

(No Model.)

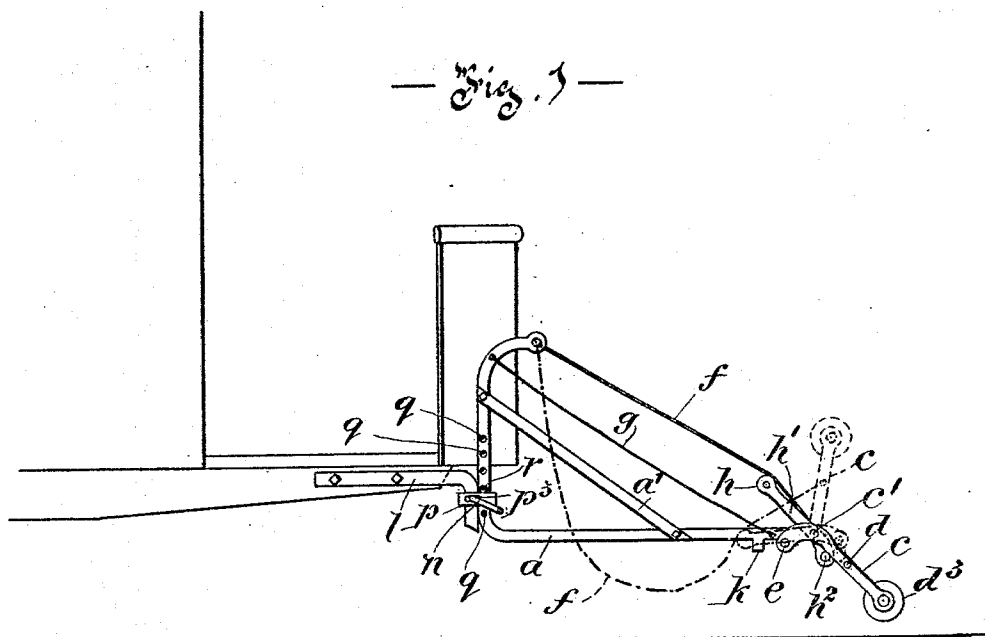
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W. J. HINPHY.
STREET CAR FENDER.

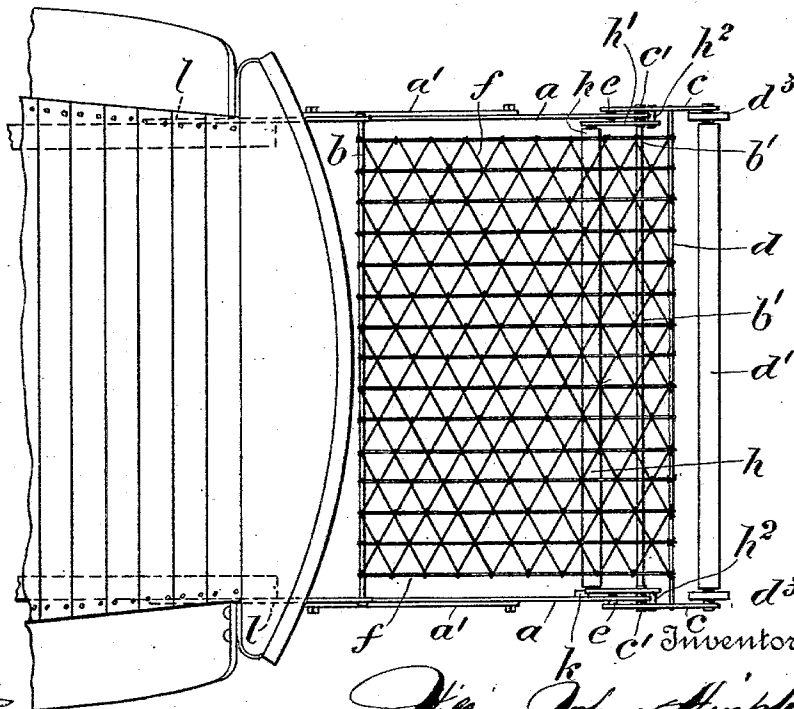
No. 551,380.

Patented Dec. 17, 1895.

— Fig. 1 —



— Fig. 2 —



Witnesses

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By

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(No Model.)

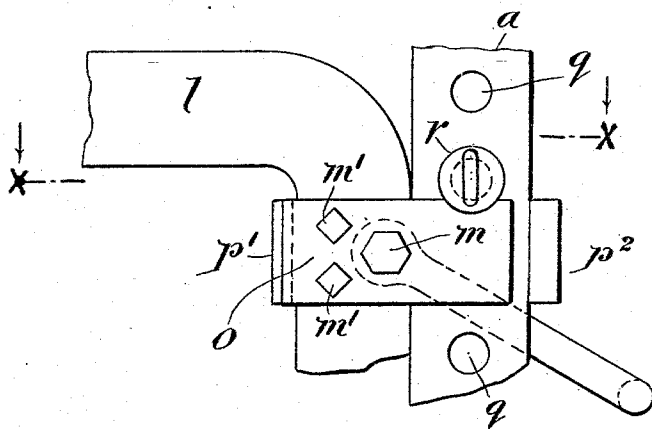
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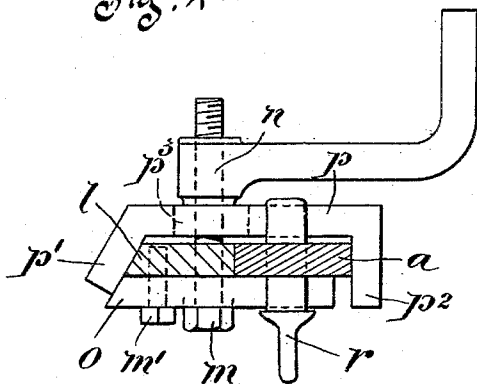
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—Fig. 3—



