J. KICH.

METALLIC TIE AND RAIL FASTENER.

APPLICATION FILED APR. 29, 1911.

997,139. Patented July 4, 1911.

Fig. 1.

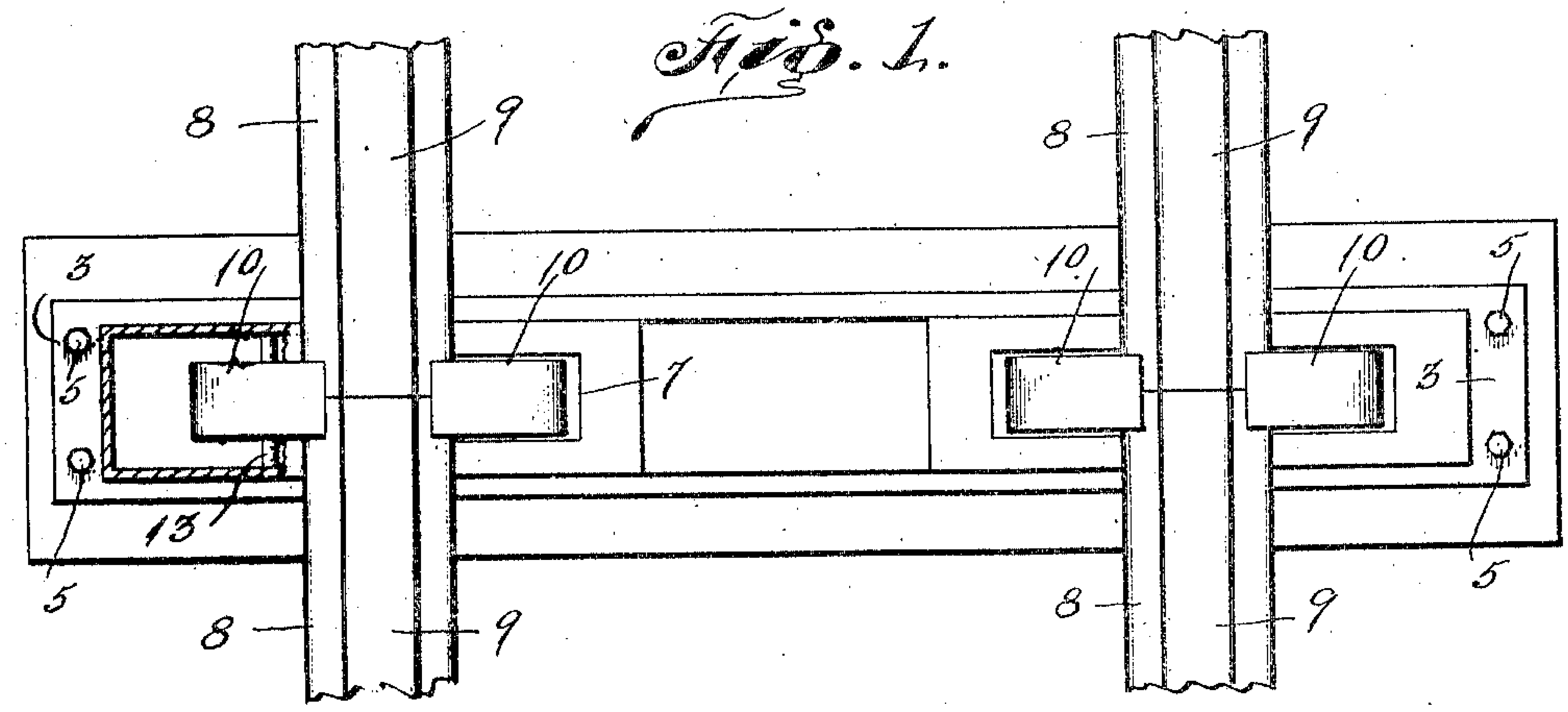


Fig. 2.

