

(No Model.)

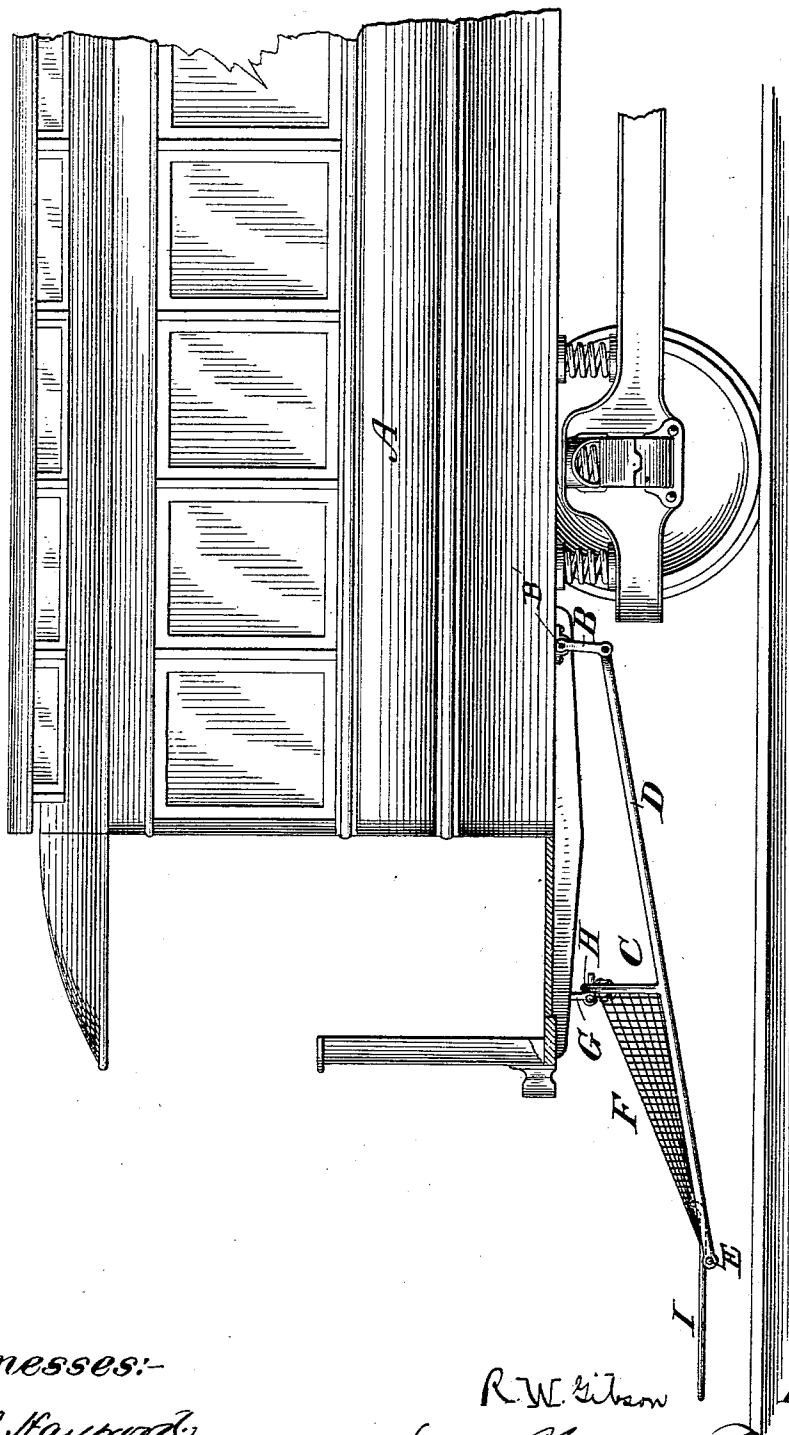
3 Sheets—Sheet 1.

R. W. GIBSON.  
FENDER FOR STREET CARS.

No. 555,316.

Patented Feb. 25, 1896.

Fig. 1.