—Fig. 4—



Witnesses

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Inventor

William John Hinphy
By *his Attorney*
W. J. L. L. L.

UNITED STATES PATENT OFFICE.

WILLIAM J. HINPHY, OF MONTREAL, CANADA, ASSIGNOR OF ONE-HALF TO
HUBERT ROOT IVES, OF SAME PLACE.

STREET-CAR FENDER.

SPECIFICATION forming part of Letters Patent No. 551,380, dated December 17, 1895.

Application filed September 21, 1894. Serial No. 523,761. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JOHN HINPHY, of the city of Montreal, in the district of Montreal and Province of Quebec, Canada, have
5 invented certain new and useful Improvements in Street-Car Fenders; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to fenders of the net
10 form and having a forward pivoted or movable section adapted to be elevated by coming in contact with the roadway through the oscillation of the car or otherwise, the object of the present improvements being to produce
15 a fender which can be more readily locked in place in front of the car and one which will be safer and more effective in its operation than those hitherto produced.

The invention embodies a special form of
20 clamping device for attaching the fender to the car and a special form of forward movable section with other parts and details of construction, all of which will be hereinafter particularly described and claimed.

25 For full comprehension, however, of the invention, reference must be had to the annexed drawings, forming a part of this specification, in which like symbols indicate corresponding parts, and wherein—

30 Figure 1 is a side elevation of the improved fender with sufficient of the car to show its attachment thereto; Fig. 2, a plan view of the same; Fig. 3, an enlarged detail elevation of the clamping device, the view being taken
35 from the inside; and Fig. 4, a horizontal section of the clamping device, taken on line *x x*, Fig. 3.

The stationary portion of the fender preferably comprises side frames made up of bars
40 *a* bent at right angles to form vertical and horizontal portions and brace-bars *a'*, with horizontal or transverse connecting-rods *b b'*.

The forward portion of the fender is movable and composed of a pair of arms or levers
45 *c c*, pivoted at *c'* to the forward ends of the horizontal portions of the frame-bars *a*, connected by a rod *d* and carrying at their outer ends a roller *d'* preferably covered with rubber tubing and having mounted upon it
50 near each end a rotatable rubber disk or ring *d²* adapted to bear upon the ground in the event of undue oscillation of the car and thus

accommodating the pivoted portion of the fender to such movement.

The inner ends of the arms *c c* are curved
55 downward and carry studs or stops *e e* which engage beneath the horizontal portions of the frame-bars *a* and so hold the arms normally in the downwardly-inclined position shown by full lines in Fig. 1 and with the disks or
60 rings *d³* within two or three inches of the roadway.

A flexible net or receiver *f* of any desirable material extends between the connecting-rods
65 *b* and *d* normally in a taut condition, and flexible guard-ropes *g* are preferably located in front of the brace-bars *a'* to prevent any chance of the person caught in the net striking the brace-rods, the ropes extending from
70 the upper ends of the vertical portions of the frame-bars *a* to the outer ends of the horizontal portions thereof, and a second reason for having the forward part of the fender movable is to allow such net to collapse and form
75 a pocket, as it were, in which a child would be safe from any chance of falling out after being thrown onto the net, and while in most cases the mere pressure upon the center of the net would be sufficient to double it in and
80 elevate the forward movable part, as indicated by dotted lines in Fig. 1, yet I prefer to use an auxiliary lifting device, which I will now describe.

The lifting device is composed of a transverse bar or roller *h* located beneath the net
85 and carried by a pair of arms *h'*, also pivoted at *c'* to the forward ends of the horizontal portions of the frame-bars *a*, to assist in raising the forward movable part so as to allow the net to collapse, the arms *h'* carrying lateral
90 projections *h²* to bear beneath the arms *c c* of the forward portion.

To prevent the bar *h* falling or being depressed more than is necessary, hooks or stops
95 *k* are formed to project inwardly from the under side of the horizontal portions of the frame-bars *a*.

