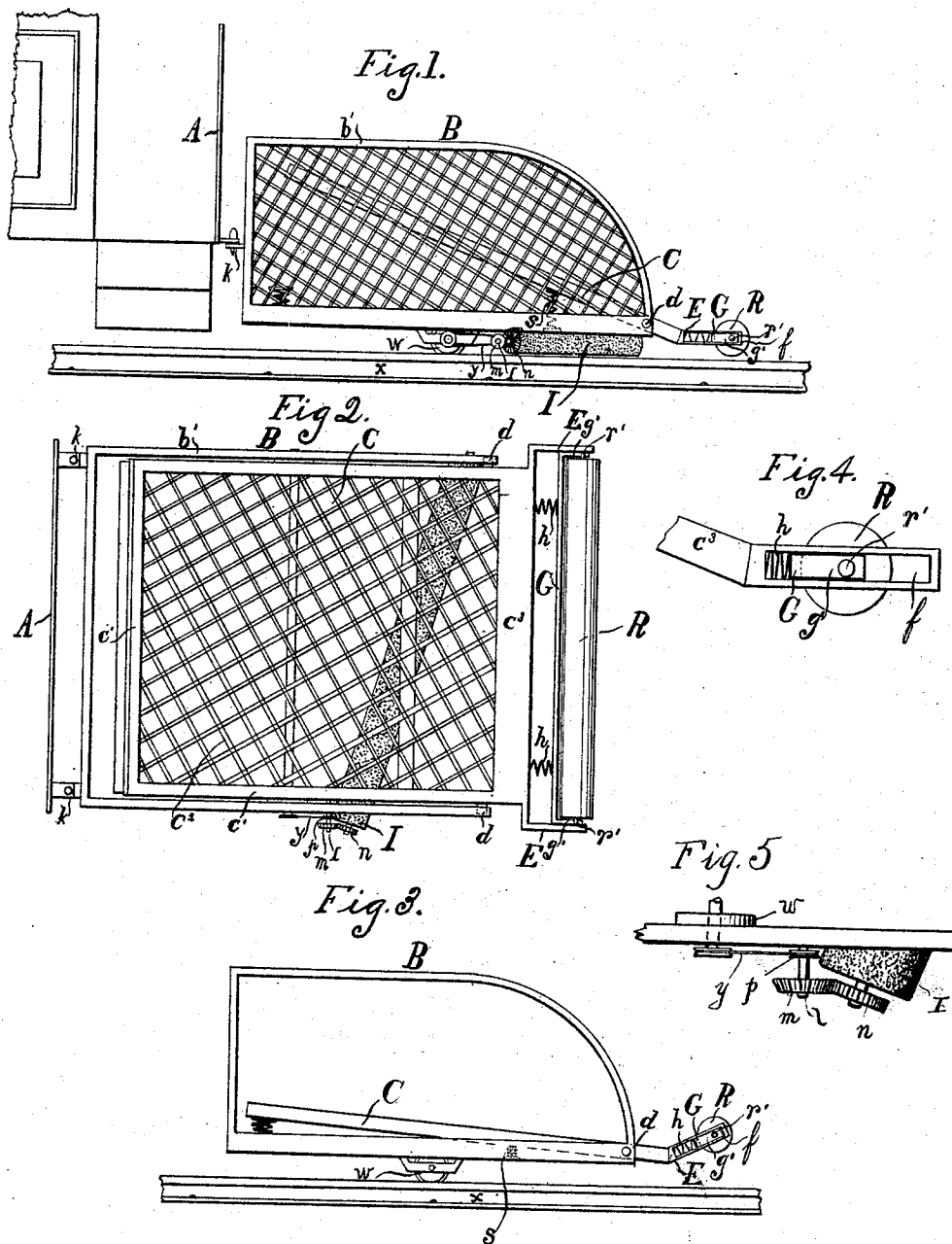


(No Model.)

B. LEV.  
CAR FENDER.

No. 540,066.

Patented May 28, 1895.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

BENJAMIN LEV, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO NICHOLAS F. HOFFMAN, OF SAME PLACE.

## CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 540,066, dated May 28, 1895.

Application filed November 23, 1894. Serial No. 529,687. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN LEV, a subject of the Czar of Russia, and a resident of the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Car-Fenders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a side elevation of the fender attached to a car, the parts being in the normal position; Fig. 2, a plan view; Fig. 3, a side view showing the pivoted bottom in the depressed position; Fig. 4, an enlarged side elevation of elastic roller and connections in the retracted position. Fig. 5 is a detail view.

