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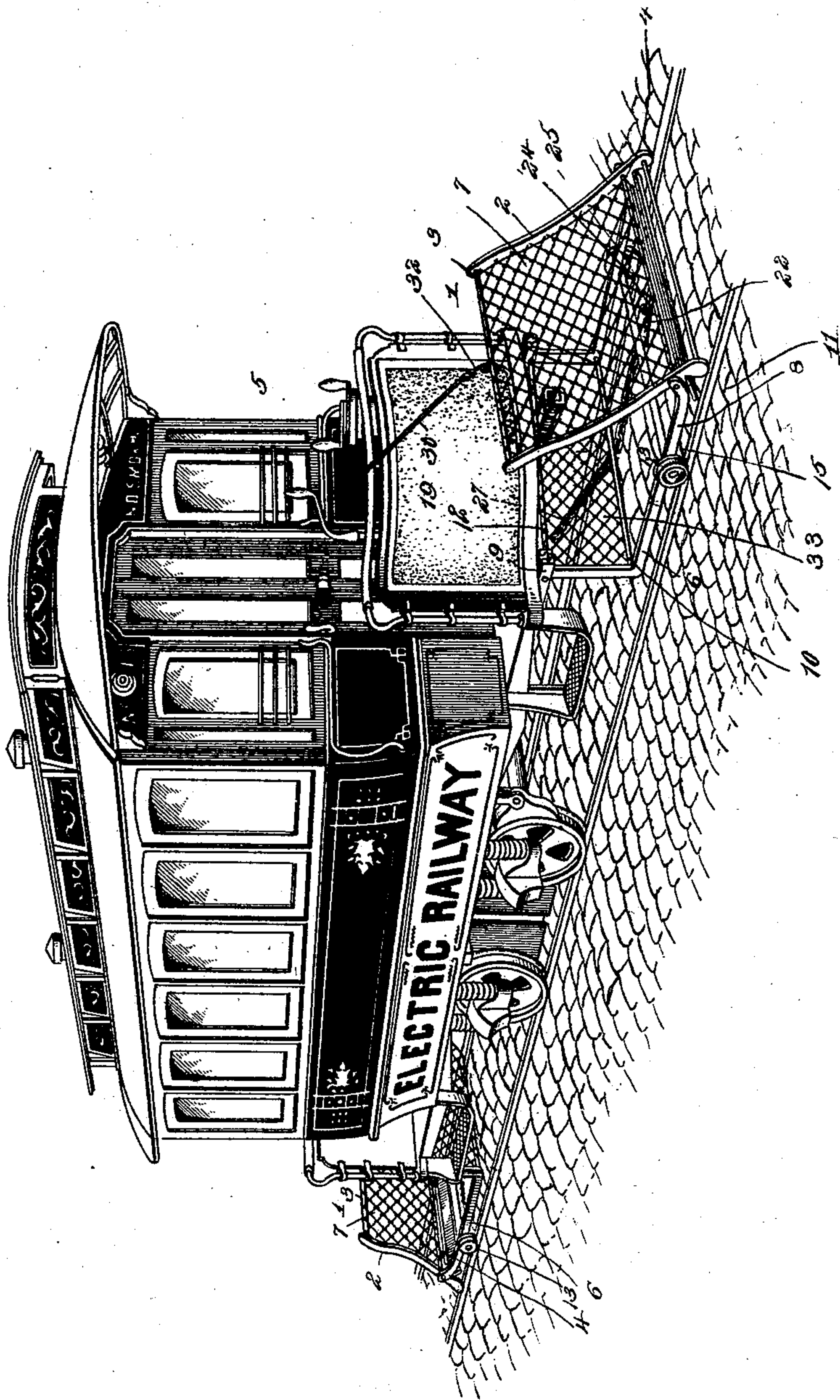
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F. GOFF & T. H. JOINER.
CAR FENDER.

No. 543,151.

Patented July 23, 1895.

Fig. 1.