The fender is removably attached to the car preferably by a clamping device constructed as follows: A strip of metal *l* bent on its edge
100 to form a right angle is secured to the ends of the stringers of the car-floor so that its forward part will project downward, and to this downwardly-projecting part are attached by

means of a carriage-bolt *m* preferably and crank-nut *n* and screw-bolts *m'* an outer bearing-plate *o* and an inner clamping-plate *p*. The outer bearing-plate *o* is plain and long enough to cross the surface of the downwardly-projecting portion of the strip of metal *l* and to project forward beyond it for a distance slightly less than the width of the vertical portion of the frame-bar *a*, which is set edge on against the forward edge of the strip *l*, while the inner clamping-plate *p* is sufficiently long to have its inner end *p'* bent at an oblique angle to bear against the inner edge of the downwardly-projecting portion of the strip *l*, which is beveled to a corresponding angle, and to have its outer end *p''* bent at a right angle to fit across the outer edge of the vertical portion of the frame-bar *a*. By this arrangement there is a direct clamping of the frame-bar *a* against the face of the strip *l*, since as the inner plate is forced, by the rotation of the crank-nut on the bolt, flatwise against the inside face of the strip the oblique end *p'* bearing on the beveled surface of the strip draws the inner plate inward, a slot *p''* where the bolt passes through it being formed to accommodate such longitudinal movement. This construction of clamp naturally allows varying thicknesses of frame-bars to be used without any difficulty being experienced, and it is easily and cheaply constructed and operated.

The vertical portions of the frame-bars *a* are provided with a series of eyes *q* to allow of regulating the height of the fender relatively to the roadway, a suitable pin *r* being provided to insert in the eye immediately above the clamping-plates.

Should it be desired to dispense with the auxiliary lifting device, the forward end of one of the horizontal portions of the frame-bars *a* would be elongated a sufficient distance beyond the pivoting-point *c'* so that the projection or stop *e* on the inner end of one of the arms *c* can engage it and so prevent the movable part falling backward too far when elevated.

What I claim is as follows:

1. In a car fender, the combination with a stationary main framing and means for attaching it to the car, of a movable inclined section pivotally connected to the forward end of the main framing, a flexible receiver extending between the rear of said framing and said movable inclined section and having its side edges free and its ends only attached to such parts, and an auxiliary lifting device in the form of a pivoted frame located beneath such receiver, adapted to engage beneath said movable inclined section and actuated by pressure upon it to elevate such movable inclined section, for the purpose set forth.

2. A car fender comprising a flexible receiver and a carrying frame therefor provided with a movable inclined section adapted to normally hold such receiver in a taut condition and an auxiliary lifting device in the form

of a pivoted frame with finger projections therefrom to engage beneath said movable section and being located beneath such receiver and actuated by pressure to elevate such inclined section for the purpose set forth.

3. In a car fender the combination with the stationary framing, comprising the side frames *a* and transverse upper and lower connecting rods, with means for securing it to the car, of the movable inclined section, comprising the arms *c c*, pivoted to the forward ends of the stationary framing, and the transverse connecting rod and roller carried between them with suitable retaining stops, the flexible receiver or net extending between the upper connecting rod of the stationary framing and the connecting rod of the movable section and having its side edges free and its ends only attached to said connecting rods for the purpose set forth.

4. In a car fender, the combination with the stationary framing, comprising the side frames *a* and transverse upper and lower connecting rods, with means for securing it to the car, of the movable inclined section, comprising the arms *c c*, pivoted to the forward ends of the stationary framing, and the transverse connecting rod and roller carried between them with suitable retaining stops the flexible receiver or net extending between the upper connecting rod of the stationary framing and the connecting rod of the movable section and the auxiliary lifting device comprising the bar *h* and pivoted arms *h'* having projections *h''*, for the purpose set forth.

5. As a clamping device for the attachment of car fenders to cars, the combination with the floor stringer of the car, of a carrying strip projecting downward therefrom, a bearing plate on one side of such strip, and a clamping plate on the opposite side, each plate projecting sufficiently to receive the rear frame piece of the fender having its rear edge or face abutting the front edge or face of the carrying strip and the clamping plate engaging the front edge or face of said frame piece and the rear edge or face of the carrying strip and tending by lateral movement to force same together with a bolt passing through both plates and carrying strip, and a tightening nut, for the purpose set forth.

6. As a clamping device for the attachment of car fenders to cars, the combination with the floor stringer of the car, of a carrying strip projecting downward therefrom, a bearing plate on one side of such strip, and a clamping plate on the opposite side each plate projecting sufficiently to receive the rear frame piece of the fender and the clamping plate having its inner end bent at an oblique angle to bear against a beveled edge of the bearing strip and its outer end bent across the outer edge of the frame piece with a bolt passing through both plates and carrying strip and a tightening nut, for the purpose set forth.

7. As a clamping device for the attachment of car fenders to cars, the combination with

the floor stringer of the car, of a carrying strip
l projecting downward therefrom, a bearing
plate o on one side of such strip, and a clamp-
ing plate p on the opposite side, each plate
5 projecting sufficiently to receive the rear
frame piece a of the fender having perfora-
tions q, and the clamping plate having its in-
ner end p' bent at an oblique angle to bear
against a beveled edge of the bearing strip

and its outer end p² bent across the outer edge 10
of the frame piece a with a bolt m passing
through both plates and carrying strip a, le-
ver nut n, and pin r for the purpose set forth.

Montreal, 7th day of September, 1894.

WILLIAM J. HINPHY.

In presence of—

WILL. P. McFEAT,
FRED. J. SEARS.