

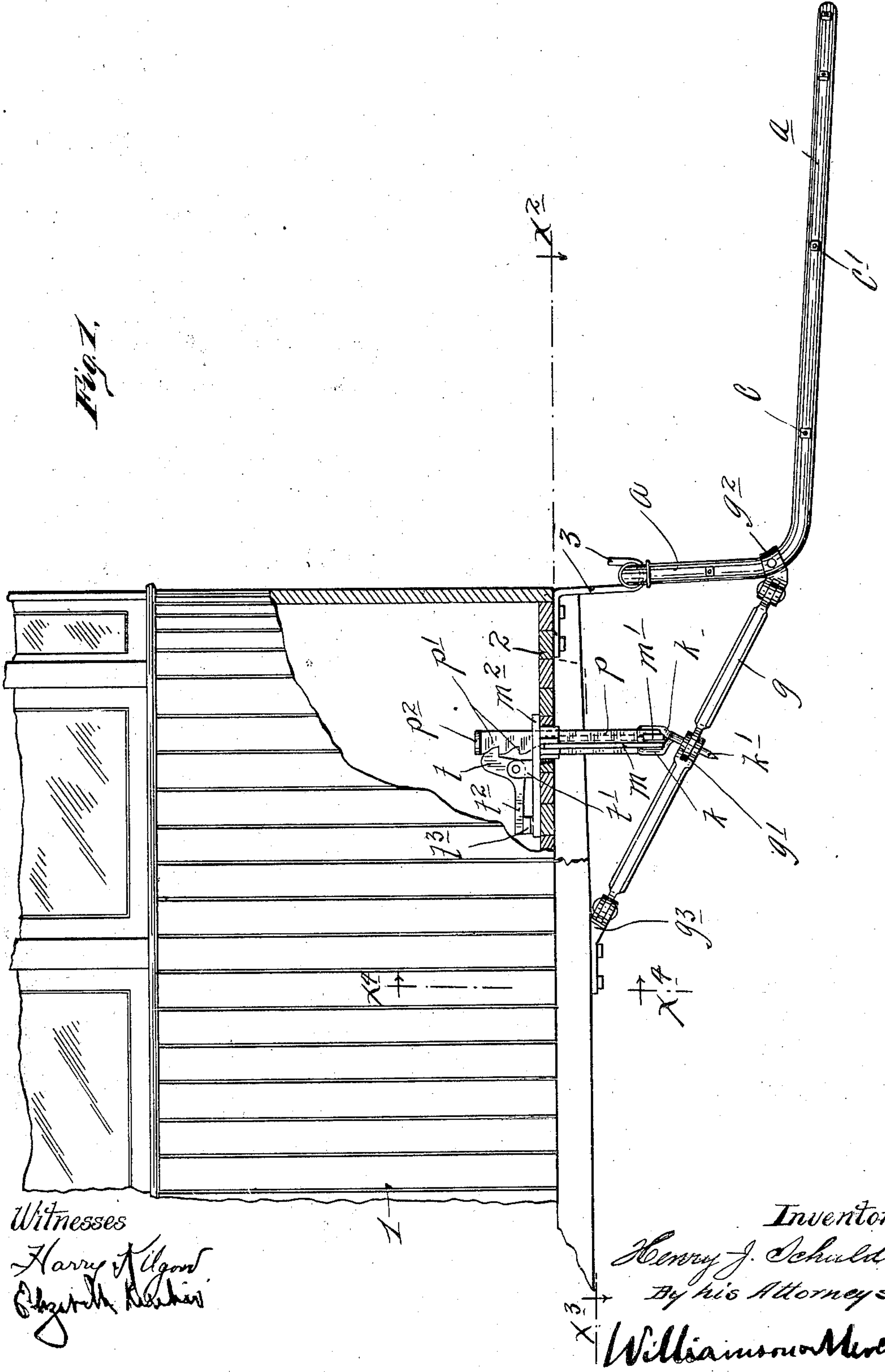
No. 705,150

Patented July 22, 1902.

H. J. SCHULDT.
STREET CAR FENDER.
(Application filed Nov. 25, 1901.)

(No Model.)

