

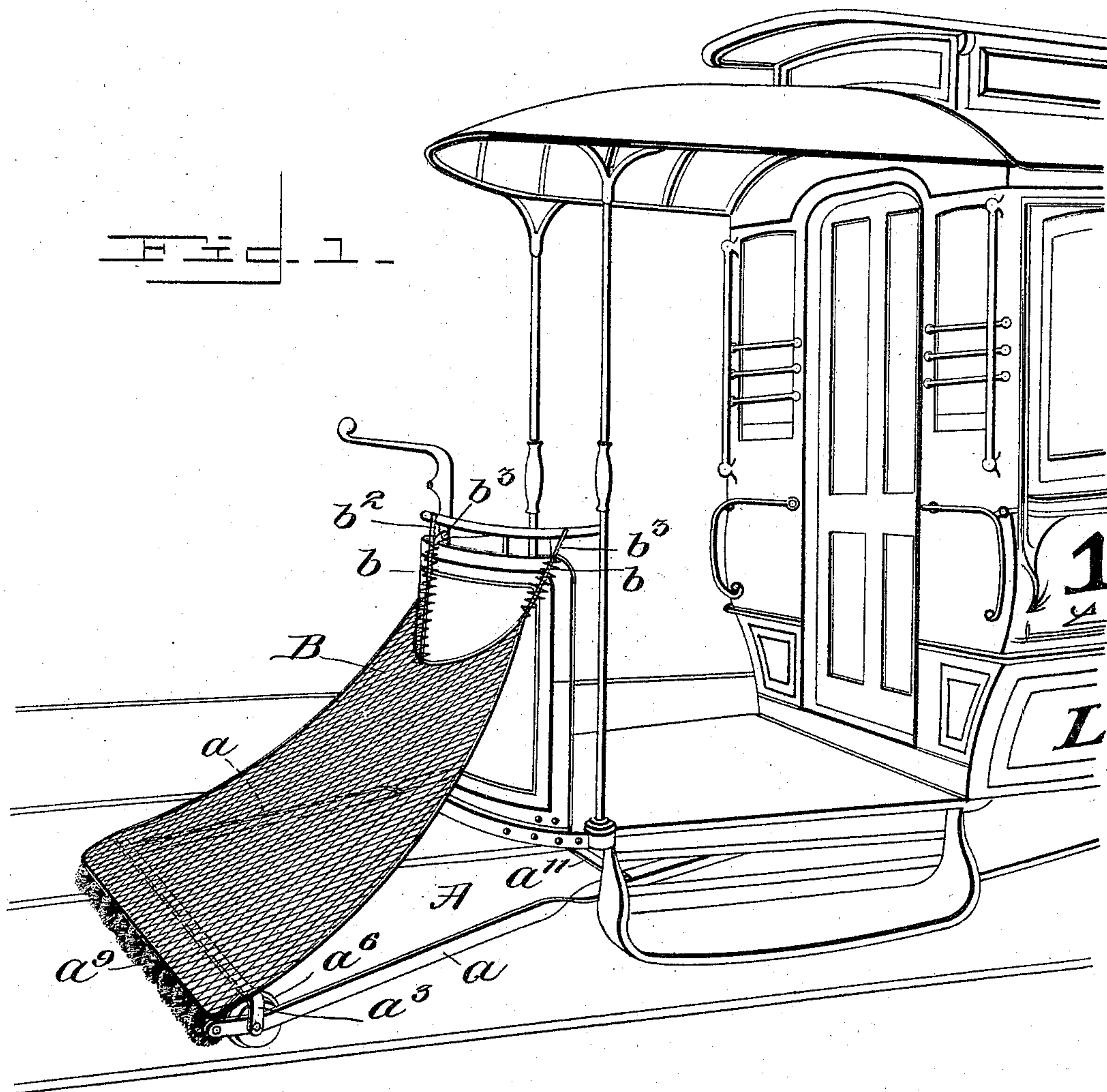
(No Model.)

2 Sheets—Sheet 1.

S. H. SHAW.  
CAR FENDER.

No. 535,776.

Patented Mar. 12, 1895.



Witnesses,  
*N. H. Humphrey.*  
*H. Holgate* by

Inventor,  
*Sanford H. Shaw,*  
*Geo. H. Holgate*  
his Attorney.



