

(No Model.)

2 Sheets—Sheet 1.

J. LEIGHTHAM.
CAR FENDER.

No. 542,480.

Patented July 9, 1895.

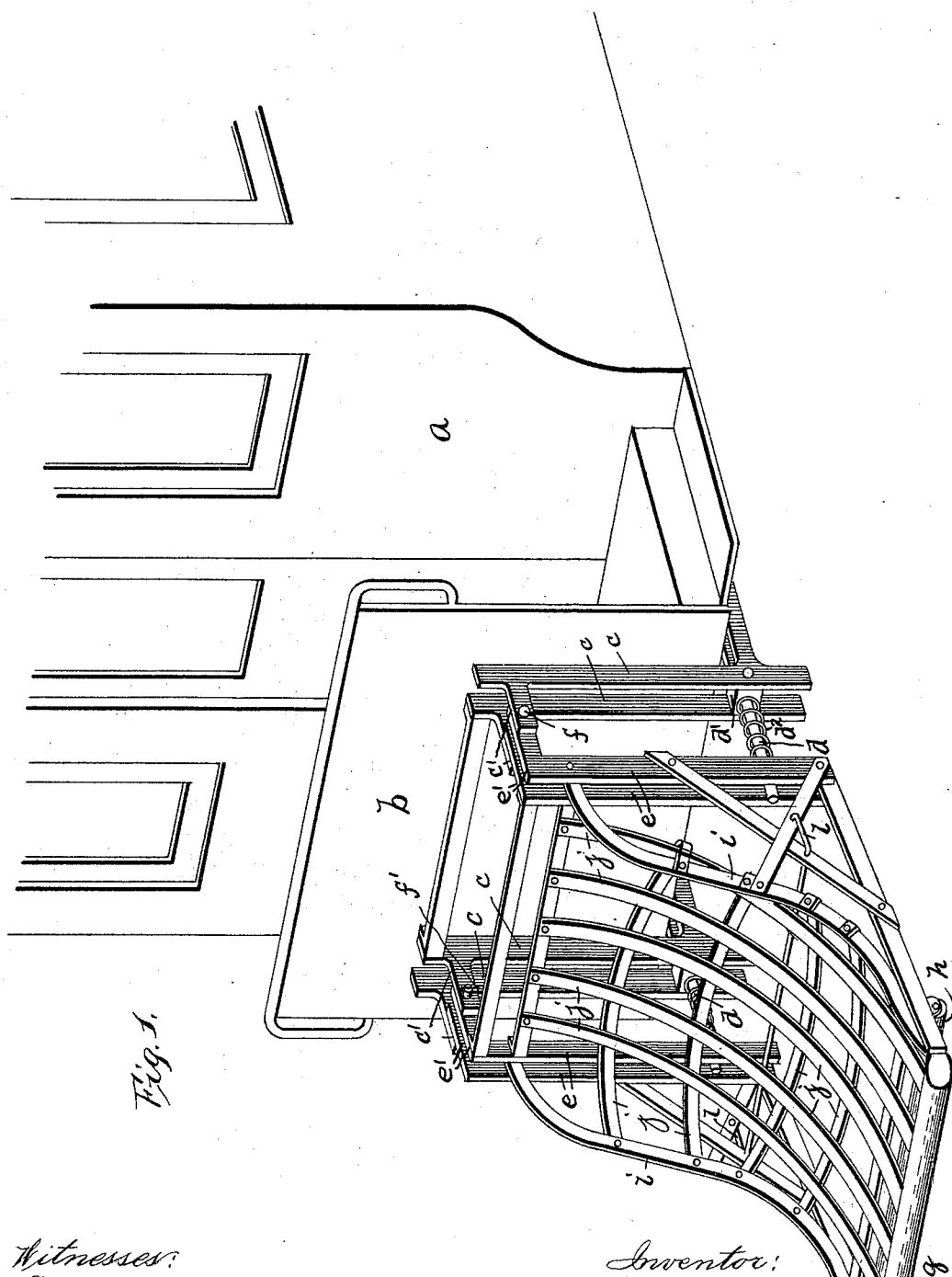


Fig. 1.

