

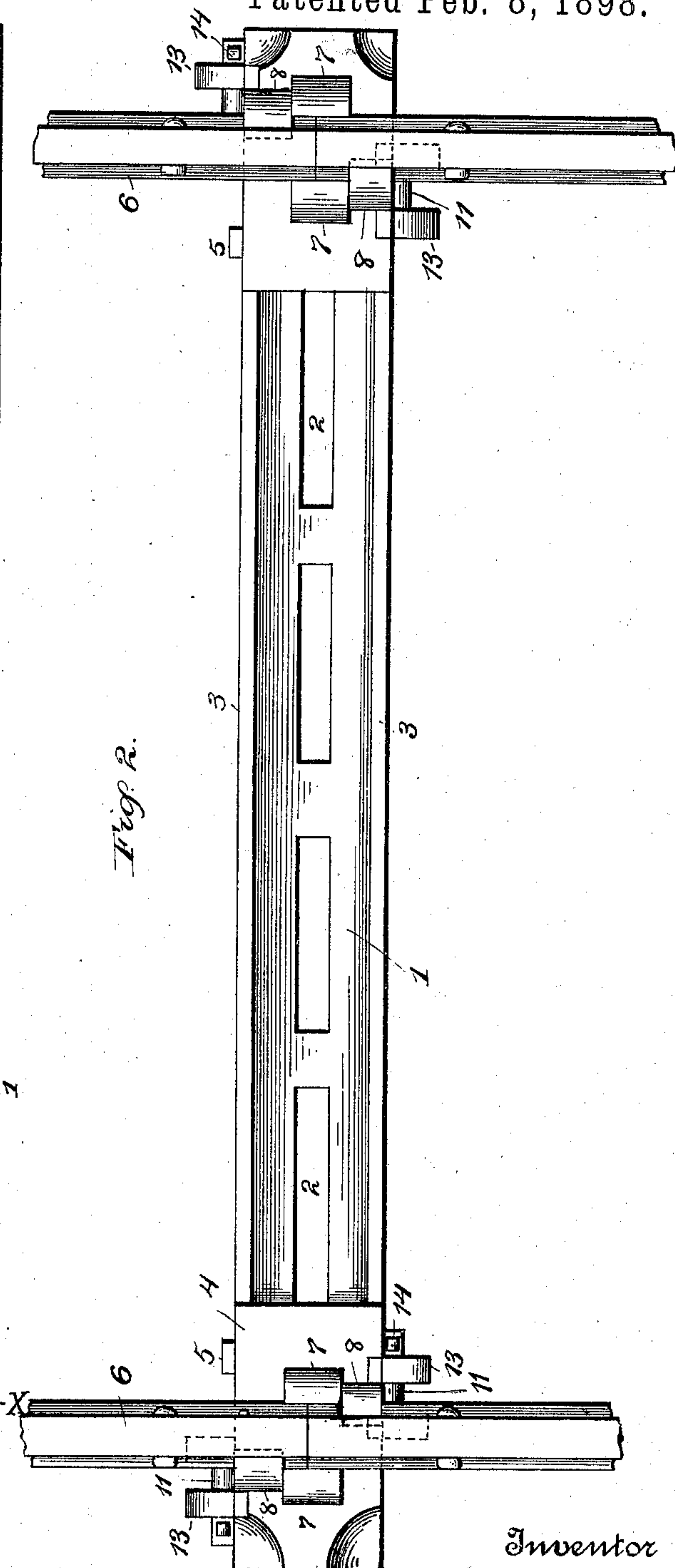
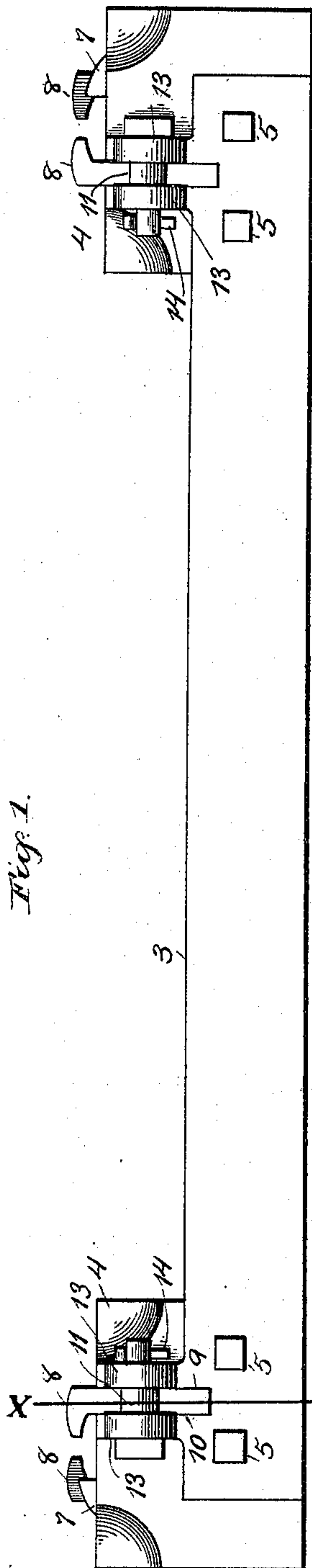
(No Model.)

