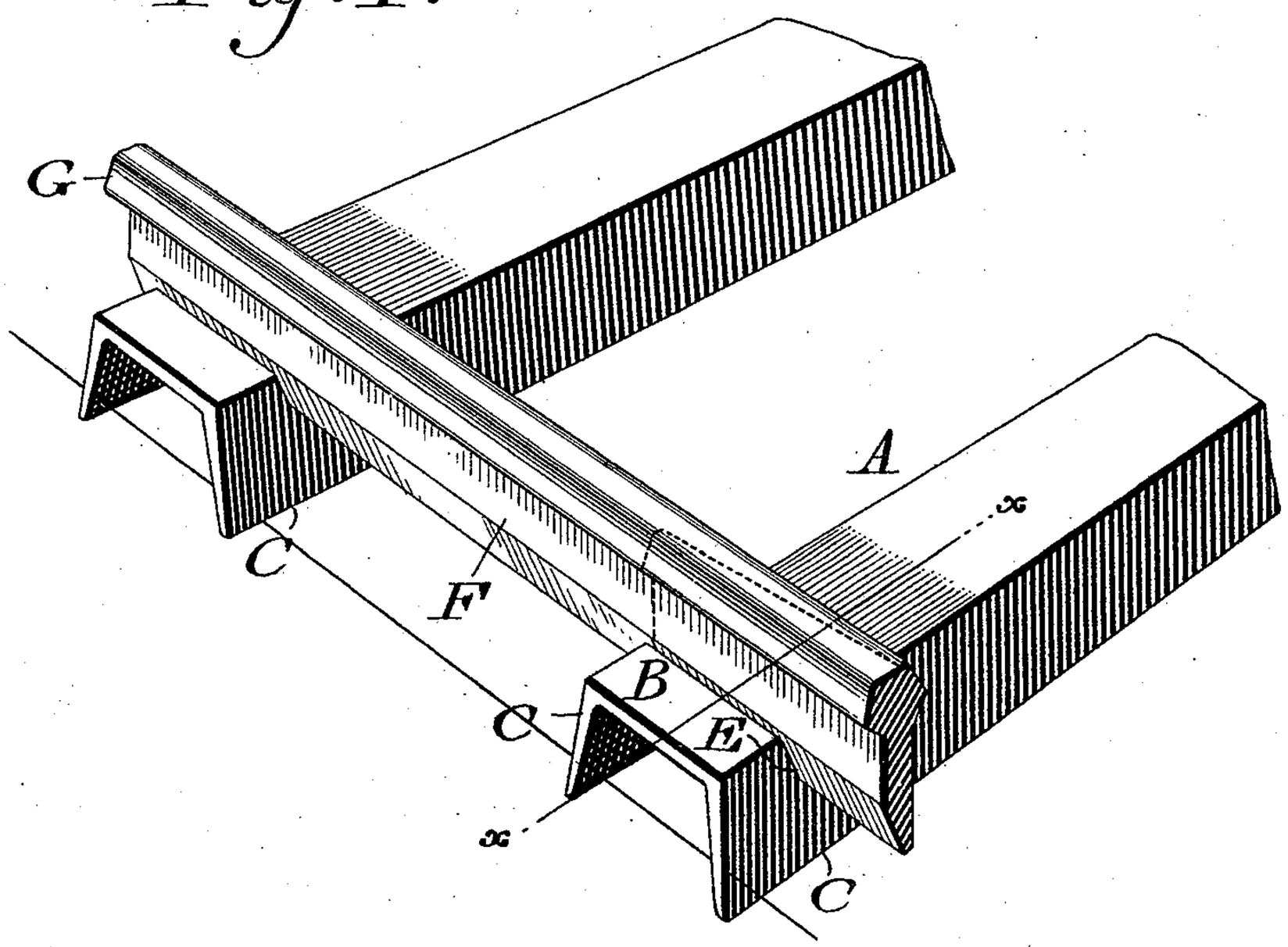
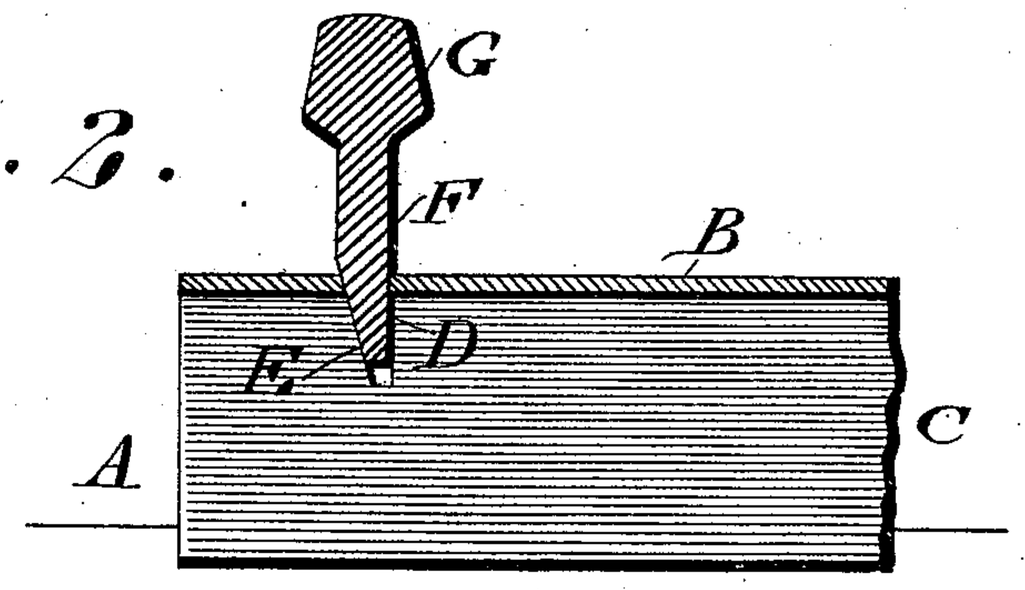