Witnesses:
E. C. Ruff
Hubert Peck

Inventor:
Joseph Leighton
per C. E. Ruff
Attorney

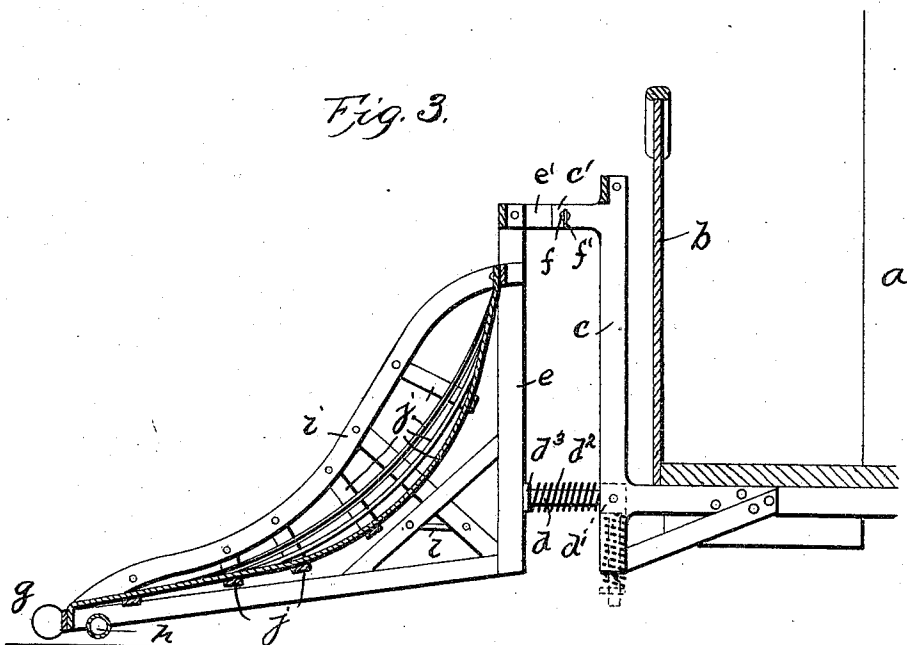
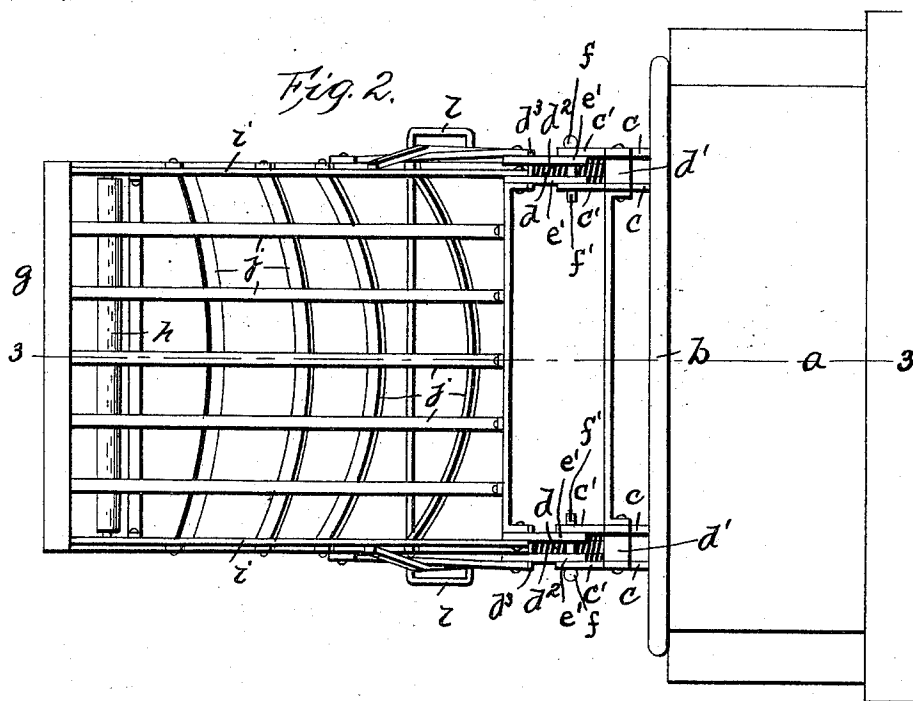
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2 Sheets—Sheet 2.

J. LEIGHTHAM.
CAR FENDER.

No. 542,480.

Patented July 9, 1895.



Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

JOSEPH LEIGHTHAM, OF READING, PENNSYLVANIA, ASSIGNOR OF ONE-HALF
TO WILLIAM H. SLICHTER, OF SAME PLACE.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 542,480, dated July 9, 1895.

Application filed March 21, 1895. Serial No. 542,659. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH LEIGHTHAM, of Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Car-Fenders; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in car-fenders.

A great problem of the day is to provide practical, efficient, simple, and economical means for preventing extraordinary loss of life and mangling of human beings by being dragged under motor-cars on urban or suburban surface railroads. The ordinary rigid wheel-fenders have been demonstrated in practice to be totally inefficient in preventing persons being dragged and mangled or caught under the wheels, because of irregularities of the surfaces of the roadway and rocking of the car and for other reasons; also very efficient scoop devices have been provided for attachment to the front ends of the cars.

It is the object of my invention to provide a simple, economical, and practical fender for motor-cars, so constructed and arranged as to be capable of picking up one or more persons located on the track without injury to such persons, and so as to prevent persons falling under or being dragged or mangled by the cars or wheels.

The invention consists in certain novel features of construction and in combinations of parts more fully and particularly described hereinafter, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a perspective of the front portion of a car provided with my present improvement. Fig. 2 is a top plan. Fig. 3 is a vertical sectional view on the line 3 3, Fig. 2.

