

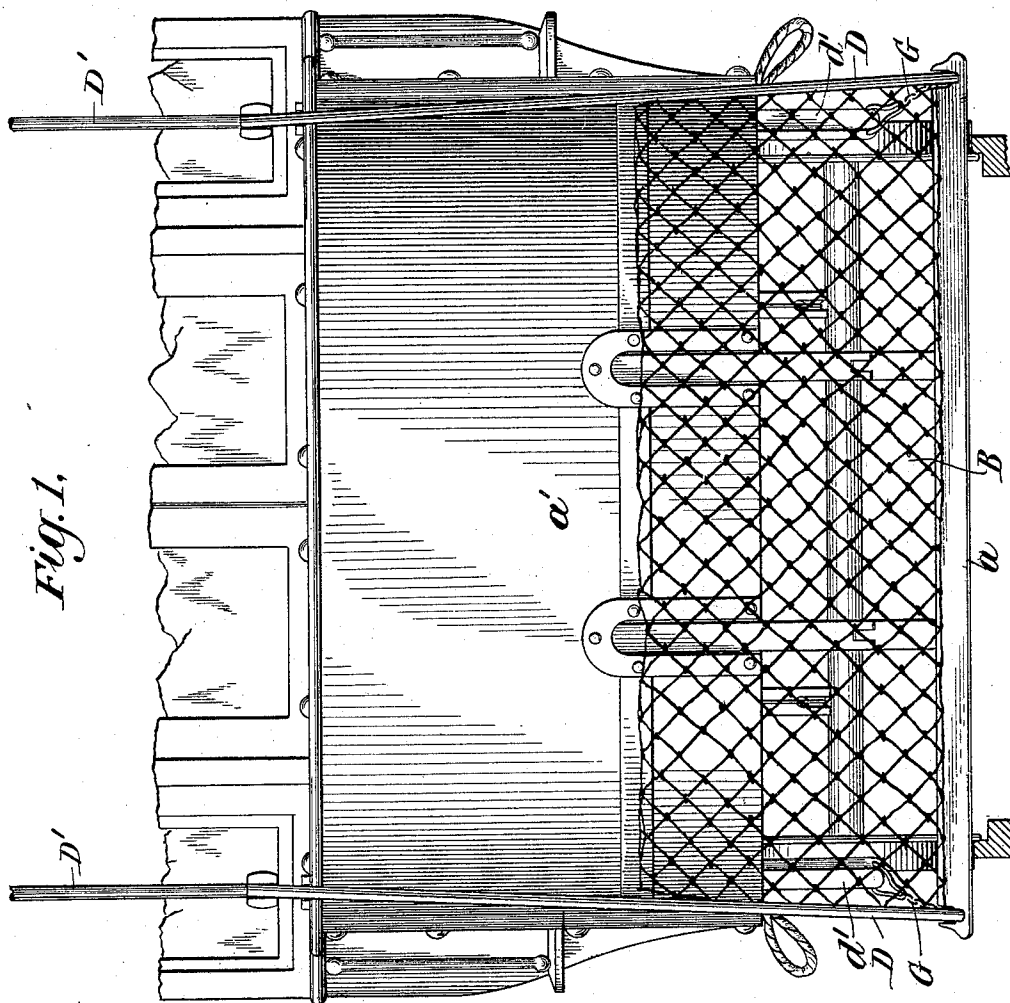
(No Model.)

4 Sheets—Sheet 1.

A. DI TRANI.
CAR FENDER.

No. 580,932.

Patented Apr. 20, 1897.



WITNESSES:

R. H. Maynard
Edwin Seger

INVENTOR

Antonio Di Trani

BY

Witter Kenyon
ATTORNEYS.

(No Model.)

