No. 684,106. Patented Oct. 8, 1901.

A. E. ROSS.

METALLIC RAILROAD TIE.

(Application filed June 12, 1901.)

(No Model.)

Fig. 1.

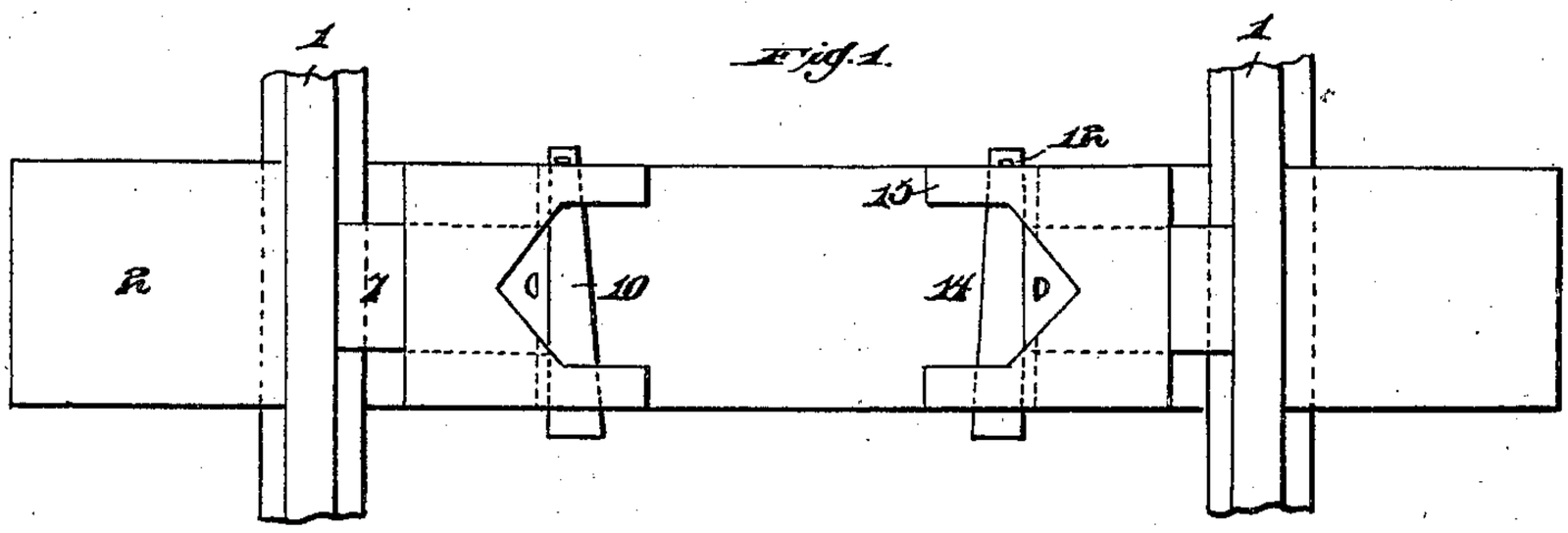


Fig. 2.