3 Sheets—Sheet 1.



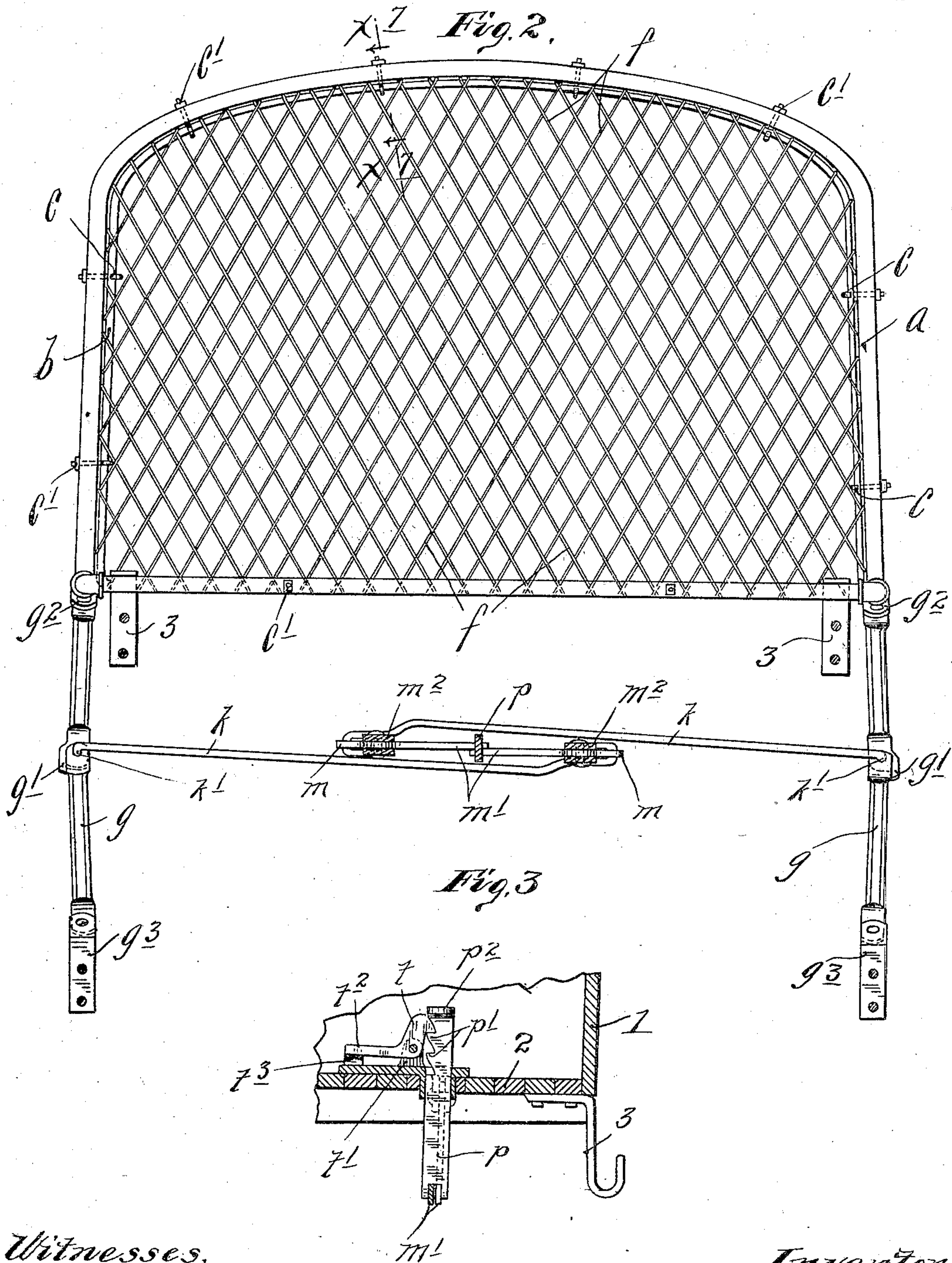
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3 Sheets—Sheet 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY JOHN SCHULDT, OF ST. PAUL, MINNESOTA, ASSIGNOR TO PHILIP W. HERZOG, OF ST. PAUL, MINNESOTA.

STREET-CAR FENDER.

SPECIFICATION forming part of Letters Patent No. 705,150, dated July 22, 1902.

Application filed November 25, 1901. Serial No. 83,519. (No model.)

To all whom it may concern:

Be it known that I, HENRY JOHN SCHULDT, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Fenders for Street-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention relates to street-car fenders of the general character disclosed in the patent to Luther Case and Henry J. Schuldt, No. 666,736, of date January 29, 1901, and has for its object to improve the same in the several particulars hereinafter noted.

The invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a view in side elevation with some parts broken away and others sectioned, showing the front end portion of the body-section of a car such as used in street-railways. Fig. 2 is a plan view of the fender and mountings therefor, some parts being sectioned. Fig. 3 is a detail view in section, approximately on the line $x^3 x^3$ of Fig. 4, some parts being broken away and others being removed. Fig. 4 is a transverse vertical section taken approximately on the line $x^4 x^4$ of Fig. 1 looking toward the front of the car, some parts being broken away. Fig. 5 is a detail in side plan, some parts being broken away, showing the central portion of one of the toggle-levers. Fig. 6 is a side elevation of the parts shown in Fig. 5; and Fig. 7 is a detail in vertical section on the line $x^7 x^7$ of Fig. 2, the parts being shown on an enlarged scale.