Witnesses:-

D. H. Hayward  
Bunham Kalisch

R. W. Gibson

Inventor:

by *Clarence R. King*

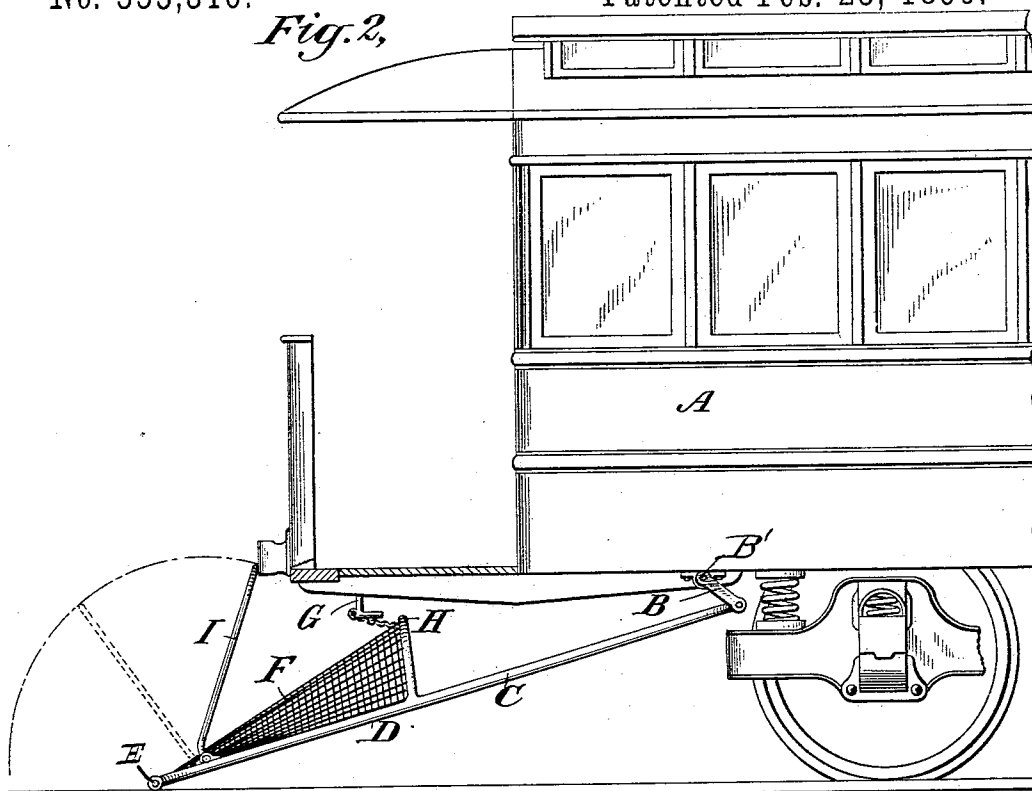
Attorney

R. W. GIBSON.  
FENDER FOR STREET CARS.

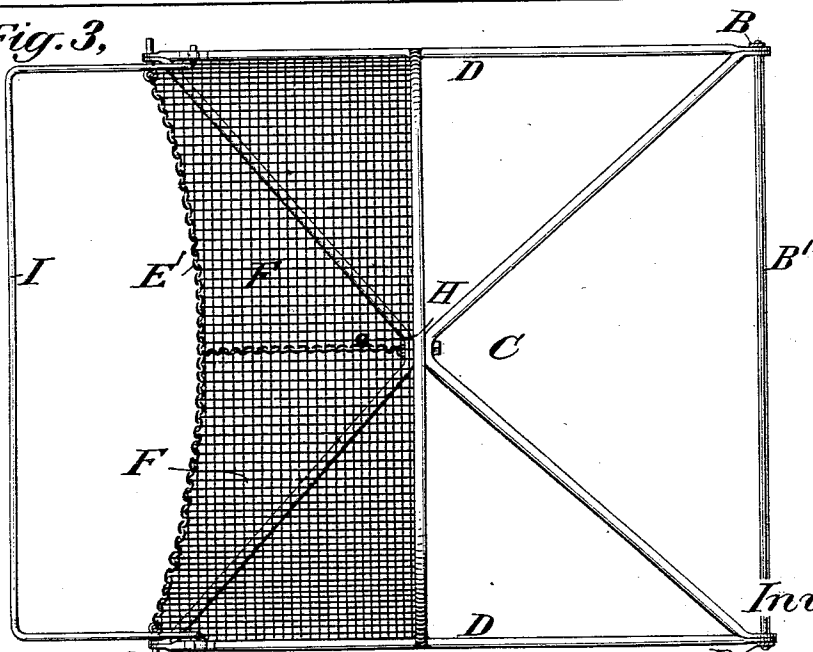
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*Fig. 2,*



*Fig. 3,*



*Inventor:*

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*Witnesses:*

*O. H. Raynor.*

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(No Model.)

