

(No Model.)

W. A. NELSON.
LIFE GUARD FOR STREET CARS.

No. 540,867.

Patented June 11, 1895.

Fig. 1.

Fig. 2.

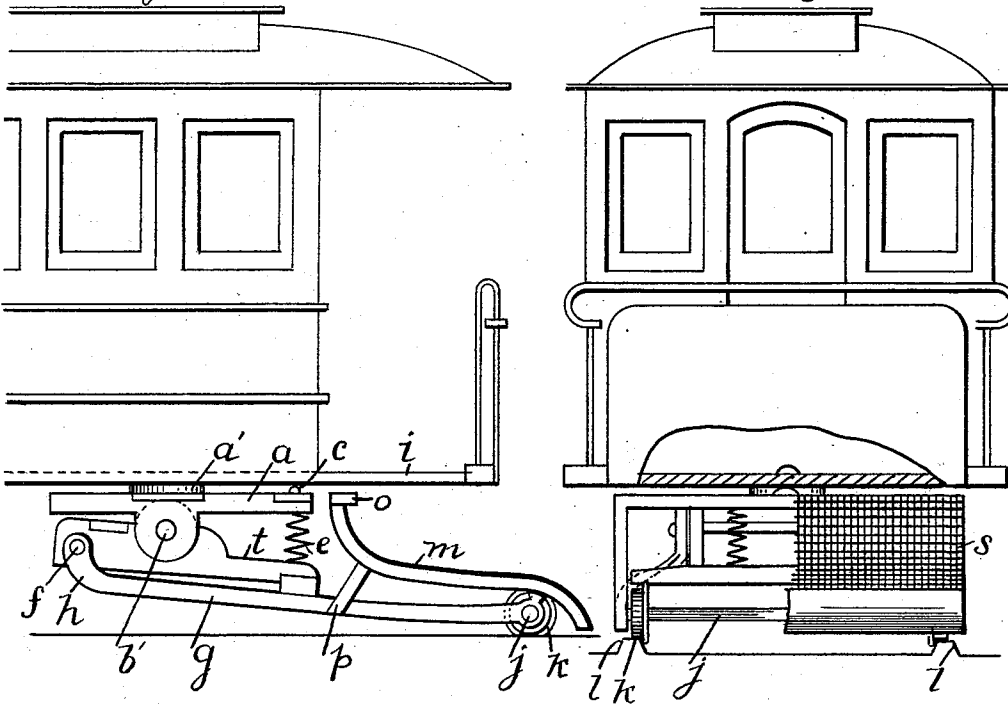
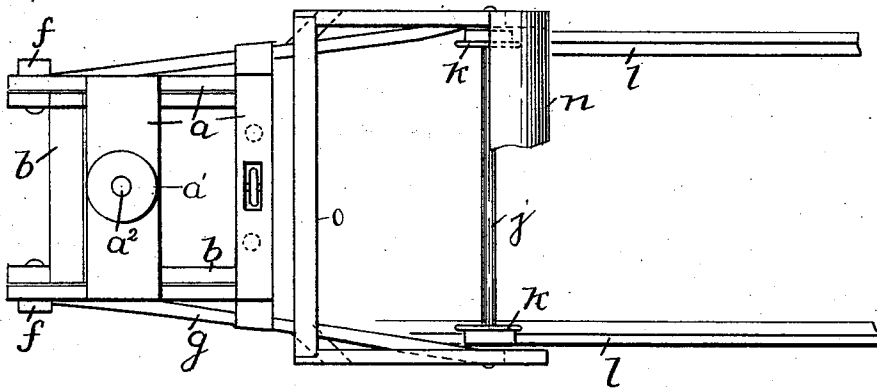


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

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LIFE-GUARD FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 540,867, dated June 11, 1895.

Application filed December 5, 1894. Serial No. 530,893. (No model.)

To all whom it may concern:

Be it known that I, WAHLFRID A. NELSON, a subject of the King of Sweden and Norway, and a resident of New York city, in the county and State of New York, have invented certain new and useful Improvements in Life-Guards for Street-Cars, of which the following is a specification.

My invention relates to attachments to street cars for preventing people from being crushed under the wheels when knocked down or falling in front of the cars and it consists of the improvements of construction and arrangements of such devices as hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of part of a car and of my improved guard attached. Fig. 2 is a front elevation of the car with a part broken out and a cross-section of the track. Fig. 3 is a plan view of the guard separately and of a portion of the track.

At a suitable position back of the front end of the car I attach a fifth wheel device of any approved kind as the frame *a*, having a disk *a'* pivoted at *a*² to the under side of the car in its central longitudinal vertical plane, and pivot another frame *b*, to the under side of frame *a* as at *b'* so as to oscillate freely in a vertical plane on a horizontal axis transversely of the car, with springs *e* between the front end of frame *a* and the front end of frame *b*. At the rear portion of frame *b*, I pivot at *f*, two bars or rods of wood or metal as *g*, said bars extending downward a short distance as at *h*, rather abruptly and thence forward and also downwardly but with much less inclination and extending forward about even with or a little beyond the front end of the platform *i*, and at the front ends supported on an axle *j* carried by small flanged wheels *k*, which run on the rails *l* of the track.

The front portion of frame *b* bears on the bars *g*, and the front portion of frame *a*, has a roller bearing *c* against the under side of the car body, the purpose of which is to transmit pressure by the springs *e* to the bars *g* to prevent the wheels *k* from "jumping" the

rails. The bars are designed to be somewhat elastic and the springs having considerable flexibility keep the wheels under pressure notwithstanding the rocking of the car.

Between the shaft *j* at the front ends of the bars *g*, and a cross bar *o*, under the body of the car directly in front of frame *a*, and also between side bars *m*, supported on bars *g* and supporting said bar *o*, a web *s* of flexible material is supported suitably for a yielding apron for reception of bodies liable to be taken up by the guard, with a sheet metal plate *n* extending forward and downward from over the top of the wheels in close proximity to the rails. This frame *a* being liable to be pressed with considerable force when the front portion of the car rocks downward has a friction roller *c* for reducing the friction when the guard may have to shift laterally at the same time, as when running on a curve in the track. It will be seen that a guard thus mounted for lateral play on the pivot *a*² and having low wheels at the front confined on the rails so as not to rise therefrom, as the car rocks, nor to be thrown off by shocks or jars, will be more effective in taking up prostrate bodies and will be less injurious to them than others not so constructed.

I claim—

The combination with a car, of a guard consisting of bars having wheels at the front to run on the rails and at the rear pivoted for vertical play to an intermediate frame which is pivoted for vertical play, its pivot being carried on the horizontally oscillating frame pivoted to the bottom of the car, springs between said frame pivoted to the bottom of the car and said intermediate frame, said latter frame bearing on the wheel carrying bars and said bars having the receiving apron on the front portion substantially as described.

Signed at New York city, in the county and State of New York, this 23d day of October, A. D. 1894.

WAHLFRID A. NELSON.

Witnesses:

W. J. MORGAN,
S. H. MORGAN.