

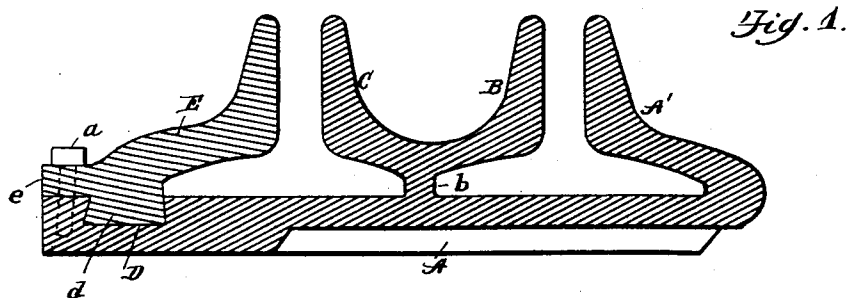
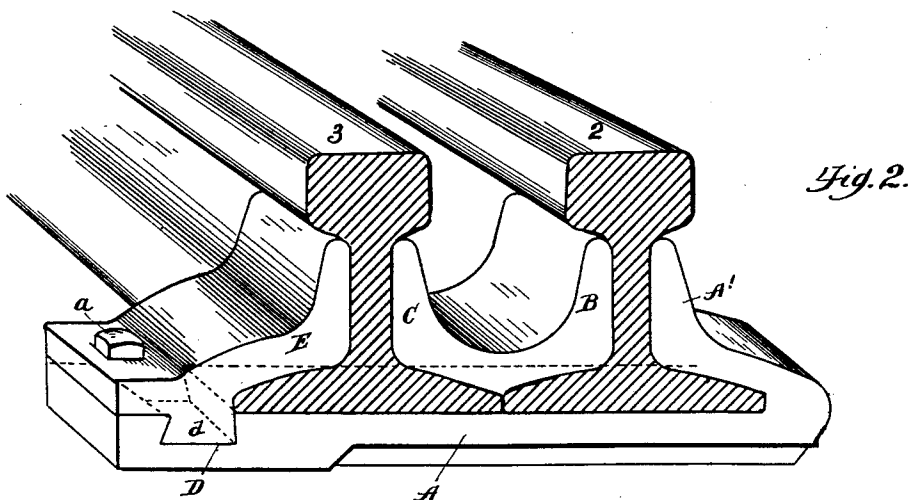
(No Model.)

2 Sheets--Sheet 1.

H. MORRIS.
GUARD RAIL CLAMP.

No. 588.164.

Patented Aug. 17, 1897.



WITNESSES
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J. H. Peterson
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INVENTOR
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(No Model.)

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Fig. 3.

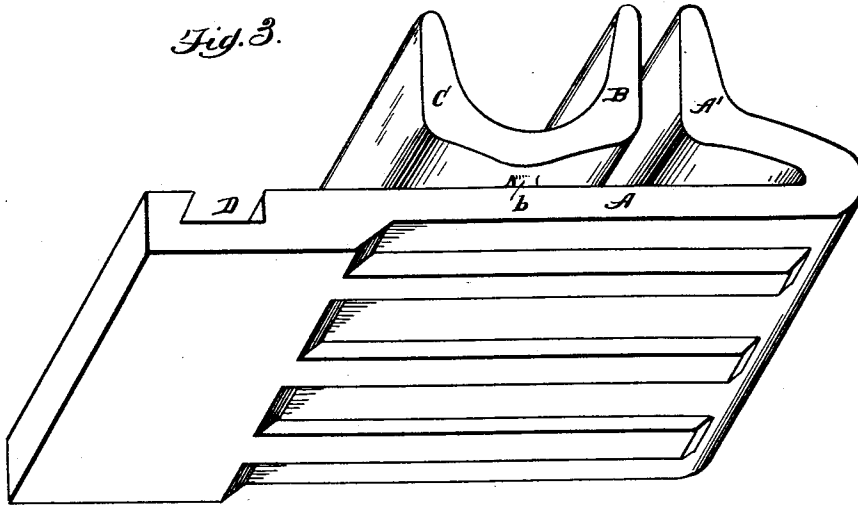
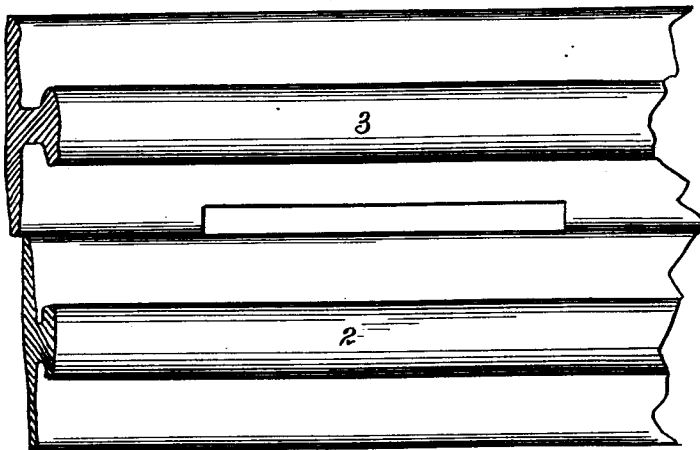


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY MORRIS, OF WALKERVILLE, CANADA.

