

No. 887,983.

PATENTED MAY 19, 1908.

J. A. SWOPE.  
RAILWAY TIE.  
APPLICATION FILED JULY 15, 1907.

Fig. 1

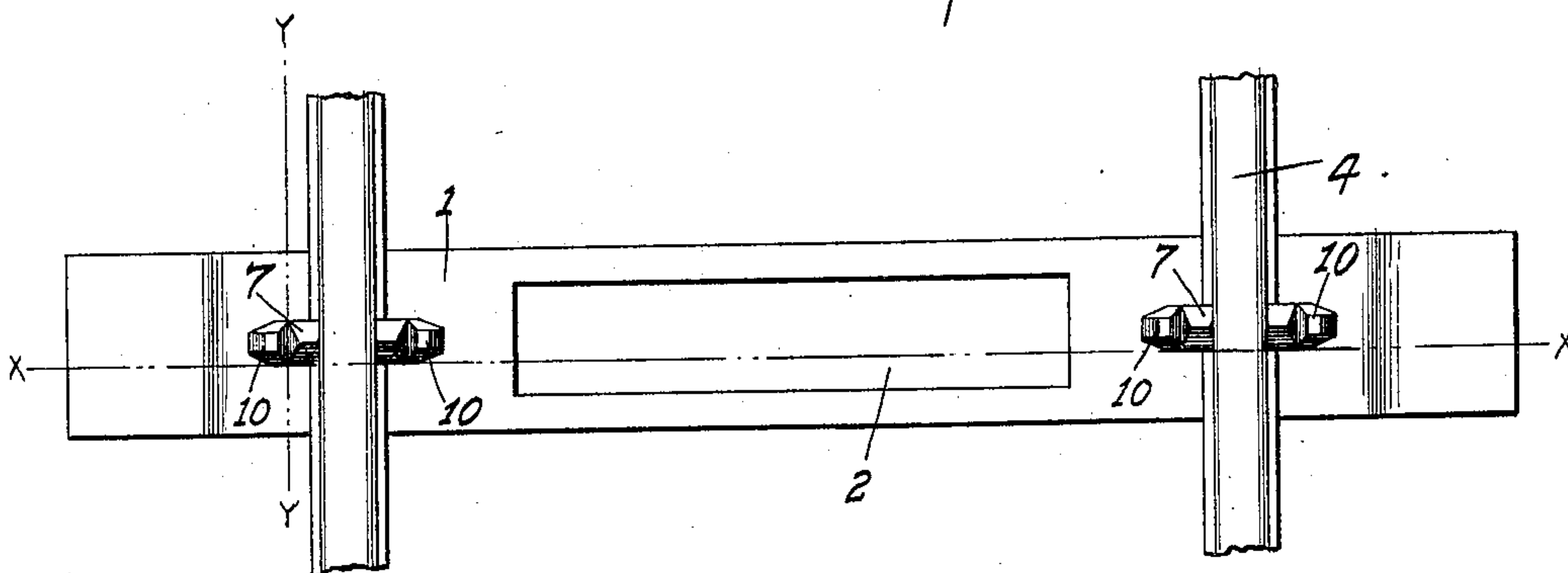


Fig. 2

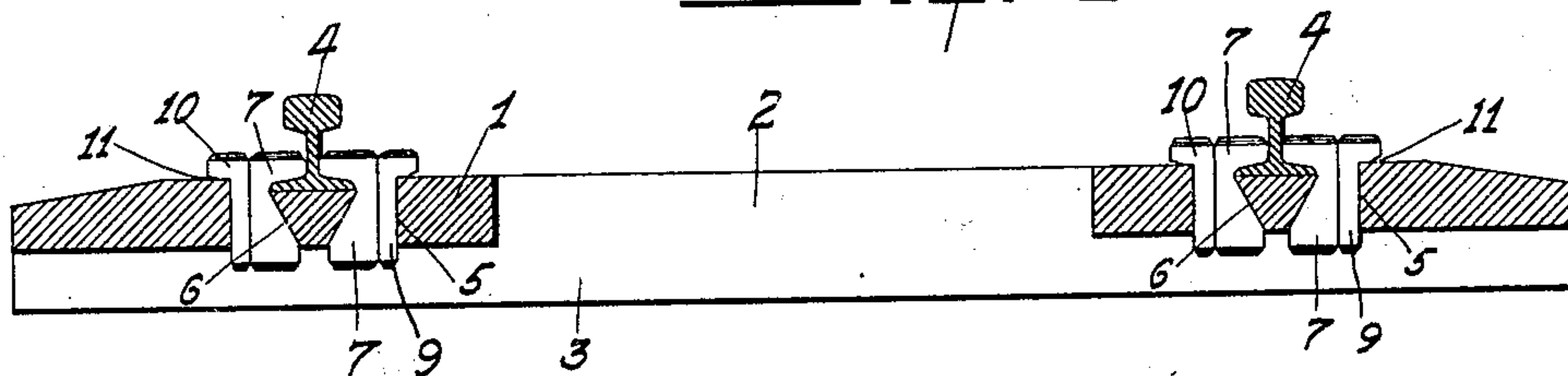


Fig. 5

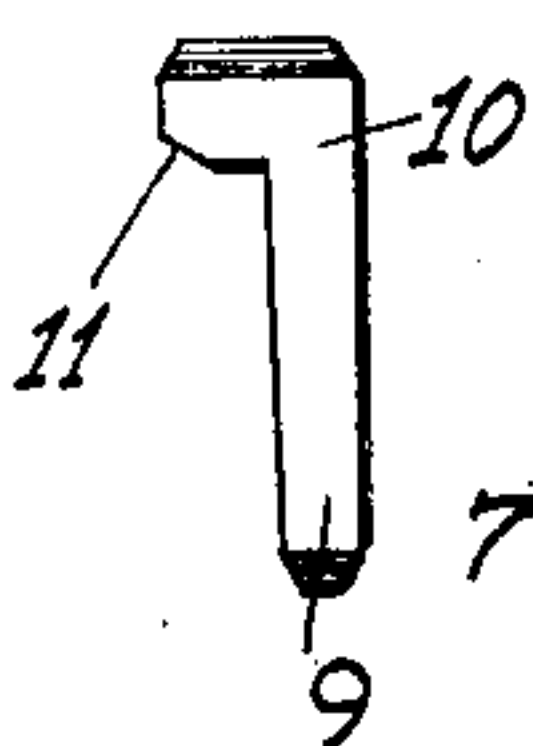


Fig. 6



Fig. 3

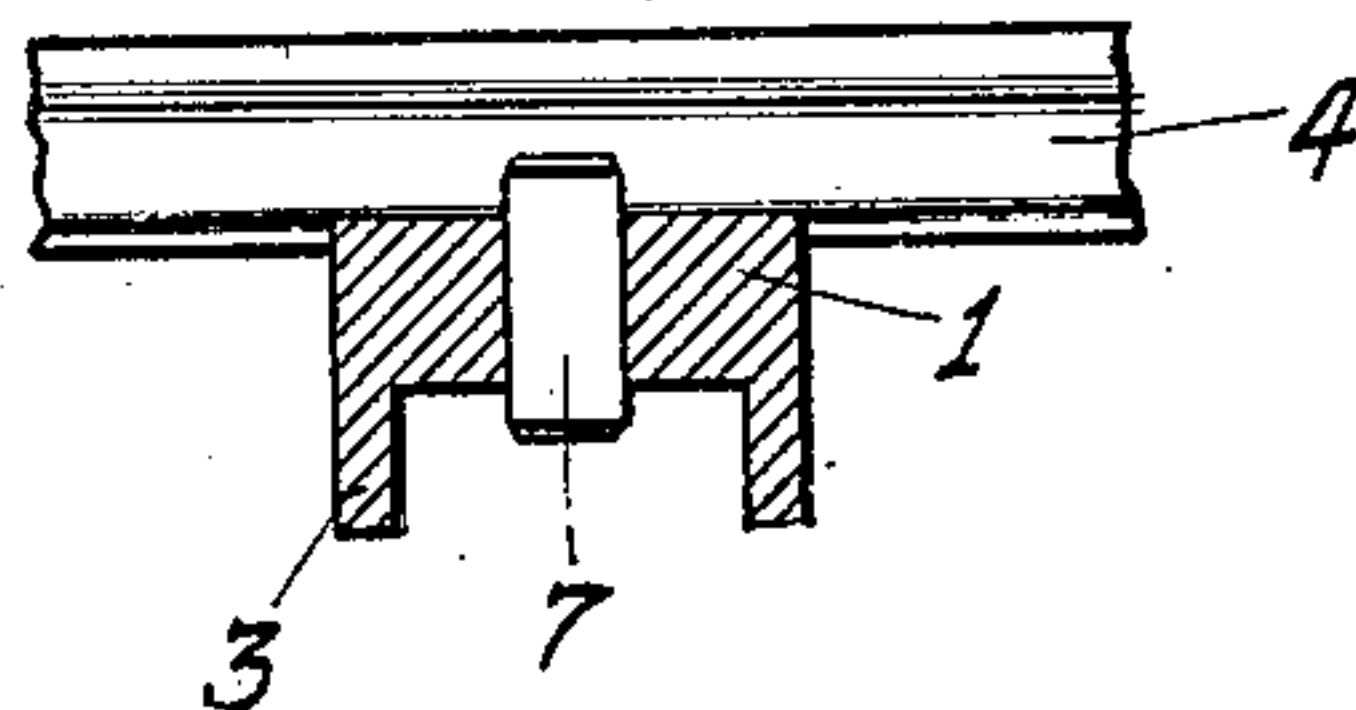


Fig. 4

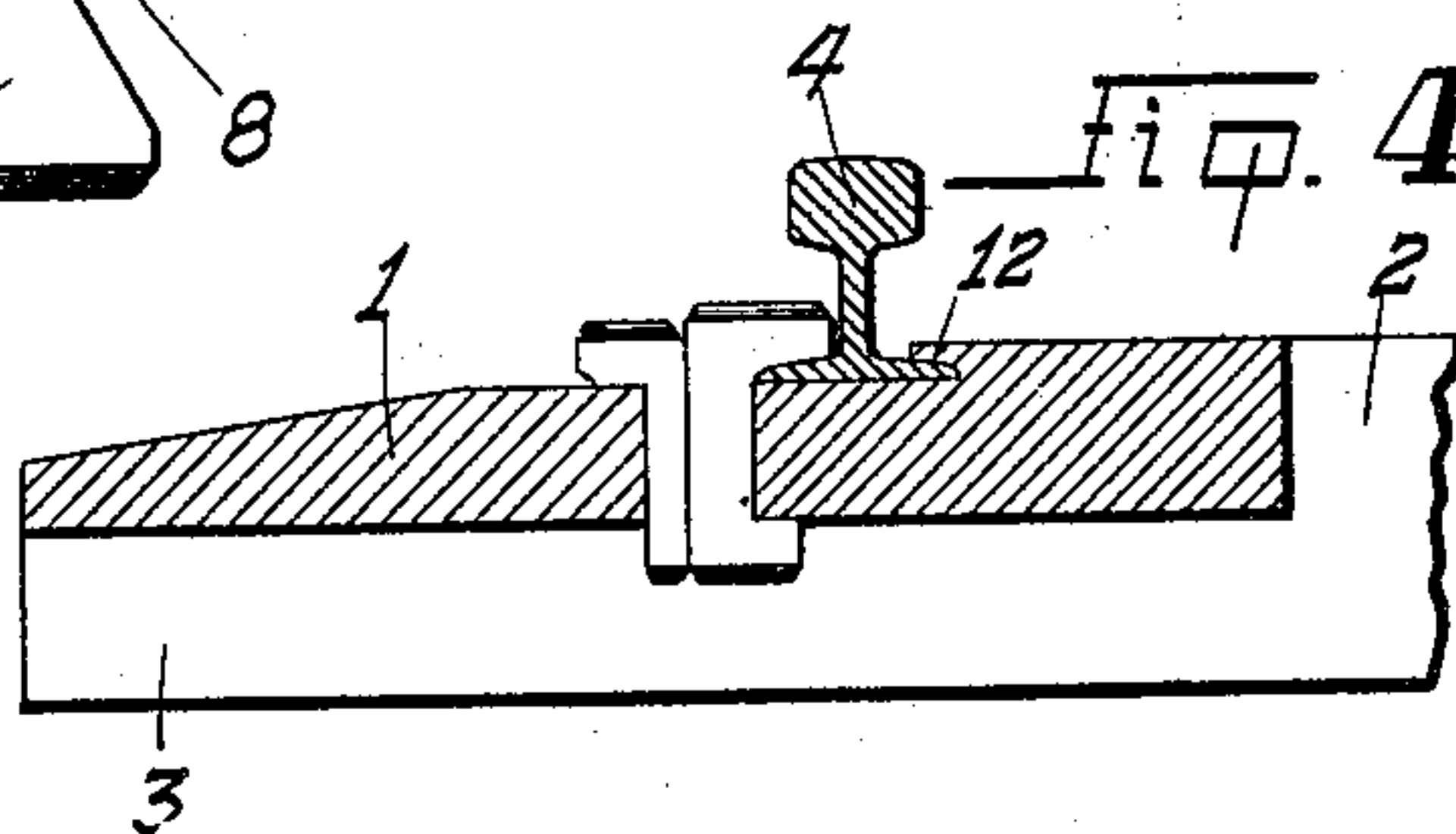


Fig. 7

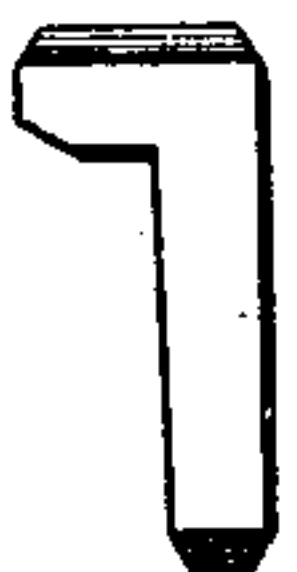
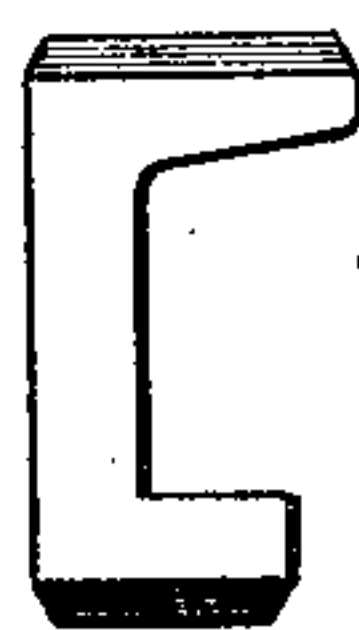


Fig. 8



Witnesses

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# UNITED STATES PATENT OFFICE.

JOSEPH A. SWOPE, OF HANFORD, CALIFORNIA.

## RAILWAY-TIE.

No. 887,983.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed July 15, 1907. Serial No. 383,909.

*To all whom it may concern:*

Be it known that I, JOSEPH A. SWOPE, a citizen of the United States, residing at Hanford, in the county of Kings and State of California, have invented certain new and useful Improvements in Railway-Ties; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in railway ties, my object being to produce a metal tie and means for locking the rails thereto, which can be manufactured at a minimum cost and yet one which will be fully and absolutely effective for the purpose for which it is designed. This object I accomplish by means of a tie formed