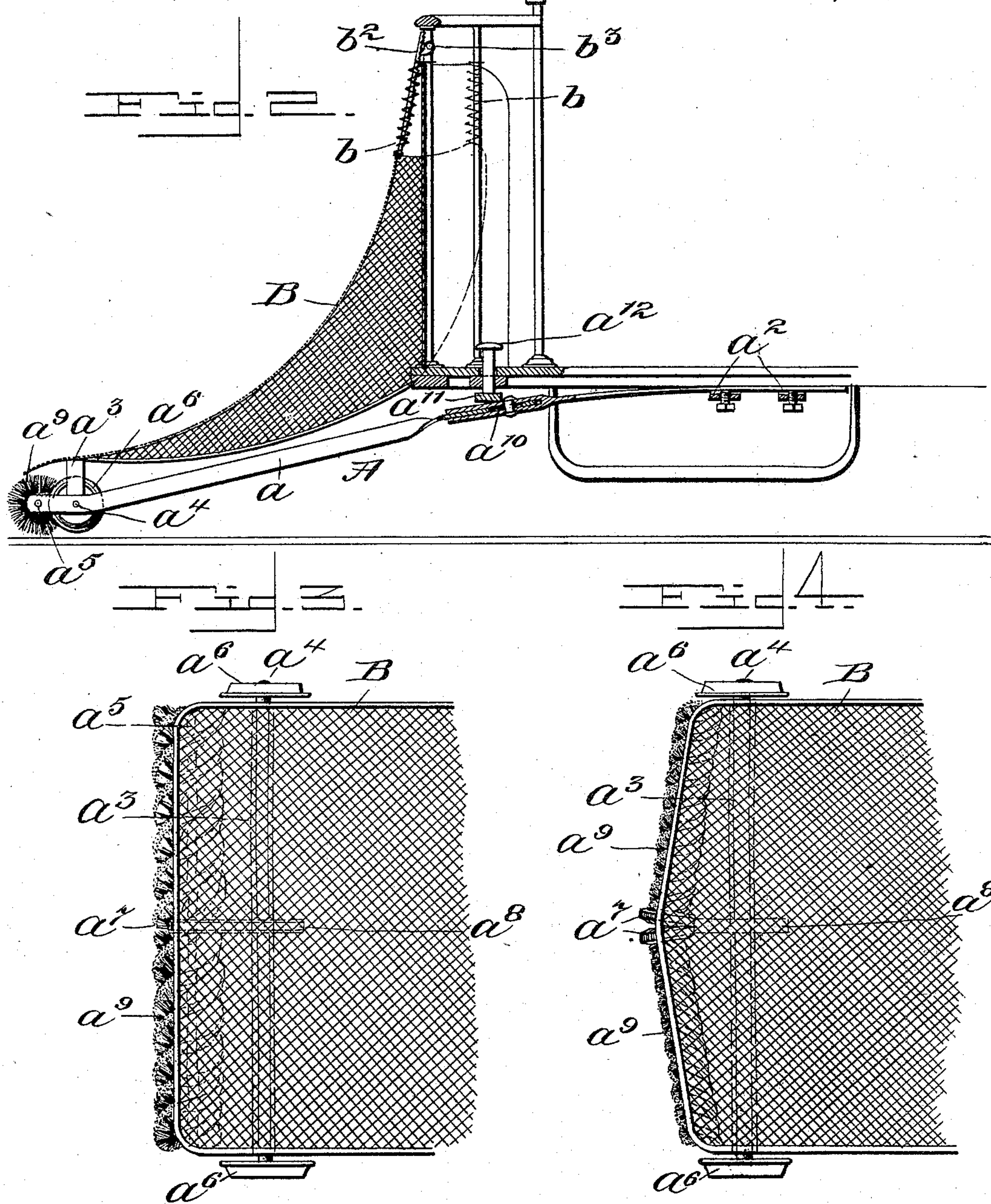
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# UNITED STATES PATENT OFFICE.

SANFORD HARVEY SHAW, OF PHILADELPHIA, PENNSYLVANIA.

## CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 535,776, dated March 12, 1895.

Application filed October 26, 1894. Serial No. 527,091. (No model.)

