

No. 778,035.

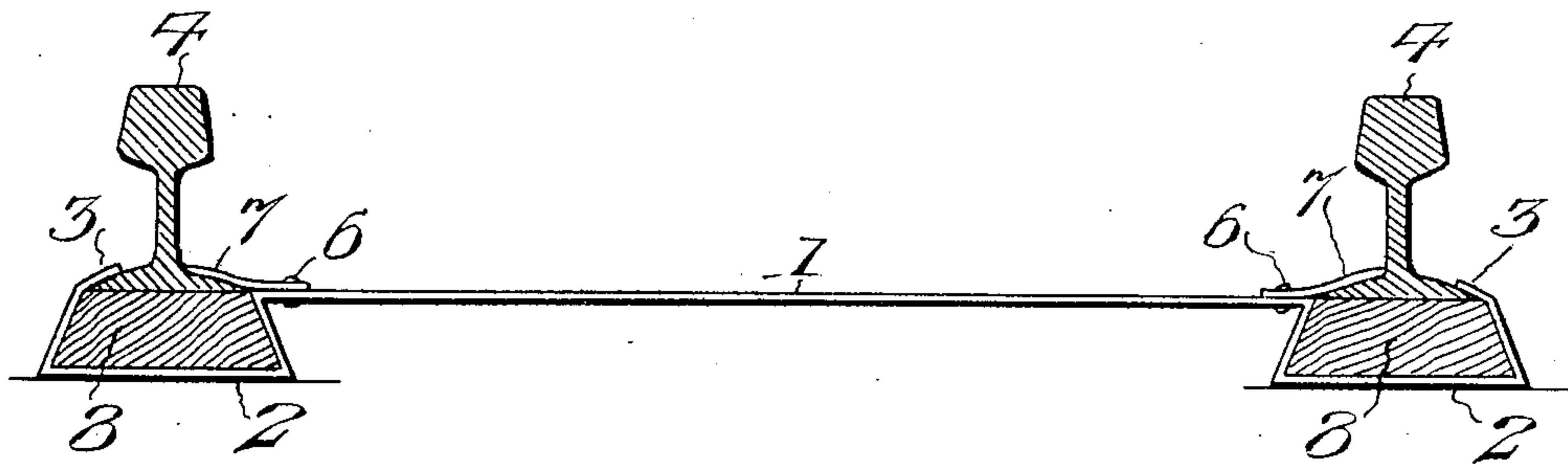
PATENTED DEC. 20, 1904.

J. HELTZEL.  
RAIL TIE.

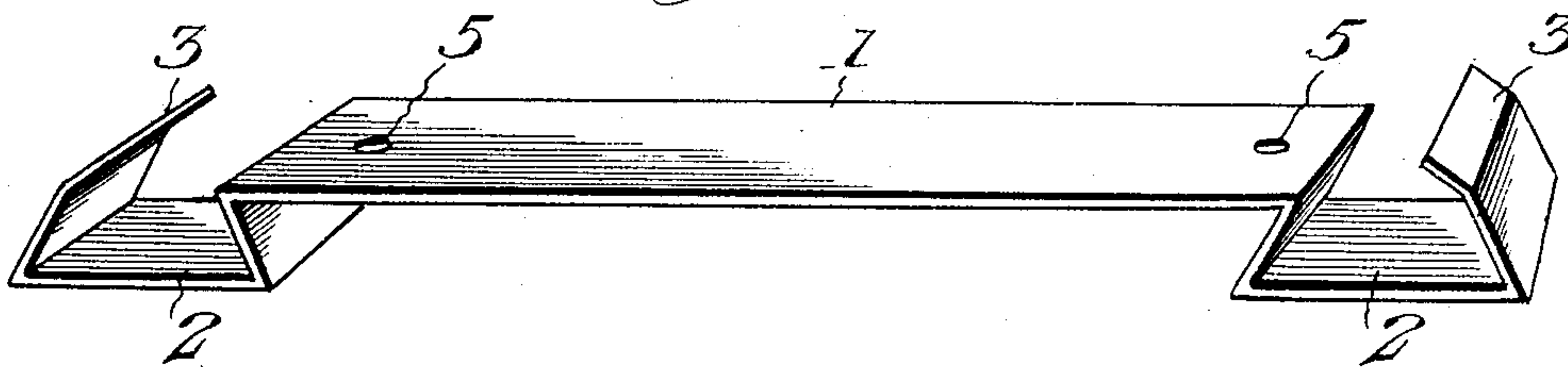
APPLICATION FILED AUG. 2, 1904.

