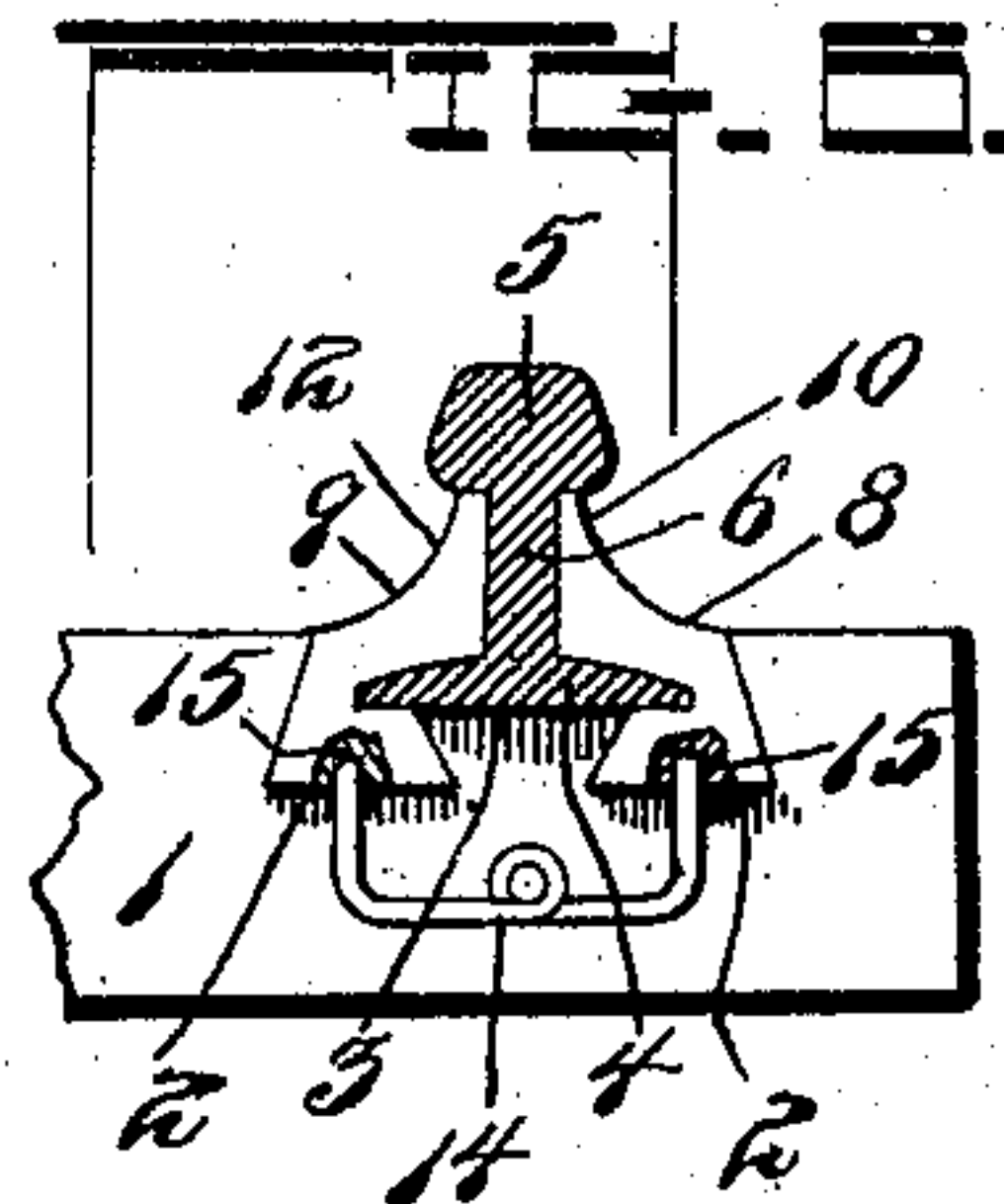
