

No. 626,290.

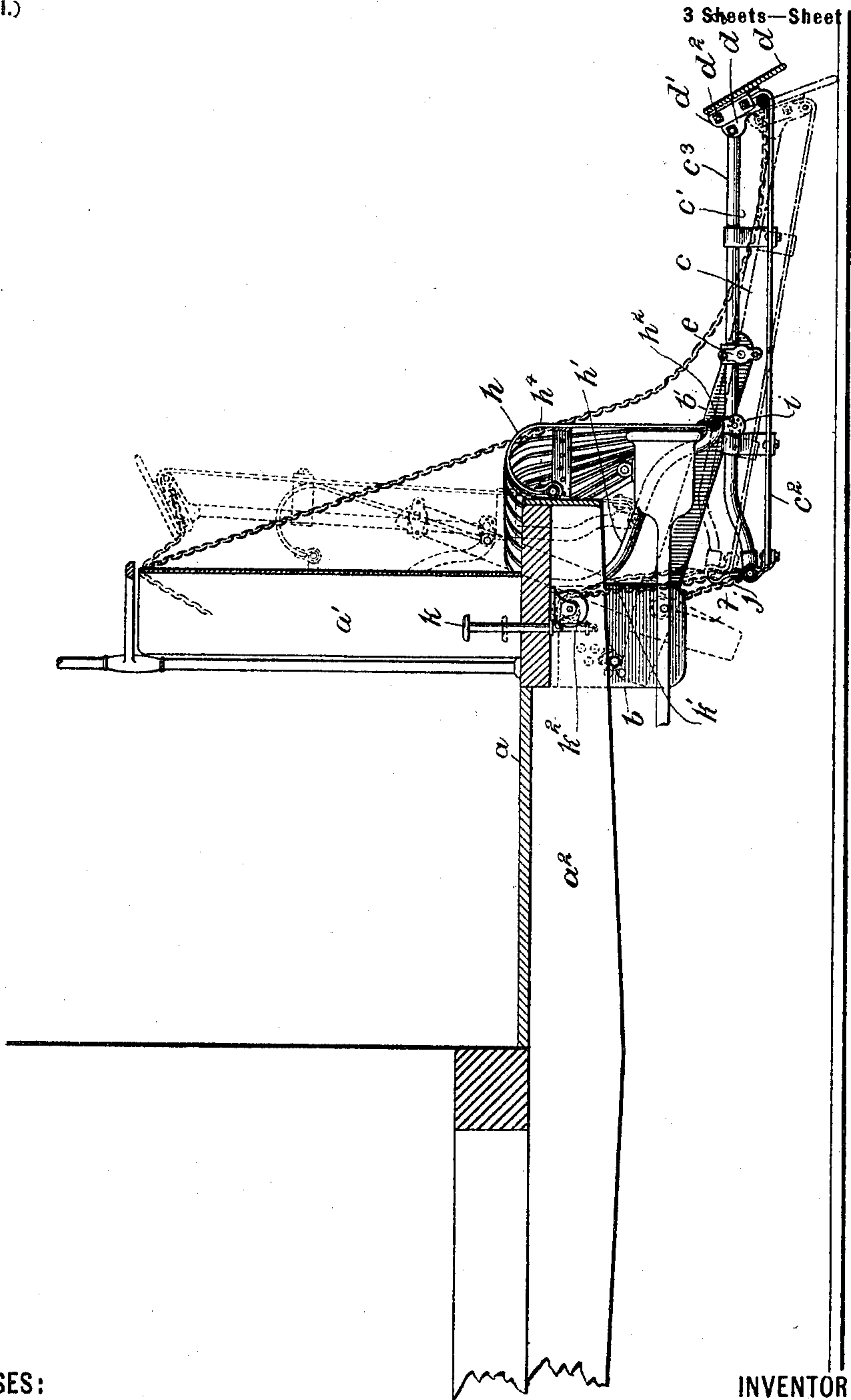
Patented June 6, 1899.

G. W. NAYLOR.
CAR FENDER.

(Application filed Dec. 27, 1897.)

