

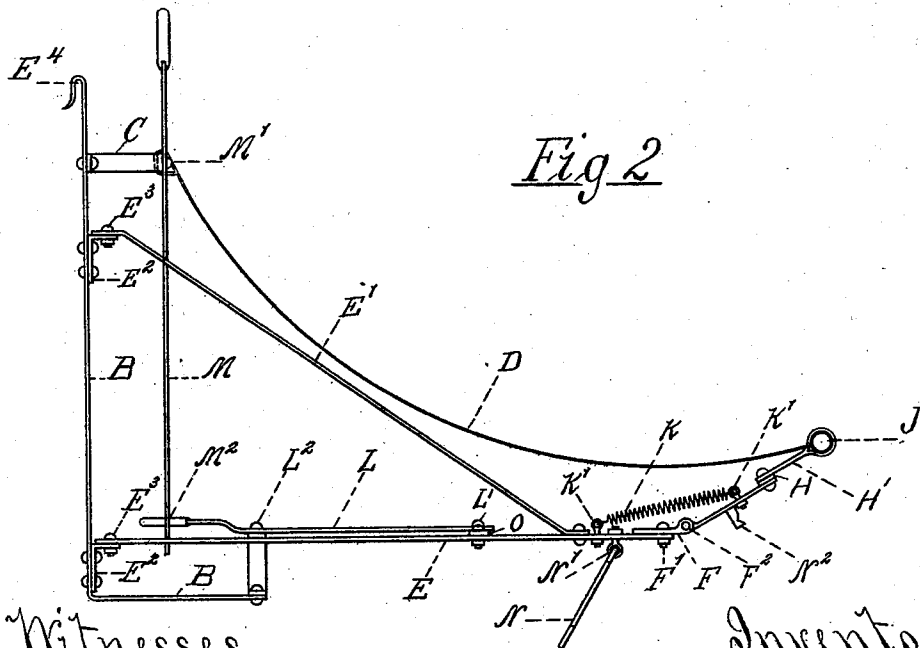
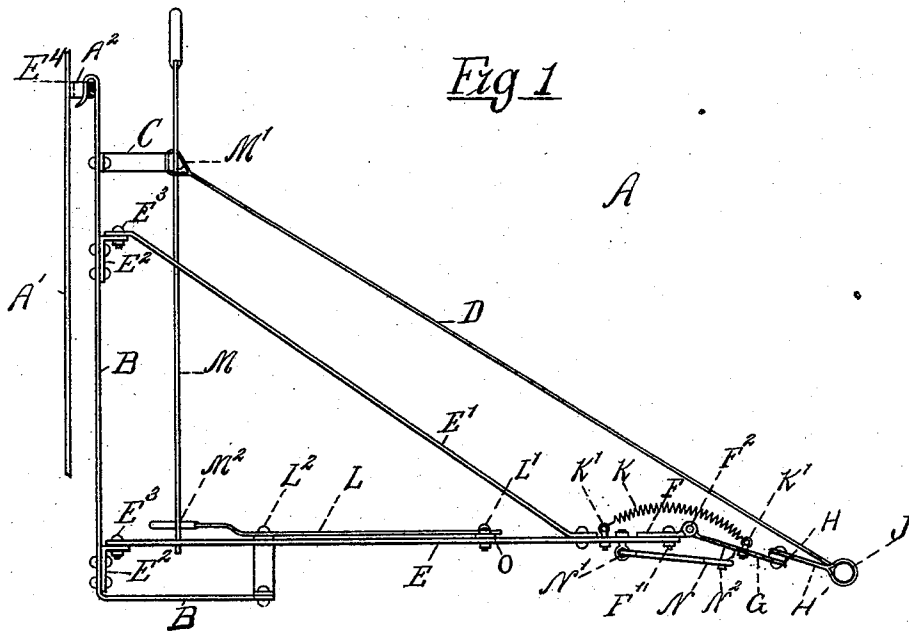
(No Model.)

2 Sheets—Sheet 1.

W. A. DONOR.
CAR FENDER.

No. 531,626.

Patented Jan. 1, 1895.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM A. DONOR, OF JERSEY CITY, ASSIGNOR OF ONE-THIRD TO MICHAEL J. O'KEEFE, OF PATERSON, NEW JERSEY.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 531,626, dated January 1, 1895.

Application filed October 6, 1894. Serial No. 525,054. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. DONOR, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented a certain new and useful Improvement in Car-Fenders, of which the following is a specification.

This invention relates to an improvement in car fenders and the object of the invention is to take up persons or other objects or obstacles that are met by a moving car and relates particularly to the fenders of trolley cars or cars impelled by the use of electricity.

A further object of my invention is to provide a fender that may be attached to any car without defacing the same and which may be readily removed from one end of the car to the other when necessary by the motorman or conductor.

A still further object of my invention is to provide a car fender that is pivotally adjusted so that it may readily be swung either to the right or to the left, so as to enable cars to pass each other on a curve without collision, and so as to allow a car at the ordinary speed to take up persons without detriment to life or limb.

I accomplish these objects by my invention which consists in the features of construction and the combination or arrangement of parts hereinafter described and claimed, reference being had or made to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation of my fender with the spring or guard down. Fig. 2 is a side elevation with the spring guard up after striking an obstruction. Fig. 3 is a general plan of my improved fender, parts being omitted, the dotted lines indicating how the fender may be turned from right to left or vice versa.

