

No. 741,496.

PATENTED OCT. 13, 1903

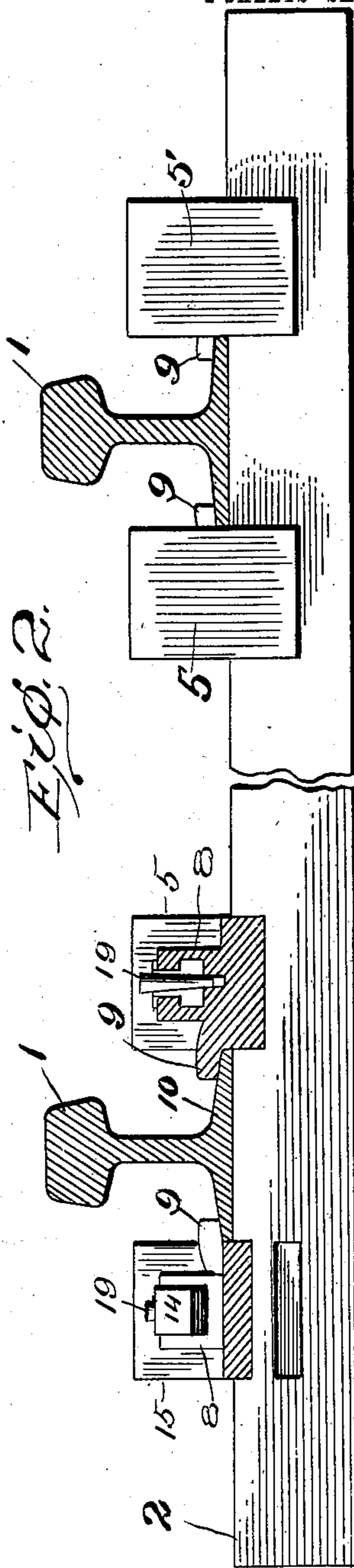
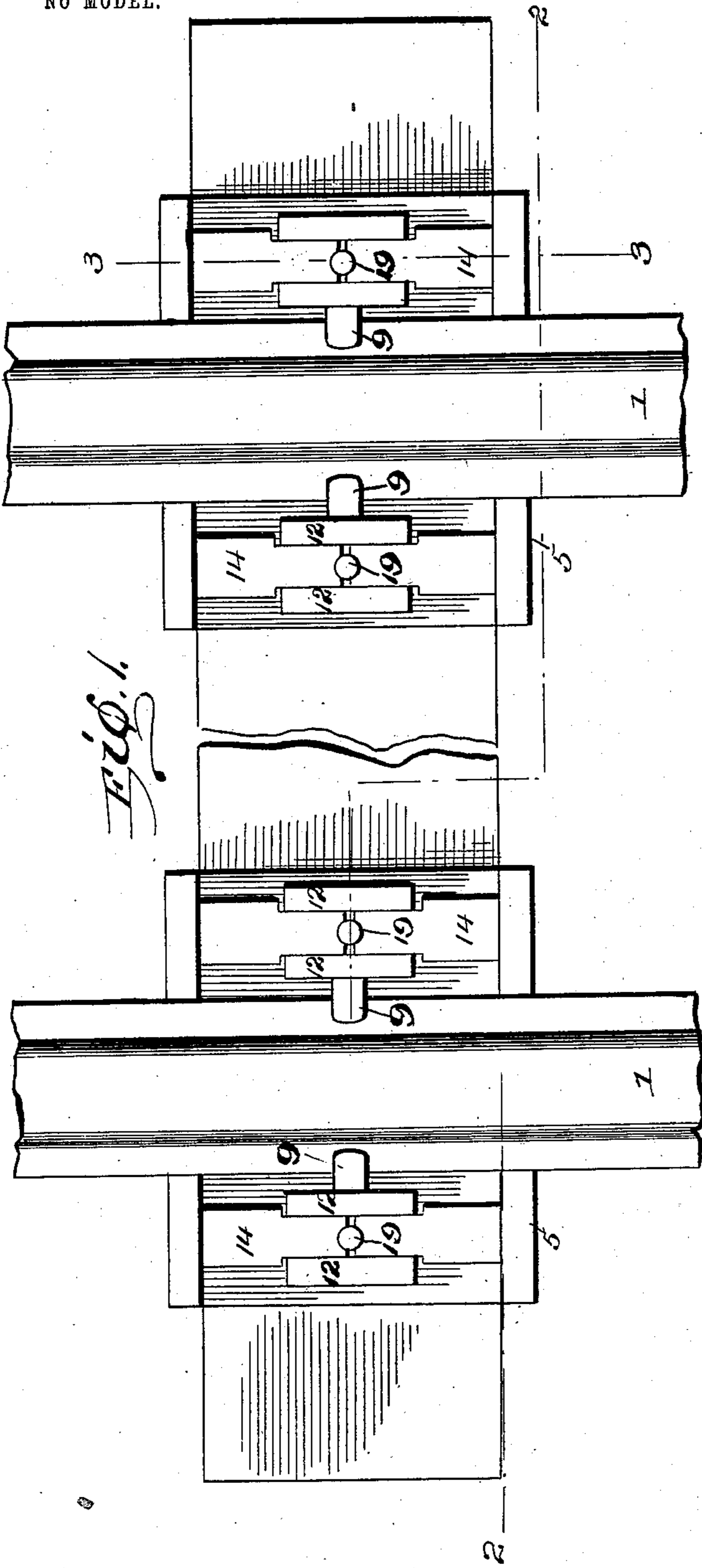
T. W. HUGHES.

