

(No Model.)

A. A. WILLIAMS.
CAR FENDER.

No. 549,415.

Patented Nov. 5, 1895.

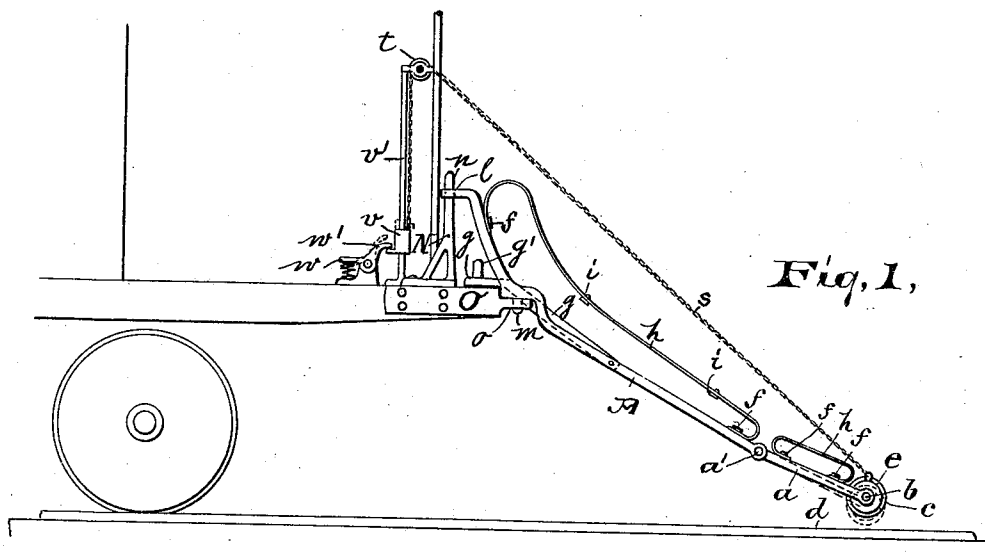


Fig. 1,

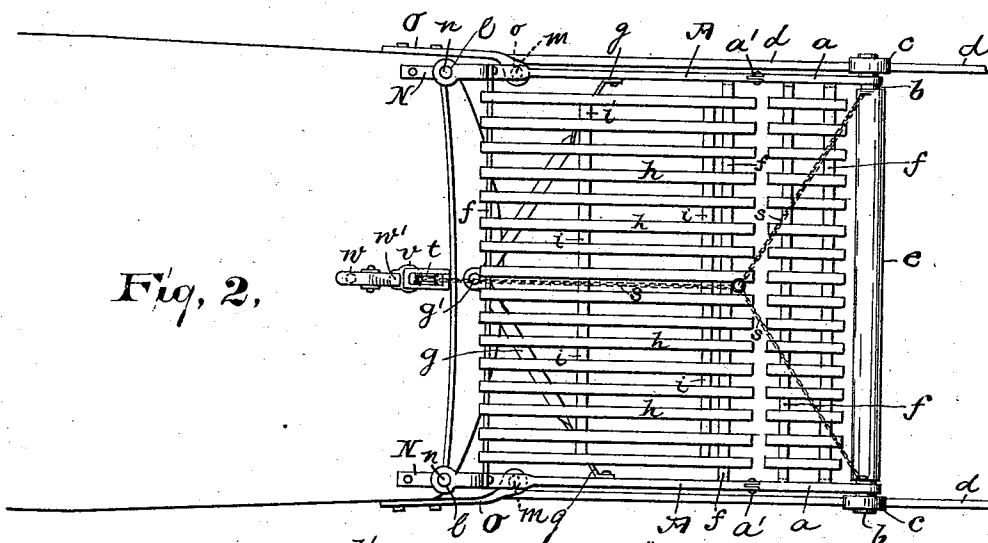


Fig. 2,



Fig. 3,

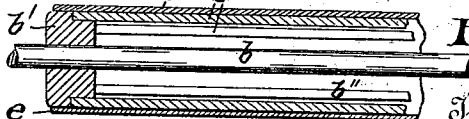


Fig. 4,

Witnesses
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UNITED STATES PATENT OFFICE.

ALPHEUS A. WILLIAMS, OF ORANGE, NEW JERSEY.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 549,415, dated November 5, 1895.

Application filed June 17, 1895. Serial No. 553,008. (No model.)

To all whom it may concern:

Be it known that I, ALPHEUS A. WILLIAMS, a citizen of the United States, residing at Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Car-Fenders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The objects of this invention are to prevent injury and loss of life to persons who may collide with street-cars driven by other than horse-power and to secure other advantages and results, as will be hereinafter set forth.

