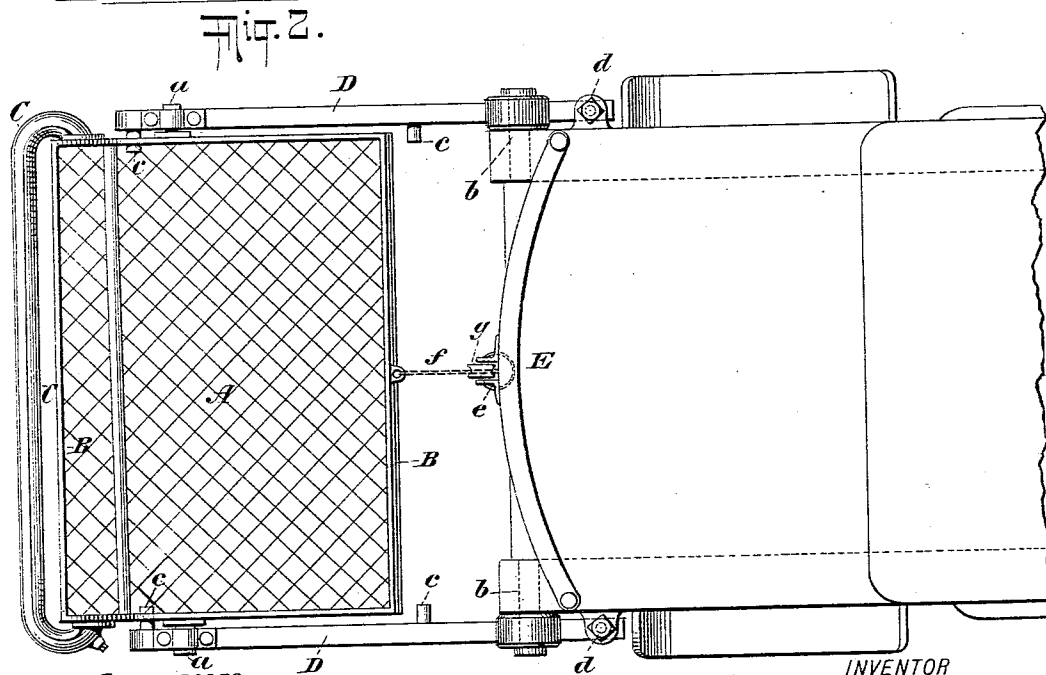
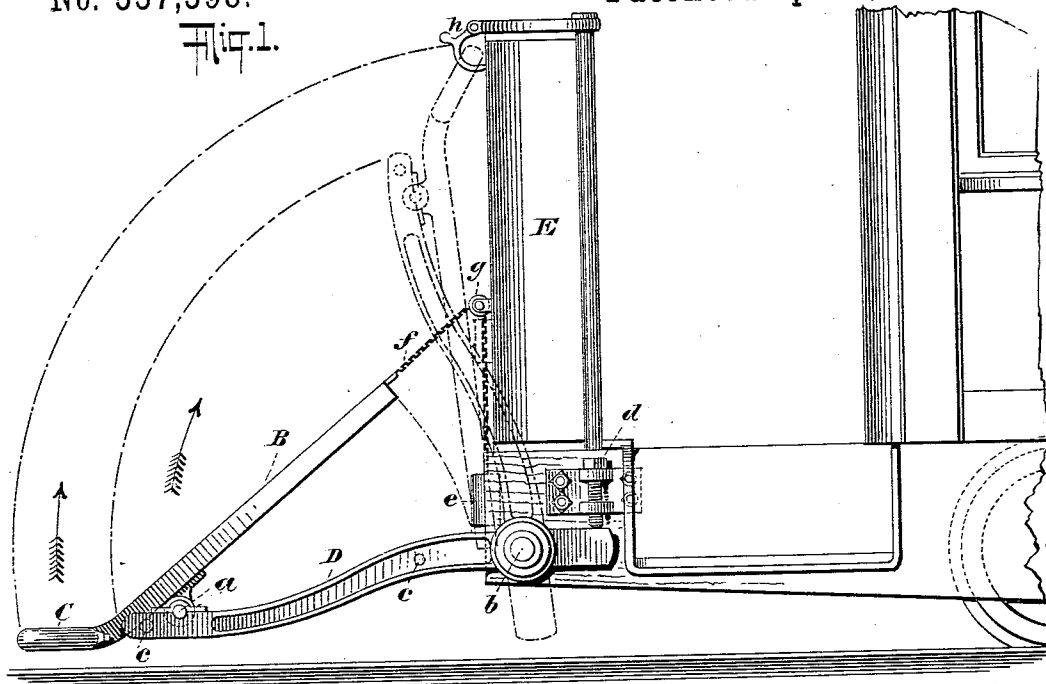


(No Model.)

