

No. 814,868.

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H. C. NUNN.
GUARD RAIL FASTENER.
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Fig. 1.

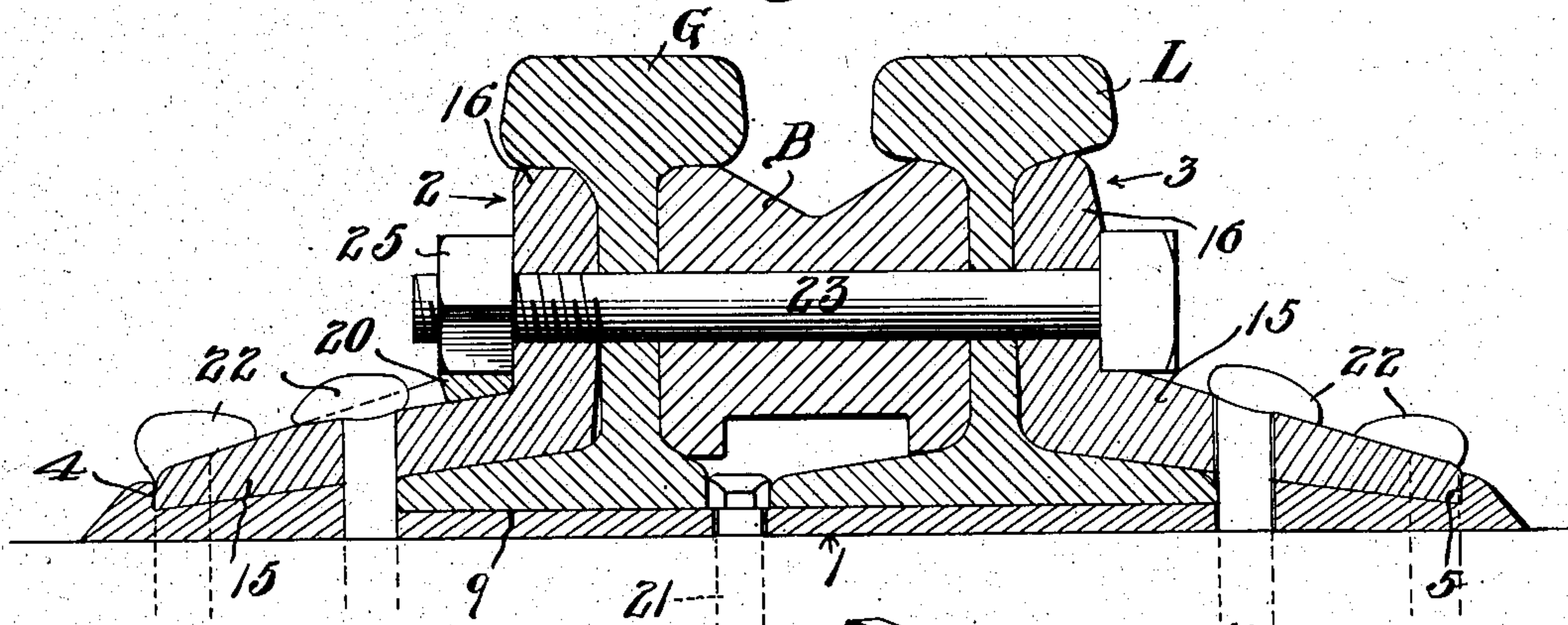


Fig. 2.