2 Sheets—Sheet 1.

W. F. BOND.
COMBINATION RAILROAD TIE.

No. 598,764.

Patented Feb. 8, 1898.



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Victor J. Evans.
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(No Model.)

2 Sheets—Sheet 2.

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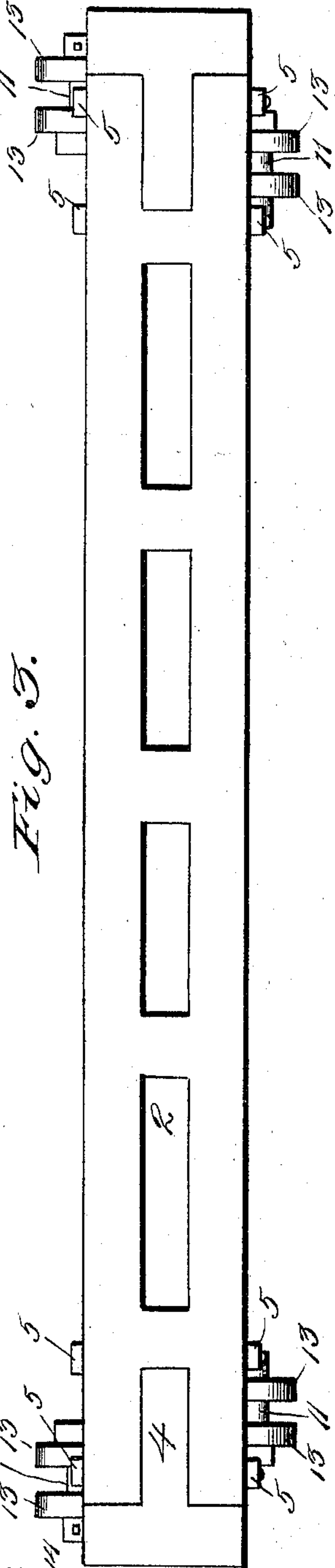


Fig. 3.

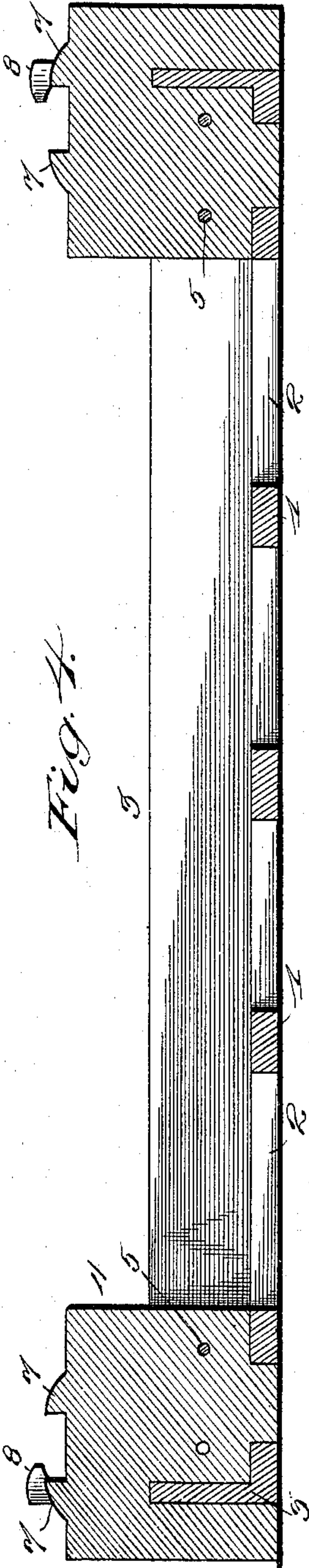


Fig. 4.

