(No Model.)

C. F. KREUZ.

RAILROAD TIE.

No. 251,251. Patented Dec. 20, 1881.

Fig. 1.

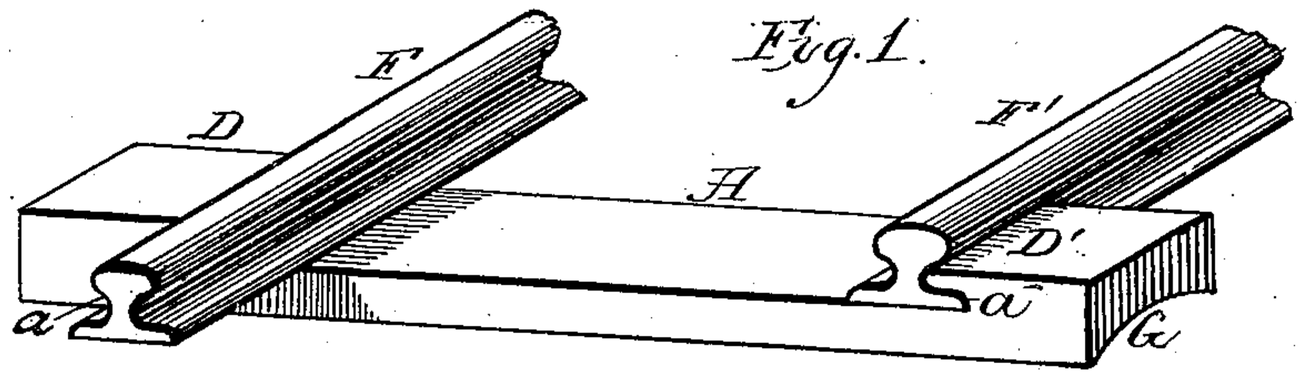


Fig. 2.

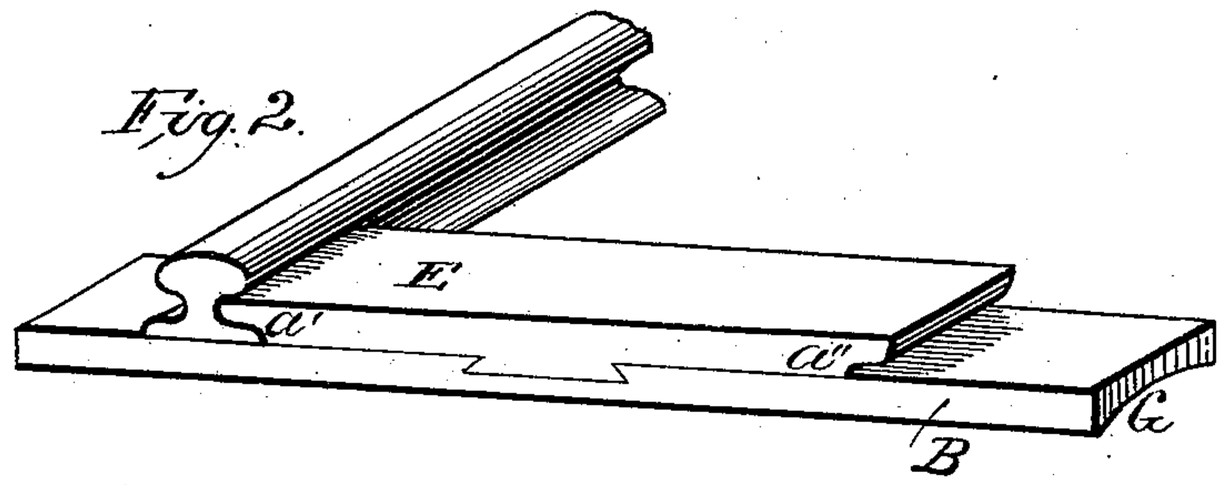


Fig. 3.