(No Model.)

Fig. 1.



WITNESSES:

H. J. Thiede.
E. Stevens

INVENTOR

Geo. W. Naylor

BY

Chas. F. Dore
ATTORNEY

No. 626,290.

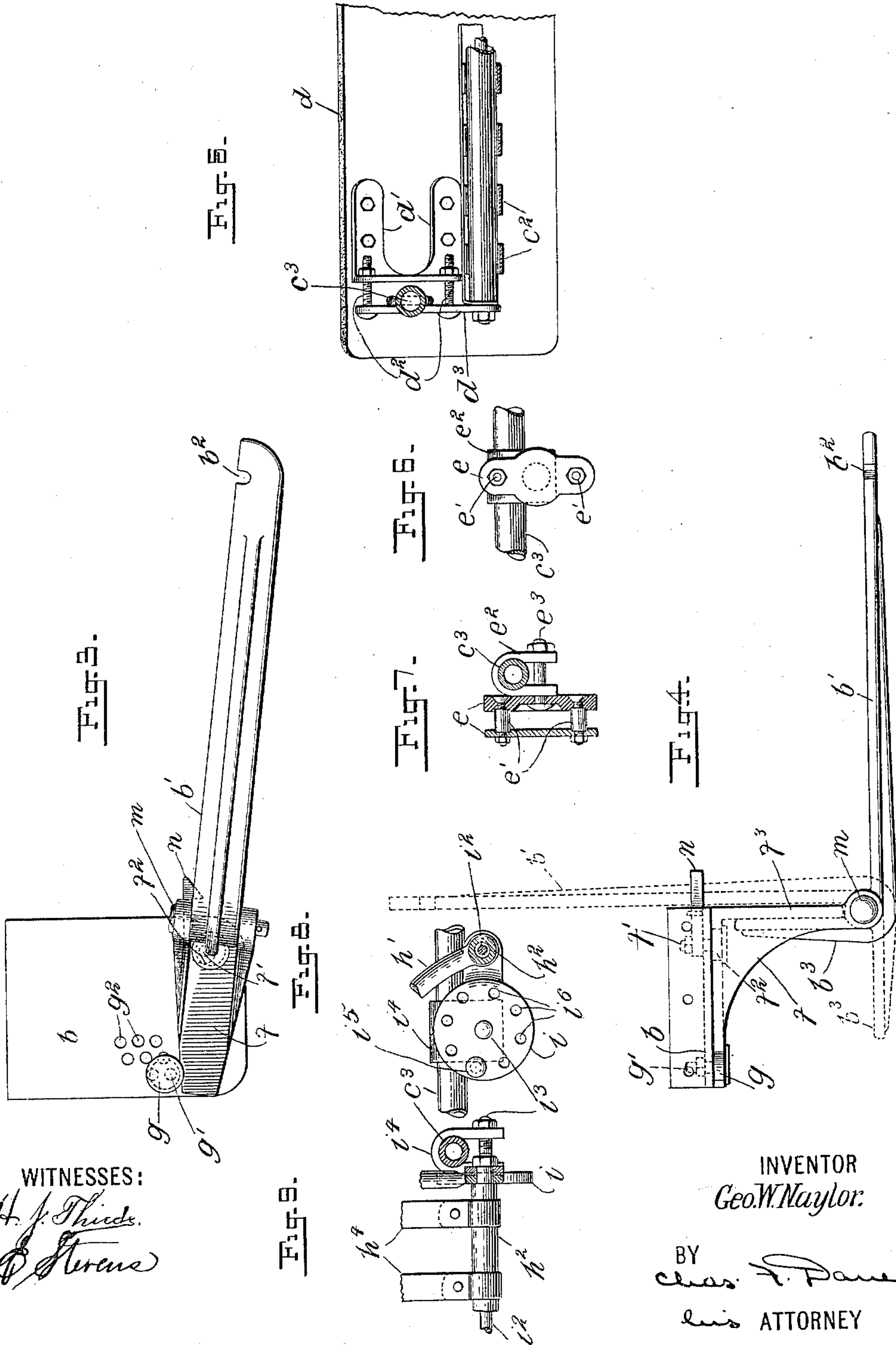
Patented June 6, 1899.