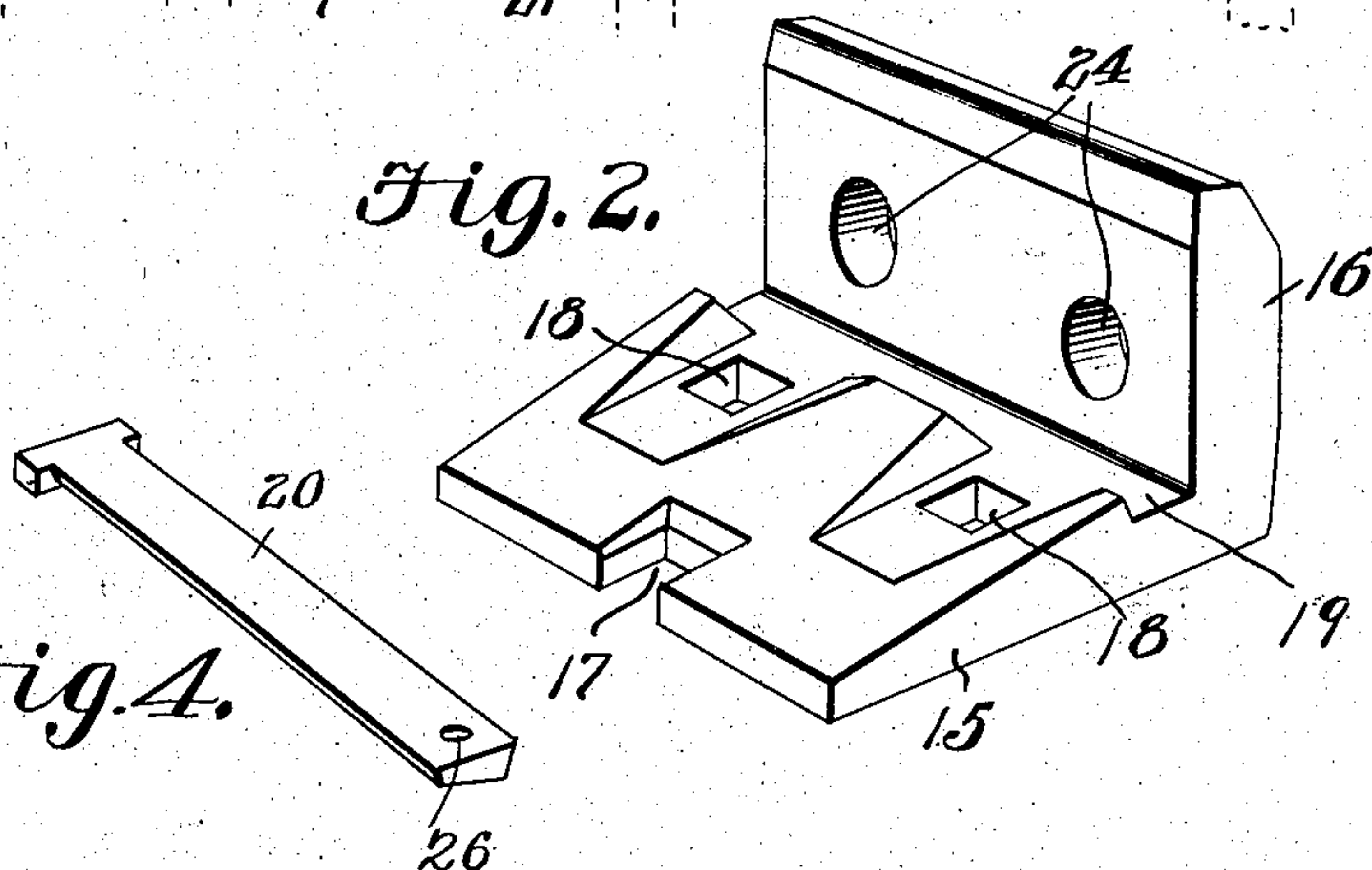
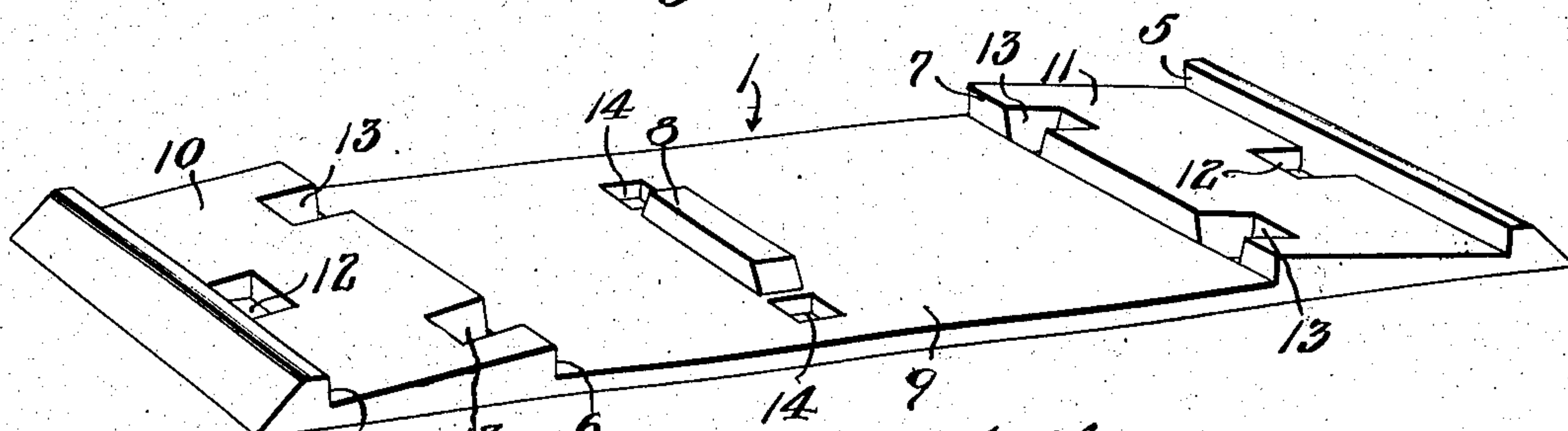