Inventors

Witnesses

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J. H. Riley

By their Attorneys. *Frank Goff and*
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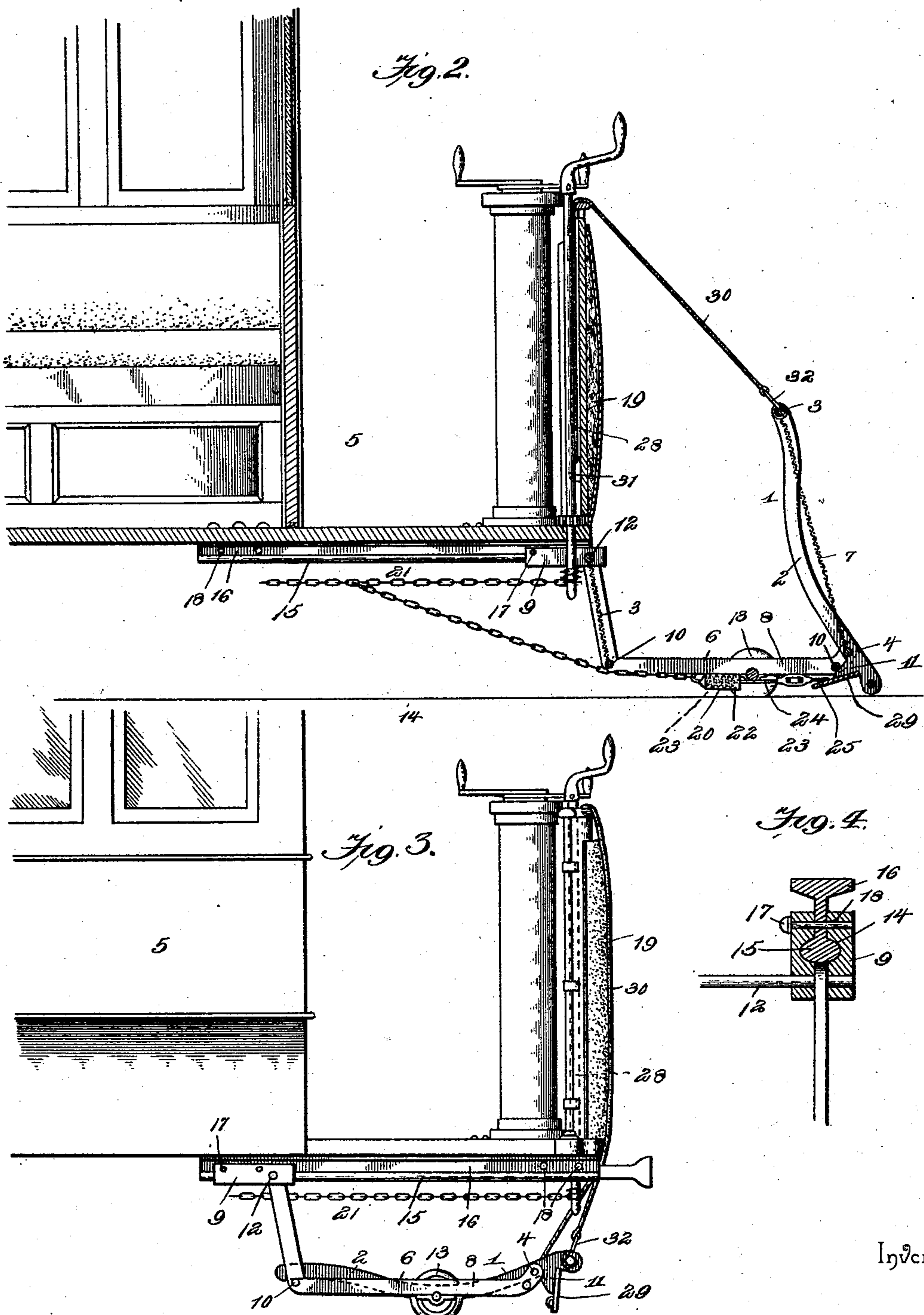
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UNITED STATES PATENT OFFICE.

FRANK GOFF, OF CAMDEN, AND THOMAS H. JOINER, OF BURLINGTON,
NEW JERSEY.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 543,151, dated July 23, 1895.

Application filed January 2, 1895. Serial No. 533,618. (No model.)

To all whom it may concern:

Be it known that we, FRANK GOFF, residing at Camden, in the county of Camden, and THOMAS H. JOINER, residing at Burlington, in the county of Burlington, State of New Jersey, citizens of the United States, have invented a new and useful Car-Fender, of which the following is a specification.

The invention relates to improvements in car-fenders.

The object of the present invention is to improve the construction of car-fenders, and to provide a simple and inexpensive one which may be readily applied to street-railway cars of any ordinary construction, and which will be automatic in operation and capable of picking up a person and of cradling him without injury.

A further object of the invention is to provide a car-fender capable of automatically applying the brake of a car, and adapted, when not in use, to be folded beneath the car, and to form, when folded, a guard or fender.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a car provided with fenders constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of one end of the car, the fender being shown in operative position. Fig. 3 is a similar view, the fender being folded. Fig. 4 is a detail sectional view illustrating the construction of the ways of the car.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a substantially rectangular fender-frame composed of similar side bars 2 and upper and lower transverse rods or end pieces 3 and 4 and connected with a car 5 by a substantially L-shaped frame 6.

The fender-frame 1 is provided with wire-netting 7 attached to the upper and lower transverse rods 3 and 4 and forming a receptacle to receive a person or other object to prevent the same from coming in contact with the car or the wheels thereof. The L-shaped

supporting-frame 6 is slidingly connected with the car and is adapted, when not in use, to be moved inward under the same, as illustrated in Fig. 3 of the accompanying drawings, and it is composed of two L-shaped sides 8, pivoted at their upper terminals to sliding-blocks 9, and having the sides 2 of the fender-frame pivotally connected to their outer ends, and the L shaped sides are connected by transverse rods 10.

The fender-frame 1 is pivoted intermediate of its ends to the front of the supporting-frame and is maintained in an inclined position, as illustrated in Figs. 1 and 2 of the accompanying drawings, the forward or outward swing of the same being limited by lugs 11 projecting rearward from the side bars of the fender-frame and engaging one of the rods 10 of the supporting-frame.

