

No. 782,317.

PATENTED FEB. 14, 1905.

J. H. BLAIR & F. DITCHFIELD.

METALLIC RAILWAY TIE.

APPLICATION FILED MAY 16, 1904.

Fig. 1.

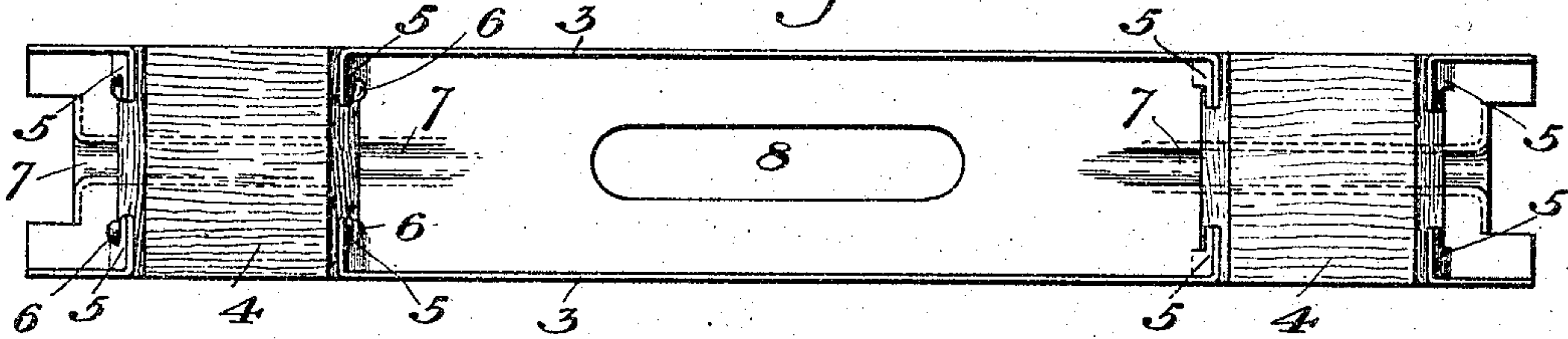


Fig. 2.

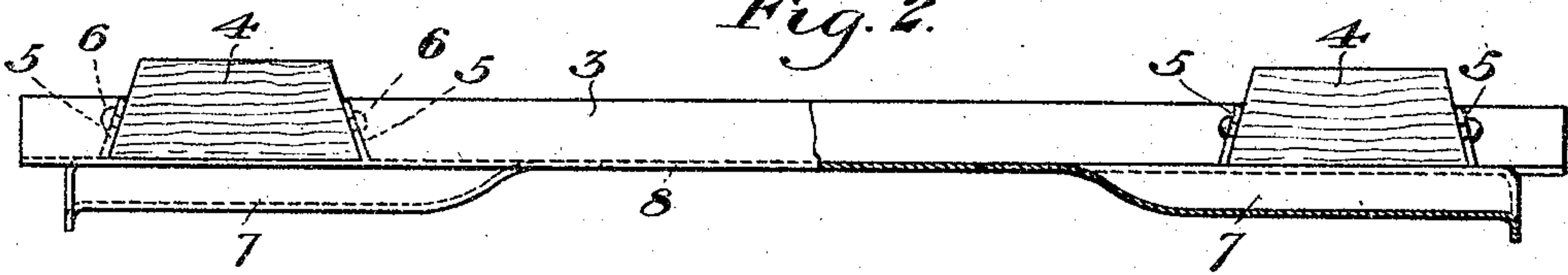


Fig. 3.

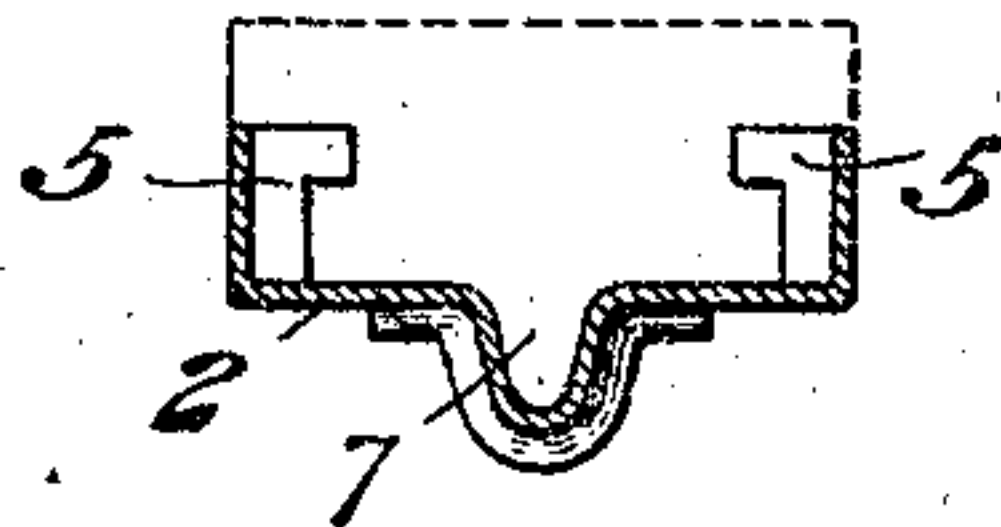


Fig. 4.