*To all whom it may concern:*

Be it known that I, SANFORD HARVEY SHAW, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

This invention relates to car fenders.

10 The object is to produce a device in the nature of a combined fender and track cleaner, by which the safe removal of obstructions, such as man or beast, when overtaken by a car, will be insured and the body supported thereby, clear of the track.

15 With this object in view, the invention consists in various novel combinations and arrangements of parts, which will be hereinafter more particularly described and pointed out in the claims.

20 The invention is illustrated in the accompanying drawings forming part of this specification, in which like letters of reference indicate corresponding parts in the several views.

25 Figure 1. is a view in perspective of one embodiment of the invention, applied. Fig. 2. is a sectional view of the same. Figs. 3 and 4. are fragmentary views in plan, of the front portion of the fender.

30 In the drawings: A, represents the frame of the fender, preferably of steel comprising side rods or bars  $a$ , the inner ends of which are removably secured beneath the body of the car, in socketed castings or clips  $a^2$ , the bars or rods being of spring metal, the fender proper, is thereby yieldingly supported, normally, clear of the track and road-bed. The bars  $a$ , are connected by a brace  $a^3$ , and have 35 journaled between and at or near their outer ends, two shafts  $a^4$ ,  $a^5$ . The former carries terminal wheels  $a^6$ , and a centrally disposed gear  $a^7$ , and the latter, a gear  $a^8$ , meshing with or connected to the gear  $a^7$ , as by a chain, so as to be driven thereby. This shaft  $a^5$ , may 40 be one or two sections, as shown in Figs. 3 and 4, and is designed to carry brushes  $a^9$ , which serve the dual purpose of sweeping the track and forming a yielding engaging pro-

jection in the removal of obstructions. To 50 render the frame capable of readily adapting itself to curves of the track, that is when the outer end is depressed, the bars  $a$ , are jointed at  $a^{10}$ , so as to have limited lateral play. Above or adjacent this joint is a cross bar 55  $a^{11}$ , which is suitably retained in proper position and connected to a vertically movable rod or pin  $a^{12}$ , working through an opening in the platform of the car, the pin being operated by the foot, in a well known manner. 60

B, represents the wire netting, which is attached to and if desirable may project beyond the brace connecting the side-bars of the frame. It is connected at the opposite 65 end to the upper rail of the dash board, by interposed spiral springs  $b$ , which encircle rack-bars  $b^2$ , secured to the netting. Engaging these bars, are pawls  $b^3$ , which are mounted in any suitable manner upon the dash board. The netting is more or less full bodied so that 70 it sags toward the center forming a cradle like support.

To adjust the device for use, the motorman, places his foot upon the head of the plunger, and pressing it downward causes the 75 outer end of the frame to become depressed, against the resistance of the spring side bars, until the wheels rest upon the track, when they begin to revolve, thereby imparting motion to the forward shaft, through the spur 80 or bevel gearing and causing the brushes to revolve in an opposite direction. On striking the object, the shock will be greatly reduced, by reason of the yielding surface of the brush and its being in motion. As the object falls 85 into the net the additional weight upon the springs causes them to expand, the rack-bars and pawls acting at the same time to lock the springs, thus expanded, so as to prevent their sudden recoil, which in some instances, would 90 be sufficient to dislodge the object.

From the foregoing description it will be obvious, that the motorman, by depressing the plunger, may at any time sweep the track, so as to keep it free of dirt, snow or the like. 95

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

1. A car fender, comprising a vertically movable spring frame, detachably secured to the car in a manner to be normally supported clear of the road bed, and provided at the  
5 outer end with wheels, which are adapted to ride upon the track when the frame is depressed, a track cleaning brush rotatably mounted in the frame, and means for driving the brush, and a catch net attached to the  
10 frame and yieldingly connected with the car, as specified.

2. A fender comprising a vertically movable spring frame, detachably secured to the

car in a manner to have limited lateral play, and provided with wheels adapted to ride 15 upon the track when the frame is depressed, a track cleaning brush rotatably mounted and a catch net attached to the frame and yieldingly connected with the car, as specified.

In testimony whereof I have hereunto 20 affixed my signature in the presence of two subscribing witnesses.

SANFORD HARVEY SHAW.

Witnesses:

WM. LANIER GAULBERT,  
PERCY V. KEATING.