W. B. Atkinson,

Railroad Chair,

No. 82,271, Patented Sept. 22, 1868

Fig: 1

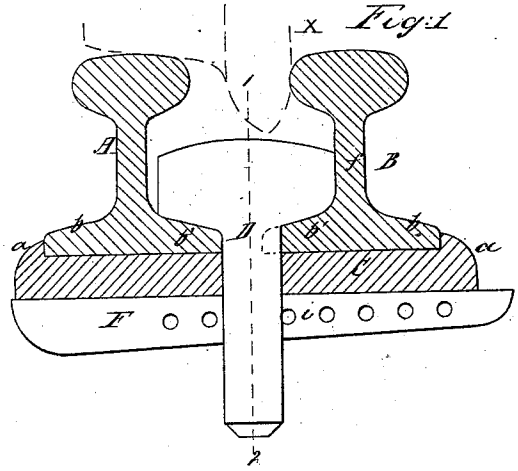


Fig: 2

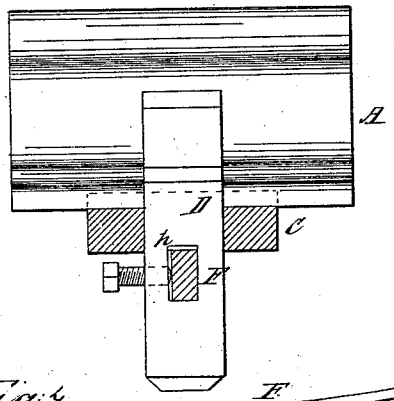


Fig: 4

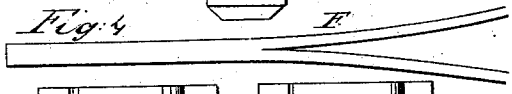
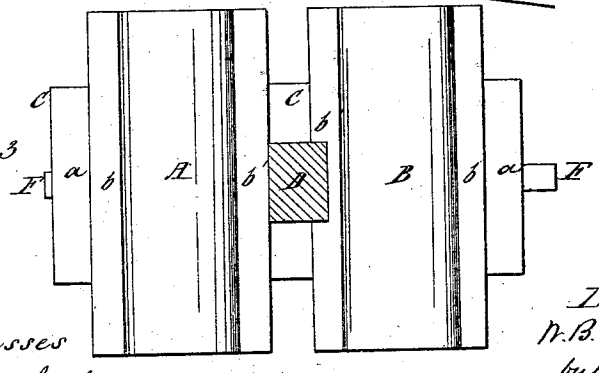


Fig: 3



Witnesses
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Inventor
W. B. Atkinson
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Henry Howson

United States Patent Office.

WILLIAM B. ATKINSON, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 82,271, *dated September* 22, 1868; *antedated September* 9, 1868.

IMPROVED CLAMP FOR RAILROAD-RAILS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM B. ATKINSON, of Pittsburg, Allegheny county, Pennsylvania, have invented an Improved Safety-Clamp for Guard-Rails; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of a clamp, constructed substantially as described hereafter, for so securing a guard-rail as to prevent it from being moved either laterally or longitudinally by any strains to which it may be subjected.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a sectional view of my improved safety-clamp for guard-rails.

Figure 2, a section on the line 1 2, fig. 1.

Figure 3, a plan view, partly in section; and

Figure 4, a detached view.

Similar letters refer to similar parts throughout the several views.

A represents a portion of one of the main rails of a railroad-track, and B part of an adjacent guard-rail.

The guard-rail is generally secured at a point opposite to a switch or turnout, its object being to maintain the wheels of a car upon the proper track at any point where they would be liable to run off of the same.

This is clearly shown in fig. 1, where the red lines X represent a portion of a car-wheel, the flange of which enters the space between the two rails, and bears against the guard-rail.

The strain thus imparted to the latter rail has a tendency to loosen it, after which, instead of a safeguard, it becomes absolutely dangerous—an objection which I propose to obviate by means of the devices which I will now proceed to describe.

The main and guard-rails A and B are secured to the sleepers of the track in the usual manner, and then, between or upon the sleepers, at equal distances apart, and beneath the rails, are placed plates C, each plate having at its opposite ends lugs or lips *a*, against which bear the lower flanges *b b* of the two rails.

A T-headed bolt or pin, D, passes between the two rails, and through an opening in the plate C, its head conforming to the shape of the lower flanges *b' b'* of the rails, and to the web *f* of the guard-rail, as shown in fig. 1.

In the shank of the bolt D is an opening, *h*, (fig. 2,) for the reception of a wedge-shaped key, F, which bears against the under side of the plate C, and against the lower edge of the said opening, so that when the key is driven into the latter, the bolt D will be drawn downwards upon the flanges *b' b'* of the two rails, until the latter are bound firmly between the head of the bolt and the plate C.

In order to prevent the key F from being loosened by the continual vibrations and shocks to which it is subjected by passing trains, it is necessary that it should be secured in the position to which it is driven. This may be done by a pin, *i*, inserted into one of a number of holes in the key, and bearing against one side of the bolt D, as shown in fig. 1, or a set-screw, passing through one side of the bolt, may be caused to bear against and hold the key, as shown in fig. 2, or, if desired, the end of the key may be split to effect this object, as shown in fig. 4.

It will be seen, on reference to figs. 1 and 3, that a portion of the flange *b'* of the guard-rail is cut away or recessed, for the reception of the shank of the bolt D, the object being to counteract any tendency the guard-rail might have to slip longitudinally.

The above clamp is simple in its construction, can be readily applied, and serves to effectually prevent the guard-rail from being moved either laterally or longitudinally.

I claim as my invention, and desire to secure by Letters Patent—

The T-headed bolt or pin D, plate C, and wedge or key F, combined and applied to the securing of a guard-rail, substantially as herein set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

W. B. ATKINSON.

Witnesses:

JOHN WHITE,

C. B. PRICE.