G. W. NAYLOR.
CAR FENDER.

(Application filed Dec. 27, 1897.)

(No Model.)

3 Sheets—Sheet 3.



WITNESSES:
H. J. Thiede.
O. Stevens

INVENTOR
Geo. W. Naylor.

BY
Chas. T. Dene
his ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE W. NAYLOR, OF JERSEY CITY, NEW JERSEY.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 626,290, dated June 6, 1899.

Application filed December 27, 1897. Serial No. 663,463. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. NAYLOR, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented new and useful Improvements in Car-Fenders, of which the following description, taken in connection with the drawings herewith accompanying, is a specification.

My invention has for its object, first, to provide a car-fender of cheap and simple construction that may be readily attached and adjusted to existing cars without special provision being made in the construction of the latter to allow for such attachment; second, to have the parts of the fender so constructed and arranged as to enable the several parts to be separately repaired or replaced as occasion requires without otherwise interfering with the structure as a whole; third, to provide means for receiving and cushioning the blow caused by a person or other object striking the fender and preventing such person or object from rolling off the fender after being received on the same, and, fourth, to otherwise improve and render such fenders more desirable for the purpose for which they are intended.

The above object I secure by means of the construction and arrangement of parts embodying my invention, as hereinafter set forth in detail, and pointed out in the claims.

Referring to the drawings, Figure 1 is a vertical sectional view, in side elevation, of the end of a car and a car-fender thereon embodying my invention. Fig. 2 is a plan view of the same; and Figs. 3 to 9, inclusive, are detail views of different parts of the fender to be hereinafter referred to.

To explain in detail; a denotes the platform, and a' the dashboard, of an ordinary street-railway car. Secured to the timbers or framework $a^2 a^2$, beneath the platform and adjacent to the opposite side of the latter, are two hangers $b b$, each having an arm b' attached thereto, which arms are arranged with one end extending forward from beneath the platform a to receive and support the fender c . This fender c , as herein shown, is constructed with an outer frame c' , preferably formed of small gas-pipe and steel-plate strips c^2 , extending across such frame and

secured around the opposite sides of the same. The fender as thus constructed is light, strong, and capable of being readily and cheaply repaired.

The opposite sides $c^3 c^3$ of the fender-frame are raised above the bottom or intermediate portion of the same, as clearly shown in Fig. 1, to serve as a guard-rail to prevent a body on the fender from rolling off at either side of the same, and as a similar guard for the front of the fender I have stretched a broad strip of strong leather or other similar yielding material d across the same, which will give when striking against a body and cushion the blow. This strip d , which is secured at its opposite ends to the fender and left free at its center, is preferably supported in a slanting position, as shown in Fig. 1, so as to better insure a body when struck by the same being thrown upon the fender. Further, when a body is thus struck by said strip d the latter will give and turn under the weight of the body to allow the latter to readily drop in the fender, and then as the weight is removed the said strip will immediately assume its normal upright position and prevent the body from rolling out of the fender at its front end.

The strip d may be secured to the fender in any suitable manner, a simple means, as herein shown, being as follows: Two plates d' d' are firmly attached to the leather adjacent to its opposite ends, and these plates are connected through the medium of clamping-bolts $d^2 d^2$ with plates $d^3 d^3$, located at the opposite sides of the fender-frame and forming a part of the same. This construction permits the tension of the strips to be readily adjusted, as may be required.