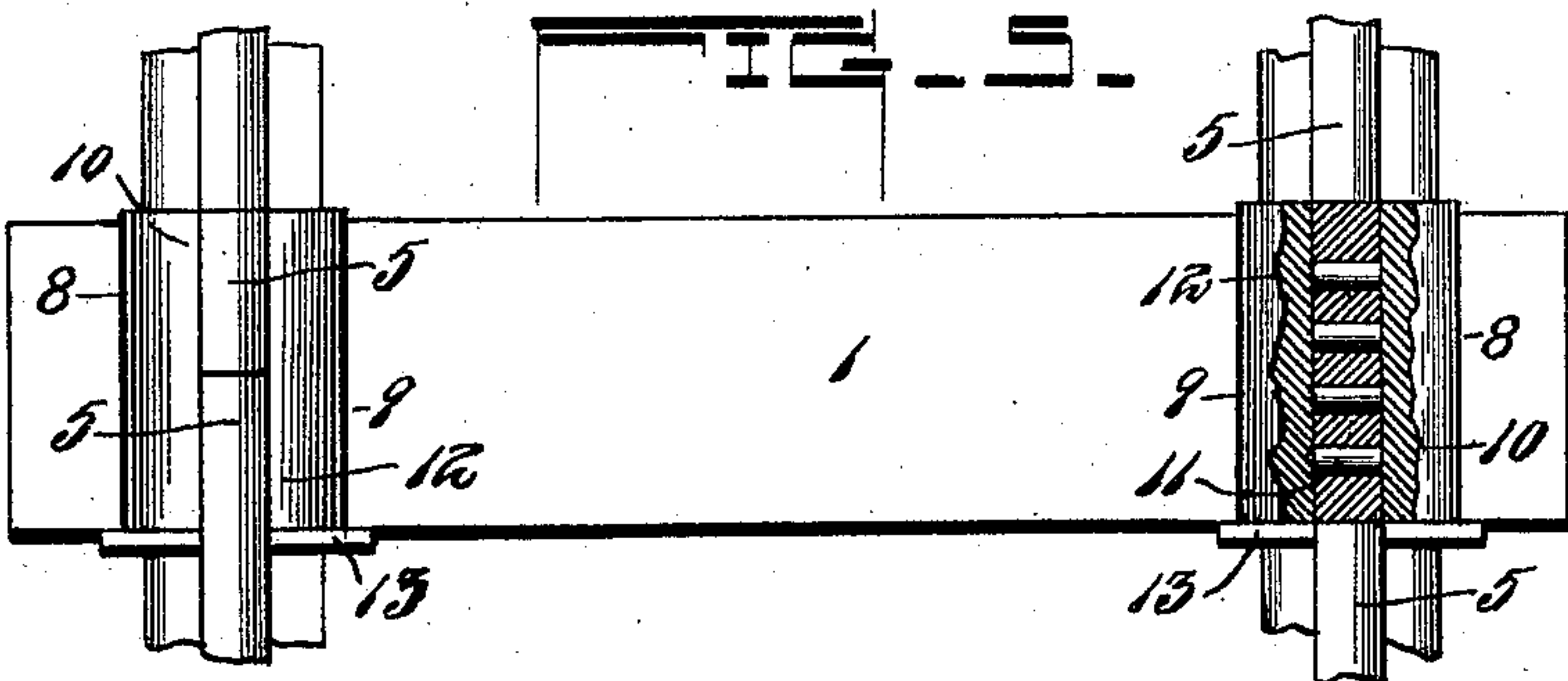