RAIL FASTENING AND CROSS TIE.

APPLICATION FILED APR. 30, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

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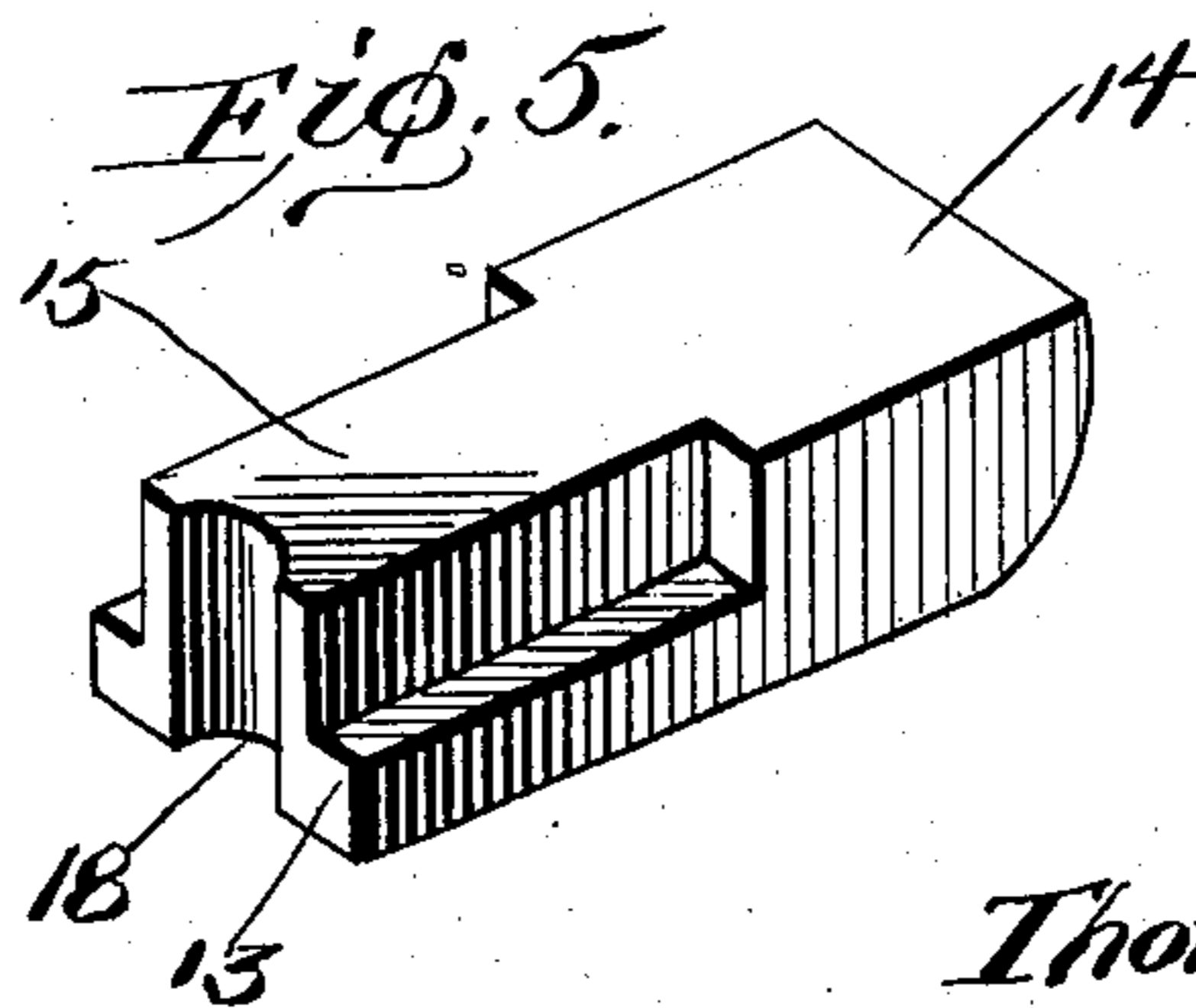
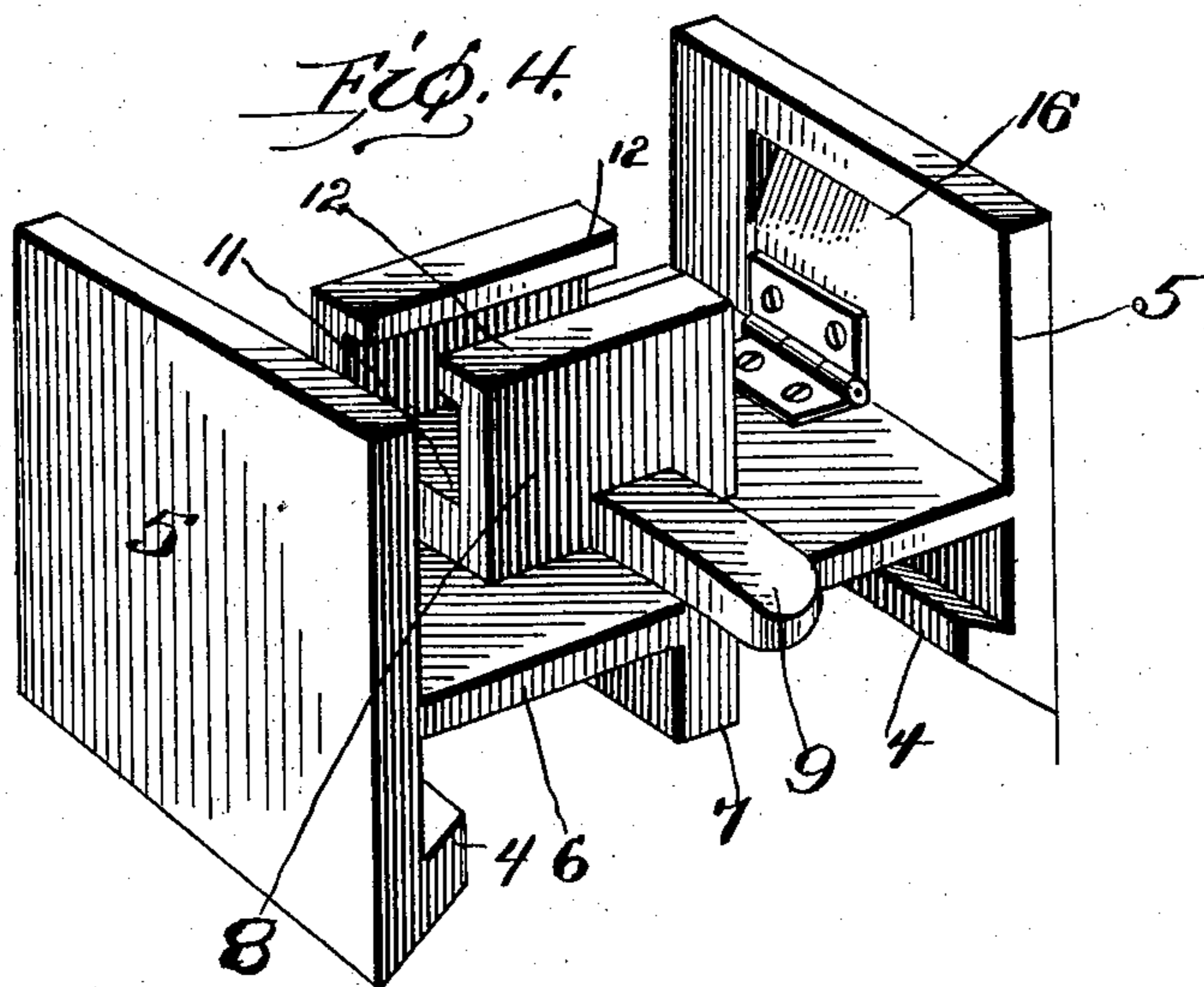
