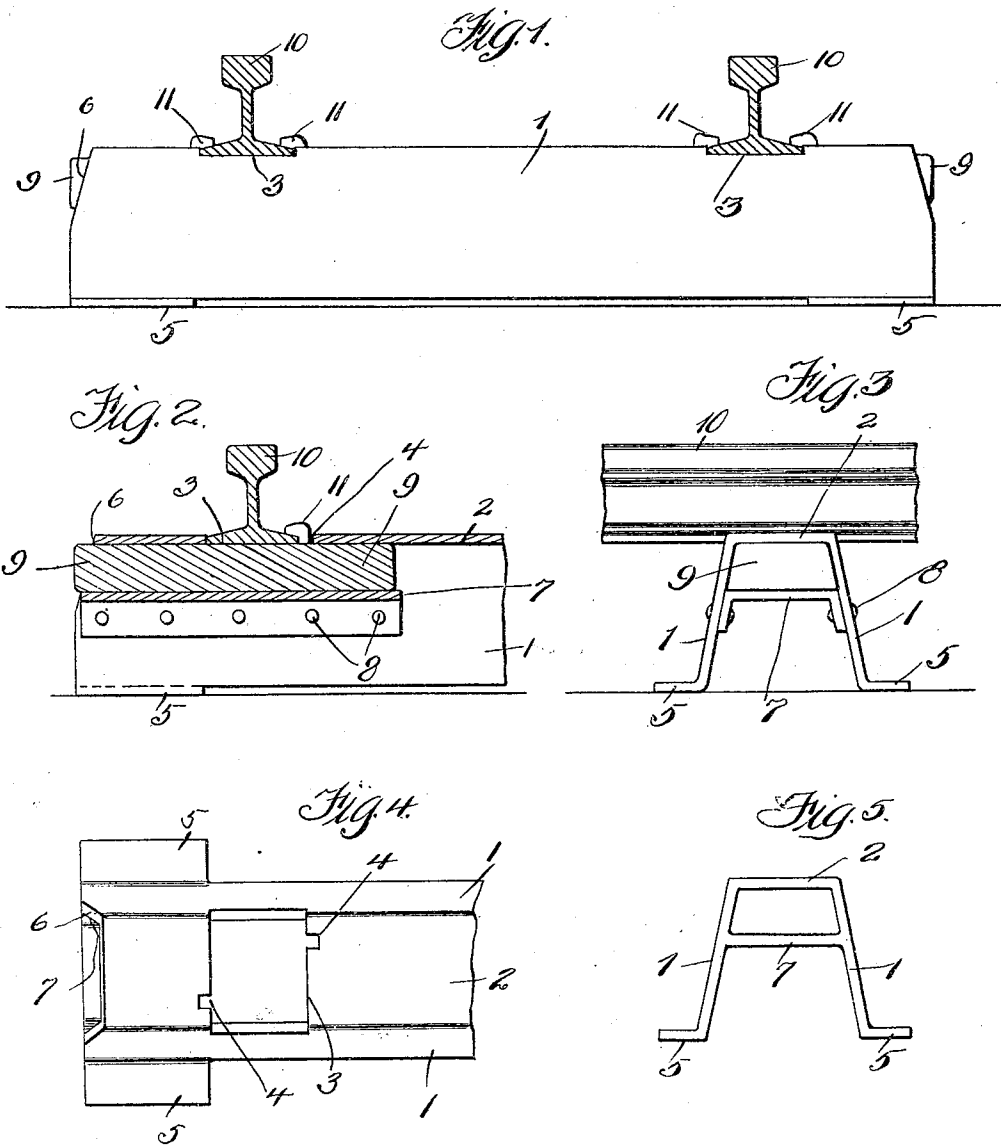


T. B. BRADFORD.
METALLIC TIE.
APPLICATION FILED APR. 16, 1909.

939,794.

Patented Nov. 9, 1909.



Witnesses

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METALLIC TIE.