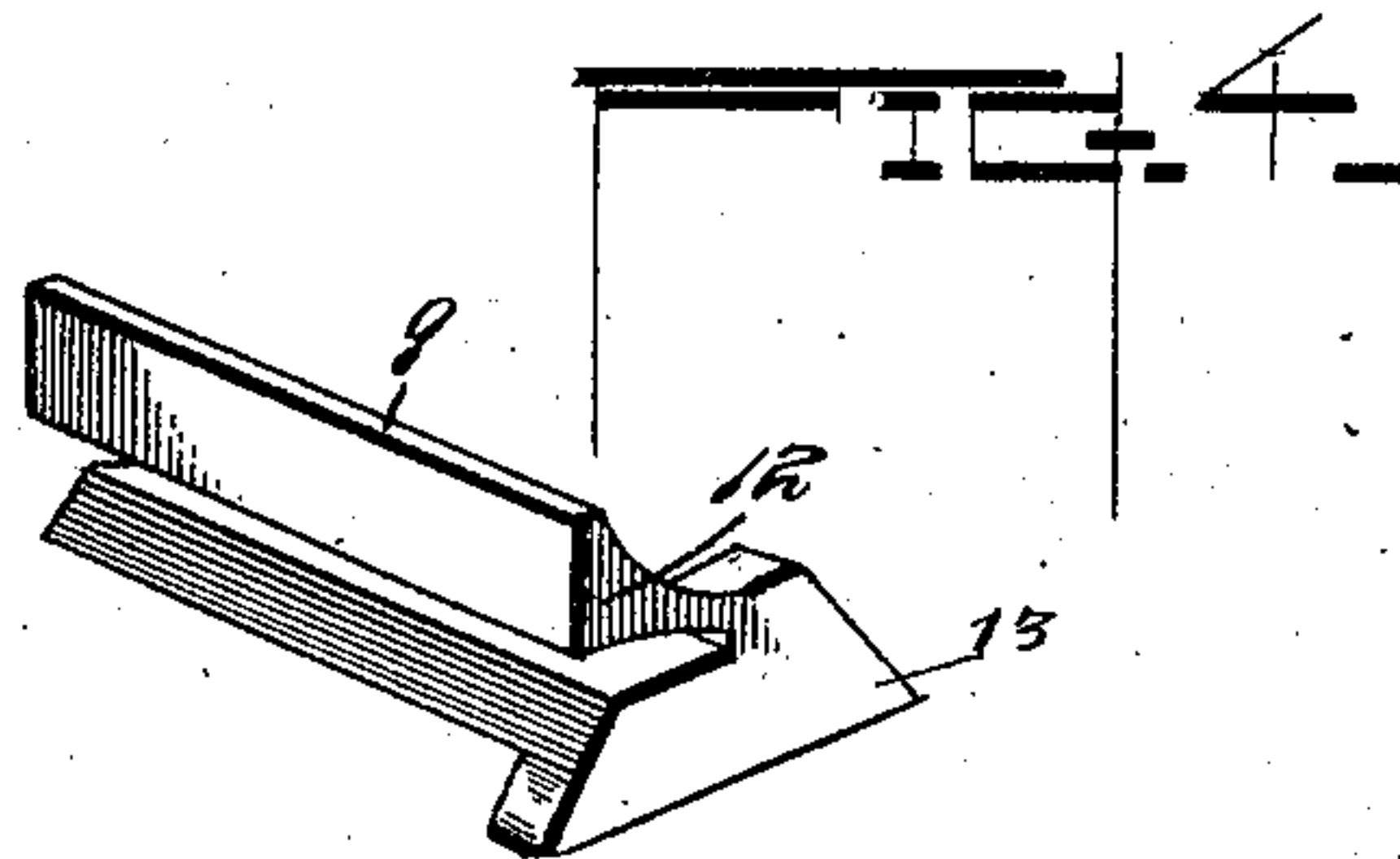
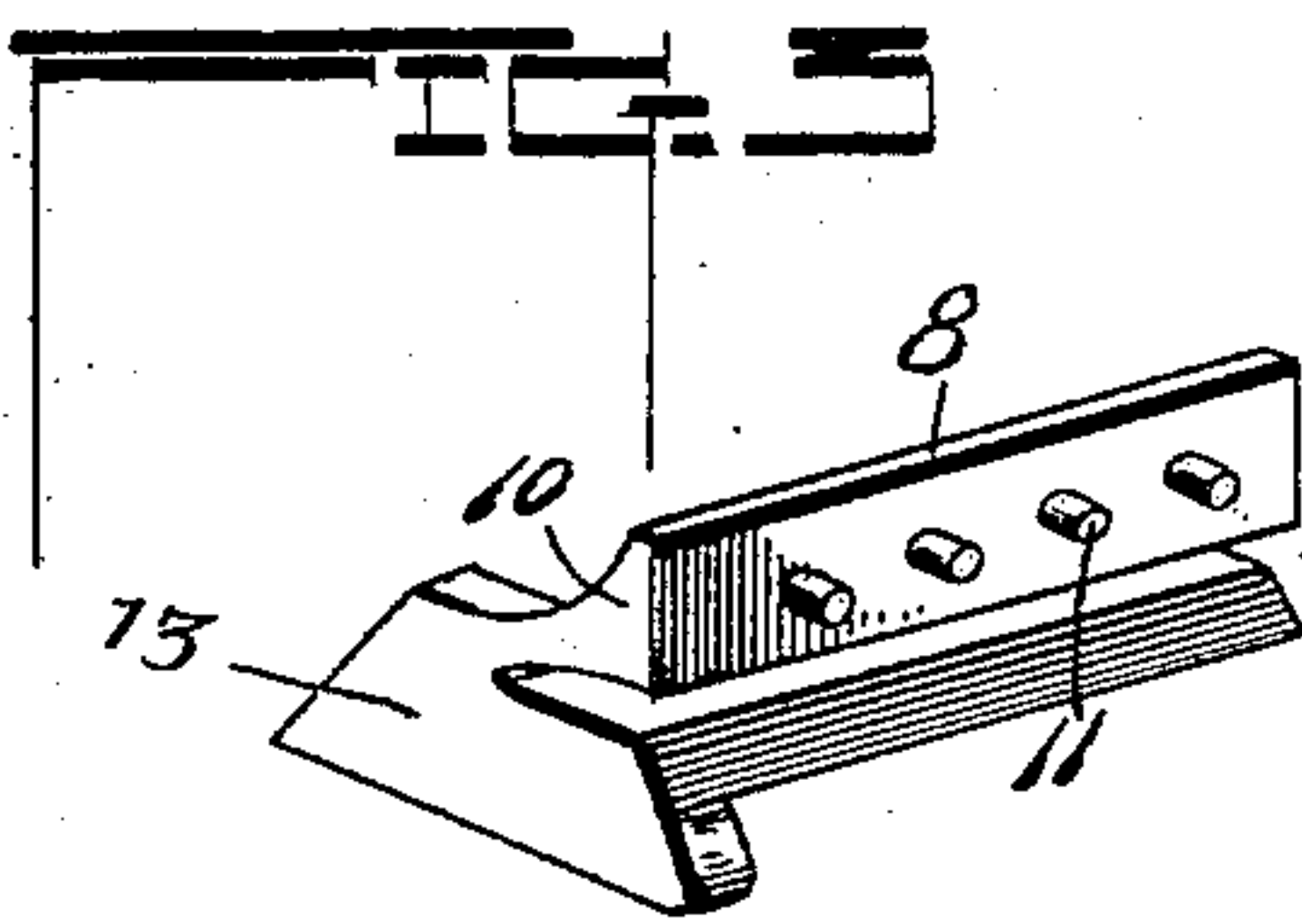