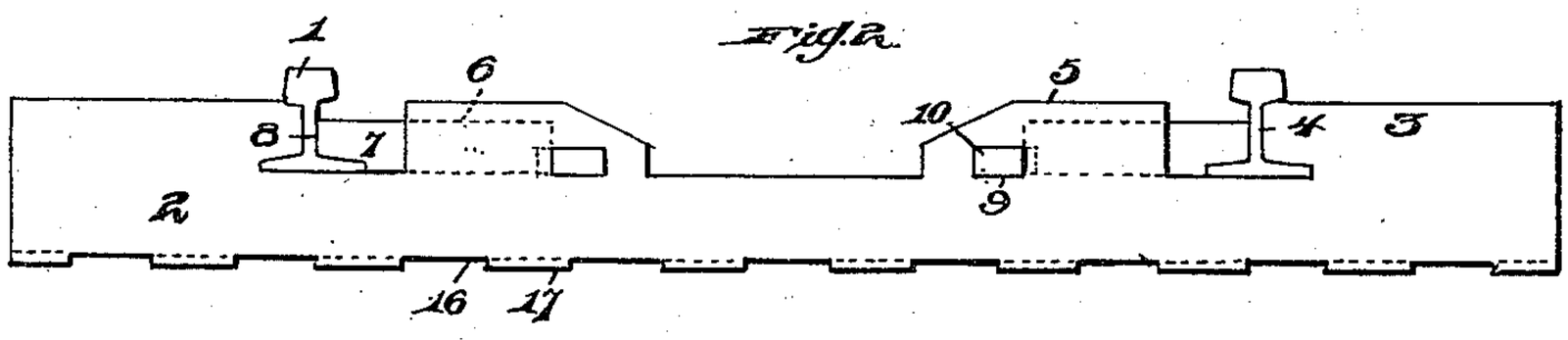


Fig. 3.

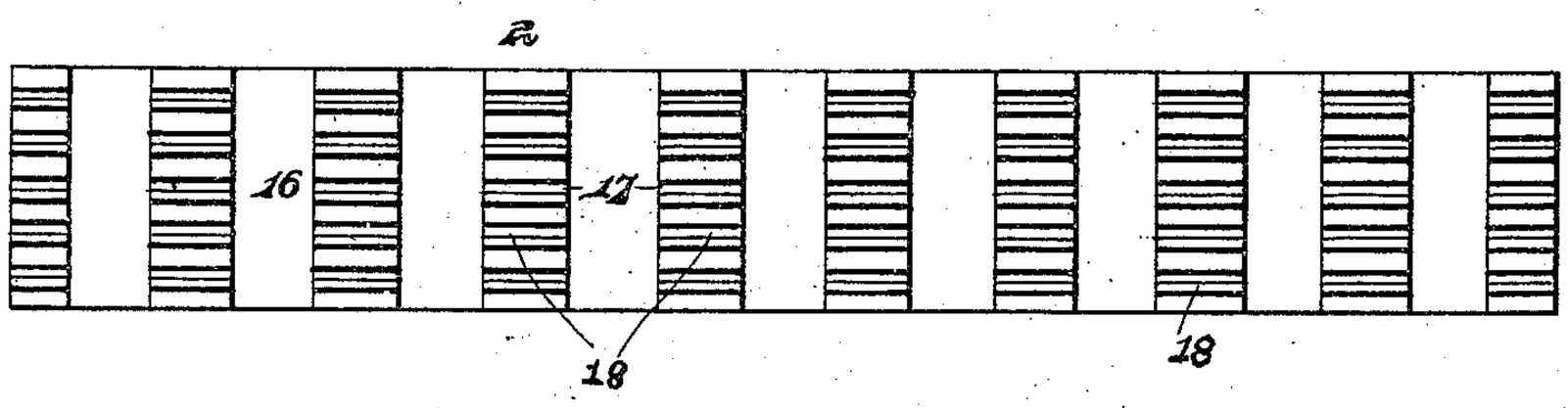


Fig. 4.

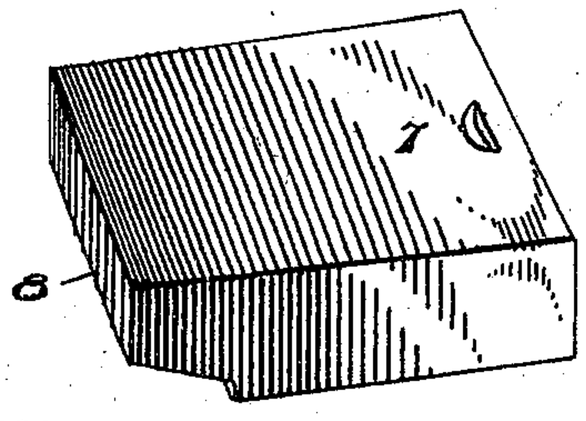
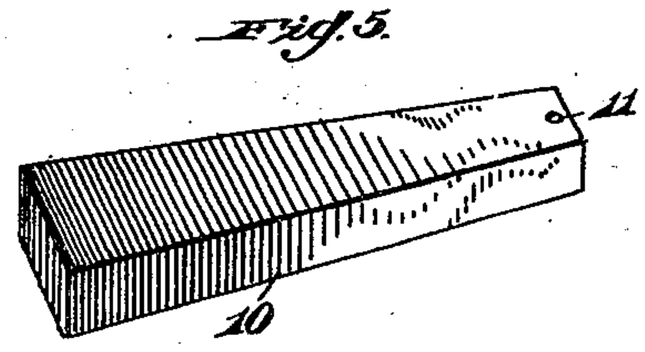


Fig. 5.