The front of the fender is supported slightly above the roadbed by track-wheels 13 journaled on a transverse rod or axle of the supporting-frame and located intermediate of the ends of the outer arms or portions of the L-shaped sides thereof.

The upper terminals of the L-shaped sides of the supporting-frame are pivotally secured to the said blocks 9 by a transverse rod 12, and the blocks 9, which are preferably two in number, are each composed of two similar sections spaced apart and provided with corresponding grooves 14 in their inner faces and receiving a substantially T-shaped flange 15, depending from a guide-bar 16, and the guide-bars 16 are mounted on the bottom of the car and form tracks or ways on which the supporting-frame slides when it is desired to fold the fender beneath the car.

In folding the fender beneath the car for the purpose of coupling two cars or the like, the fender-frame is folded or swung downward upon the horizontal portion of the supporting-frame, and the latter is then moved inward beneath the car and is secured in either position by means of removable pins 17 arranged in perforations of the sliding blocks and adapted to engage corresponding perforations 18, located at the inner and outer ends of the ways 16.

When a person comes in contact with the fender the fender-frame swings rearward, as

will be readily seen, and it is cushioned in this rearward movement, or swinging by a spring cushion or spring-tension device 20, connected detachably with the bottom of the fender-frame and also with the brake mechanism or connections 21 thereof, whereby the brake will be yieldingly and automatically applied when the fender comes in contact with a person or other object. The tension device or cushion consists of a cylinder 22, open at one end, and a spiral spring 23 located within the cylinder and connected with the closed end thereof. The other end of the spiral spring 23 is connected by adjustable rods 24, having a turnbuckle and provided at the front with a hook 25, detachably engaging an eye of a guard 29, secured to the lugs 11 of the fender-frame. The turnbuckle enables the tension of the spring to be controlled, and the closed end of the cylinder 22 is connected by a chain 27 or the like with the brake mechanism, or rather the connection 21, that extends forward from the brake-levers to the brake-operating shaft 28.

The transverse guard 29, which is secured to the lugs 11, is inclined rearward when the fender is in operative position, but when folded beneath the car it is arranged substantially vertically to prevent stones or the like from coming in contact with the fender and injuring the latter. This guard also swings forward when the fender-frame swings rearward incident to a person coming in contact with it, and the guard will prevent the feet of a person from being caught under the fender and being dragged or crushed.

In passing around curves the fender should be raised slightly to lift the wheels 13 from the track, and for this purpose a strap or other flexible connection 30 is arranged on the front dash of the car and is provided at its inner terminus with a stirrup 31 to receive the foot of the motorman, and at its outer terminal it is provided with a hook 32 adapted to engage either the upper transverse rod of the fender-frame, as illustrated in Fig. 2 of the accompanying drawings, when the fender is in operative position, or the lower transverse rod, as illustrated in Fig. 3 of the accompanying drawings, when the car-fender is folded beneath the car.

The dashboard of the car is padded at 19 to prevent a person being injured in event of contacting with the dashboard, and the upward-extending portion of the supporting-frame is provided with a sheet of netting 33.

It will be seen that the car-fender is exceedingly simple and inexpensive in construction, that it is positive and reliable in operation, and that it is capable of ready application to cable-cars, electric cars, and other street-railway cars. It will also be apparent that the cushioning device, which forms a part of the connection between the fender-frame and the brake mechanism, yieldingly applies the brake and cushions the fall of a

person. Furthermore, it will be seen that the car-fender may be compactly folded beneath a car when it is desired to couple cars, and in folding the fender the cushioning device and its connections extending from it to the brake mechanism and the fender-frame may be detached.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What we claim is—

1. In a car fender, the combination with a car, of an L-shaped supporting frame connected with the car, and adapted to extend forward therefrom, an inclined fender frame pivotally connected to the front of the supporting frame and normally arranged in an inclined position, and yielding connections between the fender frame and the brake mechanism, whereby the fender frame will be cushioned and the brake automatically applied, substantially as described.

2. In a car fender, the combination with a car, of a supporting frame, a fender frame hinged to the front of the supporting frame and arranged at an inclination and provided with rearwardly extending lugs located adjacent to the bottom of the fender frame and depending therefrom and rigid therewith, and the transverse guard secured to the lugs and forming a vertical shield when the fender is folded, substantially as described.

3. In a car fender, the combination with a car provided with ways, a supporting frame slidably mounted on the ways and adapted to be moved inward under the car, an inclined fender frame hingedly connected with the front of the supporting frame, and the rearwardly inclined transverse guard located at the bottom of the fender frame and arranged to swing forward when the fender frame is folded, substantially as and for the purpose described.

4. In a car fender, the combination with a car, of a supporting frame, an inclined fender frame hingedly connected with the supporting frame and provided with lugs located at its bottom and adapted to engage the supporting frame to limit the forward swing of the fender frame, a transverse guard secured to the lugs, and a yielding connection between the guard and the brake mechanism said connections being provided with means whereby its tension may be adjusted, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

FRANK GOFF.
THOS. H. JOINER.

Witnesses:

B. S. HELONEY,
FRANK MATLOCK.