NO MODEL.

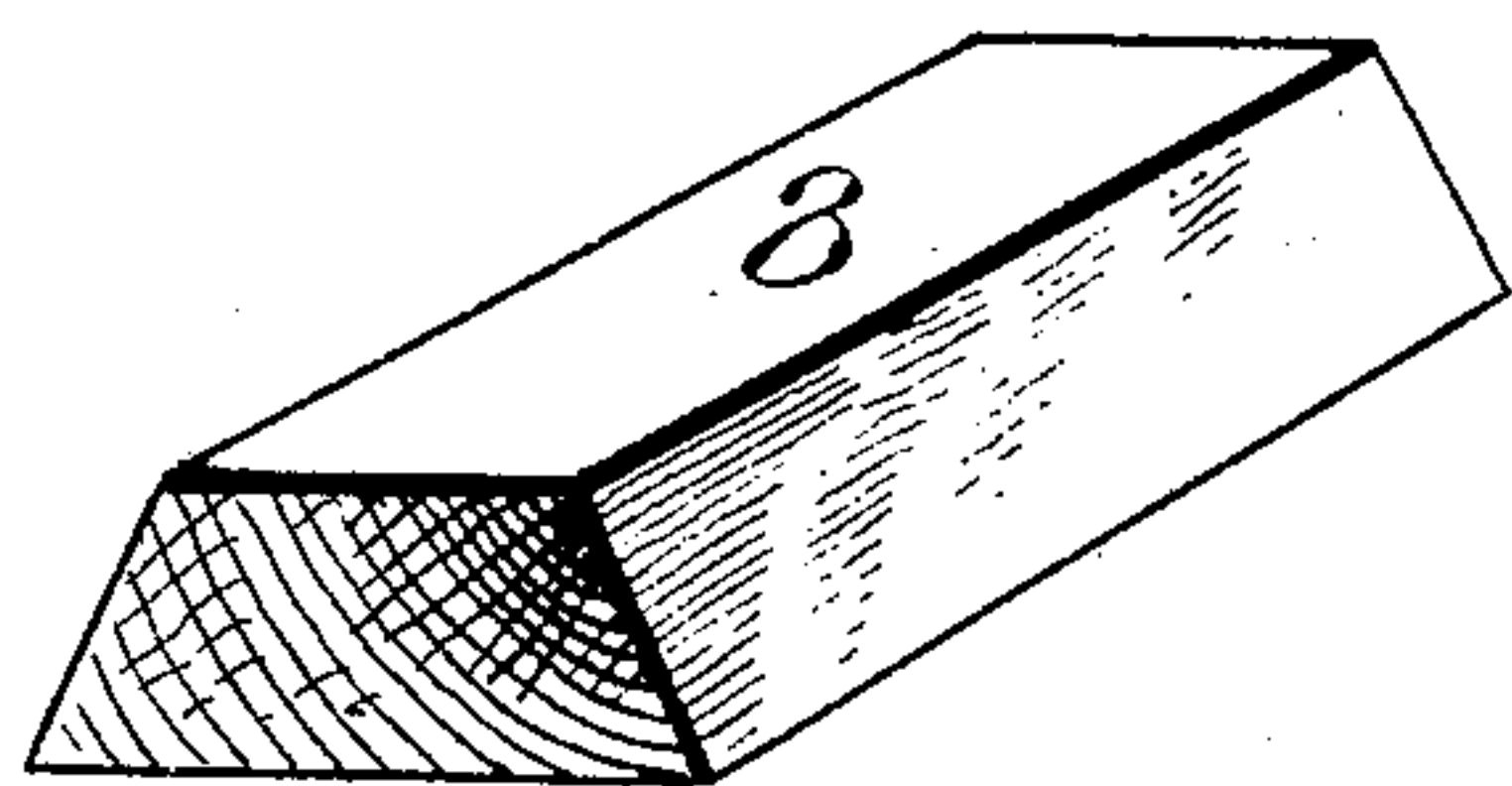
*Fig. 1*



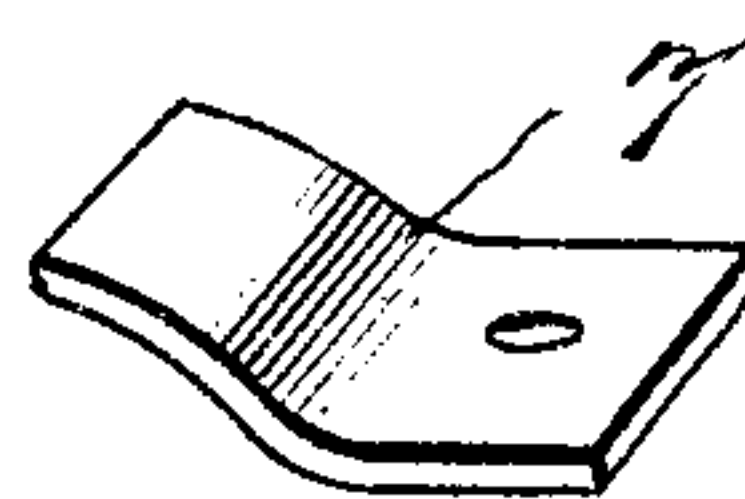
*Fig. 2*



*Fig. 3*



*Fig. 4*



Witnesses

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# UNITED STATES PATENT OFFICE.

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## RAIL-TIE.

SPECIFICATION forming part of Letters Patent No. 778,035, dated December 20, 1904.

Application filed August 2, 1904. Serial No. 219,197.

*To all whom it may concern:*

Be it known that I, JACOB HELTZEL, a citizen of the United States, residing at New Oxford, in the county of Adams and State of Pennsylvania, have invented new and useful Improvements in Rail-Ties, of which the following is a specification.

My invention relates to rail-ties, and its object is to provide a metallic device of this character which is of simple and inexpensive construction and which is adapted to receive blocks of wood or other like material on which the rails may be placed and secured.

With the above and other objects in view the invention consists of a strip of metal which serves to connect boxes located at the ends thereof and provided with oppositely-disposed inclined walls adapted to receive blocks of wood or like material having beveled sides. Retaining-flanges are formed integral with the outer walls of the boxes for engaging the base-flanges of rails, and securing devices are connected to the strip adjacent each end thereof.

The invention also consists of the further novel construction and combination of parts hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings I have shown the preferred form of my invention.

In said drawings, Figure 1 is a side elevation of the tie and showing the blocks thereof and the rails thereon in section. Fig. 2 is a perspective view of the metallic portion of the tie. Fig. 3 is a detail view of one of the blocks, and Fig. 4 is a perspective view of a securing device.

Referring to the figures by numerals of reference, 1 is a metallic strip having boxes 2 integral with its ends, the side walls thereof being inclined upwardly and inwardly. Retaining-flanges 3 are formed integral with the outer walls of boxes 2 and are adapted to overlap the outer base-flanges of rails 4. Apertures 5 are formed within strip 1 adjacent its ends and are adapted to receive securing-bolts 6, which extend through retaining-plates 7. These plates are adapted to

