

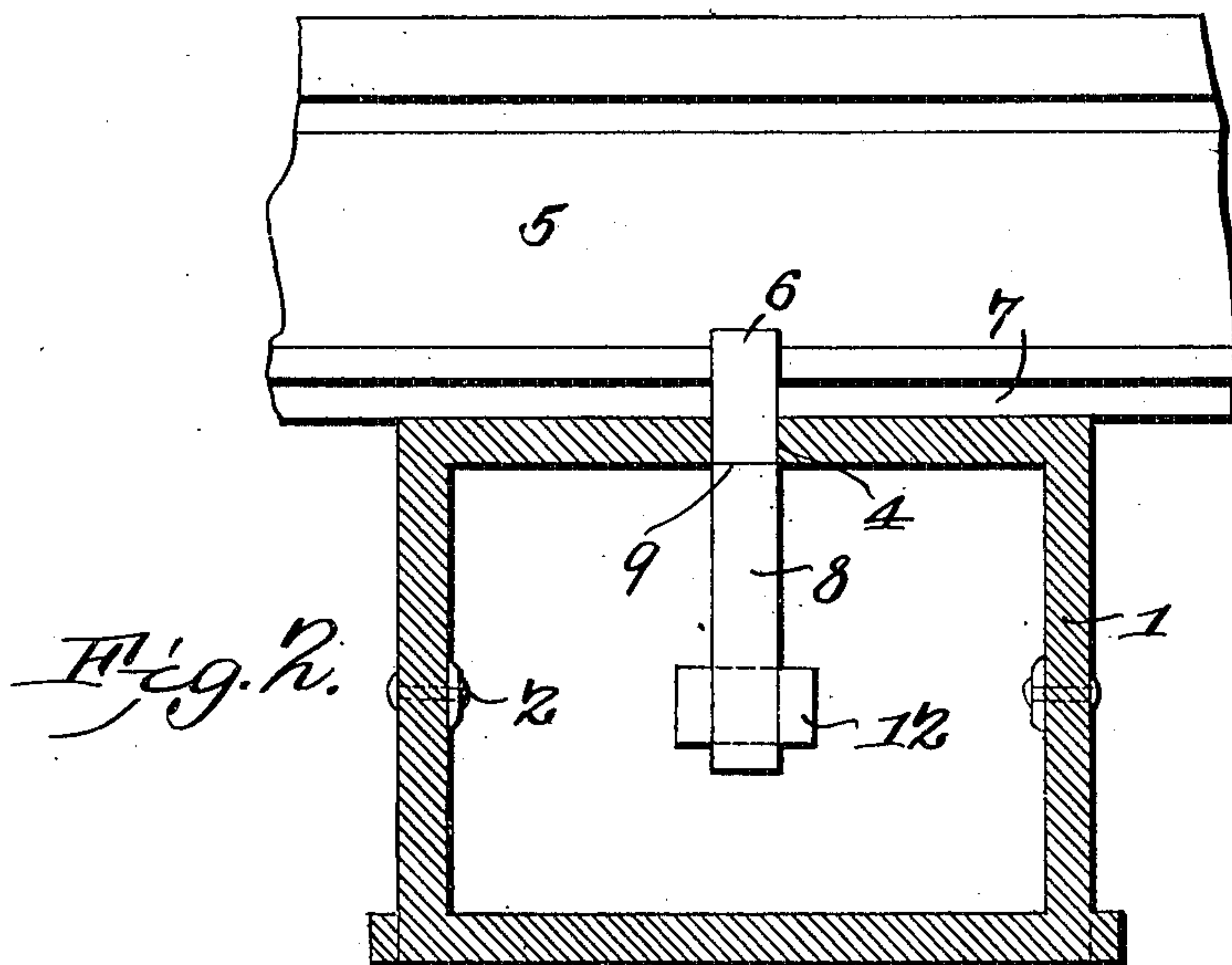
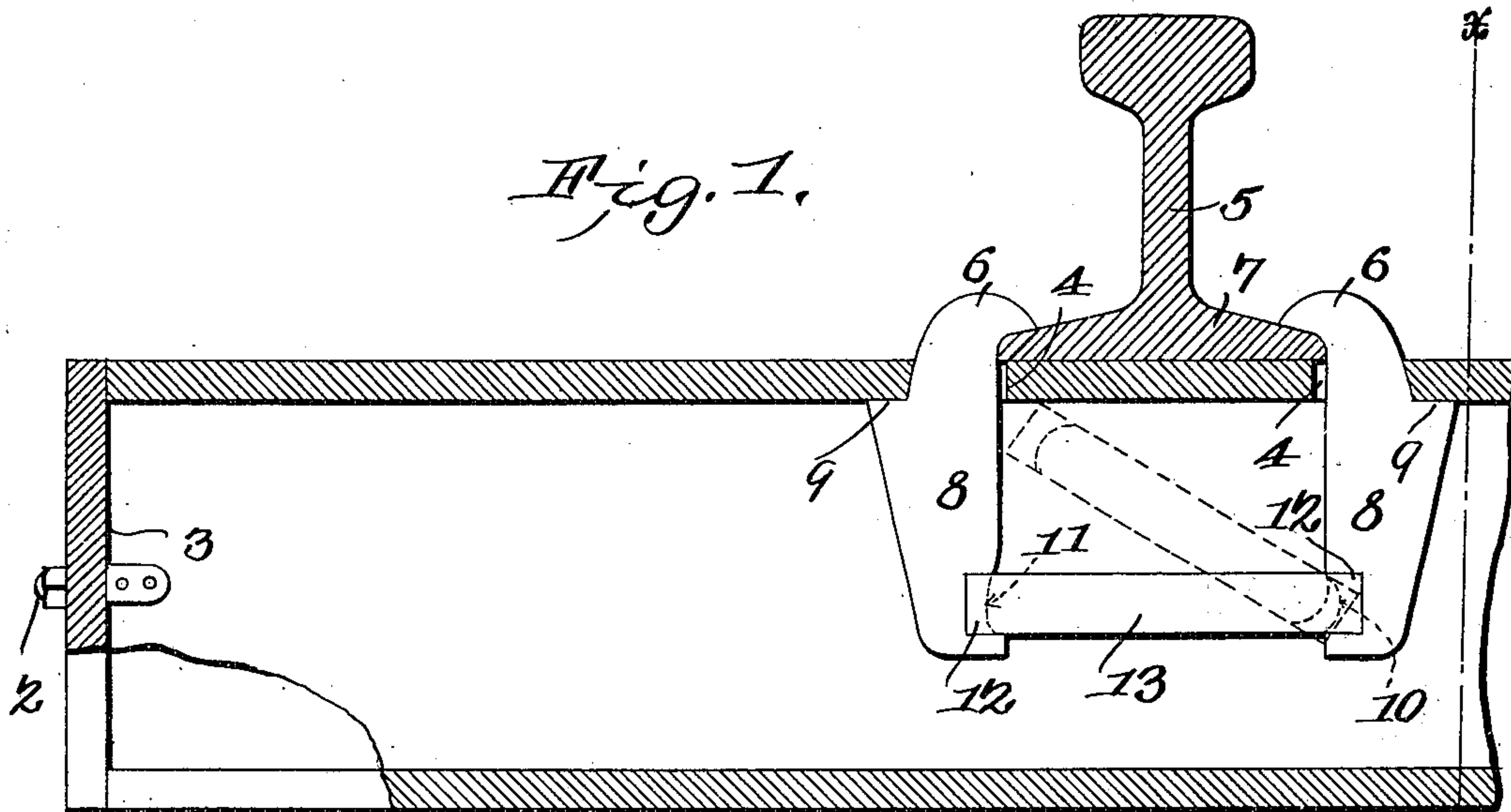
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PATENTED JULY 10, 1906.

