

(No Model.)

W. W. WORTHINGTON.
METHOD OF MAKING RAILROAD TIE PLATES.

No. 506,963.

Patented Oct. 17, 1893.

Fig. 1.

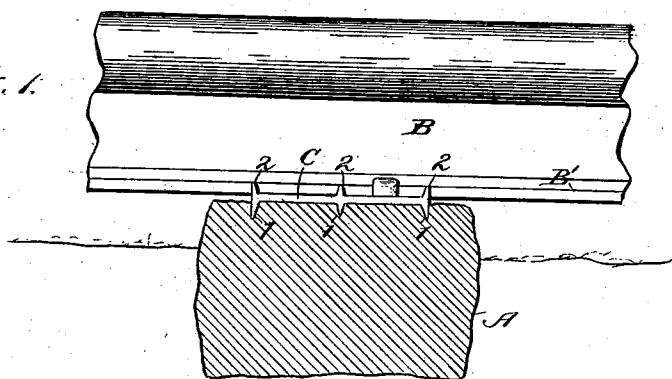


Fig. 2.

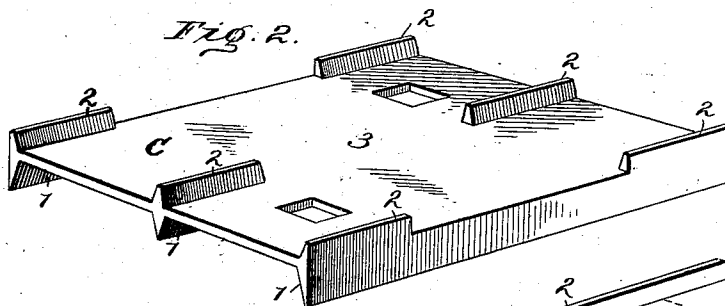


Fig. 3.

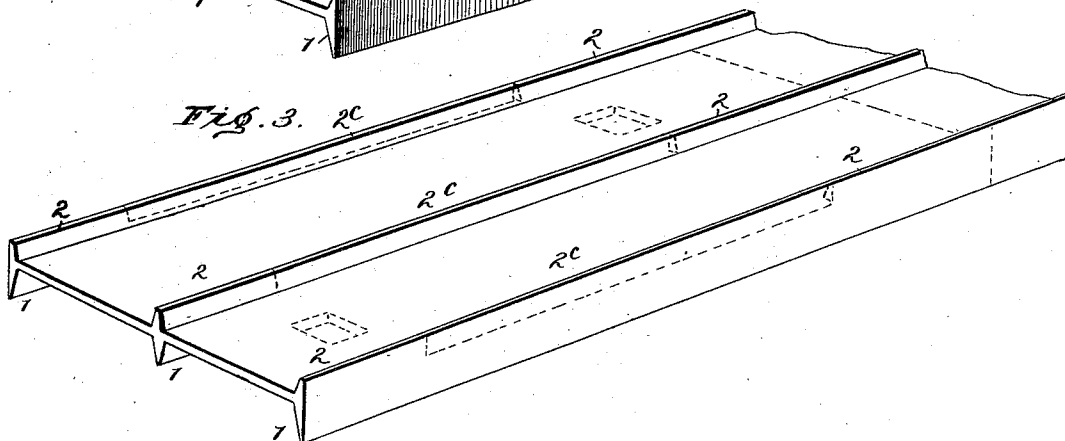
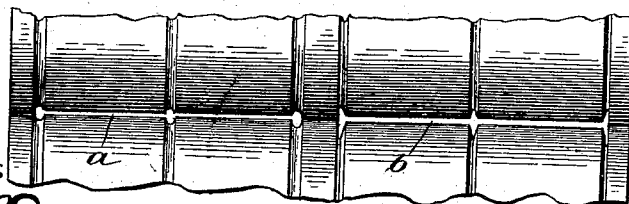


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM W. WORTHINGTON, OF CALDWELL, NEW JERSEY, ASSIGNOR TO
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METHOD OF MAKING RAILROAD TIE-PLATES.

