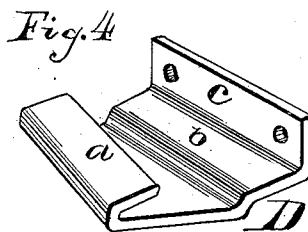
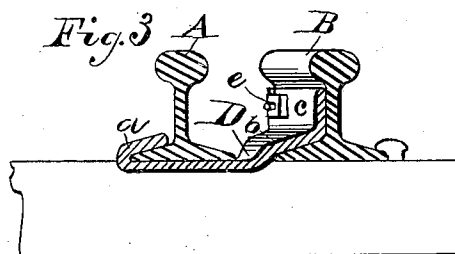
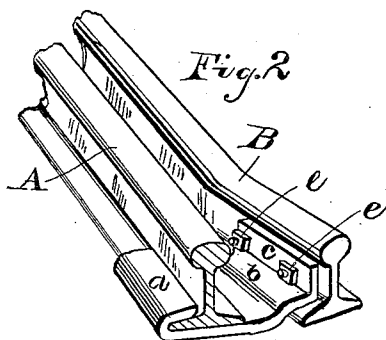
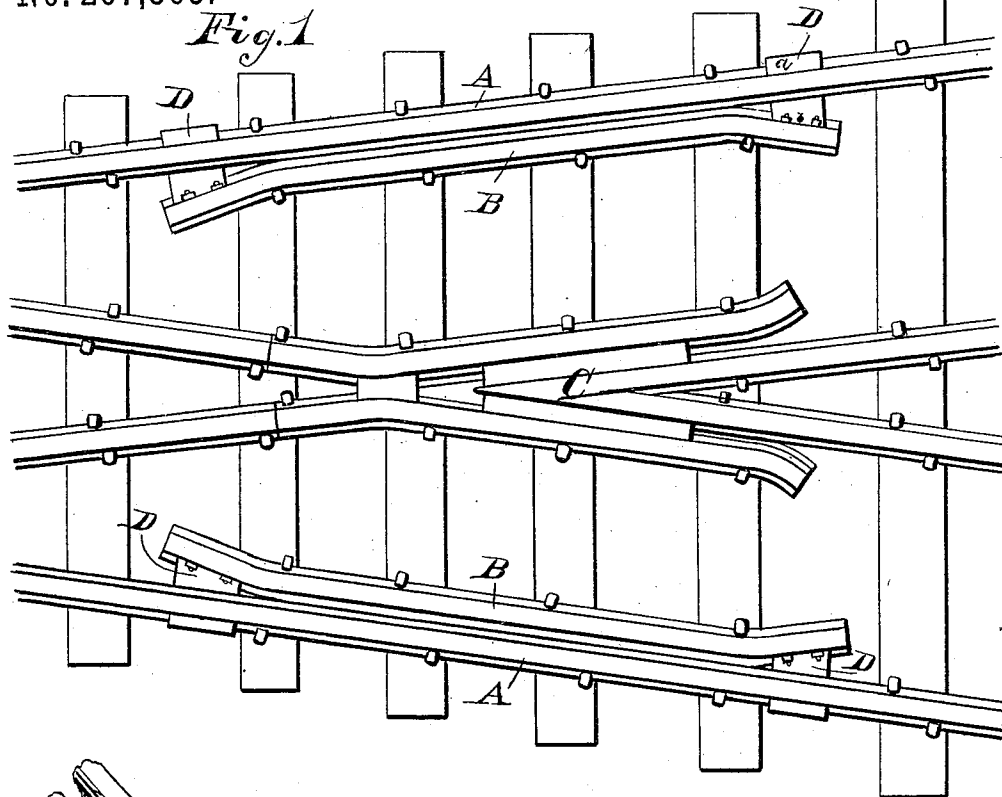


(No Model.)

W. J. MORDEN.
GUARD RAIL FOR SWITCH FROGS.

No. 267,565.

Patented Nov. 14, 1882.



Attest

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UNITED STATES PATENT OFFICE.

WILLIAM J. MORDEN, OF CHICAGO, ILLINOIS.

GUARD-RAIL FOR SWITCH-FROGS.

SPECIFICATION forming part of Letters Patent No. 267,565, dated November 14, 1882.

Application filed May 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. MORDEN, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Guard-Rails for Switch-Frogs, of which the following is a specification.