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UNITED STATES PATENT OFFICE.

ALLEN E. ROSS, OF PITTSBURG, PENNSYLVANIA.

METALLIC RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 684,106, dated October 8, 1901.

Application filed June 12, 1901. Serial No. 64,265. (No model.)

To all whom it may concern:

Be it known that I, ALLEN E. ROSS, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Railroad-Ties, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in metallic ties, and has for its objects to provide novel means whereby the rails are securely held in position upon the ties; furthermore, to construct a tie in a manner that will prevent the lineal or lateral displacement of the same.

With the above and other objects in view the invention consists in the novel combination and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claim.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate corresponding parts throughout the several views, and in which—

Figure 1 is a top plan view of my improved metallic tie, showing the rails applied thereto. Fig. 2 is a front view thereof. Fig. 3 is an underneath plan view of the tie. Fig. 4 is an enlarged perspective view of the fastening-block. Fig. 5 is a similar view of the locking-wedge.

In the drawings the reference-numeral 1 indicates the rails.

2 indicates the metallic tie, having its sides enlarged, as shown at 3, and its inner walls formed to correspond with the web and base of the rail, as shown at 4, to receive the rail 1.

The reference-numeral 5 indicates guides formed integral with the upper face of the metallic tie. These guides have formed therein guideways 6 to receive fastening-block 7, said fastening-block carrying an engaging face 8, corresponding with the web and base of the rail.

The reference-numeral 9 represents an opening formed in the guide to receive a wedge-shaped key 10, having an opening 11 formed therein to receive a pin or split spring 12. The guide 5 has also formed therein a cut-away portion 14 on its upper face, forming inwardly-projecting lugs 15.

The reference-numeral 16 indicates cut-away portions formed in the under face of the metallic tie, these cut-away portions leaving projections 17, said projections 17 having formed thereon roughened or corrugated surfaces 18.

The operation of my improved device is as follows: The tie being placed in proper position, the corrugations 18 will prevent the lineal movement of the tie and the cut-away portion 16 will prevent the lateral movement of the tie, it being thus firmly held in position. The rails are each placed in proper position, as shown in Figs. 1 and 2 of the drawings, the blocks 7 being then applied in the guideways and the key-wedge applied through the side openings, extending over the entire width of the tie, causing the block to be driven closely to and engage the inner faces of the rails. This wedge is then secured firmly in position by means of a pin passing through the opening 11, or a split spring.

It will be seen that the device may be applied to the outer face of the rail as well as to the inner face thereof when in certain constructions it is necessary to place the locking means on the outer faces of the rails instead of as shown in the drawings. It will also be noted that the above construction will dispense with the use of nuts and bolts in railway constructions, and fish-plates may be used, which would be placed on the inner face of the rails and engaged by the block 7 instead of allowing the block 7 to abut against the inner faces of the rails directly, as shown in the drawings.

The many advantages obtained by the use of my improved railroad-tie will be readily apparent from the foregoing description, taken in connection with the accompanying drawings.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

In a metallic tie having a corrugated un-

der face, an enlarged portion made integral with the end thereof, the inner wall of said portion conforming in shape and adapted to receive one side of the rail, a guide made integral with the upper face of said tie, said guide having a cut-away portion formed between the sides thereof leaving inwardly-extending lugs, said guide having a guideway formed therein in alinement with the tie, the lower face of said guideway being in alinement with the upper face of the tie, said guideway extending into the said cut-away portion of the guide and of less width than said cut-away portion, a fastening-block having a flat base operating in said guideway with each end thereof exposed, an engaging face on said block to engage the web and rail base, the inwardly-projecting lugs having an opening formed therein transverse to the tie in alinement with the upper face thereof and extending into the said cut-away portion of the guide, and a wedge-shaped key of the same size as the transverse opening in the lugs operating therein and engaging one end of the fastening-block, substantially as described.

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

ALLEN E. ROSS.

Witnesses:
JOHN NOLAND,
E. E. POTTER.