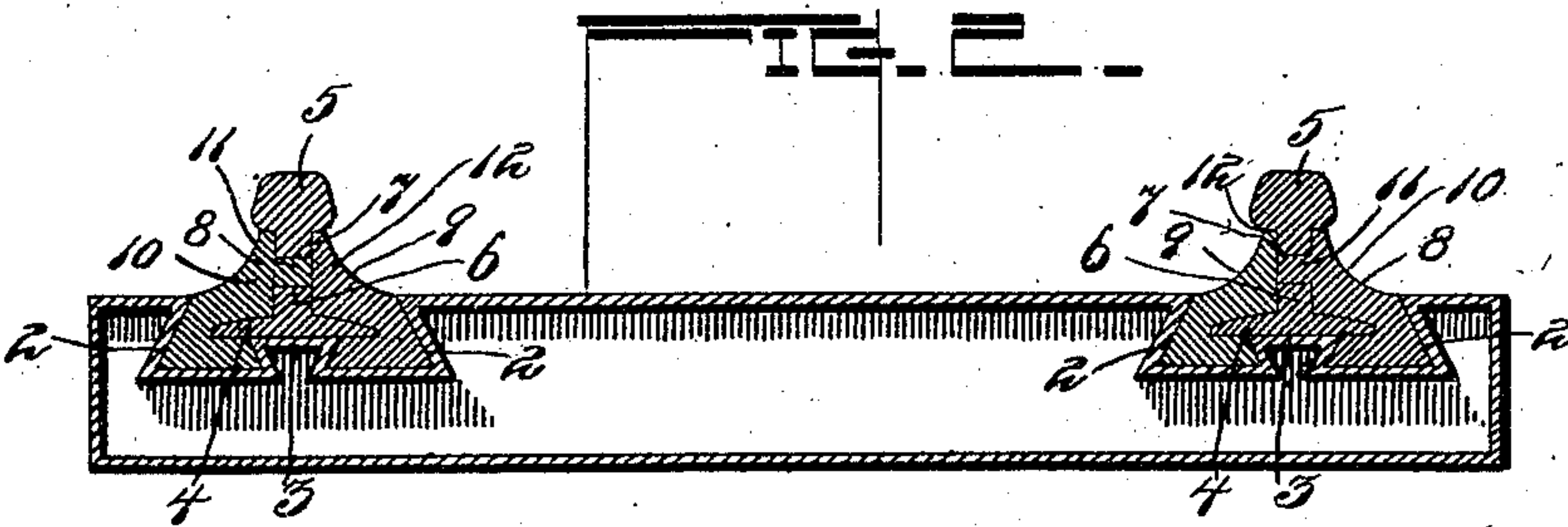
