(No Model.)

H. W. EATON.

CAR FENDER.

No. 525,592. Patented Sept. 4, 1894.

Fig. 1

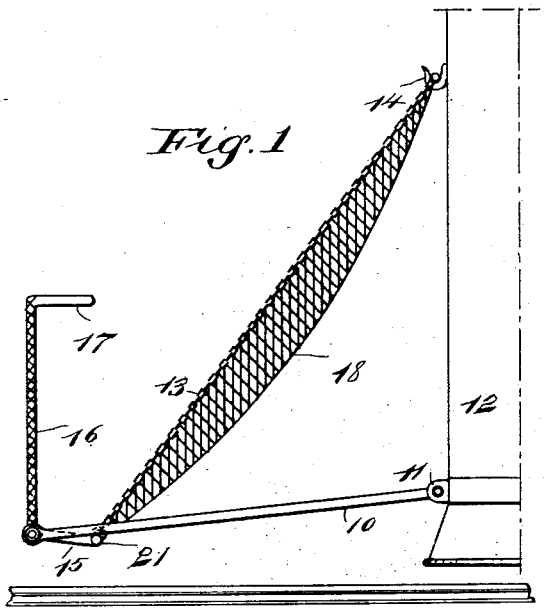


Fig. 2

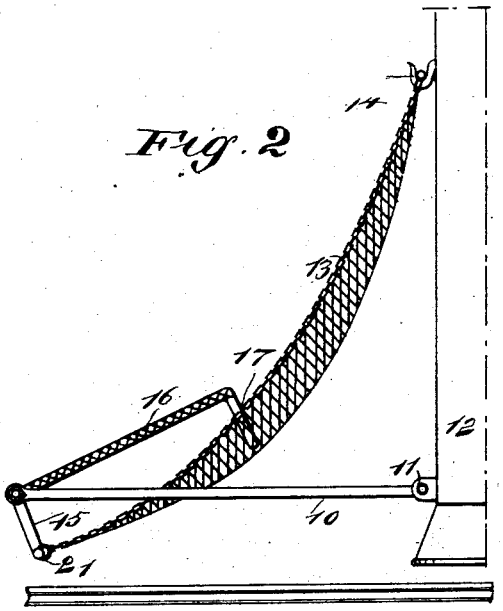


Fig. 3

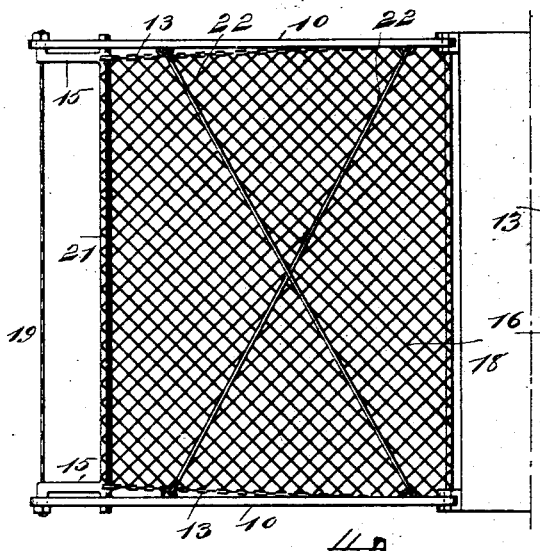
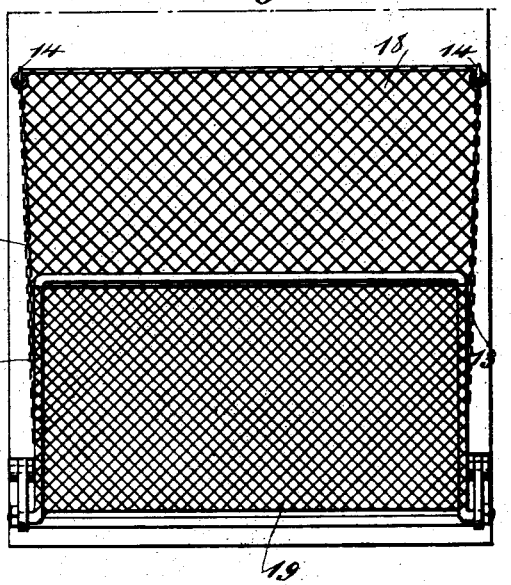


Fig. 4



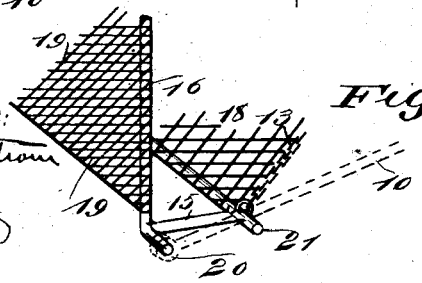


Fig. 5

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CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 525,592, dated September 4, 1894.