Fig. 2.



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RAILROAD-RAIL AND METALLIC CROSS-TIE.

SPECIFICATION forming part of Letters Patent No. 497,562, dated May 16, 1893.

Application filed May 5, 1892. Serial No. 431,890. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. WARD, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Railroad-Rails and Metallic Cross-Ties, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a rail formed as hereinafter set forth, and a metallic tie having a seat for said rail, which is adapted to be weighted thereinto.

Figure 1 represents a perspective view of a railroad rail and metallic cross tie embodying my invention. Fig. 2 represents a section on line *x*, *x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

Referring to the drawings: A designates a metallic cross tie consisting of a top B, and depending legs C at the side thereof, said legs being flaring, whereby when they are properly ballasted they are caused to rest firmly in position and prevented from shifting.

In the ties are recesses D, one side of each of which is tapering as at E, said recesses receiving the reduced or tapering lower end of the web F of the rail G, it being noticed that the portion of the web which is seated in said recesses D is beveled on one side, the other side being straight so as to conform to the shape of the latter, whereby the rail is properly sustained, and as there is a wedging action of the rail in the recesses, said rail tightens itself therein, thus insuring the support of the rail on the tie, it being noticed that the rail is formed without a flange and that cheek pieces, bolts and other fastening devices are dispensed with. Where the ends of adjacent rails meet at the cross tie, said ends are made tapering so that each end is supported on the tie, see dotted lines Fig. 1.

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

1. A railroad rail having a web without a flanged base, the lower end of said web having one of its sides beveled forming a taper, substantially as described.

2. A railroad rail having a web without a flanged base, and its lower end being tapering, in combination with a cross tie formed of a top and depending sides, and having a recess in said top and sides, the recess in the side being tapering, substantially as described.

3. A metallic cross tie formed of a top, and depending sides, and having a transverse recess, in said top and sides, the recess in the side being tapering, substantially as described.

WILLIAM S. WARD.

Witnesses:
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