939,794.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THADDEUS B. BRADFORD, a citizen of the United States of America, residing at Monongahela, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Ties, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to metallic ties, and the objects of my invention are, first, to provide a strong and durable metallic tie or sleeper for supporting rails; second, the provision of novel means in connection with a
15 metallic tie, whereby spikes can be used as a rail fastening medium; third, to provide a metallic tie of a simple and inexpensive construction that can be stamped and cut from sheet metal; fourth, to provide a tie that can
20 be embedded in a road bed and easily tamped to correctly position that portion of the track supported thereby; and 5th, to provide a tie that can be easily removed from beneath the track and renewed by the ordinary unskilled labor used for such purposes.
25 The above objects are attained by a metallic structure that will be hereinafter described in detail and then specifically pointed out in the appended claims.

30 Referring to the drawing forming part of this application, Figure 1 is an elevation of a tie constructed in accordance with my invention, Fig. 2 is a longitudinal sectional view of a portion of the same, Fig. 3 is an
35 end view of the tie, Fig. 4 is a plan of one end, and Fig. 5 is an end view of a modified form of tie.

The metallic tie is made of an inverted oblong channel bar, having inclined sides 1 and a top plate 2, said top plate adjacent to the ends of the tie being cut away, as at 3, and provided with diagonally disposed spike notches 4. The inclined sides 1 at the ends of the tie are provided with outwardly
45 extending flanges or feet 5, and said side walls at the ends of the tie and contiguous to the top plate 2 are cut away at an inclination, as at 6. Connecting the side walls 1 at the ends of the tie are horizontal webs
50 or supports 7, which in the preferred form of construction are riveted or otherwise secured, as at 8, to the inclined side walls 1,

while in the modified form of construction, the web or support 7 is formed integral with the side walls 1, or welded thereto. The web or support 7 is of a sufficient length to support a wooden bar or block 9 beneath the top plate 2 and between the side walls 1, and this bar or block is adapted to support rails 10 mounted in the cut away portions 3 of the tie and secured to said blocks by spikes 11 engaging the base flanges of the rails, said spikes extending through the notches 4. The ends of the tie are cut away as at 6, whereby the outer ends of the blocks or supports 9 can be easily gripped and withdrawn from the ends of the tie, after the spikes 11 have been removed.

It is apparent that the bars or blocks 9 can be renewed without removing or renewing the metallic tie, and that in manufacturing the tie, it can be either stamped or pressed from sheet metal or rolled and afterward sheared to provide the flanges 5 and the cut away portions of the tie.

While in the drawings forming part of this application there is illustrated a preferred embodiment of my invention, it is to be understood that the structural elements thereof can be varied or changed without departing from the spirit or scope of the invention.

Having now described my invention what I claim as new, is;—

1. In a metallic tie, the combination with rails, of an inverted channel shaped bar having inclined sides and a top plate, said top plate adjacent to the ends thereof being cut away to receive the base flanges of said rails, a support arranged between the sides of said tie and at each end thereof, a wooden block mounted upon each support and adapted in conjunction with the sides of said tie to support said rails, spikes driven into said blocks for holding said rails thereon, said tie having the ends thereof cut away to permit of the outer ends of said blocks being gripped.

2. In a metallic tie, the combination with rails, of an inverted channel shaped bar having inclined sides and a top plate, said top plate adjacent to the ends thereof being cut away to receive the base flanges of said rails, a support arranged between the sides

of said tie and at each end thereof, a wooden
block mounted upon each support and
adapted in conjunction with the sides of
said tie to support said rails, spikes driven
5 into said blocks for holding said rails there-
on, said tie having the ends thereof cut
away to permit of the outer ends of said
blocks being gripped, and outwardly ex-

tending flanges carried by the lower edges
of the tie at the ends thereof. 10

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

THADDEUS B. BRADFORD.

Witnesses:

H. J. YOHE,

JENNIE HAMMOND.