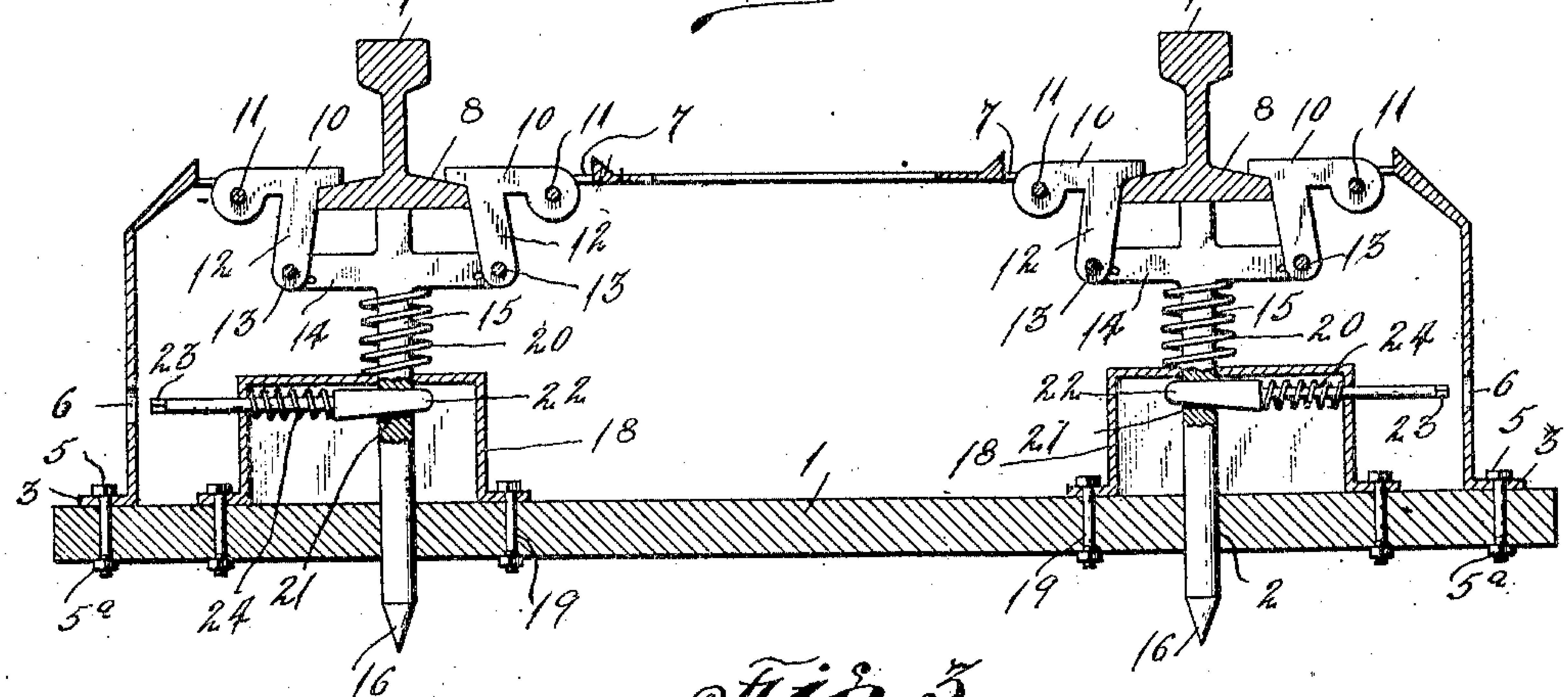