Application filed February 24, 1894. Serial No. 501,384. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. EATON, of the city, county, and State of New York, have invented a new and Improved Car-Fender, of which the following is a full, clear, and exact description.

My invention relates to improvements in that class of car fenders which are supported at the ends of street cars to prevent people from being run over by the cars. An objection to many of these fenders is that they are so rigid in front that if they strike a person they are liable to injure him almost as badly as if the car ran over him.

The object of my invention is to obviate this difficulty by providing a car fender which is so flexible that it cannot possibly injure a person whom it strikes, also to arrange the fender in such a way that it may be easily hung to a car, may be easily folded up when not in use, and will, when it strikes a person, catch him in such a way that he is carried safely along with the car, no attempt being made to throw him off the track, so that by stopping the car he may be restored in safety to his feet.

To these ends my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of my improved fender as applied to a car, showing it in position for use. Fig. 2 is a similar view, illustrating the position of the parts when a person has been caught on the fender. Fig. 3 is an inverted plan of the fender. Fig. 4 is a front end view of the fender; and Fig. 5 is a broken perspective view, showing in detail the connection between the guard frame and the fender proper.

A suitable framework 10 is connected by a hinge joint, as shown at 11, with the car 12, at a point near the bottom of the car, this frame extending forward in a nearly horizontal position; and connected with it near its outer end and on opposite sides are chains 13, or equivalent flexible supports, which extend upward and are at the top secured to hooks 14 or other fastening devices. The chains 13 are not connected directly to the frame 10, but they serve to support it indirectly. The chains are attached at their lower and outer ends to the arms 15 of a swinging frame 16, which extends normally upward, as shown in Figs. 1 and 5, at very nearly right angles to the frame 10, the frame 16 being turned inward at its upper end, as shown at 17, so that when turned over into the position illustrated in Fig. 2, it may strike the chains 13 and the network connected therewith, so as to depress the chains near the center and swing them and the frame 10 upward slightly at the front extremity of the fender, as Fig. 2 shows.

The chains 13 are connected by a netting 18 and the frame 16 is also provided with a netting 19, the netting in either case being of any suitable material. The frame 16 is pivoted at its lower end, as shown at 20, to the outer end of the frame 10, and the arms 15 have at their free ends a cross bar 21 which extends beneath the sides of the frame 10, and thus by striking the frame 10 limits the upward swing of the arms 15 and consequently the outward movement of the frame 16. To prevent too much side sway, the frame 10 is provided with cross braces 22 on its under side, as shown clearly in Fig. 3. It will be seen that this arrangement forms a very flexible fender which can be very cheaply made and very easily applied to a car. If the fender strikes a person, the more rigid portion of it will strike the person near the ankles, which trips him, and the upper part of his legs and the lower portion of his body strike the swinging frame 16 which swings inward under his weight, thus throwing him upon the nettings 18 and 19, and the chains 13 are buckled in the middle, thus drawing up their outer ends and raising the frame 10 somewhat, so that the party thrown is carried safely and the car may be stopped and the person removed without injury.

By bending the frame 16 backward at the top and bottom as shown at 15 and 17 it acts as above specified, and it also removes the bars from the front of the frame, leaving only the netting, which, if it strikes a person, yields and it does the person no harm.

It will be understood that the height of the

frame may be regulated by the length of the chains 13, and the height of the hooks 14 or other devices to which the chains are fastened. It will be seen that the chains 13, acting on the arms 15, will hold the frame 16 normally up, but if the device is to be folded, the frame 16 may be swung inward and the frame 10 swung upward and fastened in any convenient way to the car.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. The combination with a frame adapted to be connected with and project in front of a car, of an upwardly extending netted or covered frame hinged at its lower edge to the front end of the first frame to swing rearwardly and downwardly when struck, means for preventing the frame from swinging forwardly and downwardly, and a net extending from the hinged edge of the upwardly projecting frame over the first frame and provided with means for connecting it to the front of the car, substantially as described.

2. The combination, with a car, of a forwardly extending frame hinged thereto, a second frame hinged to the first frame and provided with inwardly-extending arms, suspending chains secured to the arms and adapted to be secured to the car, a network covering for the second frame, and a netting connecting the chains, substantially as described.

3. The combination, with a car, of a forwardly projecting frame hinged thereto, a second frame hinged to the first frame and adapted to extend upwardly therefrom, the second frame having inwardly projecting arms and a cross bar extending beneath the sides of the first frame, a network covering for the second frame, and suspending chains secured to the lower inner portion of the second frame and adapted to be attached to the car, the suspending chains being connected by a netting, substantially as described.

4. The combination, with the car, of a forwardly projecting frame hinged thereto, a second frame hinged to the first frame and provided with inwardly-extending lower and upper ends, suspending chains secured to the inwardly-extending lower ends of the second frame and adapted to connect with the car, a network covering for the second frame, and a netting connecting the suspending chains, substantially as described.

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