

No. 620,581.

Patented Mar. 7, 1899.

R. W. GIBSON.

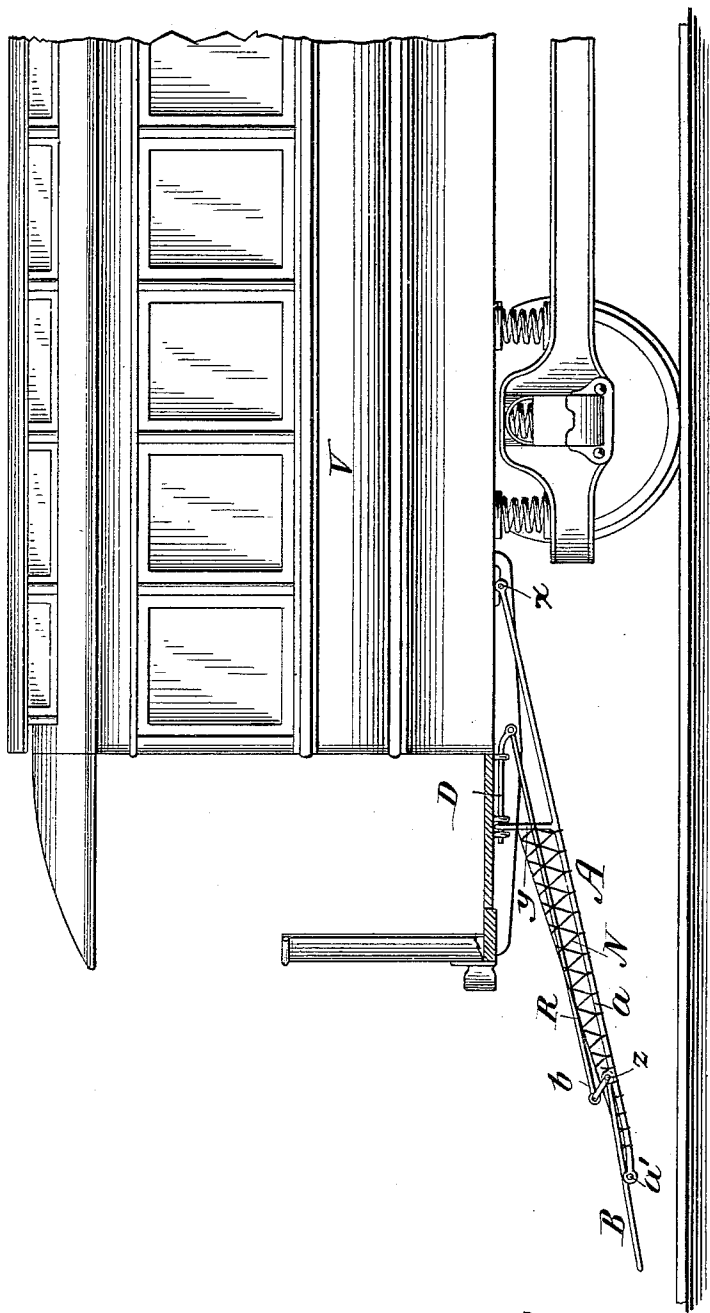
CAR FENDER.