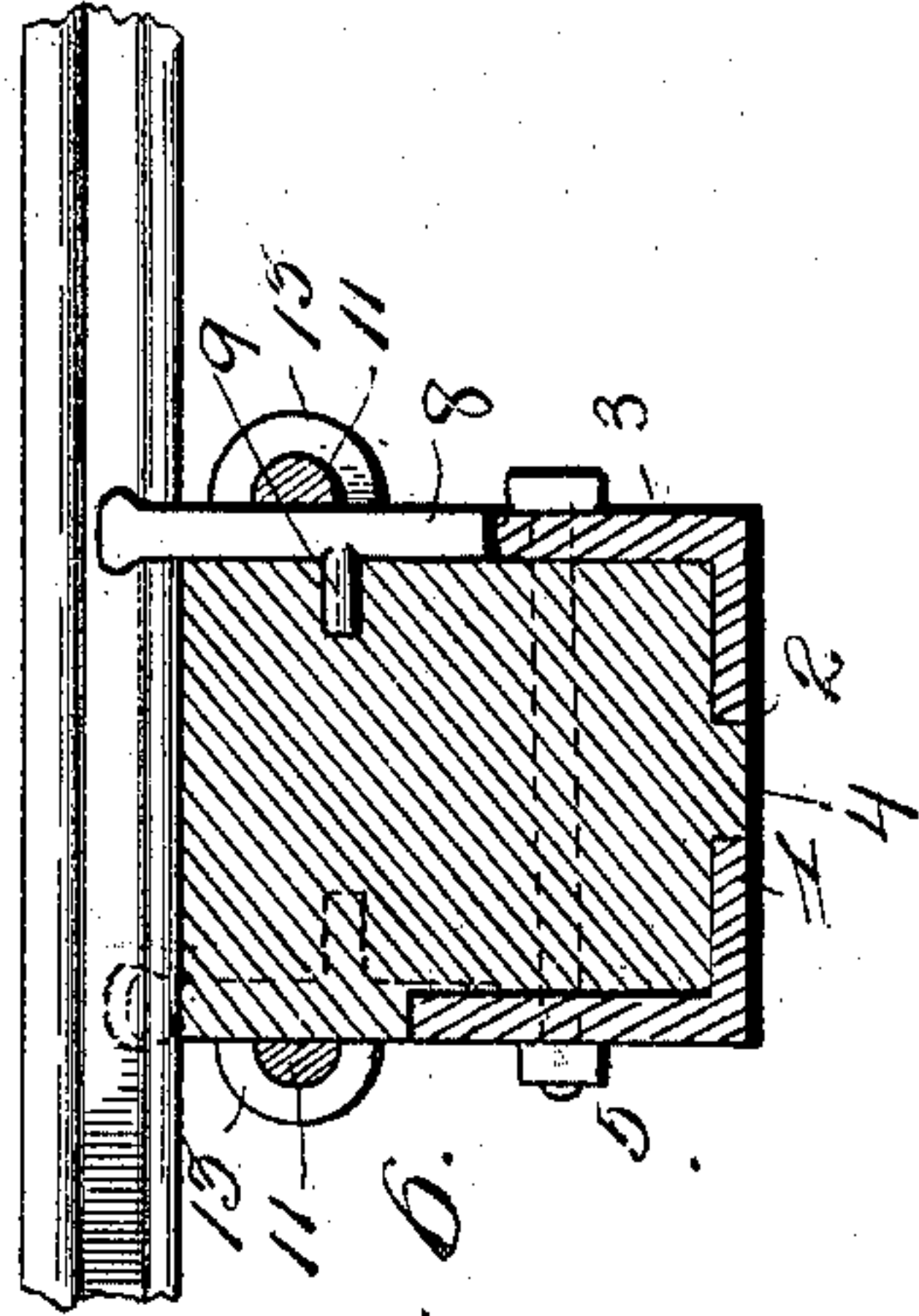


Fig. 6.