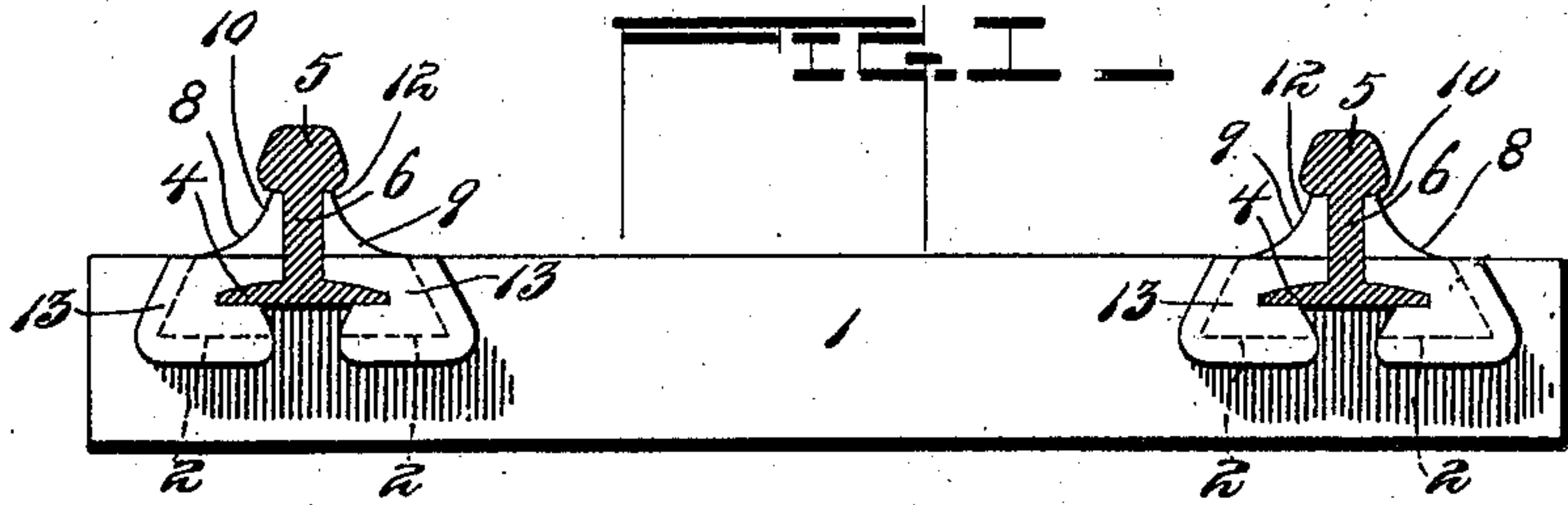