The numeral 1 indicates the body of the car, and the numeral 2 indicates the platform or floor of the vestibuled end section thereof. To the front portion of the platform 2 is rigidly secured a laterally-spaced pair of hinge irons or hangers 3, of ordinary construction.

The frame of the fender is made up of a

primary rim a , which is preferably tubular, and an inner or supplemental marginal rim b . The said supplemental frame-section b is preferably formed of round rod, which closely follows the tubular primary frame a and is detachably secured thereto by single-ended clamping staples or hooks c . These hooks or staples c embrace the rod b with their hooked ends and are passed diametrically through the tube a , as best shown in Fig. 7, and are secured in position by nuts c' on their screw-threaded outer ends. The supplemental frame-section b is filled in by a network, preferably formed by diagonally-crossed ropes or wires f , suitably secured to the said rod b and removable therewith. As in the said patent above identified, the fender is normally held upward, as indicated in Fig. 1, by means of toggle-levers g , that are normally held from their dead-centers by stop-lugs g' . (Best shown in Figs. 5 and 6.) At their forward ends the toggle-levers g are pivoted to brackets g^2 , secured on the primary frame-section a , as best shown in Fig. 1. At their rear ends the toggle-levers are pivoted to small brackets g^3 , rigidly secured by bolts or otherwise to the timbers of the car-body 1, as also shown in Fig. 1. The outer ends of a pair of transversely-extended toggle-actuating rods or links k are pivotally connected to the central joints of said toggle-levers, as best shown in Figs. 5 and 6, wherein it will be noted that the downturned ends k' of the said rods are made to serve as pivot-pins to connect the sections of the said toggle-levers. At their upper ends the said rods k are pivoted to depending arms m of reversely-acting bell-cranks m' , which, as shown, are pivoted to a floor-plate m^2 , suitably secured to the floor 2 of the front-end vestibule. A vertically-movable ratchet plunger or bar p , provided with teeth p' and a footpiece p^2 at its upper end, works through a suitable guide in the floor-plate m^2 . The lower end of this plunger p engages the free intumed ends of both the bell-cranks m' , as best shown in Figs. 3 and 4. A lock pawl or dog t , pivoted to a lug t' on the floor-plate m^2 , coöperates with the teeth p' of the ratchet-bar p to hold the fender in a raised position. This pawl t has a projecting tail or foot piece t^2 , which, as

shown, is subject to a flat spring t^3 , pressed between the same and the floor-plate m^2 .

The principal object of my present invention is to provide an improved device which
5 may be operated entirely by the use of the foot, both to trip or drop the fender and to raise or restore the same to its normal position, thus leaving the motorneer's arms free to perform those manipulations necessary to
10 control the car. This I have accomplished in a very simple manner.

Normally the fender will be held in its raised position (indicated in Fig. 1) or in a slightly-lower position, if desired, by the en-
15 gagement of the pawl t with the teeth of the ratchet-plunger p . The weight of the fender is sufficient to cause the same to quickly fall as soon as it is released. This release may be instantly effected by stepping on the foot-
20 piece t^2 of the pawl t . The fender may be almost as quickly raised or restored to its normal position by stepping on the footpiece p^2 of the ratchet-bar p , thereby forcing the
25 levers inward to their normal positions. (Indicated in Figs. 1 and 2.)

It will of course be understood that the device above described is capable of considerable modification within the scope of my in-
30 vention.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination with a car and a fender hinged thereto, of a pair of toggle-levers for
35 supporting said fender, and a combined trip

and resetting device acting on said toggle-levers and involving a vertically-movable ratchet-plunger, and a cooperating lock-pawl, which pawl is released from the said plunger
40 when stepped upon, and which plunger is adapted to be reset by the pressure of the foot, substantially as described.

2. The combination with a car and a fender hinged thereto, of a pair of toggle-levers for supporting said fender from the car-body, a
45 pair of reversely-acting bell-crank levers pivotally connected to the car-body and connected, one to each of said toggle-levers, a vertically-movable ratchet-tooth plunger, working
50 through the car platform or floor, and a cooperating lock-pawl, which pawl is adapted to be released from said plunger by the pressure of the foot, and which plunger is adapted
55 to be pressed down, to raise the said fender, by the pressure of the foot, substantially as described.

3. A car-fender comprising the primary marginal frame or tube a , the secondary or inner marginal frame b following the interior of said tube or frame a , a filler secured to the
60 said supplemental frame b , and the nutted hooks or clamping-staples c engaging said frame b and passed through the said frame a , substantially as described.

In testimony whereof I affix my signature 65 in presence of two witnesses.

HENRY JOHN SCHULDT.

Witnesses:

PHIL. W. HERZOG,
J. J. WATSON.