The fender is pivotally supported at its center upon the arms $b' b'$, so that it will hang in a normal position to ride parallel with the track or road-bed, but when striking against an object at its front end be caused to tilt at such end to a position close to the road-bed, and so prevent the person or other object from getting beneath the fender. When the fender is thus tilted, the leather strip d , projecting at its lower end beneath the bottom of the fender, prevents contact of the latter with the road-bed and so avoids liability of breakage to the same. As a means for securing de-

tachable connection between the fender and its supporting-arms I have provided the fender with a pivoted latch device at each side thereof for connection with said arms, which consists, as more clearly shown in Figs. 6 and 7, of two plates $e e$, connected together with a space between the same by two bolts or pins $e' e'$. The latch as thus formed is connected with the fender by means of a clip e^2 , which fits over the fender-frame, and a bolt e^3 , which clamps said clip on the frame and connects with one of the latch-plates e to secure the latch in pivotal connection with the fender, as clearly shown in Fig. 7. In securing the fender in connection with the arms $b' b'$ the upper end or cross-pin e' of the latch is first placed in a seat or recess b^2 in the upper edge of the said arms, and the latch is then turned to bring its lower pin e' beneath the arms, and so lock the upper pin in its seat and prevent the same being displaced therefrom by the jolting of the car. The latch device may, however, be formed in one piece, bent into the desired form, and pivoted directly to the frame or be otherwise constructed without departure from the invention.

The fender-supporting arms $b' b'$ have a hinged connection with brackets $f f$, which are adjustably connected with the hangers $b b$ in a manner to enable the outer ends of the said arms to be vertically adjusted for the purpose of allowing the position of the fender to be properly regulated relative to the road-bed when placed upon cars of varying heights. The means for securing such adjustment of the brackets, as herein shown, consists of a bolt f' , connected with the said hangers and provided with an eccentric-head f^2 , which is adapted to be seated within an opening in the bracket to pivotally support the latter, as more clearly shown in Figs. 3 and 4. The bracket, being thus pivotally supported, is engaged at a point back from the pivot, in order to sustain the arms at the forward end of the same in a raised position, by the eccentric-head g of a second bolt g' , which latter is also attached to the hanger. In this manner the bracket, and thereby the fender, may be readily and accurately adjusted by turning either one or both of the eccentrics f^2 and g . A further adjustment may also be secured by providing the hanger with a number of openings g^2 , arranged at different heights, in which the bolt g' may be placed when it is desired to secure a greater adjustment than that allowed by the turning of the eccentrics.

The fender-supporting arms $b' b'$ being pivotally supported, as described, whereby their front ends are vertically movable, allows the fender to be turned and swung up against the dashboard of the car when not in use, as shown by dotted line in Fig. 1. The shape of the fender is such that when it is thus turned up against the dashboard it fits closely against the latter and so enables two cars to be brought sufficiently close together to be coupled.

Adjacent to the rear end of the fender is

supported a spring-cushion h , which occupies a position in front of the buffer of the car to prevent a person falling upon the fender from striking against said buffer. This spring-cushion consists of a frame h' , preferably formed of gas-pipe, which conforms to the buffer of the car and extends down at either end of the same to the sides of the fender, at which point the ends of such frame-piece are pivotally connected with a cross-rod h^2 .

Light spring-strips h^4 extend between the lower cross-rod h^2 and the upper portion of the frame h' and have a loop form at their upper end, as more clearly shown in Fig. 1, so as to present a more yielding surface. This cushion is provided at each end thereof with plates $i i$, which are pivotally connected therewith by means of a bolt i^2 , passing through the cross-rod h^2 and through openings in arms i^7 of said plates, as clearly shown in Figs. 8 and 9. These plates $i i$ are pivotally connected with the fender-frame by means of a bolt i^3 and clip i^4 in the same manner as before described relative to the latch devices $e e$ on the fender. The cushion-frame, resting loosely at its upper end against the car-buffer and being thus pivotally connected at its lower end with the fender, does not interfere with the movements of the latter on its support. A pin i^5 , inserted through one of a series of holes i^6 in the plate i , so as to bear against one edge of the clip i^4 , prevents the said plate from turning under the weight of the cushion at the opposite side of its center and holds the said cushion in a vertically-adjustable position, whereby it may be regulated for buffers of different heights. The cushion h , being supported on the fender at a point back from its pivotal support, tends to movably hold the forward end of the fender in a raised position, and to support the rear end of the fender under the weight of the cushion I connect the same with the hangers or other part of the car by means of a short chain j , as shown in Fig. 1. In order that the motorman or other person may operate the fender from the platform of the car to depress its forward end into near or actual contact with the road-bed when a person or other object is seen upon the track, so as to prevent them getting beneath the same, I have supported a pin k within an opening in the platform, having its lower end connected with the rear end of the fender by a chain or other flexible connection k' , which operates over a pulley or drum k^2 , supported beneath the platform of the car. The pin k is normally in a raised position above the platform, as shown in Fig. 1, so that the operator by pressing upon the same with his foot may tilt the fender as described.