(Application filed Jan. 7, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



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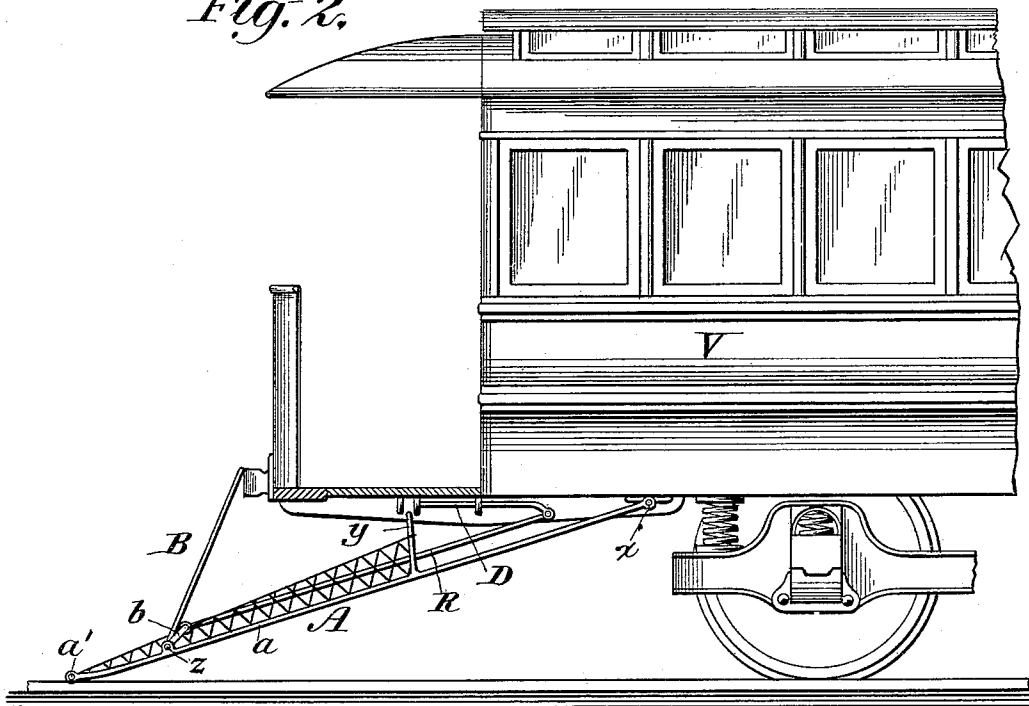
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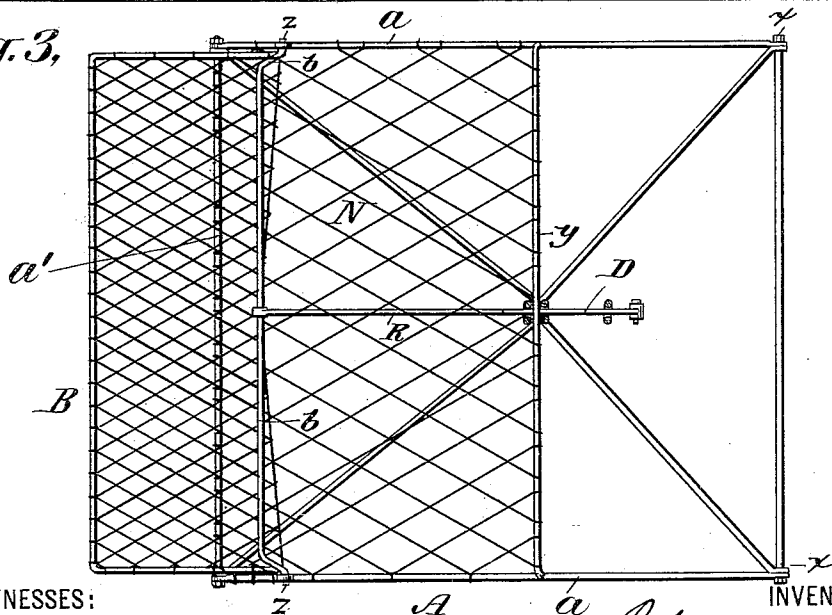
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*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

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## CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 620,581, dated March 7, 1899.

Application filed January 7, 1899. Serial No. 701,461. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT WILLIAMS GIBSON, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

My invention relates to fenders for street-cars and other similar vehicles; and the object of such invention is to provide a fender which while held and carried normally in an elevated position is automatically released and dropped before coming in contact with any object lying in the path of the car, such invention constituting an important improvement on the invention described in the specification forming part of Letters Patent No. 555,316, granted to me under date February 25, 1896. In such specification I described a fender provided with a main guard hinged to the vehicle and arranged to be shifted longitudinally in a rearward direction, and thereby dropped from a loop sustaining such main guard when a fore guard attached to such main guard came in contact with an obstacle in the path of the car. While a fender of the construction described in this specification possessed many advantages over fenders not arranged to act automatically, I have found that material improvements could be effected in the method of carrying and dropping the fender. By my present invention I have perfected a method by which the automatic dropping of the main fender in time to remove any obstacle is effected without any longitudinal displacement or shifting, and its operation is rendered absolutely certain and effective under all conditions.

