

(No Model.)

M. C. SWIFT.
STREET CAR FENDER.

No. 549,662.

Patented Nov. 12, 1895.

Fig. 1.

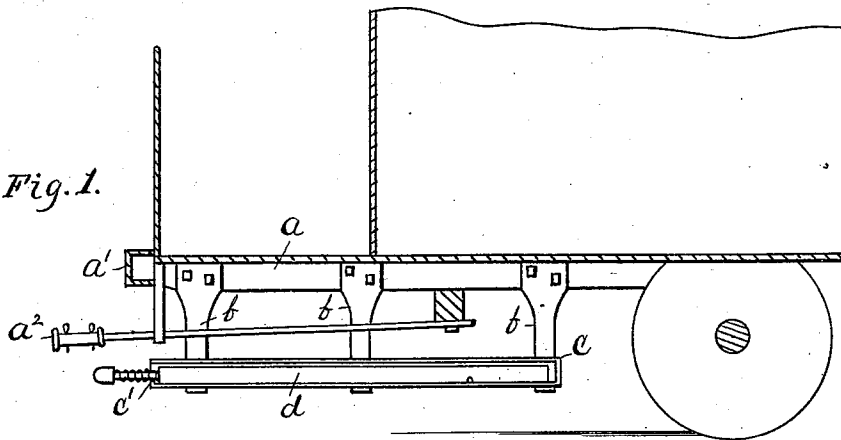


Fig. 2.

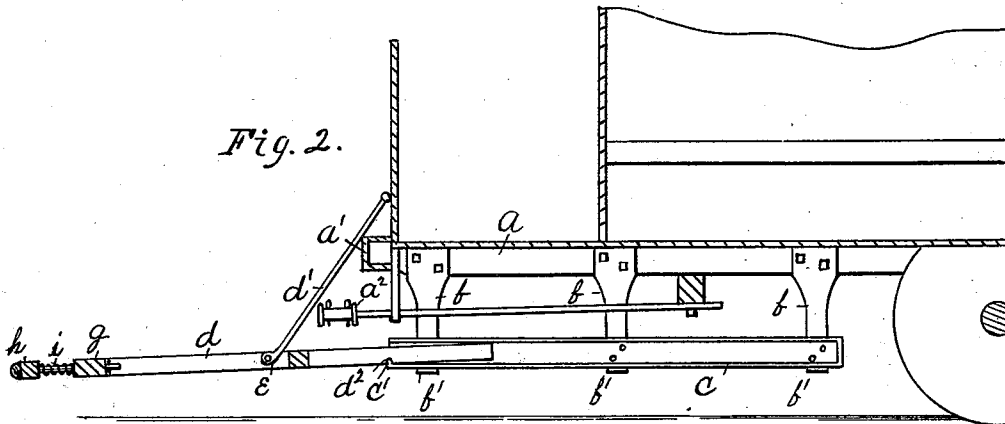


Fig. 3.

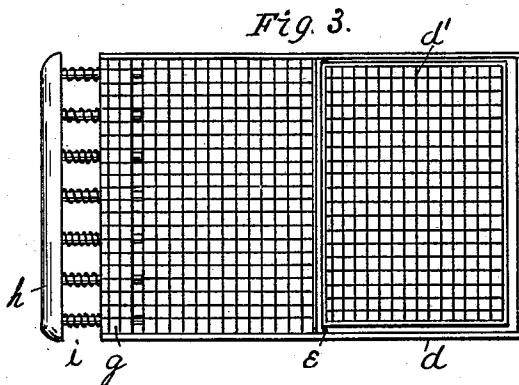


Fig. 5.

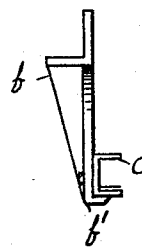
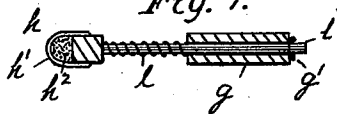


Fig. 4.



Witnesses
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MOSES C. SWIFT, OF NEW BEDFORD, MASSACHUSETTS.

STREET-CAR FENDER.

SPECIFICATION forming part of Letters Patent No. 549,662, dated November 12, 1895.