In the drawings the letter —A— indicates the fender; A', the front of car, and A² a lug riveted on the front of the car; —B—, the main frame; —C—, cross bar for netting; —D—, the netting; —E—, the bottom arms which are pivotally secured to the main frame —B—; —E'—, a brace secured to the arm —E— and pivotally secured to the main frame —B— by means of the brackets —E²— —E²—.

—G— is a hinged arm which is secured to

the bottom arm —E— by means of the hinge —E—.

—H— is a cross bar with extensions which together with the arms —H'— carry the helical spring —J—.

—K— is a spring which has one end secured to the outer end of the arm —E— and the other end secured to the hinged arm —G—. The tension of the spring —K— draws up the hinge arm —G— and the spring arm —H'—.

—N— is a hook bolt which is suspended from the eye bolt —N'— which is secured to the bottom of the arm —E— near the outer end thereof.

—N²— is a catch secured to the bottom of the hinge arm —G—. The hook bolt —N— is adapted to engage the catch —N²— when the hinge arm —G— is drawn down.

—O— is a cross bar which connects the bottom arms —E—.

—L— is a lever which is secured by the bolts L' and L² to the cross bar —O— and the main frame B respectively.

—M— is a lever to work the lever —L—.

—M'— indicates the fulcrum bolt or pin and —M²— a slot through which the lever —L— passes.

The spring —K— is secured to the arms —E— and —G— by means of the eye-bolts —K'—.

A hook —E⁴— is formed on each side of the main frame —B— for hooking on to the dash board of the car.

The brackets —E²— are secured to the main frame —B— in any suitable manner and the bottom arm —E— and the brace —E'— are pivotally secured to said brackets by means of the bolts —E³—.

As shown in Fig. 3, the spring —J— projects in front of and at each side of the hinged arm —G— and is the first part of my device to come in contact with any person or object which the car will meet in its progress. Said spring is sufficiently yielding as to insure the safety of a person struck by it from serious injury while offering resistance enough to cause the hinged arm —G— to drop toward the ground thereby releasing the hook-bolt —N— from engagement with the catch —N²—. The person or object being thus struck by the helical spring —J— naturally falls into the

netting —D— and the spring —K— is of sufficient tension to cause the hinge arm —G— to rise as shown in Fig. 2, thus forming a cradle or safe receptacle for the person or object picked up.

As there are many curves in street railroads where double tracks are laid it is obvious that any fixed or permanent fender which projects much in front of a car would not be practicable as the projecting fender or fenders of cars coming in opposite direction around the curve would collide and prove worthless and objectionable in many other ways.

As the bottom arms and side braces of my fender are pivotally secured to the main frame it is obvious that the above mentioned objections cannot be made or raised against my invention. On the contrary by means of the levers M and L my whole fender may be turned either to the right or to the left as occasion may require for the purposes of avoiding a collision where the tracks are close together or close to piers or abutments in going around a curve. It may also be objected to many car fenders or life guards that they are cumbersome, unsightly and permanently secured to the cars, while my device, as I aim to have it constructed, which is substantially as shown in the drawings, is light but strong and is easily attached to or detached from a car so that but one fender of my invention will be necessary for each car, as it may be changed from one end of the car to the other by the motorman or conductor when necessary.

The length of the different arms, braces, hinges and springs and the size and tension of the springs as well as the size of the netting —D— may be varied to suit the requirements of different cases without in any way departing from the essential principles or elements which constitute my invention.

With this description of my invention, what I claim, and desire to secure by Letters Patent, is—

1. A fender capable of lateral movements, actuated by levers, said fender having a front part thereof hinged to the main body of the fender and being capable of vertical movements, actuated by springs in combination

with a spring extending around both sides and in front of said hinged portion and secured to projecting arms thereon, substantially as shown and described and for the purpose specified.

2. A fender, capable of lateral movements, actuated by levers, said fender having a front part thereof hinged to the main body of the fender and being capable of vertical movements actuated by springs, in combination with a netting, suitably secured to the main frame, and a spring extending around both sides and in front of said hinged portion and secured to projecting arms thereon, substantially as shown and described and for the purposes specified.

3. In combination with a railway car, a fender, capable of lateral movements, actuated in such movements by a lever or levers, the movable portion of said fender being pivotally secured to the main frame thereof, said fender having a front part thereof hinged to the main body of the fender and being capable of vertical movements actuated by springs, a spring extending around both sides and in front of said hinged portion and secured to projecting arms thereon, and a netting suitably secured to the main frame, substantially as shown and described and for the purposes specified.

4. In a car fender the main frame —B— having the bottom arms —E— and side braces —E'— pivotally secured to the main frame, a drop hinged portion secured to the main body of the fender, said hinged portion being held down by means of a hook and catch, in combination with the springs —F— the tension of which is adapted to elevate the hinged portion when the hook —N— is released from engagement with the catch —N²—, a helical spring secured to the front and sides of said hinged portion by means of projecting arms or extensions thereon adapted to receive the same, and a netting suitably secured to the main frame, substantially as shown and described and for the purposes specified.

WILLIAM A. DONOR.

Witnesses:

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