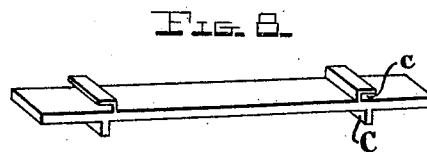
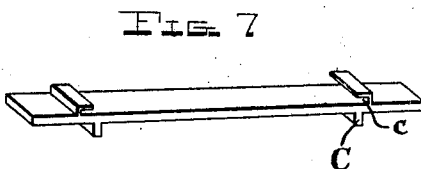
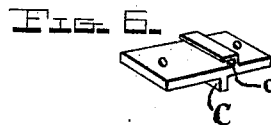
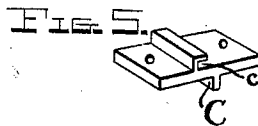
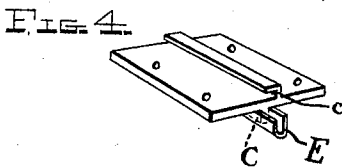
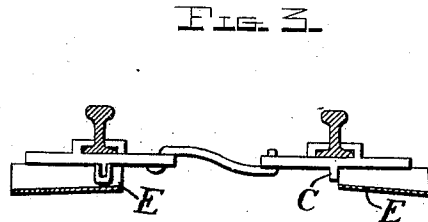
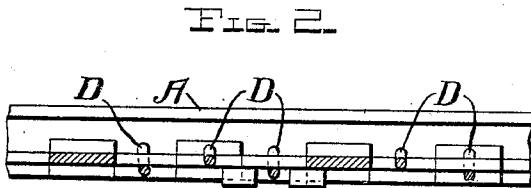
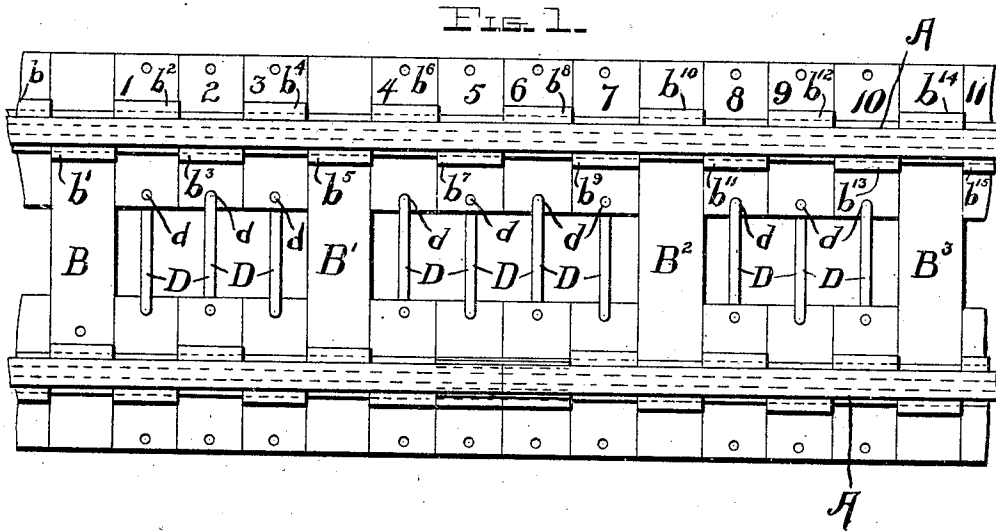


No. 835,174.

PATENTED NOV. 6, 1906.

J. R. BARKER.
METALLIC RAILWAY TIE.
APPLICATION FILED APR. 26, 1906.



WITNESSES:
Geo. B. O'Neil
H. F. K. O'Neil

BY

INVENTOR
James R. Barker
Wm. H. Bates

Attorney

UNITED STATES PATENT OFFICE.

JAMES R. BARKER, OF GREEN VALLEY, ILLINOIS.

METALLIC RAILWAY-TIE.

No. 835,174.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed April 26, 1906. Serial No. 313,781.

To all whom it may concern:

Be it known that I, JAMES R. BARKER, a citizen of the United States, residing at Green Valley, in the county of Tazewell and State of Illinois, have invented certain new and useful Improvements in Metallic Railway-Ties, of which the following is a specification.

My invention relates to improvements in metallic ties for railways; and the object is to provide means of peculiar construction by which the rails are rigidly secured and held in place and lateral, vertical, or other displacement of the rails is effectually obviated.

With these and other objects in view the invention consists in the novel construction and combination of parts, as will be hereinafter more in detail described and specifically claimed.