overlap the inner base-flanges of the rails 4. Blocks 8 of wood or other like material are arranged within the boxes 2, and these blocks have their sides beveled so as to be overlapped by the side walls of the boxes.

The ties are adapted to be placed at desired intervals, and after the blocks 8 have been placed within the boxes 2 the rails are put upon them and their outer base-flanges are inserted under the flanges 3 of the tie. The securing plates 6 are then fastened to the tie so as to overlap the inner base-flanges of the rails, and said rails are therefore securely held in place.

The complete tie can be made at slight cost, and as only short blocks of wood are necessary it will be understood that a considerable saving is thus made. Should the blocks become worn or otherwise rendered unfit for use, they can be very easily replaced.

The strip 1 and the boxes 2 are formed in a single length of metal, and therefore there is no danger of the rails spreading.

In the foregoing description I have shown the preferred form of my invention, but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing any of the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

Having thus described the invention, what is claimed as new is—

1. In a rail-tie, the combination with a strip having boxes at the ends thereof; of blocks seated within the boxes, and rail-engaging devices integral with said boxes.

2. In a rail-tie, the combination with a strip having boxes at the ends thereof provided with converging walls; of a block seated within and engaged by the walls of each box, and a rail-engaging flange integral with each box.

3. In a rail-tie, the combination with a strip bent at its ends to form boxes having converging side walls; of blocks seated within and engaged by the walls of the boxes.

4. In a tie, the combination with a strip  
bent at its ends to form boxes having con-  
verging side walls; of blocks within and en-  
gaged by the walls of the boxes, rail-engag-  
5 ing flanges integral with the boxes, and rail-  
securing devices detachably connected to the  
strip.

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

JACOB HELTZEL.

Witnesses:

E. E. FREED,  
R. F. STEFFIE.