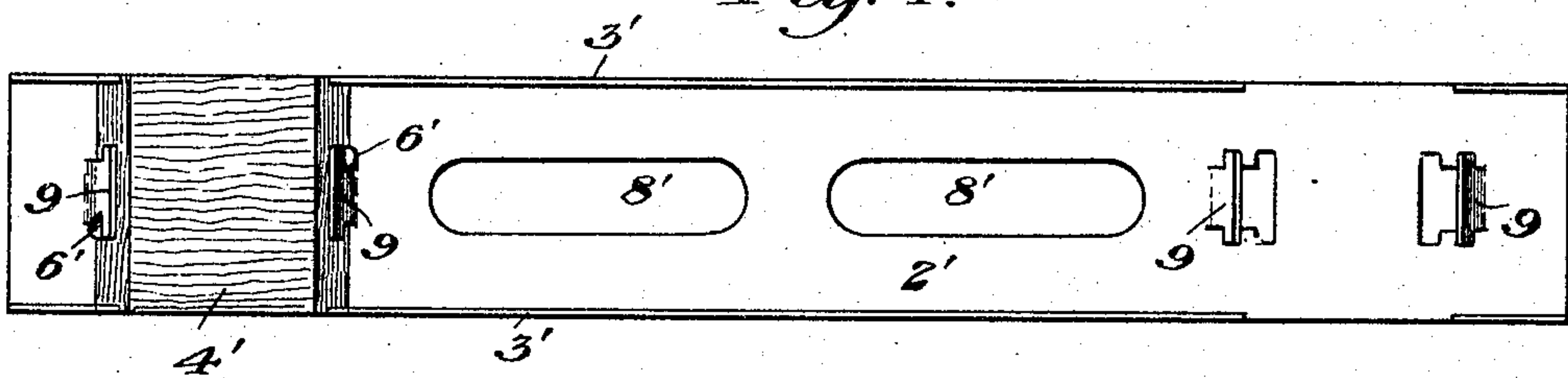


Fig. 5.

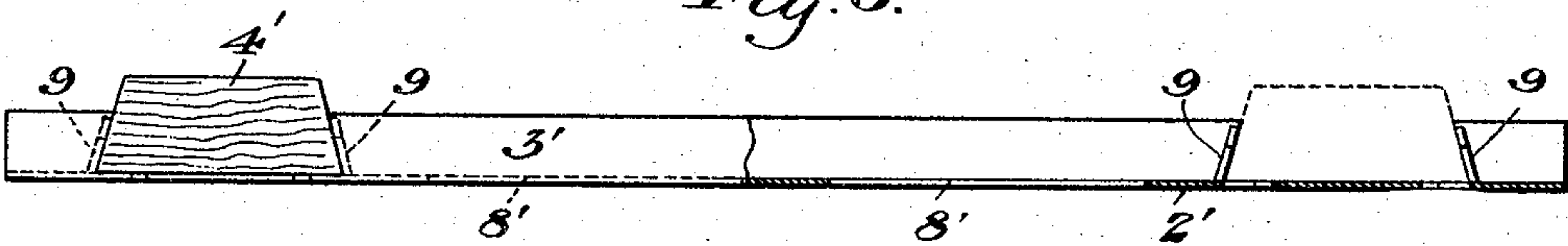
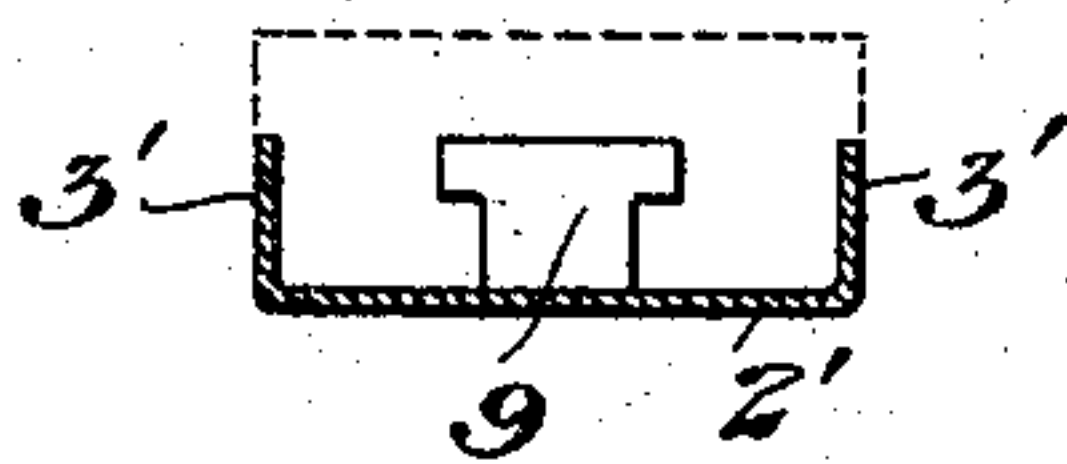


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

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METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 782,317, dated February 14, 1905.