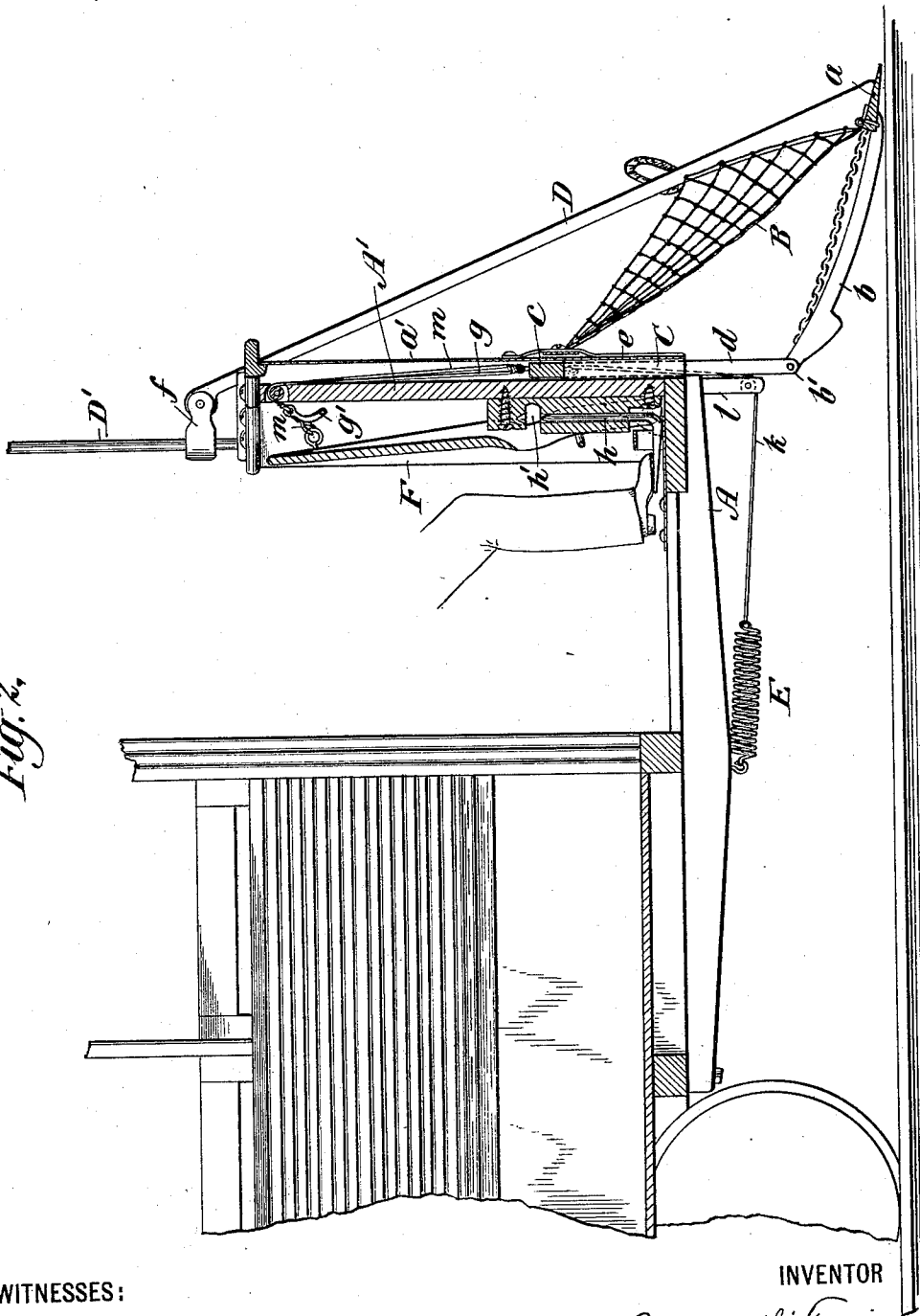
4 Sheets—Sheet 2.

A. DI TRANI.
CAR FENDER.

No. 580,932.

Patented Apr. 20, 1897.

Fig. 2.



WITNESSES:

R. H. Hayport
Edwin Seger

INVENTOR

Antonio Di Trani
BY
Walter Keryon
ATTORNEYS.