(No Model.)

J. M. ROMBERGER.
RAILROAD TIE.

No. 577,176.

Patented Feb. 16, 1897.



WITNESSES

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RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 577,176, dated February 16, 1897.

Application filed October 29, 1896. Serial No. 610,425. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. ROMBERGER, a citizen of the United States, residing at Leib, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in 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 improvements in metallic railroad-ties, the object of the same being to provide a hollow metallic tie provided with means whereby the rails may be securely fastened thereto without the use of spikes, and whereby the abutting ends of two adjacent rails may be held securely together without the use of a fish-plate.

The invention consists of a hollow metallic tie having dovetailed grooves in its upper surface, one adjacent to each end thereof, an inverted dovetailed pillar or tongue located centrally of each of said grooves, and securing-blocks arranged in pairs, the members of each pair fitting within the dovetailed grooves in said tie, embracing the base and web of the rail, one of them provided with laterally-extending pins or projections which are adapted to be passed through corresponding openings in the adjacent ends of the two rails.

The invention also consists in other details of construction and combinations of parts, which will be hereinafter more fully described and claimed.

In the drawings forming part of this specification, Figure 1 represents a side elevation of my improved tie, showing the rails secured thereto in section and the outer ends of the clamping-blocks for said rails. Fig. 2 is a longitudinal section through the same. Fig. 3 is a detail perspective view of one of the clamping-blocks detached. Fig. 4 is a similar view of the other clamping-block; and Fig. 5 is a similar view of the ends of two adjacent rails, showing the clamping-blocks with the pins or projections thereon passing through the slots or openings in said rails. Fig. 6 is an elevation, partly in section, of one end of the tie, showing the securing-spring for the clamping-blocks.

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

The tie 1 is constructed of sheet metal or metallic plates and has formed in its top surface at each end dovetailed grooves 2 2, each having a central inverted dovetailed pillar or tongue 3 therein. Upon the pillar 3 rests the base 4 of the rail 5, which is of ordinary construction, except that the outer ends of the web 6 thereof may be formed with slots or perforations 7 7. The said rails are held securely in place by means of clamping-blocks 8 9, the block 8 having a dovetailed lower end or base which is adapted to fit within the groove 2 between the outer edge thereof and the pillar or tongue 3 therein. It is also formed with an upwardly-extending portion 10, which lies in close contact with the web of the rail and is formed with laterally-extending projections 11 11, which are adapted to fit in the openings 7 7 in the web 6. The other clamping-block 9 is formed with a similarly-shaped base which fits within the opposite side of the groove 2 and has a corresponding upwardly-extending portion 12, which lies in close contact with the opposite side of the web 6.

The outer ends of each of the clamping-blocks 8 and 9 are formed with lips or flanges 13 13, which bear against the sides of the tie 1 and prevent the longitudinal movement thereof in one direction. A suitable spring may also be provided for preventing the accidental detachment of the clamping-blocks in the opposite directions. This may consist of an ordinary leaf-spring 14, which is secured to the side of the tie 1 opposite the flange 13 and is adapted to fit within a notch or recess 15 in said clamping-block 9.

