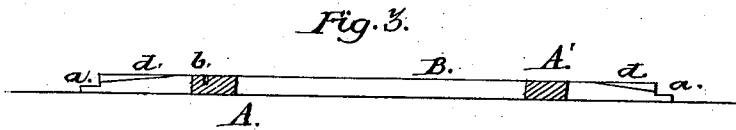
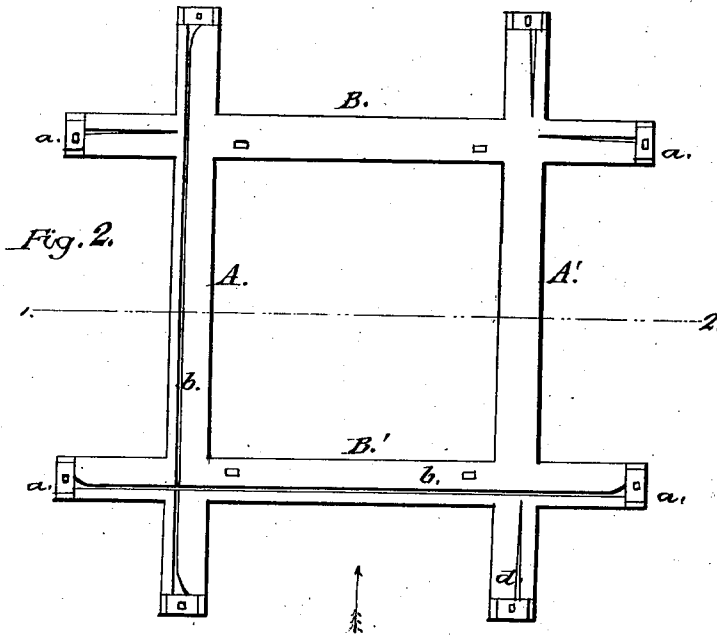
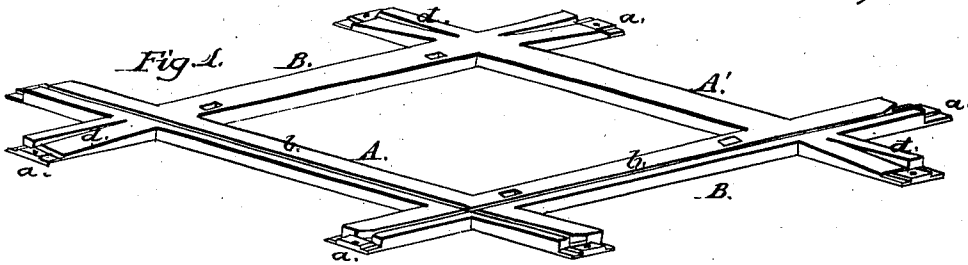


J. E. Ridgway.

Railway Frog.

N^o 87,293.

Patented Feb. 23, 1869.



Witnesses:
Wm. Steel
John Parker

Inventor:
Jacob E. Ridgway
Per
Henry Howson
Attorney

United States Patent Office.

JACOB E. RIDGWAY, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 87,293, dated February 23, 1869.

CROSSING-PLATE FOR STREET-RAILWAYS.

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, JACOB E. RIDGWAY, of Philadelphia, Pennsylvania, have invented an Improved Crossing-Plate for Street-Railways; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of a plate, placed at the intersection of two street-railways, and made of four bars, two coinciding with the rails of one track, and two coinciding with the rails of the crossing-track, one of each pair of bars having a longitudinal groove, and the other being plain, with the exception of a short vanishing tread at each end, all substantially as described hereafter, so as to be free from the gaps which interrupt the continuity of the tread of ordinary crossings and cause the jars and shocks to the cars and annoy neighboring residents at the same time.

The improved crossing-plate being comparatively free from prominent ribs, is not liable to be displaced or damaged by heavily-laden vehicles.

In order to enable others skilled in the art to make and apply 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 perspective view of my improved crossing-plate for street-railways;

Figure 2, a plan view; and

Figure 3, a transverse section on the line 1-2, fig. 2.

The crossing-plate consists of two bars, A and A', coinciding with the rails of one track, and two bars, B and B', intersecting the first bars, and coinciding with the rails of the crossing-track, these four bars being made in one piece, or in separate pieces secured together, as may be deemed most expedient, and each end of each bar being provided with a lip or projection, *a*, on which bears the end of a rail.

The bar A has a longitudinal groove, *b*, for receiving the flanges of car-wheels, this groove being slightly enlarged laterally at each end, so as to insure the entrance of the flanges.

The opposite bar, A', is plain throughout the greater portion of its length, but near each end it is so inclined as to leave a short tread, *d*, which coincides with that of the adjoining rail, and gradually diminishes in depth, until it disappears at the upper surface of the bar, at or near the outer edge of the crossing-bar.

The two transverse bars B and B' are provided, the latter with a longitudinal groove, similar to that of the bar A, and the former with short vanishing treads, similar to those of the bar A'.

Supposing a car to be travelling in the direction of the arrow, the track coinciding with the bars A and A', the wheels to the left will enter the groove *b*, this entrance being insured by the short tread *d* on the bar A', which prevents the car from moving laterally to the right until the flanges of the left wheels have entered the groove *b*, after which the opposite wheels leave the short tread *d*, and the flanges alone then bear upon the plain portion of the bar A', while the car is entirely controlled laterally by the groove *b*.

As the wheels are about to leave the bars A and A', those to the right gradually come under the control of the short tread *d*, which, at the end of the bar A, coincides with the tread of the adjoining rail; at the same time the flanges of the opposite wheels leave the groove *b* of the bar A, and pass on to the ordinary rail.

The above explanation will apply to the bars B and B'.

It will be seen that in my improved crossing-plate the usual gaps, where one tread crosses the other, are avoided, and consequently that the jarring of cars, and the annoyance therefrom to neighboring residents, are obviated; at the same time the plate is comparatively free from the usual projecting ribs or treads, which, in ordinary crossing-plates, form partial obstructions to passing vehicles, so that the latter tend to displace and otherwise injure the said ribbed plates, while they will pass freely over my improved crossing-plate.

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

The within-described crossing-plate, consisting of the bars A and A', and B and B', the bars A and B' having longitudinal grooves, and the bars A' and B short vanishing treads *d* at each end, all substantially as and for the purpose herein described.

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

JACOB E. RIDGWAY.

Witnesses:

JOHN WHITE,
HARRY SMITH.