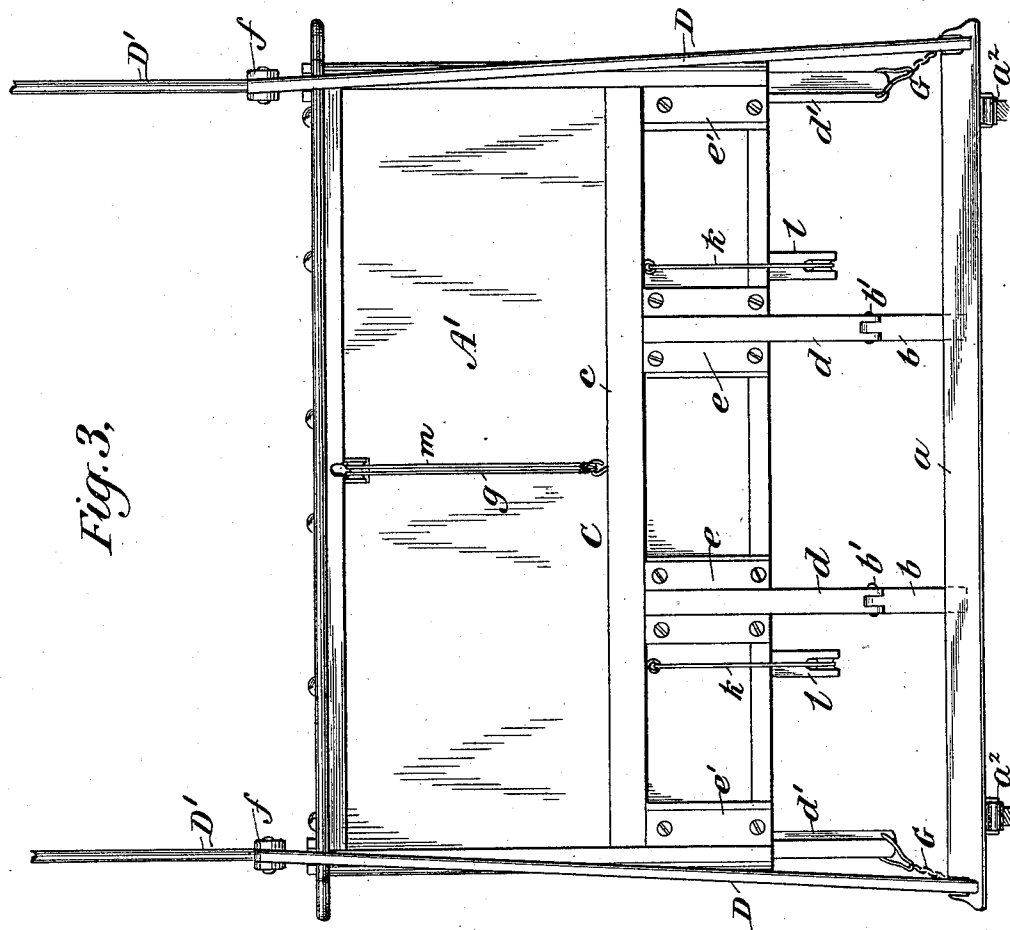
(No Model.)

4 Sheets—Sheet 3.

A. DI TRANI.
CAR FENDER.

No. 580,932.

Patented Apr. 20, 1897.



WITNESSES:

B. H. Hayworth
Quinn Seger

INVENTOR

Antonio M. Trani
BY
Walter Meryon
ATTORNEY S.

(No Model.)

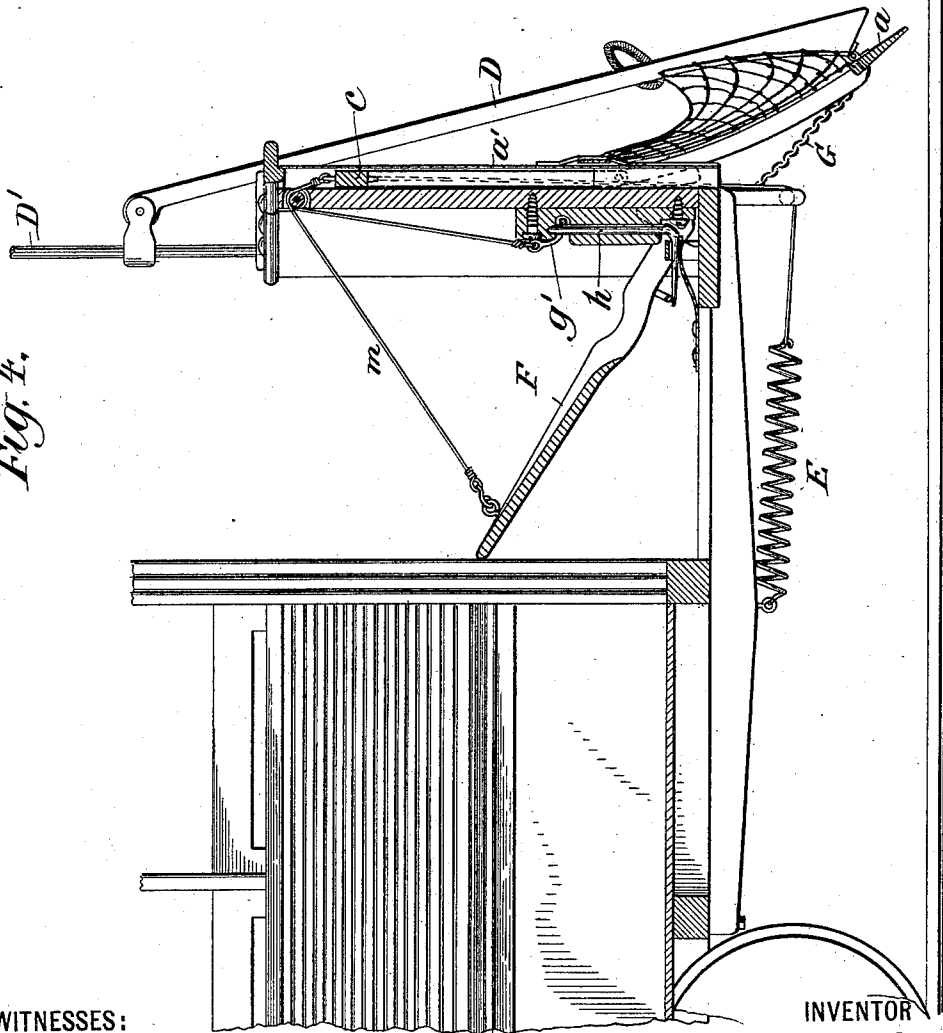
4 Sheets—Sheet 4.