Application filed May 16, 1904. Serial No. 208,124.

To all whom it may concern:

Be it known that we, JAMES HOLMES BLAIR, of Pittsburg, and FRANK DITCHFIELD, of Bellevue, Allegheny county, Pennsylvania, have invented a new and useful Metallic Railway-Tie, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of our improved tie. Fig. 2 is a side elevation of the same, partly in section. Fig. 3 is a cross-section through the strengthening-rib at one side of the filler-block. Figs. 4 and 5 are views similar to Figs. 1 and 2, respectively, showing a modified form; and Fig. 6 is a cross-section of such modified form.

Our invention relates to the class of metallic railway-ties, and is designed to provide a cheap, simple, and effective tie wherein the rails are cushioned by the use of a wooden filler-block.

The invention consists in a channel-shaped metal tie having the flanges cut out or notched on opposite sides to receive transverse filler-blocks.

It also consists in a channel-tie having bent-up lugs to hold the filler-blocks in place, in a strengthening-rib arranged below the block, and, further, in the construction and arrangement of the parts, as hereinafter more fully described and claimed.

In the drawings, referring to the form of Figs. 1, 2, and 3, 2 represents the web, and 3 the flanges, of a channel-section, which are preferably formed of pressed steel. The flanges are notched or slotted at opposite sides near the ends, these notches preferably being of the dovetailed form, and within these notches are seated the transverse wooden blocks 4, the sides of which are beveled or inclined to fit the edges of the flanges in the notched portions. In order to hold the filler-blocks in place, we show the flanges as having inwardly-bent lugs 5, which may be formed in slotting them. These lugs fit against the inclined faces of the block and prevent its movement lengthwise of the tie. The filler-block is preferably of such length that its ends

are flush with the side flanges, though it may extend beyond them, if desired, and to prevent the movement of the block we preferably form the lugs 5 with notches, beneath which nails or spikes 6 may be driven into the blocks. The rails are spliced to the filler-blocks in the usual manner, and the grain of these blocks preferably runs in line with the axis of the tie at right angles to the rail. To strengthen the tie in the portions beneath the rails, we preferably form depending ribs 7, which may be pressed into shape when the plate is pressed into channel form. These ribs preferably extend from the ends of the tie inwardly beyond the filler-blocks. In order to allow drainage from the interior of the inverted channel, we preferably form a slot or slots 8 8 in the intermediate portion of its web to allow moisture to drain out.

The form of Figs. 4, 5, and 6 is similar to the first form except that instead of forming lugs in the side flanges lugs 9 are cut and bent up from the web, these lugs fitting against the inclined faces of the filler-blocks. In this form similar parts are designated by similar numerals with the prime-mark applied.

The advantages of our invention result from the use of the inverted channel with slotted sides to receive the filler-blocks, this giving a cheap, light, and efficient construction. The blows upon the rails are absorbed by the wooden filler-block, while the lower ribs assist in stiffening the tie. The struck-up lugs afford a cheap and convenient means of holding the blocks in place.

Variations may be made in the form and arrangements of the various parts without departing from our invention.

We claim—

1. A metallic tie comprising a metal web having notched or recessed side flanges near its ends and filler-blocks seated in the recessed portions of said flanges, substantially as described.

2. A metallic tie comprising an inverted channel with its flanges recessed or notched down to the web, and filler-blocks, seated in the recessed portion; substantially as described.

3. A metallic tie comprising an inverted

channel with dovetailed recesses in the side flanges extending down to the web, and blocks having inclined sides fitting in said recesses; substantially as described.

5 4. A metallic tie comprising an inverted channel with recessed side flanges near its ends, filler-blocks seated in the recessed portions, and depending ribs in the web extending be-
10 neath the filler-blocks; substantially as de-
scribed.

5. A metal tie of inverted-channel form, hav-
ing filler-blocks, and lugs bent up from the tie-
body against the inner and outer faces of the
filler-blocks, and arranged to prevent move-
15 ment thereof in either direction lengthwise of
the tie; substantially as described.

6. A metallic tie comprising an inverted

channel having its side flanges cut or notched
down to the web, wooden blocks seated in said
portions, and lugs bent up from the material 20
of the tie and engaging the filler-blocks; sub-
stantially as described.

7. A metallic tie comprising an inverted
channel having wooden filler-blocks, lugs on
the tie engaging the blocks, and securing de- 25
vices extending through the lugs into the
blocks; substantially as described.

In testimony whereof we have hereunto set
our hands.

JAMES HOLMES BLAIR.
FRANK DITCHFIELD.

Witnesses:

JOHN MILLER,
H. M. CORWIN.