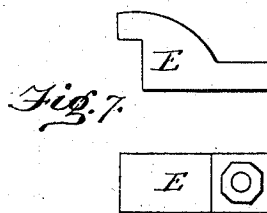
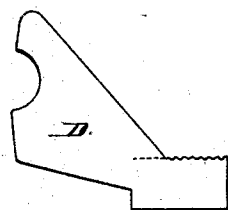
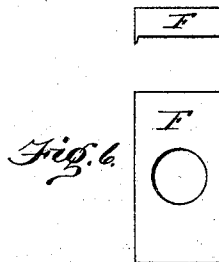
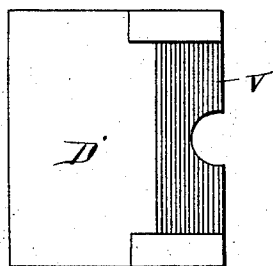
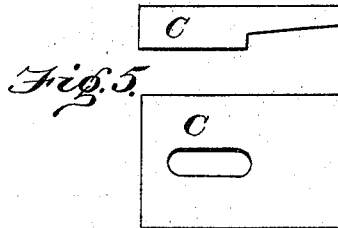
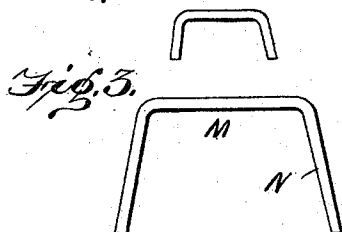
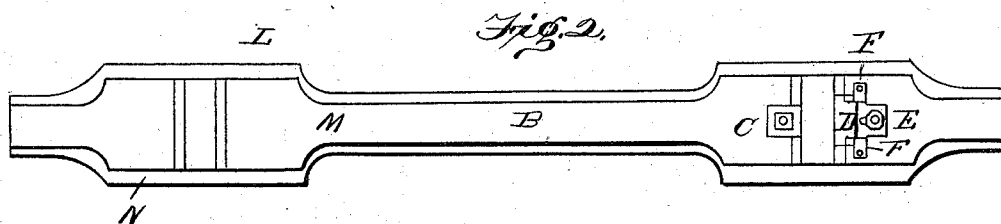
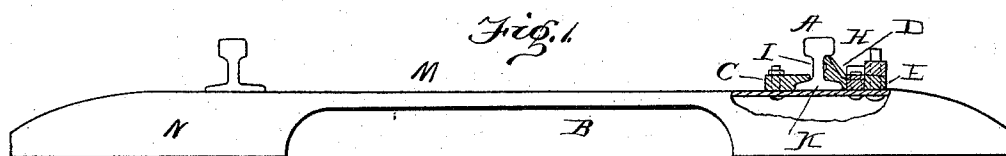


(No Model.)

J. C. BARTON.
RAILROAD CROSS TIE.

No. 571,329.

Patented Nov. 17, 1896.



Witnesses:
J. M. Fowler Jr.
G. W. Woodbury

Inventor
John Campbell Barton
By *Stephenson & Woodbury*
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UNITED STATES PATENT OFFICE.

JOHN CAMPBELL BARTON, OF PORT HURON, MICHIGAN.

RAILROAD CROSS-TIE.

SPECIFICATION forming part of Letters Patent No. 571,329, dated November 17, 1896.

Application filed February 3, 1896. Serial No. 577,945. (No model.)

To all whom it may concern:

Be it known that I, JOHN CAMPBELL BARTON, a citizen of the United States, residing at Port Huron, in the county of St. Clair and State of Michigan, have invented certain new and useful Improvements in Railroad Cross-Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to form a solid metallic railway road-bed, and to this end the invention consists in the design and combination of features made substantially as set forth hereinafter and as shown in the accompanying drawings, in which—

Figure 1 is an elevation of a tie as in use with some parts in section. Fig. 2 is a top or plan view of same. Fig. 3 shows central and side cross-sections of the cross-tie. Fig. 4 shows top view and elevation of the outer rail-brace. Fig. 5 shows same of inner brace. Fig. 6 shows same of the outer brace-holder. Fig. 7 shows same of outer brace side-holder.

This road-bed is formed of rails A and cross-ties B, and means C for holding the inside of rail, and D E F for holding the outside of the rail.

The rails are of the usual form, as shown, with head H, web I, and foot K, of any suitable pattern. The ties are either of cast or wrought metal, with an upper web M and down-bent wings N at the sides. Their ends under the rails are large to support the rails on the earth, while the center portion is less in section to hold the ends in proper relation. Both the ends and central parts have the top web and side wings M N, which catch in the earth with a solid and secure hold. The outer ends of the top web of the ties bend down and the side wings close together somewhat toward the outer ends, and the crossing places for the rails are fitted to receive the rails L. The rails are held in place by clamps C, held by bolts and having overhung tops projecting over the lower inner toes or flanges of the rail. These clamps have holes for the holding-bolts, made oblong so as to enable the position of the rails and their width apart to be adjusted as required to suit straight and curved parts of the track and other circumstances.

The outer sides of the rails are held by

braces or bolsters D, which rise to and bear against the outer shoulders of the rail-heads while resting on the ties. These braces or bolsters are held in place by clamps E F F, each held by a bolt. The bolster D has a seat cut in its edge to rest against the bolt of clamp E or against a projection made on the front of clamp E to fit into this seat instead.

The sides of bolster D are held by clamps F F, also held by bolts to the tie. These clamps have knobs or projections depending from them to fit into grooves V, cut into the edge of bolster. The shoulders between the broad parts of the ends of the ties and the reduced central part connecting them, when the side webs or wings sink into the earth as they are arranged to do, serve to brace the ties, so as to hold them from changing their positions sidewise crosswise of the track, assisted by the bearings of the wings on the outer parts of the ties, while the wings or dependent webs on the sides of the ties prevent movement lengthwise of the track, so as to hold the track rigid in place. At the same time the reduced size of the central connection of the ties reduces the metal in weight and cost of the ties, giving some elasticity to the road-bed.

Various modifications may be made.

I claim—

1. A railway road-bed formed of a pair of rails held on metallic ties having top and wing webs, enlarged ends and reduced central parts and downcurved outer ends, such rails and ties held together by inner clamps C, and outer bolsters D, held in place by clamps E, F at the sides and front thereof, substantially as set forth.

2. The rail-fastening formed of an inner clamp held by a bolt, and an outer bolster D from the tie to the rail-head, held by clamps E, F at the sides and front thereof, each held by bolts as set forth.

3. In a rail-fastening an outer bolster D from the tie to the rail-head, held by clamps E, F at the sides and front thereof, each held by bolts as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN CAMPBELL BARTON.

Witnesses:

WM. STEPHENSON,
JNO. M. GLEASON.