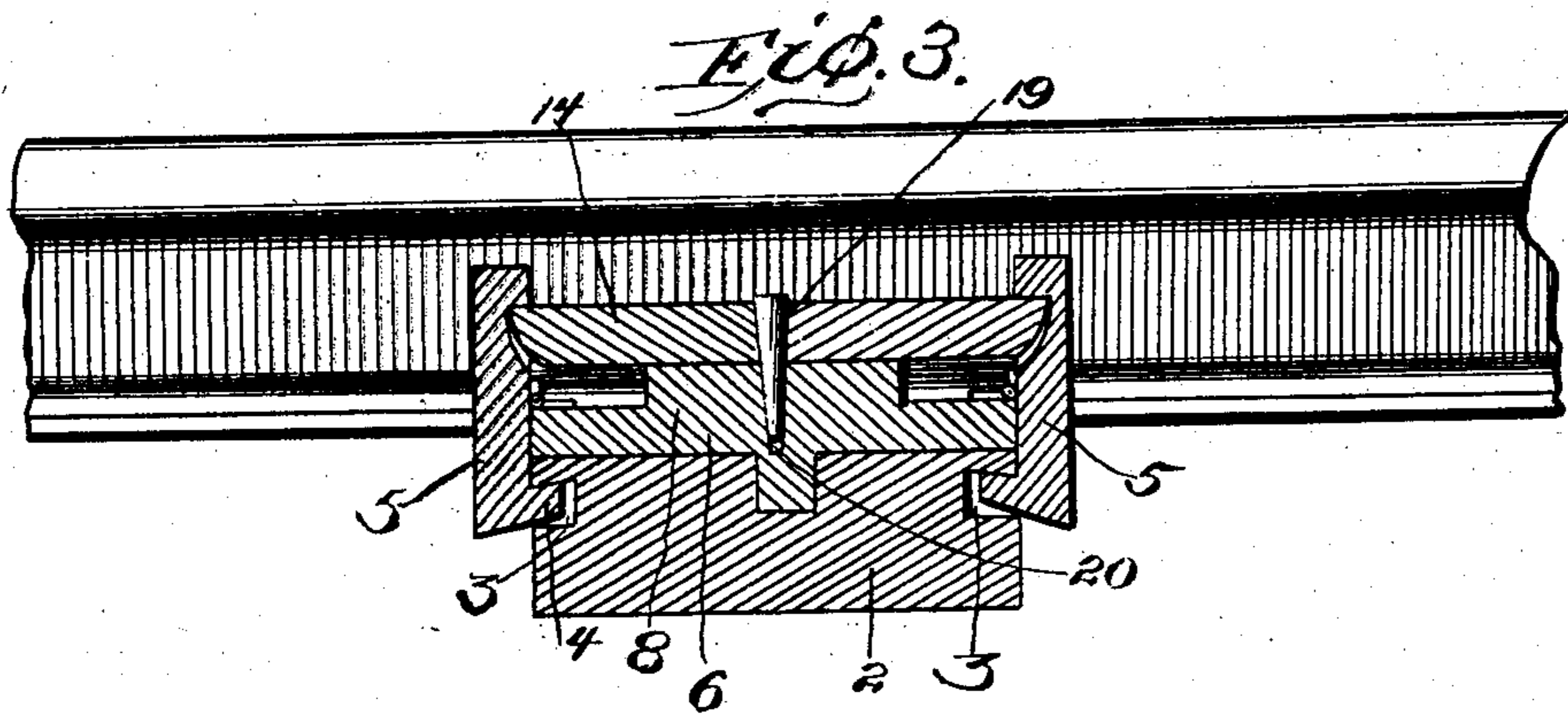
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UNITED STATES PATENT OFFICE.