It will be understood, of course, that the clamping-block 8 will be employed only upon those ties upon which the ends of two adjacent rails meet. At all other points the blocks on both sides of the rail will be like that described as being upon the inner side thereof and numbered 9.

In applying the rail the clamping-blocks 8 and 9 are placed upon each side of the web thereof and are afterward slid into the dovetailed groove in the tie 1. When the block 8, having the projections 11 11 thereon, is employed, the same is passed around the webs

of the two adjacent rails, and the same are slid into their seats in the manner heretofore described. The block 9 is not inserted until afterward.

5 The device is extremely simple in construction and effective in operation. By the use of the same securing-spikes are dispensed with as well as the fish-plates at the abutting ends of two adjacent rails.

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

1. A metallic railroad-tie having dovetailed grooves in its top surface adjacent to its outer ends, and an inverted dovetailed pillar located centrally of each of said grooves, in combination with a rail adapted to rest upon said pillars, and clamping-blocks adapted to slide into said grooves on each side of said rail, substantially as and for the purpose described.

2. A metallic railroad-tie having dovetailed grooves in its top surface adjacent to its outer ends, and an inverted dovetailed pillar located centrally of each of said grooves, in combination with a rail adapted to rest upon said pillars, and clamping-blocks having dovetailed lower ends adapted to fit within said grooves on opposite sides of said pillars and provided with upwardly-extending portions adapted to embrace the web of said rail and with flanges upon their outer ends forming stops for limiting the inward movement thereof, substantially as and for the purpose described.

3. A metallic railroad-tie having dovetailed grooves in its top surface adjacent to its outer ends, and an inverted dovetailed pillar located centrally of each of said grooves, in combination with a rail adapted to rest upon said pillars, and clamping-blocks having dovetailed lower ends adapted to fit within said grooves on opposite sides of said pillars and provided with upwardly-extending portions adapted to embrace the web of said rail and with flanges upon their outer ends forming stops for limiting the inward movement thereof, and a spring-stop for preventing the rearward movement of said clamping-blocks when they have once been seated, substantially as and for the purpose described.

50 4. A railroad-tie having a dovetailed groove in its upper surface, and an inverted dovetailed pillar located centrally of said groove, in combination with the abutting ends of

two adjacent rails each having slots or openings in the outer ends of the webs thereof, and a pair of clamping-blocks having dovetailed bases adapted to fit within said groove on opposite sides of said pillar, each provided with an upwardly-extending portion and upon one of which are formed laterally-extending pins or projections adapted to pass through slots or openings in said rails, substantially as and for the purpose described.

5. A railroad-tie having a dovetailed groove in its upper surface, and an inverted dovetailed pillar located centrally of said groove, in combination with the abutting ends of two adjacent rails each having slots or openings in the outer ends of the webs thereof, a pair of clamping-blocks having dovetailed bases adapted to fit within said groove on opposite sides of said pillar, each provided with an upwardly-extending portion and upon one of which are formed laterally-extending pins or projections adapted to pass through the slots or openings in said rails, both provided with flanges upon their outer ends for limiting their inward movement, and means for preventing the outward movement thereof when they have once been seated, substantially as and for the purpose described.

6. A railroad-tie having a dovetailed groove in its upper surface, and an inverted dovetailed pillar located centrally of said groove, in combination with the abutting ends of two adjacent rails, each having slots or openings in the outer ends of the webs thereof, a pair of clamping-blocks having dovetailed bases adapted to fit within said groove on opposite sides of said pillar, each provided with an upwardly-extending portion and upon one of which are formed laterally-extending pins or projections adapted to pass through the openings or slots in said rails, the other of said blocks having notches or recesses therein, and a spring secured to said tie adapted to engage said notch or recess, substantially as and for the purpose described.

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

JAMES M. ROMBERGER.

Witnesses:

FREDERICK WILLIER,
W. HENRY RABUCK.