GUARD-RAIL CLAMP.

SPECIFICATION forming part of Letters Patent No. 588,164, dated August 17, 1897.

Application filed December 24, 1896. Serial No. 616,954. (No model.)

To all whom it may concern:

Be it known that I, HENRY MORRIS, a subject of the Queen of Great Britain and Ireland, residing at the town of Walkerville, in the county of Essex, in the Province of Ontario, in the Dominion of Canada, have invented a certain new and useful Improvement for the Securing of Guard-Rails, known as "The Morris Guard-Rail Clamp," of which the following is a specification.

This invention relates to guard-rail clamps, and has for its object an improved form of clamp or chair adapted to hold the guard-rail firmly in position with respect to the main rail of a railway-track, the guard-rail referred to being the short piece of rail that is spiked to the ties between the track-rails and near to one of them at locations opposite the frog-points of switches, one of the main objects of such a guard being to keep the wheel of the railway-truck on the line-rail in cases where the truck may be loose under the car or where for any reason the wheels may not be true to the gage of the railway-track.

In the drawings, Figure 1 is a sectional elevation of the clamp. Fig. 2 is an end elevation of the clamp with rails in place. Fig. 3 is a perspective of the clamp seen from a point below the plane of its bottom side. Fig. 4 is a plan of that portion of the rails engaged by the chair.

The chair is made with a base A broad enough to extend under the guard-rail and to engage at one of its projecting edges with a clamp that wedges into position and holds the parts firmly together.

A represents the base of the clamp, from which rise the several branches that engage over the foot-ledges of the main rail and the guard-rail.

A' represents the branch which rises on the outside—that is, from that side of the base-plate A which lies at the outside of the track and beyond the line-rail of the track.

B C indicates a branch which rises at the inside of the main rail of the track and divides into two arms, one of which, B, engages over the inner foot-flange of the main rail, and the other of which, C, engages over the outer foot-flange of the guard-rail. That part of the base A which lies entirely inside of the guard-rail is provided with a groove

dovetailed in horizontal cross-section and slightly narrower at one end than at the other. Within this groove D is engaged the tongue *d* of a clamp E, that curves upward and engages over the inner foot of the guard-rail. A flange *e* extends beyond the tongue *d* and is adapted to engage over the top surface of the base A, and this flange *e* is provided with a bolt-hole which registers with a bolt-hole through the base A and is adapted to receive a bolt *a*, that finally screws all the parts together. The arms B and C rise from a stem *b*, that is preferably shorter in length than the corresponding length of the base A, and the foot of the guard-rail 3 is notched to engage the stem *b*, so that the feet of the two rails 2 3, as shown in Fig. 2, lie closely adjacent at points outside of the chair or clamp, while the stem *b* rises through the opening made between them at the place where the foot of the rail 3 is notched.

The clamp when assembled without having the rails placed in position has an appearance similar to that shown in Fig. 1. An end elevation of the clamp with the rails in position is similar to that shown in Fig. 2.

In use the clamp is placed on the main line-rail before that is spiked down and is slipped along the end rail to the position it is to occupy. The guard-rail 3 is then laid up alongside of it. The grip or clamp E slips endwise into position and is secured by the bolt *a*. The strain is carried by the tongue and groove *d* D, the bolt *a* simply serving to hold the parts in position and not being used to sustain any considerable part of the strain.

What I claim is—

1. In a clamp to secure guard-rails in position with respect to the main line-rail of a railway, a base provided with the engaging arm A; the arm *b* shorter in length than the base and provided with two branches, one of which is adapted to engage over the foot of the line-rail, and the other over the foot of the guard-rail; the clamp E provided with a tongue adapted to engage in a groove in the base, and itself adapted to engage over the inner foot of the guard-rail, substantially as described.

2. In combination with a base provided with branches adapted to engage over three of the flanges of two adjacent-lying rails, a clamp

adapted to engage said base and be held thereto, and to itself engage over the fourth foot of the two engaging rails, substantially as described.

- 5 3. In combination with a base provided with branches adapted to engage over three of the flanges of two adjacent-lying rails; a clamp adapted to engage said base and be held thereto, and to itself engage over the fourth
10 foot of the two engaging rails, and a bolt

adapted to secure the clamp in place, substantially as described.

In witness whereof I have hereunto set my hand, in presence of two witnesses, at Windsor, December 14, 1896.

HENRY MORRIS.

Witnesses:

J. F. PATTERSON,
G. J. LEGGATT.