The nature of my invention and the method in which the desired objects are attained are fully set forth and described in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of my improved fender secured to the forward end of a car, such fender being shown as carried in elevated or normal position. Fig. 2 is a similar view of the fender after dropping. Fig. 3 is a plan view of the fender.

In the above figures, V represents the body of the car.

A is a frame forming the main guard of the fender, constructed with side rails *a a* and a front rail *a'*. I construct such front rail *a'* preferentially of a suitable elastic substance and I fill in the frame A with a suitable netting or other similar fabric N for the purpose of holding a body or other obstacle when lifted by the front rail *a'*.

The frame A is hinged to the car-body at the points *x x* and is supported on a yoke Y, supported on the draw-bolt D, attached in any suitable manner to the under side of the car.

B is a frame forming the fore guard of the fender and hinged to the main guard at the points *z z* in such a way as to allow of free upward motion.

*b* is a crank-lever framed into the fore guard and so constructed that when the fore guard B is raised the ends of the lever *b* are pushed back and operate the rod R, which in turn pushes back the draw-bolt D, and thereby releases the yoke Y, thus allowing the main guard A to drop into the position shown in Fig. 2.

The operation of my improved fender and the manner in which it accomplishes the objects for which it is designed are as follows: The main guard A is normally suspended at any desired height from the ground and carries the fore guard B at about the same height. On the fore guard coming in contact with any object, such as a body lying on the track, it will if the object be sufficiently high pass under and catch it with the ordinary action of a fender; but if, as is often the case, such object is low and has a tendency to pass under the fender, the fore guard in passing over such object rises easily and freely on its hinges without injuring the object, and immediately by the action of the lever *b* operating the rod R the draw-bolt D is drawn, thereby freeing the yoke Y, and the main guard A immediately drops and passes under and picks up the object without injury.

I have in the above specification and drawings shown a simple mechanism whereby the main guard is dropped by releasing a draw-bolt supporting the yoke Y, by which the main guard is suspended, but it is obvious that the motion of the lever *b*, when actuated by the rising of the fore guard, may be ar-

ranged to cause the release of the yoke Y by other mechanical methods without departing from the spirit of my invention.

5 Having thus described the nature of my invention and the mode in which it is operated, what I claim, and desire to secure by Letters Patent, is—

1. The combination with the vehicle, of a  
10 main guard attached to the vehicle by hinges adapted to give such guard vertical movement, means for normally suspending the main guard at any required height, a fore  
15 guard hinged to the main guard in such a manner as to allow a free upward movement of the fore guard, a lever operated by the upward movement of the fore guard, and means  
20 for releasing the support by which the main guard is suspended to the vehicle when the lever is operated by the upward movement of the fore guard, all substantially as described and for the purposes specified.

2. The combination with a vehicle of the main guard A hinged to the vehicle and suspended therefrom by the yoke Y, the fore  
25 guard B, hinged to the front of the main guard A and free to rise when pressed upward by an object in front of the vehicle but remaining stationary when passing under such object, and means for releasing the yoke  
30 Y from its attachment to the vehicle when such means are actuated by the rising of the

fore guard B, substantially as described and for the purposes specified.

3. The combination with a vehicle of the main guard A, hinged to the body of the vehicle and suspended therefrom by the yoke Y, the fore guard B hinged to the main guard A and operating by its upward movement the lever *b*, and means for releasing the yoke Y by the operation of the lever *b* when such lever is actuated by the rising of the fore guard B in manner shown and for the purposes specified. 35 40

4. The combination with a vehicle, of the main guard A hinged to the body of the vehicle, the fore guard B hinged to the fore part of the main guard A, the lever *b* operated by the rising of the fore guard B, the rod R actuated by the lever *b*, the draw-bolt D attached to the vehicle and carrying the yoke Y and operated by the rod R, and the yoke Y suspended from the car by the draw-bolt D and carrying the main guard A, all substantially as described and for the purposes specified. 45 50 55

Signed at New York, in the county of New York and State of New York, this 4th day of January, A. D. 1899.

ROBERT WILLIAMS GIBSON.

Witnesses:

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P. HATHAWAY.