A. DI TRANI.
CAR FENDER.

No. 580,932.

Patented Apr. 20, 1897.

Fig. 4.



WITNESSES:

R. H. Raymond
Edwin Seger

INVENTOR

Antonio Di Trani
BY
Walter H. Hays
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANTONIO DI TRANI, OF NEW YORK, N. Y., ASSIGNOR OF TWO-THIRDS TO
JOHN C. HEIN AND GEORGE W. GLAZE, OF SAME PLACE.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 580,932, dated April 20, 1897.

Application filed January 15, 1897. Serial No. 619,313. (No model.)

To all whom it may concern:

Be it known that I, ANTONIO DI TRANI, a subject of the King of Italy, and a resident of New York city, in the county and State of New York, have invented Improvements in Car-Fenders, of which the following is a specification.

This invention relates to car-fenders adapted to be attached to the platform of a tramway-car to prevent injury to a pedestrian who may be struck by the car.

The object of the invention is to provide a simple, efficient, and inexpensive device of the kind referred to.

The invention consists of the construction hereinafter described.

In the drawings forming part of this specification, and in which like letters of reference designate similar parts, Figure 1 is a front elevation of a fender embodying my invention attached to a car-platform in operating position. Fig. 2 is a central vertical sectional elevation of the fender and car as shown in Fig. 1. Fig. 3 is a front elevation corresponding with Fig. 1, but in which the front plate of the platform-dash and the net of the fender are removed; and Fig. 4 is a sectional elevation similar to Fig. 2, but showing the fender elevated from the track and close to the platform.

Referring now more particularly to the specific embodiment of the invention shown in the drawings, A is the front platform, having a dash A', carried by a tramway-car. The scoop B of the fender is generally made of flexible netting and extends back from the buffer a. The scoop, with its buffer, is arranged to be normally carried in a retracted position close to the car-platform and generally a substantial distance above the track, as shown in Fig. 4, and is provided with means controlled by an operator on the car for thrusting it forward from the platform and down close to the track, so as to be in full operating position, as shown in Fig. 2, when there is danger of the car striking a pedestrian. By carrying the scoop normally close to the platform and arranging it to be thrust forward in time of danger the car during most of the time occupies less space on the track than cars generally do that are provided with fenders, and pedestrians are in many cases thereby enabled to escape from before the car.

Moreover, in the crowded streets of a city more space is afforded for road-vehicles to pass before the car, while at the same time the retracted position of the scoop close to the car is such that it can be thrust forward into full operating position with the least possible loss of time. Moreover, during the time that the scoop is retracted and while it is moving forward it is in a partially-effective position to pick up a pedestrian should one be struck by the scoop. The capability of the buffer of being dropped close to the track when the scoop is thrust forward into full operating position is important because it enables the buffer to strike a pedestrian close to his feet, so as to upset him into the scoop.

It is not practicable for a moving car to carry a scoop all the time very close to the track, owing to the rocking of the car and consequent liability of injury to the fender. For this reason many fenders now in use have to be carried so far above the track that they are a source of danger rather than safety, because a pedestrian when struck is almost certain to be knocked down ahead of the fender, where he is liable to be run over by the car. Accordingly I provide one or more thrust-rods b and one or more supporting-rods D, carrying at their outer ends the buffer a, and suitable means whereby the buffer may be swung inward close to the platform and when required may be thrust or swung forward from the platform, and whereby the buffer is dropped close to the track when thrust forward and is lifted up from the track when swung inward.