THOMAS WESLEY HUGHES, OF BLACKFORD, KENTUCKY.

RAIL-FASTENING AND CROSS-TIE.

SPECIFICATION forming part of Letters Patent No. 741,496, dated October 13, 1903.

Application filed April 30, 1903. Serial No. 155,071. (No model.)

To all whom it may concern:

Be it known that I, THOMAS WESLEY HUGHES, a citizen of the United States, residing at Blackford, in the county of Webster and State of Kentucky, have invented certain new and useful Improvements in Rail-Fastenings and Cross-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 cross-tie construction and cooperating parts adapted to connect the cross-tie and rail; and it consists of certain novel features of combination and construction of parts, the preferred mechanical expression whereof will be hereinafter clearly set forth, and pointed out in the claims, my prime object being to provide a rail-securing device which will be found to be reliably efficient in connecting the track-rail at any desired point with its supporting cross-tie.

A further object of my invention is to provide means which while strong and durable in character will be of comparatively simple construction, whereby the rail may be connected or disconnected with its supporting tie, as desired.

Other objects and advantages will be hereinafter made clearly apparent, reference being had to the accompanying drawings, which are made a part of this application, and in which—

Figure 1 shows a top plan view of parts of two track-rails and securing devices for connecting the rails to their supporting-tie. Fig. 2 is a sectional view of Fig. 1 on line 2 2. Fig. 3 is a sectional view of Fig. 1 on line 3 3. Fig. 4 is a perspective detail view showing a portion of one of my rail-securing attachments separated from the cross-tie, while Fig. 5 is a perspective detail view of one of the locking devices, a pair of which is employed to cooperate with the device shown in Fig. 4.

In order to conveniently designate all the various details or elements of my invention and cooperating accessories, numerals will be employed, the same numeral applying to a similar part throughout the several views.

Referring to the numerals on the drawings,

1 indicates a section of a track-rail provided at suitable intervals with supports or cross-ties 2, both of said parts being of the usual or any preferred construction and of any suitable material. The cross-tie is provided upon each side of the track-rail with recesses 3, which are designed to receive the inwardly-directed flange or lip 4, carried by the lower end and inner edge of the clamping members 5, which latter are hinged or otherwise pivotally secured to the anchoring member 6, of proper length to be coincident in extent with the width of the cross-tie, as more clearly shown in Fig. 3.

To more securely anchor the member 6 in its operative position, I form upon the lower side thereof a suitable rib 7, extending longitudinally with the tie and adapted to fit a recess formed in a contiguous part thereof, as more clearly shown in Figs. 3 and 4. I also form the anchoring member 6 so that it will be provided upon its upper side with the preferably integral seat 8 and the overreaching lug or finger 9, the latter being designed to engage a contiguous part of the base 10 of the track-rail. The seat 8 is provided with a slotted opening 11, formed with overhanging lips 12, said slot being adapted to receive the base-section 13 of the locking-detent 14, a suitable rib-section 15 being carried by the base 13 and adapted to fit between the lips 12 of said seat, whereby said base-section may move longitudinally within the seat 11, but cannot move in any other manner.