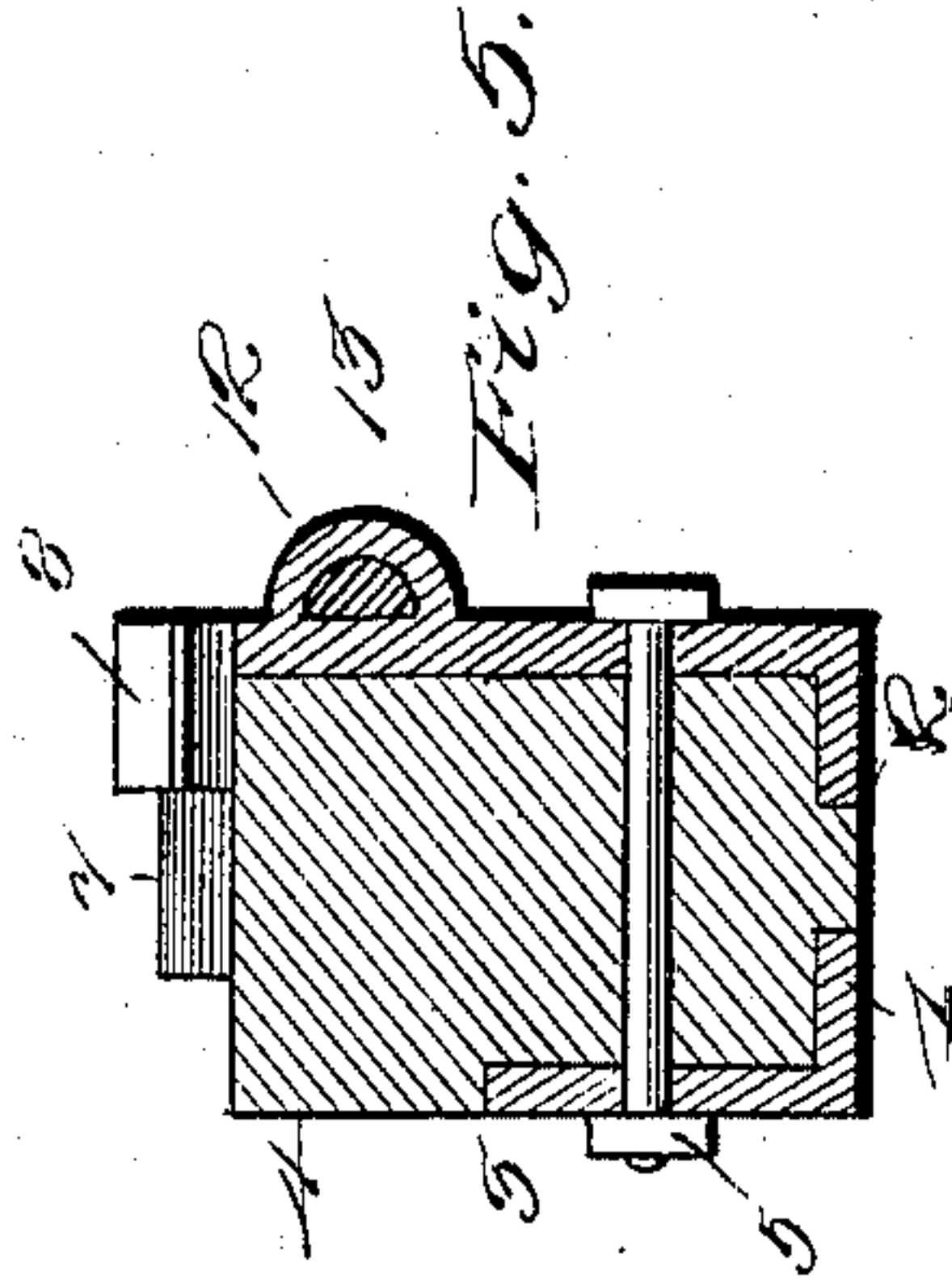


Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM F. BOND, OF MORRISDALE MINES, PENNSYLVANIA.

COMBINATION RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 598,764, dated February 8, 1898.