Fig. 4.

Fig. 3.



WITNESSES:

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GUARD-RAIL FASTENER.

No. 814,868.

Specification of Letters Patent.

Patented March 13, 1906.

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To all whom it may concern:

Be it known that I, HENRY C. NUNN, a citizen of the United States, residing at Canterbury, in the county of Mingo and State of West Virginia, have invented a new and useful Guard-Rail Fastener, of which the following is a specification.

This invention relates to guard-rail fasteners.

The object of the invention is in a positive, simple, and thoroughly effective manner to prevent the guard-rail from spreading relatively to the main-line rail or the wheels of a locomotive from climbing the frog - point, thereby to prevent accidents, frequently attended by loss of life, which result therefrom.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a guard-rail fastener, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts, Figure 1 is a view in transverse section through a guard-rail fastener constructed in accordance with the present invention. Fig. 2 is a perspective detail view of one of the cheek-plates of the fastener. Fig. 3 is a perspective detail view of the base-plate of the fastener. Fig. 4 is a perspective detail view of a key used for locking against accidental turning the nuts carried by the bolts that hold the members of the rail-fastener assembled.

Referring to the drawings, L designates a main-line rail, G a guard-rail, and B a spacing-block for holding the two rails appropriately distanced apart, and as these parts may be of the usual or any preferred construction further description thereof is deemed unnecessary. The present invention resides in a novel form of guard-rail fastener designed in a positive manner to preclude the possibility of any spreading of the guard-rail relatively to the main-line rail or any loosening of the holding means by which the parts are assembled. The fastener embodies a base-plate (designated generally 1) and two cheek-plates, (designated generally 2 and 3.) The base-plate is made, preferably, of cast metal and is formed with two terminal abutments or shoulders 4 and 5, two intermediate shoulders 6 and 7, and a lug or boss 8, that is arranged intermediate of the shoulders 6 and 7.

The body portion 9 of the plate between the shoulders 6 and 7 is preferably flat and of the same thickness throughout, while the upper sides of the cheek-plate supports 10 and 11 between the shoulders 4 and 6 and 5 and 7 are oppositely inclined to conform to the under sides of the cheek-plates, which latter in order to conform to the upper surface of the bases of the guard and line rails must be inclined relatively to those portions of the cheek-plates that engage with the webs of the rails. Each cheek-plate support adjacent to the shoulders 4 and 5 is provided with a spike-opening 12, and each shoulder 6 and 7 is provided with two spike-openings 13, while the body of the plate at each terminal of the boss is provided with two spike-openings 14. As will be readily understood, the base-plate is designed initially to be secured to the tie by spikes driven through the spike-openings 14, but the spikes that engage the remaining openings and that serve positively to hold the cheek-plates in position also serve further to assemble the base-plate with the tie.