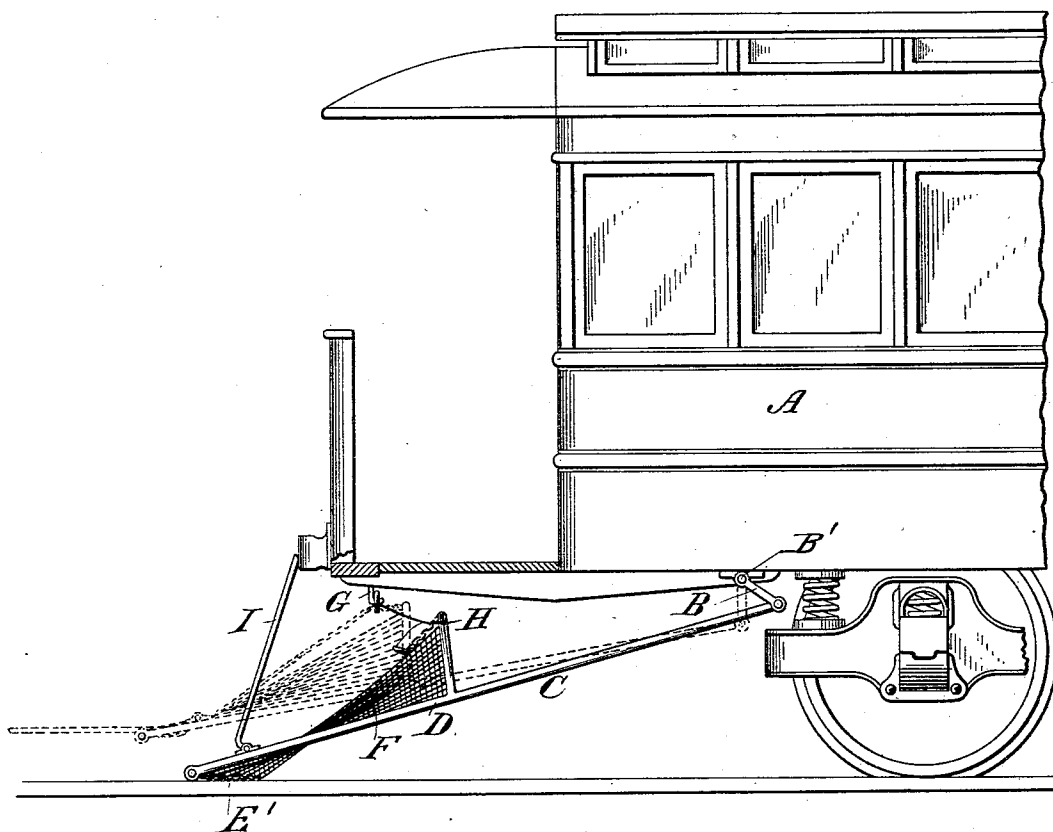
3 Sheets—Sheet 3.

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FENDER FOR STREET CARS.

No. 555,316.

Patented Feb. 25, 1896.

*Fig. 4.*



*Witnesses:-*

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*Inventor:-*

*R. W. Gibson*

*By Laurence J. Dwyer*

*Attorney*

# UNITED STATES PATENT OFFICE.

ROBERT WILLIAMS GIBSON, OF NEW YORK, N. Y.

## FENDER FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 555,316, dated February 25, 1896.

Application filed June 18, 1895. Serial No. 553,242. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT WILLIAMS GIBSON, a citizen of the United States, residing in the city, county, and State of New York, have invented a new and useful Improvement in Fenders for Street-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates generally to fenders for street-cars and like vehicles, and more particularly to the class of fenders which are normally carried elevated above the ordinary obstructions and irregularities of the surface, but may be lowered close to the surface on approaching an unexpected obstacle, as a living being, so as to with certainty pass beneath him and lift or remove him without injury.

The principal object of my invention is to provide a simple, safe, and efficient fender of this class which will be dropped automatically on meeting such an obstacle and will pick up or throw aside a person struck thereby without injuring him. I attain this end, briefly, by providing a main guard normally sustained above ordinary obstructions or inequalities whatever the motion of the car, and in addition thereto a fore guard, projecting in advance of the main guard, of such a character as not to injure a person struck thereby, and arranged, when struck, to automatically drop the main guard close to the surface before the latter reaches the person, so that it will with certainty pick up or remove him from danger. I have also devised a novel construction of main guard by which a closer conformation to the surface, when it is dropped, is obtained than usual and injury thereby prevented.