Application filed July 7, 1896. Serial No. 598,293. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. BOND, a citizen of the United States, residing at Morrisdale Mines, in the county of Clearfield and State of Pennsylvania, have invented certain new and useful Improvements in Combination Railroad-Ties; and I do hereby 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.

My invention relates to railroad-ties, the object of the same being to provide a combination-tie made up of separate parts preferably constructed of metal, in which the rails are readily and conveniently secured in place, are firmly held while in place, and may be readily removed when desired.

A further object is to prevent spreading of the rail and rotting of the tie by reason of the deposition of water in the top thereof.

Other objects will hereinafter appear.

The invention consists of the construction, combination, and arrangement of parts, as will be more fully hereinafter described, and specifically pointed out in the claims.

In the drawings forming part of this specification, Figure 1 represents a side elevation of my tie complete. Fig. 2 is a plan view of the same with the rails shown in secured position thereon. Fig. 3 is a bottom plan view. Fig. 4 is a longitudinal section through the tie, the said section being taken through the chairs or guides for the rails. Fig. 5 is a cross-section of the same, taken through one of the securing-bolts. Fig. 6 is a cross-section on the line $x x$ of Fig. 1.

Like reference-numerals indicate like parts in the different views.

My improved tie is made up of a base-plate 1, which is formed with openings 2 2 therein and with side flanges 3 3, extending upwardly therefrom. The said base-plate and flanges are preferably constructed of iron, and fitting between the flanges at each end of the plate 1 are the head-blocks 4 4, each formed with a tongue upon its lower end, which projects through one of the openings 2 in said plate, the block itself being securely held in place by bolts 5 5, passing through the flanges 3 and said blocks. The upper corners of the blocks

4 4 are cut away, as shown, so as to prevent a deposit of water on the upper surface. Upon the top of these blocks the rails 6 6 rest, the same passing between guide-blocks or chairs 7 7, as clearly shown. The said rails are held in place by means of the bolts 8 8, which are formed with lateral arms or projections 9 9 thereon, which fit within recesses 10 10 in the blocks 4 and are held in place therein by means of key-bolts 11 11, passing through the openings 12 12 in the lugs 13 on the side flanges 3 of the base-plate 1 on each side of the bolts 8. The said key-bolts are themselves prevented from displacement by the insertion of a pin or spring-loop 14 through the opening in the inner ends of said key-bolts.

As thus constructed, it will be seen that I have devised a simple combination railroad-tie made up of a number of parts securely joined together in which the rail is readily and quickly inserted and removed and in which lateral displacement of the rail is positively prevented. By reason of the construction of the securing pins or bolts 8 it is not necessary to drive said pins downward against the flange of the rail, but the same are inserted laterally into the head-blocks of the tie and are securely held from displacement by the key-bolts acting in engagement therewith. It is thus absolutely impossible for the securing pins or bolts to be removed accidentally.

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

1. A railroad-tie having lateral recesses in its outer edges, lugs on each side of said recesses having openings therethrough, rails upon the upper surface of said tie, securing pins or bolts for said rails having laterally-extending arms fitting the recesses in said tie and key-bolts extending through the openings in said lugs, substantially as described.

2. A railroad-tie having lateral recesses in its outer edges, lugs on each side of said recesses having openings therethrough, chairs or guide-blocks upon the upper surface of said tie, rails resting upon said tie and fitting between said chairs or guide-blocks, securing pins or bolts for said rails having lateral arms thereon fitting the recesses in said tie

and key-bolts extending through the openings in said lugs, substantially as and for the purpose described.

3. A railroad-tie made up of a base-plate
5 having openings therein and side flanges thereon, head-blocks, one at each end of said base-plate, fitting between said flanges, having tongues upon their lower ends projecting through the openings in said plate and se-
10 cured by bolts passing through said flanges and said blocks, chairs or guide-blocks upon the upper surface of each of said head-blocks, lugs having openings therein on each side of lateral recesses in said head-blocks, rails rest-

ing upon the upper surface of said head- 15 blocks and fitting between said chairs, securing pins or bolts for said rails having laterally-extending arms fitting the recesses in said block and key-bolts extending through the openings in said lugs, substantially as 20 and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM F. BOND.

Witnesses:

THOMAS PILKINGTON,
J. FRANK BAIR.