My invention relates to a device for securing railway guard-rails, particularly adapted for use on guard-rails for switch-frogs, &c.

In the ordinary method of securing guard-rails heretofore employed great difficulty is experienced in holding said rails from being rolled or tilted by the heavy pressure against the side thereof in guiding the wheels of a car or train properly through the frog. Frequently the efficiency of the guard-rail is entirely destroyed by its becoming tilted to such a degree that the flanges of the wheels, in passing over the frog, strike the point of the frog or enter the wrong throat therein, with damaging results to frog or wheel, or resulting in the train being thrown from the track.

The object of my invention is to overcome these difficulties and to provide a fastening whereby a guard-rail may be held securely in position and absolutely prevented from rolling or tilting without the necessity of cutting or drilling holes in the traffic-rail.

To this end my invention consists, first, in a plate provided with a hook or jaw which engages with the flange of the traffic-rail, and passing under said rail curves up and bears on the top of the flange of the guard-rail, whereby said guard-rail is held from tilting or rolling; second, in providing the said plate with a flange for the purpose of securing it, by bolts or otherwise, to the guard-rail, as hereinafter more fully described with reference to the accompanying drawings, in which—

Figure 1 is a plan view of a frog and guard-rails, showing my improved guard-rail fastening in use. Fig. 2 is a perspective view, enlarged, of my improved fastening applied. Fig. 3 is a sectional elevation of the same, and Figs. 4 and 5 are detailed views of the plate removed.

Similar letters refer to similar parts throughout the several views.

In the said drawings, A represents the traffic-rails; B, the guard-rails; C, a frog, and D the improved fastening-plates.

In securing a guard-rail with my improved fastening the ends of the guard-rail are bent out in the ordinary manner to insure the flange of the wheels entering the throat between the traffic-rail and guard-rail. The plate D may be made of iron or steel, or any suitable material, but is preferably made of a single piece of wrought-iron or steel of any desired width, with one edge turned up, forming a hook or jaw, *a*, which hooks over the flange of the traffic-rail A, the plate passing under the traffic-rail, and curves up at the other side, with the part *b* formed to correspond to the top of the flange of the guard-rail B, on which it bears. A flange, *c*, is formed on the edge of the part *b*, which fits against the shank of the guard-rail B, and is secured thereto by bolts *e*, or in any other suitable manner. It is designed to use the plates D at each end of the guard-rail, at the point where they are bent out to form the mouth, and for this purpose the flange *c* and part *b* of the plates D are formed at an angle to the jaw *a* corresponding to the angle at which the end of the guard-rail is bent. They may, however, be made parallel and the plates used at any point along the guard-rail, a portion of the flange of one rail being cut away to allow the lower flanges of the guard and traffic rails to meet when desired, as is generally the case.

In fastening a guard-rail with this device the rail is first spiked down in the ordinary manner. The jaw *a* is then hooked over the flange of the traffic-rail A and the plate pushed into its position, with the part *b* bearing on the top of the flange and the flange *c* against the shank of the guard-rail B. The plate D is then secured to the guard-rail B by bolts *e*, or in any other suitable manner. If it is desired to use a plate or plates in the middle of the length of the guard-rail, they are placed in position before the guard-rail is spiked down.

The advantages of this device are many. It is very simple, and can be readily applied without any alteration of the traffic-rail, and as the weight of the train comes upon the traffic-rail at the same time the pressure comes against the side of the guard-rail said guard-rail is absolutely held from rolling or tilting.

The above description refers particularly to guard-rails for switch-frogs; but it will be evi-

dent that the device may be used equally well on all kinds of guard-rails.

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

1. A guard-rail fastening consisting of a plate provided with a hook or jaw which engages with the flange of the traffic-rail, and, passing under said rail, curves up and bears on the top of the guard-rail flange, and is secured to said guard-rail, whereby the guard-rail is held from tilting or rolling, substantially as shown and described.

2. The fastening-plate D, provided with a hook or jaw, *a*, curved portion *b*, and flange *c*, substantially as and for the purpose described.

3. The combination of a traffic-rail, A, and guard-rail B with a plate, D, having a jaw, *a*, curved portion *b*, and flange *c*, substantially as described and shown.

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

WILLIAM J. MORDEN.

Witnesses:

CHAS. KRESSMAN,
FRANK JOHNSON.