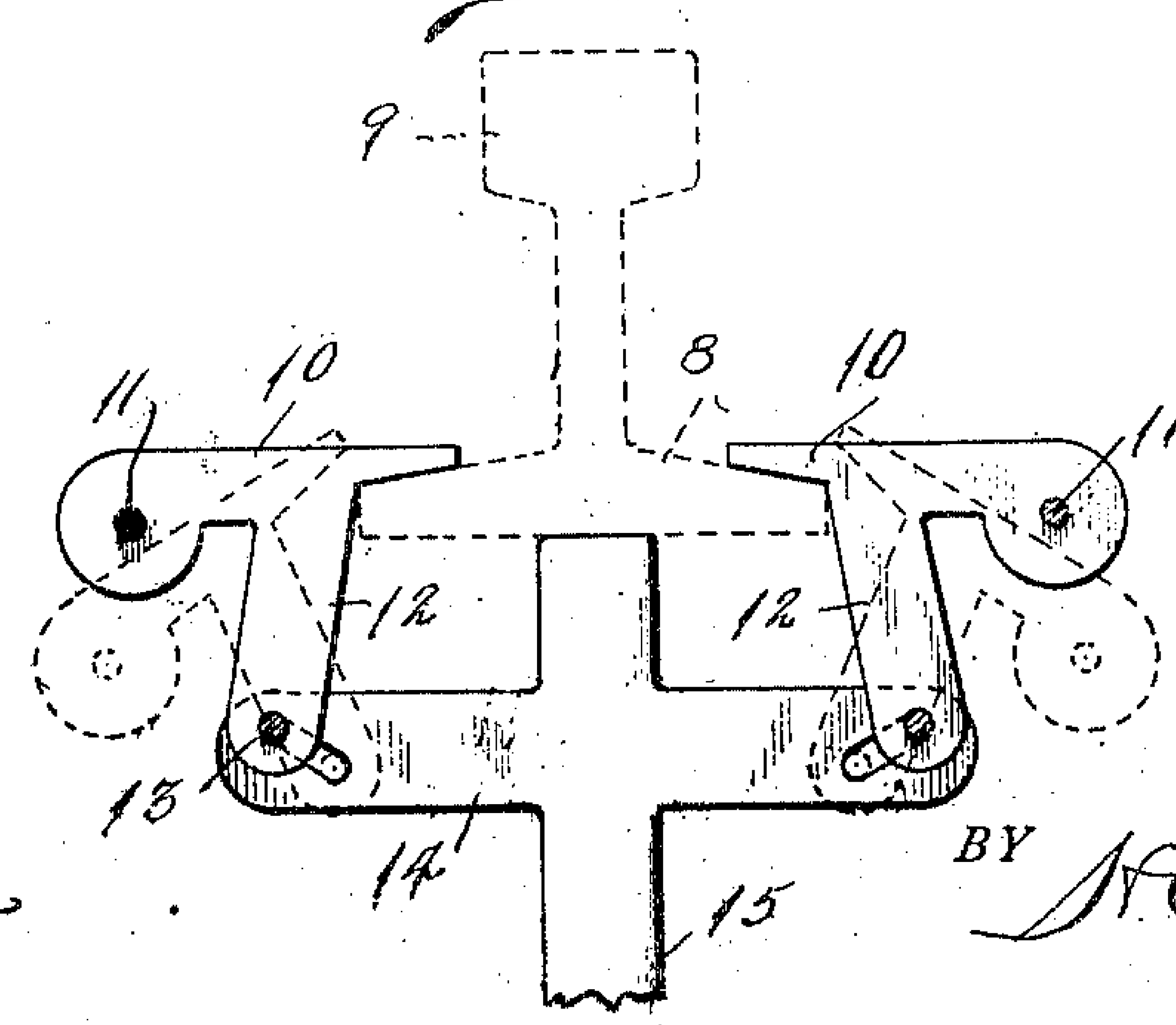