of any material other than wood, such as iron, slag, cement or other materials of any character, such tie being provided with a key locking mechanism to receive the rails; also by such other and further construction as will appear by a perusal of the following specification or claim.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Figure 1 is a top plan view of my complete improved tie. Fig. 2 is a longitudinal section taken on a line  $xx$  of Fig. 1. Fig. 3 is a cross section on a line  $yy$  of Fig. 1. Fig. 4 is a longitudinal sectional view of one end of one of my improved ties. Figs. 5, 6, 7 and 8 are detached views of locking keys.

Referring more particularly to the characters of reference on the drawings the tie is formed of a solid portion 1 having a center slot 2 for tamping purposes and bottom flange members 3.

4 designates the rails of the railroad laid on the ties in the usual manner.

In the portion 1 on each side of the line of the rails 4 are formed slots 5, the inner sides 6 of said slots 5 being beveled inward as shown in Fig. 2 and opening through the bottom of the portion 1, intermediate the flanges 3.

7 are locking keys provided with indenta-

tions 8 adapted to engage with the flange of the rails and the said beveled portions 6, said keys 7 depending below the bottom of the member 1 intermediate the flanges 3.

In practice when laying the rails the rails are placed in position and the keys 7 are inserted into the slots 5 as shown. Said slots 5 are of a greater breadth than the key 7 and in the intervening space are inserted auxiliary pins 9 having overhanging heads 10. Said pins 9 are of wrought iron and are driven into said slots 5, thus locking the keys 7 in position, the beveled effect thereof keeping the same in close contact with the base flanges of the rails and preventing any upward movement. The heads 10 of the keys 9 are provided on their under sides with notches 11 to permit of the insertion of a crow bar or other instrument for the purpose of removing said pins from the slots 5. Said keys 9 likewise depend below the bottom of the portion 1 intermediate the flanges 3 and thus when the tamping material is tamped between said flanges 3 it fills in around said keys gripping them tightly and thus aiding materially in holding them in place.

Figs. 4, 7 and 8 show a slight modification from the construction just shown in that the tie is formed with notches 12 in which one side of the base flange of the rails fits, the key mechanism being on the other side of the rail and being also slightly modified in shape.

From the foregoing description it will be seen that I have produced a metal tie which is simple and inexpensive, and yet one which has absolutely effective and safe means for locking the rails thereto.

The tie itself may be manufactured from many materials such as iron, slag, cement or the like.

While this specification sets forth the present and preferred detail of construction of my device, still many deviations may be made within the scope of my claim without departing from the spirit of my invention.

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

In a device of the character described a tie formed of a solid portion centrally slotted, depending flanges on each side of said solid portion, rails mounted on said solid portion,



said solid portion being provided with slots  
on each side of the lines of said rails, the inner  
sides of said slots being beveled, said slots  
opening through the bottom of said solid por-  
5 tion intermediate said flanges, keys inserted  
in said slots and depending below the bottom  
of said solid portions, and auxiliary keys in-  
serted to the rear of said keys and likewise

depending below the bottom of said solid  
portion, as set forth. 10

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

JOSEPH A. SWOPE.

Witnesses:

ROBT. W. MILLER,  
J. H. COOPER.