In the drawings, *a* is the car, having the usual dashboard *b*.

c are strong metal supports having the rear arms rigidly secured to the front portions of the platform-supporting beams. The sup-

ports depend below the plane of the platform and extend upwardly a suitable distance in front of the dash. These supporting-plates are four in number and arranged parallel and in pairs at opposite sides of the dash. The plates of each pair are secured a suitable distance apart, and all the plates are strongly secured and braced by cross-rods and braces. The upper ends of the plates have the forward extensions *c'* transversely perforated and forming members of the hinges between the fender and said supports.

Two vertically - swinging pins *d* are arranged in the lower ends of the pairs of supports. Each pin has a head *d'*, pivoted between the lower portions of its particular pair of supports, and each pin extends outwardly therefrom a suitable distance and has the expansive coil-spring *d²* secured thereon, with plates *d³* at its outer end slidable on the pin and arranged to bear against the rear end of the fender when the pin loosely extends through an opening therein. When the fender is removed the pins drop down between the lower ends of the supports, as shown by dotted lines.

The fender consists of the rear upright frame *e* and the bottom frame extending forwardly and downwardly from the lower end of the upright frame. The upright frame has its side beams preferably formed by parallel bars, usually separated about the same distance as the supporting-bars in the front of the dash. The bars forming the upright and bottom frames of the fender are strongly braced in various ways by cross and incline bars and otherwise, so as to form a structure capable of withstanding the strains and abuse consequent to its peculiar use. The upper ends of the side bars of the rear frame have the rearwardly-projecting ears *e' e'* fitting between the ears of the supports and having perforations registering with the perforations thereof.

f f are the pivot-bolts, passing through said ears and forming the pivots on which the fender swings. Each pivot is removable and is normally held in position and against accidental withdrawal by the swinging gravity catch or guard *f'*, pivoted in a slot in the end of the bolt with one end heavier than the

other, so that the catch can be swung into continuation of the bolt when being inserted or removed, but on being released will drop to the vertical position and prevent withdrawal of the bolt.

The fender is yieldingly held in its normal position by the springs d^2 on pins d , which pins, when the fender is in position, extend loosely through plates at the rear side of the rear end of the fender, so that as the fenders swing down or up, the openings are correspondingly compressed or distended. It should be noted that these pins extend removably through the stops or plates of the fender, so that the fender can be easily released therefrom when the pins and their springs drop down out of the way between the supporting-bars of the car front. The springs are so formed and arranged and of such strength as to normally keep the front end of the fender a short distance from the surface of the roadway.

The front bar of the fender is provided with a forwardly and upwardly projecting heavily-padded cushion g , extending completely across the front end of the fender.

A distance back from its front end the fender has the rotary shaft h , arranged at and extending completely across the under side thereof. The ends of the shaft are journaled in bearings carried by the side bars of the bottom frame of the fender, so that the shaft between said bars extends a distance below the plane of the bottom frame to engage and travel on the roadway when the fender is forced down, and so as to keep the fender proper from engaging the roadway.

i i are the side bars of the fender, suitably braced and extending from the upper part of the rear frame sides downwardly to the front part of the bottom frame-bars.

A pocket or receptacle is formed for the reception of persons or bodies picked up by the fender by means of the interlaced straps j , deflected inwardly and downwardly. The cross-straps at their ends are secured to the side bars of the fenders, and the longitudinal straps extend from the top of the rear frame to the front bar of the fender. These straps can be suitably secured together at their crossing-points, if so desired, so that an exceedingly strong network is formed, which is sufficiently yielding and flexible to prevent injury to persons falling therein.

The fender moves along with the car a distance above the roadway. When the front bar of the fender strikes an obstacle, the fender is tilted down until the shaft engages the roadway and the body or person falls or

is rolled up into the fender and is thereby kept saved from injury or death beneath the wheels of the car.

The fender is supported a distance in front of the car and is out of the way of bumpers and coupling-heads and saves all persons from injury by being struck by such projections.

The fenders can be easily attached to and removed from the car fronts and applied to either end of the car and are exceedingly light and durable in construction and entirely automatic in action without complication of parts and locks, latches, &c.

l are handles at the sides of the fenders to enable the same to be conveniently and easily moved and handled.

It is evident that various changes might be made in the forms, arrangements, and constructions of the parts described without departing from the spirit and scope of my invention. Hence I do not wish to limit myself to the exact construction herein set forth, but consider myself entitled to all such changes as fall within the spirit and scope of my invention.

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

1. A car provided with the supporting plates extending upwardly in front of the dash from and rigidly secured to the beams beneath the platform, the upper ends thereof formed to have a fender hinged removably thereto, and swinging guides having springs for the lower part of the fender carried by the supports beneath the plane of the platform substantially as described.

2. A car provided with the vertical supporting plates arranged in pairs and extending up in front of the dash and down below the same, and having the forward perforated ears at their upper ends, substantially as described.

3. A car provided with the vertical supporting plates extending up in front of the dash and extended below the same and provided with the rear extensions secured to the platform timbers, and with the forward ears at its upper end, and the swinging pins pivoted between the lower ends of the plates and having coiled springs thereon.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOSEPH LEIGHTHAM.

Witnesses:

WM. H. KLINE,
J. B. REIFMANS.