Application filed September 10, 1894. Serial No. 522,583. (No model.)

To all whom it may concern:

Be it known that I, MOSES C. SWIFT, a citizen of the United States, residing at New Bedford, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Safety-Fenders for Street-Cars, of which the following is a specification.

This invention relates more especially to electric and cable street-cars; and its object is to provide a fender which when in use will receive and sustain without injury any person that may stand in the path of the car, and, further, to construct the fender in such a manner that when the car is not in use it may be folded together and shoved under the car out of the way.

The accompanying drawings illustrate my invention, in which—

Figure 1 is a view in vertical section of a portion of a car provided with my improved safety-fender, showing the fender folded together and shoved under the car. Fig. 2 is a view in vertical section of a portion of a car provided with my improved fender, showing the fender in position to receive any one standing in the path of the car. Fig. 3 is a plan view of the fender as it appears when removed from the car. Fig. 4 is an enlarged sectional view of the front end of the fender. Fig. 5 is a side view of one of the hangers which support the ways and an end view of one of the ways in which the fender is supported.

Similar letters refer to similar parts in the several views.

The letter *a* indicates one of the sills of the car, to which are bolted the hangers *b b*, having the lip *b'*. Resting on the lips *b'* and bolted to the hangers *b* is the angular way *c*, having the lip *c'* projecting upward from the lower side of its forward end. It will be understood that both sills of the car and at each end are furnished in like manner.

d indicates a frame adapted to slide loosely in the ways *c*, having notches *d²*, adapted to receive the lips *c'*, and having wire-netting stretched within it for something more than half its length from the front.

d' indicates a frame pivoted within the frame *d* at *e*, so as to be capable of folding

forward upon the netting of the frame *d*, as shown in Fig. 1, and is also provided with wire-netting, as shown in Fig. 3. The frame *d'* is pivoted at such a point on the frame *d* that when said frame is drawn out from under the car the frame *d'* may be turned back against the dashboard of the car and cover the end of the draw-bar *a²* and the bumper *a'*, so that a person in falling on the fender is prevented from striking anything which would be likely to injure him.

The forward end of the fender is constructed so that when it strikes a person it will give a highly-cushioned blow and prevent the liability of breaking his ankles, which there would be great danger of if said front were rigid.

The construction of the front end of the fender is shown in Fig. 4, in which the front cross-bar *g* of the frame *d* is provided with a series of horizontal holes, in which play loosely the pins *i*, which are rigidly secured in the head *h*. The pins *i* are provided with spiral springs *l* between the head *h* and the cross-bar *g*, and are also provided with the stops *g'* to limit their forward movement. The head *h* is provided with a cushion, preferably consisting of a rubber covering *h'*, stuffed with curled hair *h²*.

In operation when the fender strikes a person who is standing in the path of the car the front end (which is carried as near to the surface of the track as practical) strikes him at the ankles, and the cushioned head *h* softens the blow, which is further cushioned by the yielding of the springs *l*, and the person is thus tripped without injury and falls safely upon the netting of the frames *d* and *d'*, where he is safely carried until the car can be stopped.

When the fender is drawn out from under the car ready for operation, as shown in Fig. 2, the notches *d²* in the frame *d* catch on the upward-turned lips of the ways *c*, and the fender is thus held with its front end inclining slightly downward and prevented from moving either to the front or rear.

When the car is not in use, the frame *d'* is folded down upon the netting of the frame *d*, the front end of the fender is raised sufficiently to disengage the notches *d²* from the

lips c' , and it is then shoved backward into the ways c under the car, as shown in Fig. 1.

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

1. In combination with a car, the ways c , provided with lips c' , supported on hangers under the end of the car; a frame d , having the notches d^2 , and provided with wire netting stretched within it, adapted to slide within and be supported by said ways, as shown and described.

2. In combination with a car, the ways c ,

provided with lips c' , supported on hangers under the end of the car; a frame d , having the notches d^2 , and provided with wire netting stretched within it, and having its front end provided with the cushioned head h , and a yielding connection between said head and the front cross-bar of the frame, and adapted to slide within and be supported by said ways; as shown and described.

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Witnesses:

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