E. W. & E. E. BRIMMER.

RAIL FASTENER.

APPLICATION FILED MAR. 2, 1906.



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EDGAR W. BRIMMER AND ELMER E. BRIMMER, OF NESSEN CITY,
MICHIGAN.

RAIL-FASTENER.

No. 825,636.

Specification of Letters Patent.

Patented July 10, 1906.

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To all whom it may concern:

Be it known that we, EDGAR W. BRIMMER and ELMER E. BRIMMER, citizens of the United States, residing at Nessen City, in the county of Benzie and State of Michigan, have invented a new and useful Rail-Fastener, of which the following is a specification.

This invention relates to rail-fasteners; and its object is to provide a simple, durable, and compact device of this character adapted for use in connection with metallic ties.

A still further object is to provide a fastener which will tightly clamp on the base of a rail and hold it without the utilization of bolts or other similar securing means.

With the above and other objects in view the invention consists of a hollow tie having openings in its upper face between which is adapted to be placed the base of a rail. Projecting through the openings and overlapping the base-flanges of the rail are jaws formed at one end of blocks which hang within the tie and are spaced apart and engaged by a bar of peculiar formation.

The invention also consists of certain other novel features of construction and combinations of parts, which will be hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings, Figure 1 is a longitudinal section through a portion of a tie having a rail thereon, the rail-fastening means being shown in elevation. Fig. 2 is a section on line *xx*, Fig. 1; and Fig. 3 is a detail view of a tool employed for locking the fastening means upon the rail.