Each cheek-plate is a counterpart of the other, with one slight exception, so that a description of one will serve for both. The cheek-plate comprises a foot 15 and a shoulder 16, that face of the shoulder which engages either with the web or the under side of the tread of the rail with which it coacts being appropriately shaped to contact closely therewith. The foot is provided in its outer edge with a spike-slot 17, adapted to register with the spike-opening 12 and with two spike-openings 18, designed to register with the spike-openings 13 of the base-plate, the spike-openings 18 being disposed below the plane of the upper surface of the foot in order to prevent any interference with the heads or nuts of the bolts that serve to hold the different parts of the fastener assembled. At the point of juncture of the foot and the shoulder the former is provided with a longitudinal seat 19, which is adapted to receive a locking-key 20, (shown in detail in Fig. 4,) that operates positively to prevent any turning of the nuts of the assembling-bolts, and this seat is the only feature that is not common to both of the cheek-plates.

In assembling the main-line rail and guard-rail with the fastener the base-plate 1 is first secured to the tie by spikes 21, that pass through the openings 14. The rails are then positioned, the outer edges of the bases thereof being in engagement with the shoulders 6

and 7, and their inner edges in engagement with the boss 8. The spacing-block B is then positioned between the two rails, and the cheek-plates are then adjusted relatively to the two rails and are firmly secured to the base-plate and the tie by spikes 22, that are driven through the openings 17 and 18 in the cheek-plates and openings 12 and 13 in the base-plate. It will be observed that when the cheek-plates are in position the outer edges of their feet bear directly against the shoulders 4 and 5, so that any lateral shifting of the cheek-plates relatively to the base-plate will be positively precluded, while by reason of the coaction between the bases of the rails with the shoulders 6 and 7 and boss 8 any lateral movement or shifting of the two rails will be positively precluded. After the parts have been thus assembled assembling-bolts 23 are passed through openings 24 in the cheek-plate and through appropriate openings in the webs of the rails and in the spacing-block, and nuts 25 are then seated upon the projecting terminals of the bolt and when properly tightened are held against loosening by the locking-key 20, as shown in Fig. 1.

As a matter of precaution in order to preclude any possibility of the locking-key 20 working loose it is provided in one end with an orifice 26 to receive a cotter-pin.

It will be seen from the foregoing description that although the improvements herein defined are simple in character they will be found thoroughly efficient for the purpose designed and may be adapted to railway-frogs already positioned without requiring any change whatever in their structural arrangement.

I claim—

1. A guard-rail fastener comprising a base-plate provided with terminal and intermedi-

ate abutments, and with a boss disposed intermediate of its ends, cheek-plates adapted to engage the terminal abutments, the intermediate abutments and boss being designed to be engaged by the sides of the bases of the guard and main-line rails.

2. A guard-rail fastener comprising a base-plate provided with terminal and intermediate abutments and with spike-openings adjacent to the abutments, and cheek-plates designed to engage the terminal abutments and having spike-openings to register with those of the base-plate.

3. A rail-guard fastener comprising a base-plate provided with terminal and intermediate abutments, and with spike-openings adjacent to the abutments, cheek-plates designed to engage the terminals of the abutments and having spike-openings to register with those of the base-plate, one of the cheek-plates being provided with a seat, and a nut-locking key adapted to engage the seat.

4. The combination with a main rail, and a guard-rail, of a base-plate provided with terminal and intermediate abutments, and a boss intermediate of the ends of the plate, the intermediate abutments and boss being engaged by the edges of the bases of the rails, cheek-plates to engage the terminal abutments, a spacing member disposed between the two rails, assembling-bolts passing through the cheek-plates, rails and spacing member, and means combined with one of the cheek-plates for locking the nuts of the assembling-bolts against rotation.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENRY C. NUNN.

Witnesses:

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