This invention relates especially to car-fenders for street railway cars, and it consists of a main body or receptacle open at the top and front end, and adapted to be attached to and to project from the forward end of a car, and provided with a bottom pivoted near the open end of said body portion and inclined forward, it being maintained normally in such inclined position by means of supporting springs, or it may be by a suitable weight; the object being so that when the front end of the fender strikes a person standing or walking on the track-way, he will be thrown backward and will then fall upon the inclined bottom which will be tilted back by his weight and thus prevent him from falling sidewise from the said receptacle.

The invention consists also in the combination with the fender of an elastic, spring-controlled roller of india rubber or the like, arranged transversely across the forward end of the fender, and adapted to turn in bearings in arms projecting forward from the said pivoted bottom portion.

The invention consists further in certain special features that will be hereinafter duly pointed out.

Referring to the accompanying drawings, A, Figs. 1 and 2, marks the front of the car.

B is the fender secured thereto, preferably attached by means of suitable catches, *k*, or other suitable well known devices.

The fender is constructed of a frame work, with sides, *U'*, preferably of netting, and is open in front similarly to the body of a wheel-

barrow. It has a bottom, *C*, made of a frame work, *c'*, across which also is stretched netting, *c''*. It is pivoted to and within the frame of the body part by studs, *d*, on each side, near the lower forward end of said part. The main portion of this bottom extends to the rear of the pivotal studs, and is normally inclined, as seen in Fig. 1. It is maintained in such position by means of a spring or springs, *s*. From each end of the transverse frame pieces, *c''*, of the bottom frame work projects forward, about horizontally, an arm, *E*, in whose outer end is journaled a roller, *R*, of yielding or elastic material preferably india rubber. The journals, *r'* of this roller work in horizontal slots, *f*, in said arms. Running lengthwise and at the rear of the roller, *R*, and out of contact with the periphery thereof, is a bar, *G*, with forwardly projecting side extensions, *g'*, with apertures in their ends through which the journals of said roller extend. Springs, *h*, Fig. 2, bearing against the front of the transverse bar, *c''*, and against the rear of bar, *G*, press the journals of the roller against the front ends of the slots, *f*, as seen in Fig. 1, 2 and 3, the roller being shown pushed back in Fig. 4. By the described construction of the roller and adjuncts, they are made very yielding or elastic.

The fender I usually support on the track-way by means of small wheels, *w*, adapted to run on the rails, but these might be dispensed with.

The operation is as follows: Supposing a person should be walking or standing on the track in advance of the approaching car; he will first be struck by roller, *R*, and will not be injured thereby because of its yielding quality and that of the springs, *h*. He will fall backward upon the yielding inclined bottom of the fender, which will then tilt back and down against the stress of springs, *s*, and assume the position seen in Fig. 3. Thus the person will be prevented from falling out of the fender in any direction.

In case the person shall have fallen prostrate upon the track, the soft roller will not seriously injure him.

I sometimes provide beneath the fender an inclined, rotary, cylindrical brush, *I*, whereby in case roller, *R*, should happen to pass over

a person lying on the track, he may be swept from the track and thus be prevented from being run over by the car. This brush may be driven in the proper direction by means  
 5 of a belt, *y*, Figs. 1 and 2, running over a flange on one of the car wheels, *w*, of the fender; and a pulley, *p*, on a shaft, *l*, carrying at its outer end a gear, *m*, whose teeth engage a gear, *n*, on the shaft of the brush.

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

1. In a car fender, the combination of a main body, having raised sides or lateral  
 15 guards, and an open front, of an inclined spring supported bottom pivoted near the open end of said body, between said sides or guards which bottom also extends forward beyond the pivots thereof, and beyond the main  
 20 body, said bottom being unsupported at its rear portion except by the springs together with an elastic, spring-controlled roller journaled transversely in the forward end of such projecting portion, substantially as specified.

25 2. A car fender comprising a body portion having side frames and net-work, and open in front, an inclined, pivoted, spring supported bottom portion also having a filling of net  
 30 work, a yielding transverse roller journaled to and in the forward end of said bottom por-

tion, and a brush beneath the fender, substantially as specified.

3. In a car fender, the combination with the body, whose frame has forwardly extended  
 35 arms, of an inclined, spring controlled bottom pivoted near the front end of said body, the elastic roller journaled in slots of said bottom portion, the transverse bar behind such roller and out of contact therewith, said bar having  
 40 forwardly projecting side extensions through apertures of which the journals of the roller extend, and a series of springs interposed between said bar and forward edge of said body, substantially as specified.

4. In a car-fender the combination of the  
 45 frame or body thereof, adapted to run on wheels on the track-way, the pivoted, inclined bottom, the elastic or yielding roller journaled in forward extensions of said bottom portion, and the brush beneath the fender, with means  
 50 for imparting a rotary motion to said brush, substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

BENJAMIN LEV.

Witnesses:

WALTER C. PUSEY,  
 GEO. W. REED.