The rods b are hinged or otherwise flexibly connected generally to a frame C, sliding vertically on the dash A. This frame in the present form of the invention comprises a cross-bar c, carrying vertical bars d and d' and sliding in ways e and e' on the dash behind the plate a'. By such means the upward movement of the bars d lifts the inner ends of the thrust-rods b and swings or draws back the buffer a. The rods D have an up-and-down movement and are hinged or otherwise flexibly connected to the scoop, preferably to the buffer a, as shown. When, therefore, the scoop or buffer is swung back or retracted, the rods D move upward, so as to lift the scoop up a substantial distance from the track, where it

will not be likely to strike the ground and be thereby injured. For this purpose I provide the rods D with swiveled eyepieces *f*, arranged to slide on the vertical rods D', carried by the car. A cord *g*, connected at one end to the cross-bar *c*, passes up over a pulley on the dash A' and is provided with a ring *g'*, adapted to be engaged by the foot-bolt *h* on the platform.

To insure a quick downward movement of the frame when released, I generally employ one or more springs. As here shown, coiled springs E are employed for this purpose, secured beneath the platform and having cords *k*, passing over pulleys on the posts *l* and up to the bar *c*, where they are secured. When the frame is held in elevated position, with the ring *g'* of the cord *g* caught on the bolt *h*, it is only necessary for the operator to put his foot on the bolt, when the springs quickly pull down the frame and thrust the buffer forward, the rods D moving down so as to carry the buffer close to the track. In the best form of the invention small wheels *a*² are carried by the buffer, so as to run along the track when the buffer is in this position. Inasmuch as I generally employ strong springs E, which, together with the weight of the fender, make it difficult for one man to lift the frame and lock it in elevated position, I generally employ special means to assist in this work. For this purpose a lever F is carried on the platform and from this lever a cord *m* passes over a pulley to the bar *c*.

When the lever is pulled down, it lifts the frame and strikes the foot of the bolt *h*, so as to depress it. The ring *g'* can then be easily inserted in the slot *h'*, through which the bolt works, when by lifting the lever the bolt engages the ring. The lever may then be returned to its normal position against the dash. Gare chains connected at their inner ends with vertical bars *d'* of the frame C, which slide in ways *e'*, the outer ends of the chain being connected with the buffer *a*. These chains assist in retracting the buffer.

I have herein shown and described the best embodiment of the invention now known to me, but it is to be understood that various changes in the construction and arrangement of the parts may be made without departing from the broad scope of the invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. A car-fender adapted to be supported by a car-platform and comprising a scoop provided with a buffer and arranged to be normally supported close to the platform; and means adapted to be controlled by an operator on the car for thrusting the buffer forward; said means comprising one or more thrust-rods connected at their outer ends to the buffer and vertically adjustable at their inner ends and also comprising one or more supporting-rods connected with the buffer, substantially as set forth.

2. A car-fender adapted to be supported by a car-platform and comprising a scoop provided with a buffer and arranged to be normally supported close to the platform and a substantial distance above the track; and means adapted to be controlled by an operator on the car for thrusting the buffer forward and downward close to the track; said means comprising one or more thrust-rods connected at their outer ends to the buffer and vertically adjustable at their inner ends and also comprising one or more vertically-movable supporting-rods connected with the buffer, substantially as set forth.

3. A car-fender adapted to be supported by a car-platform and comprising a scoop provided with a buffer and arranged to be normally supported close to the platform and a substantial distance above the track; and means adapted to be controlled by an operator on the car for thrusting the buffer forward and downward close to the track; said means comprising one or more thrust-rods connected at their outer ends to the buffer and vertically adjustable at their inner ends and also comprising one or more vertically-movable supporting-rods connected with the buffer, and one or more springs to force the inner ends of the thrust-rods downward, substantially as set forth.

4. In a car-fender, the combination of a scoop having a buffer; a vertically-adjustable frame on the platform-dash; thrust-rods connected at their outer ends with the buffer and at their inner ends hinged to the said frame; vertical rods on the platform; supporting-rods sliding at their upper ends on said vertical rods and at their lower ends hinged to the buffer; and means adapted to be controlled by an operator on the car for supporting and releasing the said frame, substantially as set forth.

5. In a car-fender, the combination of a scoop having a buffer; a vertically-adjustable frame on the platform-dash; thrust-rods connected at their outer ends with the buffer and at their inner ends hinged to the said frame; vertical rods on the platform; supporting-rods sliding at their upper ends on said vertical rods and at their lower ends hinged to the buffer; a lever on the platform connected with the frame for elevating the frame; a bolt on the platform adapted to be controlled by the operator on the car; a cord connected with the frame and arranged to be engaged by the bolt to sustain the frame in elevated position; and springs for forcing the frame downward when released, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANTONIO DI TRANI.

Witnesses:

GEORGE W. GLAZE,
EDWIN SEGER.