Referring to the figures by numerals of reference, 1 is a preferably metallic tie having threaded studs 2, extending from its ends and projecting through end plates 3, which serve to close the tie and prevent the admission of dirt, moisture, &c. Apertures 4 are formed in the top of the tie and are placed apart a distance substantially equal to the width of the base of a rail 5. Projecting through these apertures are hooked jaws 6, which overlap the base-flanges 7 of rail 5 and each of which is formed at one end of a block 8, which hangs within the tie and has a shoulder 9, adapted to abut thereagainst and limit the swinging movement of the jaws. The adjoining faces of the blocks 8 are recessed adjacent their lower ends, as shown at 10 and 11. The wall of

recess 10 is regularly curved, whereas the inner face of the other block 8 gradually merges into the recess 11. These recesses are adapted to receive the forked ends 12 of a cross-bar 13. The length of this bar is such that when its two ends are seated within recesses 10 and 11 the jaws 6 will be tightly clamped upon the base-flanges 7.

In using the fastener herein described the end plate 3 is removed, and after a rail has been properly positioned upon the tie the jaws 6 are inserted through the apertures 4 and in engagement with the base-flanges 7. The cross-bar 13 is then inserted in an inclined position, as shown by dotted lines in Fig. 1, with one end seated within the recess 10. A forked lever 14 is then inserted in the end of the tie until its forked end 15 embraces one of the blocks 8 and overlaps the upper end of the bar 13. By pulling upward on the handle 16 of the lever the end of the tie will act as a fulcrum, or, if desired, a block may be inserted into the tie above the lever. By operating the lever in this manner the bar 13 will be forced downward until its upper end becomes seated in the recess 11, whereupon the two jaws 6 will be held tightly clamped upon the base-flanges 7 and cannot be disengaged from their positions unless the bar 13 is forced upward out of its proper position. It is of course obvious that this bar will not become displaced through any vibration, because it is naturally maintained in the recesses 10 and 11 by force of gravity.

What is claimed is—

1. The combination with an apertured tie; of clamping members extending through the apertures and not connected to the tie and detached spreading means spaced from the tie and interposed between the said members for binding the same upon a rail.

2. The combination with a tie; of clamping members fulcrumed thereupon and not connected thereto and detached means spaced from the tie and interposed between the said members for swinging them upon their fulcrums to bind upon a rail.

3. The combination with an apertured tie; of clamping members extending through the apertures and not attached to the tie, blocks integral with said members and within the tie, and a detached spreading device interposed between the blocks and spaced from the tie.

4. The combination with an apertured tie; of clamping members extending through the apertures and not attached to the tie, recessed blocks integral with said members and within the tie, and a spreading device adapted to be seated within the recesses to bind the members upon a rail.
 5. The combination with a tie; of clamping members fulcrumed thereon, blocks integral with and extending from the clamping members, said clamping members and blocks being unattached to the tie and a detached spreading device interposed between the blocks and spaced from the tie.
 6. The combination with a tie, of clamping members fulcrumed thereon, recessed blocks integral with and extending from the clamping members, said blocks and members being unattached to the tie and a spreading device interposed between and adapted to be seated within the recesses.
 7. The combination with a tie; of clamping members fulcrumed thereon, blocks integral with the clamping members, said blocks and members being unattached to the tie, a spreading device interposed between the blocks, and insertible through one end of the tie and means for limiting the movement of said device upon the blocks.
 8. The combination with a tie; of clamping-jaws fulcrumed within the tie, recessed shouldered blocks integral with the jaws, said blocks and jaws being unattached to the tie and a spreading device insertible through one end of the tie and interposed between and adapted to be seated within the recesses.
 9. The combination with a tie, of clamping members fulcrumed thereon, recessed blocks integral with said members, and a spreading-bar interposed between and adapted to be seated within the recesses, the ends of said bar embracing the blocks.
 10. The combination with an apertured tie; of clamping-jaws extending through and fulcrumed upon the walls of the apertures, recessed blocks integral with and depending from the jaws, and a spreading-bar interposed between and adapted to be seated within the recesses.
 11. The combination with an apertured tie; of clamping-jaws extending through and fulcrumed upon the walls of the apertures, shouldered and recessed blocks integral with and depending from the jaws, and a spreading-bar interposed between and adapted to be seated within the recesses, the ends of said bar embracing the blocks.
 12. A fastener for rails comprising recessed blocks having jaws at one end, and a forked spreading-bar adapted to be seated at its ends within the recesses.
 13. A fastener for rails comprising recessed blocks having clamping-jaws at one end, shoulders upon the blocks, a spacing-bar adapted to be inserted between and to be seated within the recesses, the ends of said bar being forked to embrace the blocks.
 14. The combination with a hollow apertured tie having detachable closures upon its ends; of hooked jaws extending through the apertures, shouldered blocks within the tie and depending from the jaws, said shoulders contacting with the tie, the jaws and blocks being unattached to the tie, and a spreading-bar insertible through one end of the tie and interposed between and engaging the blocks.
- In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.
- EDGAR W. BRIMMER.
ELMER E. BRIMMER.
- Witnesses:
ARTHUR BOLTON,
CARRIUS H. MIX.