In order that my invention may be clearly ascertained, I shall first describe in detail the mode in which I carry the invention into practice and then define its particular features in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, wherein I have designated corresponding parts by like letters in all the figures.

Figure 1 represents, in side elevation, a street-car provided with a fender embodying my invention elevated in normal position. Fig. 2 is a similar view representing the fen-

der dropped, as before an obstacle. Fig. 3 is a plan view illustrating a modified form of my improved fender. Fig. 4 is a side view illustrating said modified form of fender in use.

A designates the body of a car, to the under side of which I attach, preferably by means of short depending links B, connected so as to swing together by a cross-bar B, a main guard C, which is thereby mounted both to swing vertically in front of the car and to move lengthwise thereunder.

I prefer to construct the main guard C of rigidly-connected side rails, D, connected either by an elastic front rail, E, as in Figs. 1 and 2, or by a flexible front rail, E', formed of a slack chain, as illustrated in Figs. 3 and 4, or other flexibly-jointed links, so that when lowered, as hereinafter fully described, it will closely conform to and sweep the surface without injuring a person struck thereby. I further prefer to fill in the guard C with netting F to catch and hold a person without harming him.

I provide for normally sustaining the main guard C from the car-body above the usual inequalities and obstructions of the surface by means of a catch G, which I in this instance arrange so as to normally engage a loop H on the guard and to be automatically disengaged therefrom and release the guard when the latter is shifted lengthwise rearward. On the form of main guard shown in Figs. 3 and 4 the loop H is attached to a chain connected with the front rail or chain E', so that the chain E' will be normally upheld, together with the body of the guard C, by the catch G and will also be released, together with the body of the guard C, and by its slack caused to sweep the ground, as before stated. To effect this longitudinal shifting of the main guard C before it actually reaches an obstacle, I rest on the main guard C a fore guard I, which I prefer to hinge to the main guard, as shown, so that while normally carried by and about on a level with the main guard the fore guard I can rise on striking an obstacle, following the usual tendency of such fenders, without injuring a person, if such be the nature of the obstacle, but at the same time will be caused by the resistance thereof to shift the main guard C rearward

and thus disengage and drop the same, as indicated in Fig. 2. The main guard C will then surely act, as before stated, to pick up or remove the person without injury.

5 I further prefer to make the fore guard I of a light flexible framing, so as to yield on striking a person and save him from injury, even though it should not rise, as before stated, and I usually fill in the fore guard, 10 like the main guard, with netting for a kindred purpose.

It is evident that I may greatly vary the construction and arrangement herein described without in any way departing from the spirit of my invention. For example, a 15 simple spring may be utilized to hold the main guard normally forward in engagement with its sustaining-catch, and the fore guard may be fixed instead of hinged to the main 20 guard, and thus form a part thereof, or the main guard may be immovable and the fore guard hinged thereto. The fender and its sustaining-catch may also be attached to an extension of the truck instead of to the body 25 of the car, as shown.

I claim as my invention—

1. The combination, with the vehicle, of a main guard hinged to the vehicle to swing downward and to be shifted longitudinally 30 thereon, a fixed longitudinally-extending catch on the car-body, and a loop rigidly fixed to the main guard to normally receive said catch, but to slip off the same and drop the main guard when the main guard is shifted 35 rearwardly.

2. The fender for vehicles which consists, substantially as described, of a main guard to be hinged to the vehicle to drop and move lengthwise, a fore guard hinged to the main guard, and a catch to sustain the main guard 40 and release the same when the fore guard shifts the main guard lengthwise.

3. The combination, with the vehicle, of a main guard, a link by which the main guard depends from the vehicle, a longitudinally- 45 acting catch to sustain the main guard from the vehicle, and a fore guard hinged to the main guard, substantially as described.

4. The combination with the main guard having a slack, chain-like front rail, of a 50 catch to normally sustain the slack of the chain-like front rail, substantially as described.

5. The combination, with the vehicle, of a main guard hinged to the vehicle to swing 55 downward and be shifted longitudinally, a catch and connections to normally sustain the main guard, and a fore guard hinged to, resting on and projecting ahead of the main guard, to first strike an obstacle and shift the 60 main guard rearwardly so as to release and drop the same, but to itself swing upward and pass over the obstacle, substantially as described.

In testimony whereof I have hereunto set 65 my hand this 6th day of March, 1895.

ROBERT WILLIAMS GIBSON.

In presence of—

J. CULBERT PALMER,

CLARENCE L. BURGER.