When the fender is removed from the car for any purpose, the fender-supporting arms being hinged at m to the brackets $f f$, whereby they may be moved laterally, are swung back beneath the car, where they are re-

tained by a pivoted latch *n*, supported upon the said brackets, as shown by dotted lines in Fig. 4. When the arms *b' b'* are turned outward to support the fender between the same, they are limited in their outward movement by means of short extensions *b³ b³* at their rear ends, which contact with the lever-supporting arm *f³* of the brackets, as more clearly shown in Fig. 4. The arms being thus limited in their outward movement and prevented from inward movement by the fender are firmly held from lateral movement to support the latter.

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

1. A car-fender, comprising a suitable frame having a flat strip of leather or other flexible material extending across its front end, said flexible strip being secured and supported adjacent to its opposite ends upon fixed portions of said frame and being free between its ends.

2. A car-fender, comprising a suitable frame having a strip of leather or other flexible material extending across its front end, and means connecting with said strip adjacent to its opposite ends and adjustably supporting the same whereby its endwise tension may be regulated, said strip being free between its ends.

3. A car-fender, having raised side guards and a broad strip of leather or other flexible material extending across its front end, the said strip being secured and supported adjacent to its opposite ends upon fixed portions of the fender and being free between its ends.

4. In a car-fender, the combination, with two supporting-arms, each having a recessed bearing therein, of a fender having a pivoted latch device at each side thereof resting in the said recessed bearings and embracing the arms to support and lock the fender in pivotal connection with the latter.

5. In a car-fender, two pivoted supporting-arms, a fender pivotally supported between its ends upon said arms, and a buffer-cushion pivotally connected with said fender at a point back of its connection with the supporting-arms, for the purpose set forth.

6. In a car-fender, the combination, with hangers on the car having a series of openings therein, of two arms pivotally connected with said hangers, a fender supported upon the forward end of said arms, and adjustable

eccentrics detachably supported in one of said series of openings in the hangers and engaging with the rear end of said arms.

7. In a car-fender, the combination, with two supporting-arms, of a fender hung at its center upon said arms, and a pin or plunger supported on the platform of the car having an operative connection with the fender whereby the latter may be tilted by pressing upon said pin, and means for holding the front end of the fender in a normal raised position.

8. In a car-fender, the combination with hangers on the car, of two fender-supporting arms, adjustable eccentric-bearings for said arms secured upon the hangers, an adjustable stop or bearing for the rear end of said arms, and a fender supported in the outer end of the latter.

9. In a car-fender, the combination of two fender-supporting arms having a hinged connection with a suitable support to be laterally movable to and from an operative position for supporting the fender, and means for holding said arms when swung back to an inoperative position.

10. In a car-fender, the combination of two brackets connected with the car, fender-supporting arms having a hinged connection with said brackets whereby their supporting ends may be swung laterally to and from a position beneath the car, means for limiting the outward movement of the said arms, and a fender detachably connected with said arms and holding the same from inward movement.

11. In a car-fender, the combination with two supporting-arms of a fender hung at its center upon said arms, a pin or plunger supported in a vertically-movable position on the car-platform, and a flexible connection between said pin and the fender operating over an intermediately-supported pulley or wheel.

12. In a car-fender, the combination, with the fender proper, of a buffer-cushion carried by said fender and having connection therewith through the medium of a pivoted plate or link to be vertically adjustable relative to the car-buffer, and means for supporting the cushion in a stationary adjusted position.

GEORGE W. NAYLOR.

Witnesses:

JOHN W. FRASER,
P. B. PENNINGTON.