Fig. 3.



WITNESSES:

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JULIAN KICH, OF LYNDORA, PENNSYLVANIA.

METALLIC TIE AND RAIL-FASTENER.

997,139. Specification of Letters Patent. Patented July 4, 1911.

Application filed April 29, 1911. Serial No. 624,042.

To all whom it may concern:

Be it known that I, JULIAN KICH, a subject of the Emperor of Austria-Hungary, residing at Lyndora, in the county of Butler and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Ties and Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to metallic ties and rail fasteners, and the objects of my invention are, first, to provide a strong and durable metallic tie for supporting the rails of a track; second, to furnish a tie with a novel rail fastener for positively retaining rails upon the tie; third, to obviate the necessity of using bolts, nuts and spikes for securing rails together and upon the tie, and fourth, to accomplish the above results by a mechanical construction that is highly efficient for the purposes for which it is intended.

With the above and other objects in view, the invention resides in the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing, wherein:—

Figure 1 is a plan of the tie and rail fastener, partly broken away and partly in section, Fig. 2 is a longitudinal sectional view of the same, and Fig. 3 is an enlarged elevation of a detached rail fastener.

The reference numeral 1 denotes an oblong flat foundation preferably made of concrete or other plastic material, said foundation having the top thereof provided with drain and guide openings 2.

Mounted upon the top of the foundation 1 are the lateral flanges 3 of a metallic tie 4, said flanges being secured to the foundation by bolts 5 and nuts 5ª. The outer end walls of the tie 4 are provided with openings 6, for a purpose that will presently appear, and the top of the tie 4 has oblong openings 7. The top of said tie is adapted to support the base flanges 8 of rails 9 and engaging said base flanges are clamping members 10 retained in the openings 7 of said tie by transverse pins 11, said pins loosely engaging under the top of the tie. The clamping members 10 have depending lugs 12 and these lugs are pivotally connected by pins 13 to the slotted arms 14 of a vertical pin 15. The upper end of the pin 15 is adapted to be engaged by the bottom of the rail 9 and the lower end of the pin is tapered, as at 16 and adapted to extend through an opening 17 provided therefor in the top of an inverted channel-shaped bar 18 secured to the foundation 1 by bolts and nuts or other fastening means 19. The pin 15 extends into the opening 2 and between the arms 14 and the top of the bar 18 is encircled by a coiled compression spring 20. The pin intermediate the ends thereof has a transverse opening 21 adapted to receive the tapered end 22 of a locking member 23 arranged within the bar 18, said member having the opposite end thereof protruding from said bar in proximity to the opening 6. The member 23 is supported by a coiled compression spring 24 adapted to normally hold the tapered end 22 thereof in the opening 21 of the pin 15.

A suitable instrument can be inserted in the opening 6 to grip the end of the member 23, whereby said member can be pulled outwardly to release the pin 15. The spring 20 is adapted to elevate the pin and swing the clamping members 10 to an open position to release the rail 9.

What I claim is:—

1. In a tie and rail fastener, the combination with rails, of a concrete foundation, a metallic hollow tie mounted upon said foundation and adapted to support said rails, the top of said tie having openings formed therein, clamping members loosely mounted in the openings of said tie and adapted to engage the base flanges of said rails, depending lugs carried by said members, slotted arms loosely connected to said lugs, pins supporting said arms and engaging the bottom of said rails, inverted channel-shaped bars arranged in said tie adjacent to the ends thereof and adapted to receive the lower ends of said pins, coiled compression springs encircling said pins between said bars and said arms, and spring pressed locking members arranged in said bars and adapted to engage in the lower ends of said pins, substantially as described.

2. In a tie and rail fastener, the combination with a flat concrete foundation provided with drain openings, and rails of a hollow metallic tie mounted upon said foundation and adapted to support said rails, said tie having the top thereof provided with openings, clamping members loosely mounted in said openings and adapt-

ed to engage the base flanges of said rails, slotted arms loosely connected to said members, pins supporting said arms, channel-shaped bars arranged in said tie adjacent to the ends thereof and adapted to receive the lower ends of said pins, compression springs encircling said pins between said bars and said arms, and means arranged in said bars and adapted to engage the lower ends of said pins to retain said pins in a lowered position, substantially as described.

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

JULIAN KICH.

Witnesses:
JAMES E. MARSHALL,
MAY FOSTER.