

D. F. VAUGHAN.
GUARD RAIL FASTENER.

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Inventor.

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UNITED STATES PATENT OFFICE.

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GUARD-RAIL FASTENER.

SPECIFICATION forming part of Letters Patent No. 564,350, dated July 21, 1896.

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To all whom it may concern:

Be it known that I, DAVID F. VAUGHAN, a citizen of the United States, residing at Haddonfield, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Guard-Rail Fasteners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a plan view of the device as in use; Fig. 2, a section on line $x x$, Fig. 1; Fig. 3, a side elevation.

This invention relates to fasteners for securing guard-rails in proper relative position to the main-track rails of a railway; and its object is to produce such a device which shall be efficient, readily adjustable, and capable of being cheaply made.

The precise character of the invention will appear from the following description, reference being had to the accompanying drawings, which clearly illustrate the preferred form of the device.

In the said drawings, A designates the main rail, which, in the present instance, is an ordinary T-rail; B, the guard-rail.

C is the metal fastener-plate, upon which the two rails rest, the ends of the plate projecting beyond the sides of the rails, respectively. One of these ends is secured to the underlying tie D by means of spikes $e e'$ of usual form, which are driven through suitable openings made in the plate. The heads of the spikes e extend over and upon the edge of the foot of the guard-rail, and thus retain, or aid in retaining, the latter in place. In the projecting end of the plate, on the main-rail side, is an opening F, the outer edge of which, beyond the rail, when in place, is inclined with relation to the side of the rail, as clearly seen in Fig. 1, and is provided with a series of steps or offsets f .

When the guard-rail B has been adjusted the desired distance from the main rail, the spike f^2 is driven through the opening F into the tie in such position, as shown, that the outer side of its shank will bear against one of the steps f' and its head preferably project over and upon the foot of the rail, as seen. Thus the two rails will be maintained in proper relation to each other.

When for any reason it is desired to adjust and secure the guard-rail nearer to or farther from the main rail, in order to leave a suitable interval between the adjacent heads of the two rails for the passage of the car-wheel flange, the spikes $e e'$ are drawn out and the guard-rail shifted with relation to the main rail. The said spikes are then redriven. The spike f^2 is then withdrawn and redriven against the required one of the steps f' , or sometimes the spike may be allowed to remain and another one driven at the proper point.

If the required adjustment of the guard-rail be slight, the plate and rail may be adjusted without removing the spikes $e e'$ by driving over with a hammer.

I usually secure to plate C, by means of rivets g , a brace-lug h , whose inner end bears against the side of the guard-rail. I also usually provide the said plate with a slot k to receive a spike k^2 , Fig. 2, to aid in securing the main rail, a part of the foot of the guard-rail being cut away at this point, as shown, so that the spike shall not be in the way of the adjustment of the rail.

I remark that although it is preferable to use the offsets or steps f' they may be omitted and the incline be a straight line; also, that it is not essential that the said offsets, when used, shall run regularly step by step, but must be at different distances from a baseline.

Spikes e^2 may be used at the sides of the guard-rail end of the plate for securing the latter, as shown in Fig. 1. Both rails, at points beyond the fastener-plate, will of course be spiked to the ties in the customary manner.

It will be seen that my fastener device obviates the use of wedges now generally employed for securing and adjusting the guard-rail, and which are objectionable on account of working loose, requiring frequent attention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a main rail, and its adjacent guard-rail, of the plate C upon which both of said rails are seated, and whose end portions project beyond the sides thereof respectively, one of said end portions having

therein spike-seating apertures, and the opposite end portion adjacent to the main rail having therein an elongated slot one edge of which is oblique to the rail, said slot providing means whereby the guard-rail may be secured in different relations to the main rail, by means of a spike driven therethrough, together with means for securing the inner edge of said main rail in proper adjustment substantially as specified.

2. The combination with a main rail, and its adjacent guard-rail, of the plate C upon which both of said rails are seated, and whose end portions project beyond the sides thereof, respectively, the end portion thereof on the main-rail side having an elongated slot forming a spike-seat, one edge of which is inclined or oblique with reference to said rail, whereby guard-rail may be secured in different relations to the main rail by an adjustment of the spike therein, the opposite end portion of said plate having spike-seats, and also a brace-lug which abuts against said guard-rail, together with means for securing the inner edge

of said main rail in proper adjustment substantially as specified.

3. The combination with the main rail, and its adjacent guard-rail, of the plate C upon which both of the said rails are seated and whose end portions project beyond the said rails, respectively, that end portion thereof on the main-rail side having an elongated slot whose outer edge is oblique with reference to said rail, and is stepped, spikes driven through the opposite end portion of said plate, and a brace-lug secured thereto and abutting against the guard-rail, that portion of the plate between the two rails having also a slotted spike-seat, adjacent to which the foot of the guard-rail is cut away, all substantially as and for the purpose described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

DAVID F. VAUGHAN.

Witnesses:

WALTER C. PUSEY,
ISAAC W. HEYSINGER.