SPECIFICATION forming part of Letters Patent No. 506,963, dated October 17, 1893.

Application filed November 1, 1892. Serial No. 450,680. (No specimens.)

To all whom it may concern:

Be it known that I, WILLIAM W. WORTHINGTON, a citizen of the United States, residing at Caldwell, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Methods of Making Railroad Tie-Plates; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, wherein—

Figure 1, is a view of a portion of a rail and tie, and an end view of a tie plate in position. Fig. 2, is a perspective view of a tie-plate. Fig. 3, is a perspective view of a portion of a bar adapted for making tie-plates, and Fig. 4, is a view of portions of a pair of rolls having passes adapted to produce tie-plate bar.

Like symbols refer to like parts wherever they occur.

My invention relates to the method of making what are termed "tie-plates" or wear-plates for railway ties, such as are used in track laying to prevent the vibration of the rail breaking the fiber of the tie, which when it occurs leads to water soaking, decay, and rapid destruction of the tie. Such tie plates, as is now well understood, should be sufficiently light to preserve the flexibility of the tie and avoid hammering, and yet sufficiently strong to avoid bending or buckling at the margin of the foot flange of the rail, and to meet these requirements the plates are preferably formed with longitudinal ribs or projections on the under surface which brace the plate transversely of the rail and enter the tie in line with the fiber thereof so as to avoid injury to the tie. Furthermore, such tie plates should be provided with a series of lugs or projections upon their upper surface to brace the foot flange of the rail, prevent its lateral movement on the tie plate and relieve the spikes from drawing strains.

The object of my invention is the economical production of tie-plates having the general construction, or characteristics hereinbefore specified.

To this end the invention generally stated consists in first forming a tie-plate or bar

constituting a series of tie plates, with a longitudinal rib or ribs on one face, and parallel longitudinal ribs on the opposite face, and then planing or cutting away sections of the parallel ribs to form a seat and abutments for the foot flange of a rail, all as will hereinafter more fully appear.

I will now proceed to describe my invention more fully so that others skilled in the art to which it appertains may apply the same.

In the drawings A, indicates the railway tie, B the rail, and C an interposed tie plate.

The tie-plate C, will have upon its under surface one or more longitudinal ribs 1, 1, which when the tie-plate is in position extend in the line of the fiber of the tie, transversely of the rail, and are of sufficient length to form a truss beneath the foot flange of rail B, and prevent the buckling or bending of the tie plate. Upon the upper surface of said tie plate is also a series of longitudinally arranged ribs or projections 2, 2, and so disposed as to border on the rail seat 3, and form abutments for the foot flange B' of the rail—to resist the lateral movement of rail B on the tie plate C, and prevent any drawing strain on the spikes which secure the rail.

To economically produce a tie plate of the character shown, I first produce a tie-plate bar of the general form shown in Fig. 3—that is to say with a series of longitudinal ribs upon both faces—which can be conveniently accomplished by means of rolls having two or more passes—as at *a, b*, Fig. 4—and subsequently remove sections 2^c of the ribs upon one face of the plate, to form the rail seat 3—by transversely planing the plate.

It is evident that tie-plates having the characteristics specified can thus be formed singly in an expeditious and economic manner, but that for purposes of manufacture it will be desirable to form the tie plate bar in multiples of the tie plate, and subsequently sever the single tie plates therefrom.

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

The method herein described for making railway tie-plates, which consists in first form-

ing the plate with longitudinal ribs on both
of its faces, and then planing or cutting away
parallel sections of the ribs upon one face of
the plate to form the seat and abutments for
5 the foot flange of the rail; substantially as
and for the purposes specified.

In testimony whereof I affix my signature, in

presence of two witnesses, this 26th day of
October, 1892.

WILLIAM W. WORTHINGTON.

Witnesses:

WILLIAM L. FINDLEY,
LOUISE A. BERNARD.