The invention consists in the improved guard or fender for street-cars and in the arrangement and combination of the parts thereof, as will be hereinafter more particularly described, and finally pointed out in the claims.

In the accompanying drawings, in which similar letters of reference indicate corresponding parts in all the figures where they occur, Figure 1 is a side elevation of my improved guard or fender and showing the adjacent portion of the car to which it is attached. Fig. 2 is a plan view of the same; and Figs. 3 and 4 illustrate, respectively, in cross-section and longitudinal section, a certain cushion-roll.

In said drawings, A A indicate two plates or girder-rails having hinged portions *a*, pivoted thereto at *a'*, the latter being concealed at their front ends by a rod *b*. Upon both extremities of said rod *b* are secured loose rubber pulleys *c*, which engage with the track-rails *d* when the front portion of the fender is allowed to drop, as is shown in dotted lines in Fig. 1. The rod *b* is preferably covered with a yielding material *e* or is constructed of elastic material, so that a person struck thereby will escape injury, as will be understood.

A preferred construction of a cushion-roll is shown in Figs. 3 and 4, wherein *b'* indicates two heads, which are each secured to the rod *b* near opposite ends thereof. Said heads are connected by metal or wooden strips or bars

b'', and the whole is covered with rubber, canvas, or any appropriate material *e*, thus forming a very efficient cushion.

Metal strips *f* are spanned across between the plates A A and serve to hold in place metal strips *h*, the ends of which are doubled back under the main portion and secured to the strips *f*, thus forming a yielding cushion for any person that may fall thereon, as will be readily understood upon reference to the drawings. Similar strips *f'* are spanned across between the plates A A and hold short strips *h'*, which are each secured thereto in a manner similar to the attachment of the strips *h* to the strips *f*. Metal strips *i* serve to further brace the strips *h* and prevent lateral displacement of the latter.

In order to avoid unnecessary expense and to allow of two cars being coupled together, I provide apertures *l* and projections *m* in the plates A, which fit, respectively, over corresponding projections *n* and in apertures *o*, which are formed in castings N and O. Said castings N and O may be cast integral or be separate pieces, as shown in the drawings. By this arrangement the fender can with ease be detached from one end of the car and be attached to the other end as the car comes to the end of the line and starts to travel in the opposite direction, as will be understood.

The lower hinged portion of the fender is normally held out of engagement with the track-rails by a chain *s*, which is either fastened to the bar *b* or cushion *e*, and runs from thence upward over the dashboard of the car over a pulley *t*, and from thence downward, where it is connected to a sleeve *v*, which works vertically upon a rectangular rod *v'*. The sleeve *v* is normally held down by the arm *w'* of a spring-actuated foot-lever *w*, thus holding the lower end of the fender up and out of engagement with the track.

Should the motorman or driver of the car see danger, he will instantly operate the foot-lever *w* and the front portion of the fender will drop automatically down upon the track, so that a person or other object on the track will be picked up by the fender and cannot pass below the latter. The chain *s* can readily be adjusted to any length, so as to keep the front end of the fender at any desired height above the track.

A brace *g*, which is firmly connected to the girder-rails *A*, hooks onto a projection *g'* upon the front end of the car-platform and further stiffens the fender.

5 Having thus described the invention, what I claim as new is—

10 1. In a guard or fender for railway cars, the combination, with a frame comprising two girder rails and transverse metal strips secured to the ends thereof, of lattice work, comprising longitudinal strips and cross
15 strips secured thereto, a front portion pivotally secured to the front of the frame, comprising end pieces, transverse pieces secured thereto, and strips upon the transverse pieces, a cushioned roller journaled in the front end
20 of the end pieces of the hinged portion, and means for operating the guard from the car, substantially as set forth.

2. In a guard or fender for railway cars, the combination, with a car, the front end of

which is provided with castings, said castings being provided with upwardly extending projections, a frame in front of the car the side plates of which are provided with 25 perforated projections to engage with the projections of the castings, a yielding cushion between said plates, a hinged portion in front of the plates, provided with a yielding cushion, the front of which is provided with 30 a yielding roller, and a yielding pulley at each end of the roller, and means for normally holding said hinged portion above the track, substantially as set forth.

In testimony that I claim the foregoing I 35 have hereunto set my hand this 12th day of June, 1895.

ALPHEUS A. WILLIAMS.

Witnesses:

OLIVER DRAKE,

ROBERT SOLLBERGER.