F. OAKDEN.
CAR FENDER.

No. 557,598.

Patented Apr. 7, 1896.



WITNESSES:
Guillaume Dietrich.
Wm B. Whitney

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UNITED STATES PATENT OFFICE.

FRANK OAKDEN, OF DUNEDIN, NEW ZEALAND.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 557,598, dated April 7, 1896.

Application filed January 26, 1894. Serial No. 498,073. (No model.)

To all whom it may concern:

Be it known that I, FRANK OAKDEN, a subject of the Queen of Great Britain, residing at the city of Dunedin, in the Colony of New Zealand, have invented certain new and useful Improvements in Car-Fenders and Safety Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to a fender and safety device for steam, electric, cable, and other cars, and particularly those designed to run in public streets, my object being to provide a safety attachment which is both simple in construction and convenient, and at the same time affords the maximum of protection from shock or other injury to a person struck by the moving car. I attain this object by the mechanism shown in the accompanying drawings, in which—

Figure 1 is a side view, and Fig. 2 is a top view.

Similar letters of reference indicate similar parts in both figures.

The tilting or swinging frame B, supporting a net A or other suitable structure, and the supporting-arms D constitute the principal parts of my improved safety device. The supporting-arms D are made of iron, steel, or other suitable material and of sufficient strength to withstand the strain of a person being violently thrown upon the net. They are attached at one end to the forward end of the car, one on either side, preferably by pivotal rods or pins *b*, so that the height of their forward ends and of the net which they support above the track or roadway may be easily regulated by set-screws *d*. At or near their forward ends, at *a*, is pivoted or hinged the frame B, which is strongly made of iron, steel, or other suitable material. I prefer to slightly deflect or turn up the front or lower side of the frame B, as shown in Fig. 1; but this construction is not essential to my invention. The net A is made of rope, cord, wire, or other suitable material. I do not, however, limit myself to a net as the structure to be used for filling in the space within the frame B, as a series of longitudinal or transverse parallel rods, preferably flexible or springy, or a sheet of canvas or cushion, or

other equivalent structure, may be used in place of the net, if desired.

C is a flexible or cushioned guard, preferably a hollow pneumatic rubber tube, placed around the front end of the frame B to better protect a person run into from injury. The frame itself may be padded or cushioned, if desired. The net and its supporting-frame are held in their normal tilted position, as shown in Fig. 1, by the weight or weights *e*, suitably attached thereto, or by suitable springs placed at the pivotal bearings *a* or elsewhere. The pins *c c* or other stops confine the swinging or tilting movement of the net and frame within suitable limits.

When not in use, the whole attachment may be easily folded up against the end or guard rail of the car E, where it is held by the snatch-hook *h*, provided for that purpose. This position of the device is shown by the dotted lines in Fig. 1. When thus folded up, the device is entirely out of the way and will not interfere with the coupling of the car, or the attachment can be entirely removed from the car by simply removing the pins *b*.

In operation the lower side of the frame of my improved fender and safety device or the rubber guard in front of the frame, if such a guard is used, strikes a person as near the feet as possible, precipitating him into the net, which, yielding to the weight thrown upon it, assumes a horizontal position, or one nearly so, thereby raising the legs of the person up from the ground and preventing his rolling off.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A car-fender and safety device consisting of two arms supporting a tilting frame which carries a net or other suitable structure and which is held normally in an inclined position but assumes a horizontal position, or one nearly so, under the weight of a person thrown against it, the said frame being pivoted to the supporting-arms and the said arms to the car so that the whole device may be folded up and secured against the end of the car when not in use, substantially as described.

2. The combination, with a car, of the two

supporting-arms D, D, pivoted to the car, the
tilting frame B, pivoted near its forward end
to the forward ends of the supporting-arms,
the net A, or other suitable structure mount-
5 ed upon said frame, and the hook h, for se-
curing the whole device against the end of
the car when not in use, substantially as de-
scribed.

In testimony whereof I affix my signature,
in presence of two witnesses, this 22d day of 10
December, 1893.

FRANK OAKDEN.

Witnesses:

J. R. FINCKEL,
J. WHITE.