I have fully and clearly illustrated my invention in the accompanying drawings, in which—

Figure 1 is a top or plan view of my invention as applied to a railway-track. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view thereof. Fig. 4 is a modified form in perspective of one of the short ties, showing one of the water-conductors secured to the under side thereof. Figs. 5, 6, 7, 8, and 9 are detail views showing the long and short ties in perspective.

Referring to the accompanying drawings, in which similar letters and numerals denote corresponding parts in the several figures, A A designate railway-rails of the ordinary construction, and which form no part of my invention.

B B' B² B³ designate a number of long ties, in this example four of which are shown, and interposed between these long ties is a multiple of shorter rectangular ties or plates 1 2 3 4 5 6 7 8 9 10 11, upon which the rails A A are mounted and supported. These ties are arranged parallel with each other and transversely with respect to the plane of the rails. Each of these ties, both the long and shorter ones, is provided with integrally-formed offsets $b\ b'\ b^2\ b^3\ b^4\ b^5\ b^6\ b^7\ b^8\ b^9\ b^{10}\ b^{11}$ and grooves $c\ c\ c\ c\ c\ c$, formed on each one of the ties by said offsets and within which the lower flanges of the rails take. To the under side of these ties and formed integral therewith is a series of transversely-arranged strengthening-ribs C C C C C C, but only a smaller number of these grooves, offsets, and ribs are

more clearly shown in Fig. 3 and detailed Figs. 4, 5, 6, 7, 8, and 9, which when the several parts are properly assembled together are in alinement with each other. The arrangement of the ties, as clearly shown in Fig. 1, being in parallel planes, the offsets thereon are disposed alternately upon each side of each of the rails, this being necessary for the more complete securing of the rails to the ties, as by such disposition of the offsets the rails can in no manner be displaced in any direction, the tendency of one set of grooved offsets holding the rails being to counteract any movement of the opposite set.

D D D D D D D D D D designate connecting links or hooks arranged in parallel series, which serve the purpose of securing the shorter or rectangular ties together when the several parts or system of ties are assembled for the passage of trains. These links or hooks are S-shaped, so as to enable them to grasp the shorter ties from above and below their faces at the ends of the ties, perforation $d\ d\ d\ d\ d\ d\ d\ d\ d\ d\ d\ d\ d$ being formed in the ends of the ties for their engagement with said ends, as more clearly shown in Figs. 1 and 3 of the drawings.

E E designate loops or gutters riveted or secured in any suitable manner to one or more of the ribs C C C C C C, by means of which any water from rains falling on the ties may be conducted away therefrom.

In Fig. 4 I have shown a modification of one of the ties of quadrangular construction, which can be substituted for those of oblong form, if so preferred. As a particular description of one end each of these long ties and one series of the shorter ties, their offsets, grooves, and ribs, and their relative arrangement with each other for holding the rails together are herein given, and as the opposite ends of the long ties and the opposite series of shorter ties are of duplicate construction a further description of these parts is deemed unnecessary. By such sectional construction or system of ties as herein described the advantages thereof will be obvious. Spikes and similar fastening means are dispensed with, thus relieving the constructor or operator of a great deal of inconvenience and loss of time, which would be the case in ties of the ordinary construction. These ties, both long and short, can be made of any thickness or width desired to suit heavier or lighter engines and trains which may be required in passing over the rails.

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

1. In railway-ties of the character described, comprising long and short ties arranged in series having offsets formed integral upon their upper faces, grooves formed upon their upper faces by said offsets, ribs formed integrally upon the lower faces arranged transversely to the planes of the ties, and gutters secured to the ribs, substantially as described.

2. In railway-ties of the character described, the combination with the rails; of a series of long and short ties having offsets formed integrally upon their upper faces and arranged alternately upon each side of the rails, grooves formed upon the upper faces of the ties by said offsets, and ribs formed integrally upon the lower faces of said ties, and S-shaped links connecting the inner ends of each series of short ties together, substan-

tially as described and for the purposes set forth.

3. In railway-ties of the character described, the combination with the rails; of a series of long and short ties having offsets formed integrally upon their upper faces, and arranged alternately upon each side of the rails, grooves formed upon the upper faces of the ties by said offsets, ribs formed integrally upon the lower faces of said ties, S-shaped links connecting the inner ends of each series of short ties together, and gutters secured to the ribs, substantially as described and for the purposes set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES R. BARKER.

Witnesses:

GEO. B. WOOD,
SUAN BATES.