The outer end of the detent 14 is beveled upon its under side, and thus adapted to be received by the recess 16, provided in the inner face of the clamping members or jaws 5. It will therefore be obvious that two of the detents 14 are provided for the seat 11, each detent being adapted at its outer free end to enter its respective recess 16, and it therefore becomes desirable to provide suitable means for forcing the detents outward into engagement with the locking-jaws or clamping member 5, and with this purpose in view I provide on the inner end of each of the detents 14 a semicircular recess 18, adapted to receive a locking-lug 19, which is somewhat conical or tapered in character, as more clearly shown in Fig. 3, the lower end of said lug being re-

ceived by a suitable aperture 20, provided centrally in the member 6 and in the bottom of the seat 8. It therefore follows that when the locking-lug 19 is driven home the detents 14 will each be forced outward, causing each detent to enter its free end into its respective recess 16, thereby forcing the upper ends of the clamping-jaws 5 outward and incidentally moving the lower ends thereof into engagement with a contiguous part of the cross-tie and causing the flanges or extensions 4 to enter the recesses 3, and thereby bringing the finger or lug 9 tightly down upon and in engagement with the base of the rail and in this way holding said rail securely anchored in its adjusted position.

In some instances a suitable recess may be formed in the top of the tie adapted to receive the entire anchoring-section 6 in addition to the rib carried by the lower side thereof, the object being to more securely lock said anchoring-section in its operative position, and thereby relieve the strain placed upon the clamping members 5.

While I have described the preferred combination and construction of parts of my invention, it will be understood that various changes and modifications may be adopted without departing from the spirit and scope of my invention, and I therefore wish to comprehend all substitutes and equivalents of the construction herein described and illustrated.

From the foregoing description, considered in connection with the accompanying drawings, it will therefore be apparent that the rails may be readily disengaged by simply withdrawing the pin or plug 19, when the detents 14 may be drawn toward each other and disengaged from their respective recesses in the clamping member 5, thus enabling the upper ends of said clamping members to be drawn toward each other sufficiently to disengage the flanges 4 from the recesses in the side of the rail and permit the anchoring member 6 to be bodily raised out of the way, carrying with it the integral finger 9, and thereby freeing the rail and permitting it to be readily removed from its position.

In some instances the lower end of the plug or locking-pin 19 may be properly shaped and threaded to enter a threaded seat in the base-section 6 or in the seat 8, as the case may be, while the upper end of said plug may be shaped to cooperate with a wrench, thus enabling the plug to be readily turned home in its locked position or reversely rotated and removed.

Believing that the advantages and manner of applying my invention to use have thus

been made clearly apparent, further description is deemed unnecessary.

What I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described rail-fastening, comprising the combination with a tie having suitable recesses formed therein upon each side of the rail, of an anchoring-section 6 having the hinged clamping members 5 provided with inwardly-directed flanges at their lower ends; suitable locking-detents cooperating with the upper ends of said clamping members and suitable means to force said detents outward into engagement therewith and additional means carried by said anchoring-section adapted to engage and secure a contiguous part of the base of the rail all substantially as specified and for the purpose set forth.

2. The herein-described rail-fastening, comprising the combination with a tie having suitable recesses formed therein, of an anchoring-section 6, clamping members 5 hinged thereto, inwardly-directed flanges at the lower ends of said members, detents slidably mounted upon said anchoring-section and means to force said detents into engagement with the upper ends of said clamping members, means carried by said anchoring-section to hold said detents in place and additional means carried by said section to engage and secure a contiguous portion of the rail, substantially as set forth.

3. In a rail-fastening, the combination with a tie having suitable recesses and slots therein, of an anchoring-section 6 having a seat upon one side and a rib upon the opposite side and also having a finger 9 extending beyond one edge thereof, clamping members hinged to each end of said section, inwardly-directed flanges at the lower edge of said clamping members, detents slidably mounted in said seats and a lug 19 adapted to force said detents into engagement with the upper ends of the clamping members, as and for the purpose set forth.

4. In a rail-fastening, the combination with a tie having slots therein, of an anchoring-section 6, clamping members pivotally secured to said anchoring-section, inwardly-directed flanges at the lower edges of said members and means to force said flanges into the sides of said tie, as and for the purpose set forth.

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

THOMAS WESLEY HUGHES.

Witnesses:

W. D. CROWELL,
A. N. STATION.