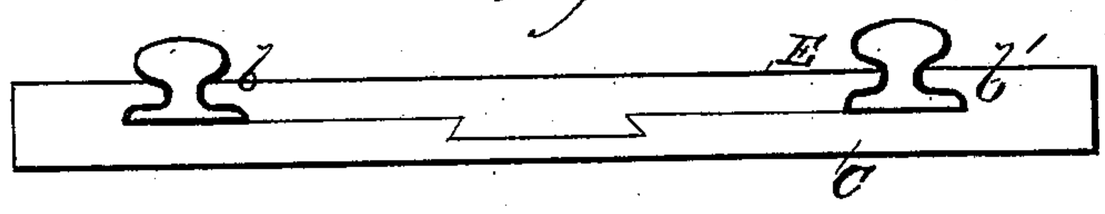
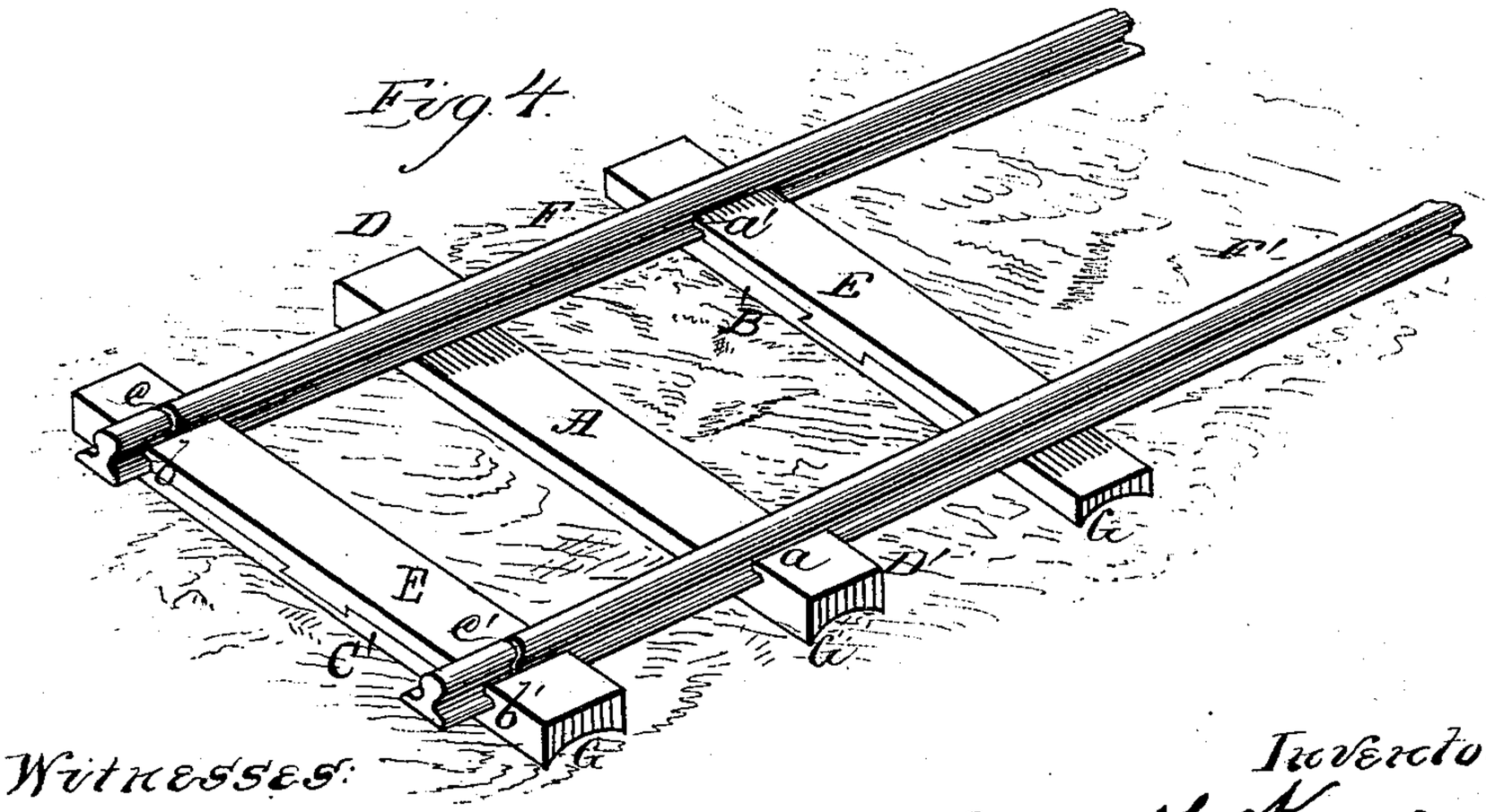


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 251,251, dated December 20, 1881.

Application filed April 25, 1881. (No model.)

To all whom it may concern:

Be it known that I, CONRAD F. KREUZ, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Railroad-Ties and the System of Laying Railroad-Tracks; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to the laying of railroad-tracks; and it consists in a system of tying and supporting the rails, as well as in the construction of the ties, as will hereinafter be fully described.

In the drawings, Figure 1 is a perspective view of one of the ties in my system. Fig. 2 is a like view of another. Fig. 3 is a side view of a tie that receives and supports the ends of the rails; and Fig. 4 is a section of track, showing all of the ties in my system in their proper relative positions.

A and B are the ties which alternate with each other. To prevent spreading I construct the tie A with end lugs or upper portions, D D′, grooved or partially reduced at *a a*, to embrace the outer portion of the rail-flange; and I provide the tie B with a lug, E, grooved at *a′ a″*, to embrace the inner portions of the rail-flange, and forming a brace to prevent the rails approaching each other, the upper portion of each tie being reduced to form the lugs described. When the ends of the rails meet I provide a tie, C, which has not only the lugs D D′, but also the lug E, the ends of the rails fitting in grooves *b b′* formed between the said lugs.

I have shown the lugs E in the drawings made separate from the ties and dovetailed into them; but it is apparent that each tie may have its lug cast in one piece with it without departing from the spirit of my invention.

I preferably concave the under side of each tie, as shown at G, so that when laid they will grasp the earth and be securely anchored therein.

My ties may be laid cheaply and by unskilled labor.

I claim—

1. In a track-laying system, the combination, with the ordinary rails, of the ties A and B, alternately arranged throughout the length of a single pair of rails, the first-named ties being provided with recesses fitting against the exterior surfaces only of the rails, while the last-named ties are provided with similar recesses adapted to receive the interior surfaces only of said rails without other contact than that specified in each case, and the bottom of the rail-flanges and the tie C, adapted to receive the ends of each pair of rails and unite the same with the ends of the succeeding pair, as shown and described.

2. In a metallic railroad-tie, the base consisting of a single casting concaved on its under surface, and provided on its upper surface with a central transverse dovetail depression, and lugs or projections at each end integral with the base, in combination with the detachable upper portion, partially reduced at each end, and provided on its under surface with a central dovetail projection, as shown and set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 7th day of April, 1881.

CONRAD F. KREUZ. [L. S.]

Witnesses:
H. G. UNDERWOOD,
STANLEY S. STOUT.