(No Model.) 2 Sheets—Sheet 1.

E. K. THODEN.

CAR FENDER.

No. 532,610. Patented Jan. 15, 1895.

Fig. 1.

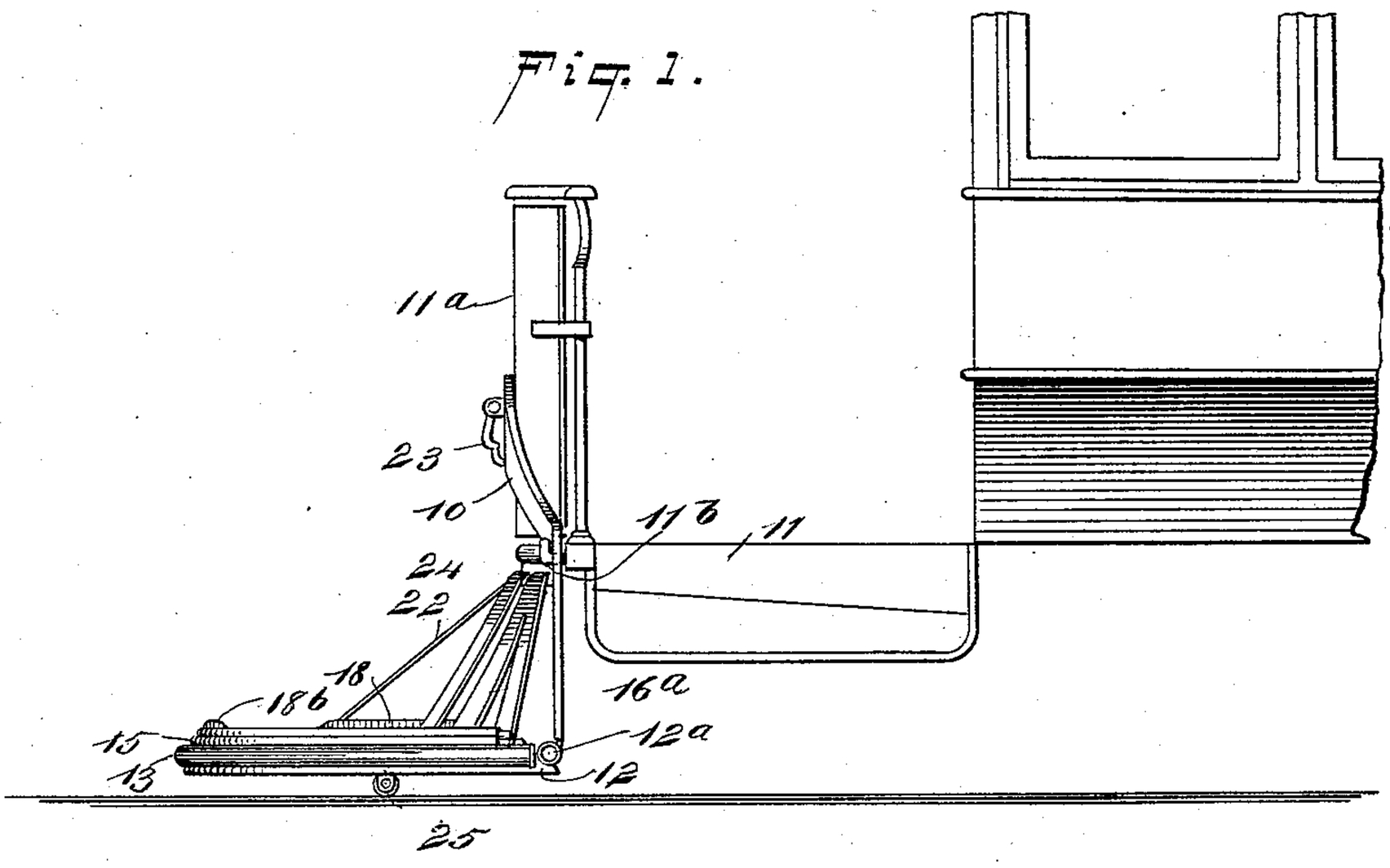

Fig. 2.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

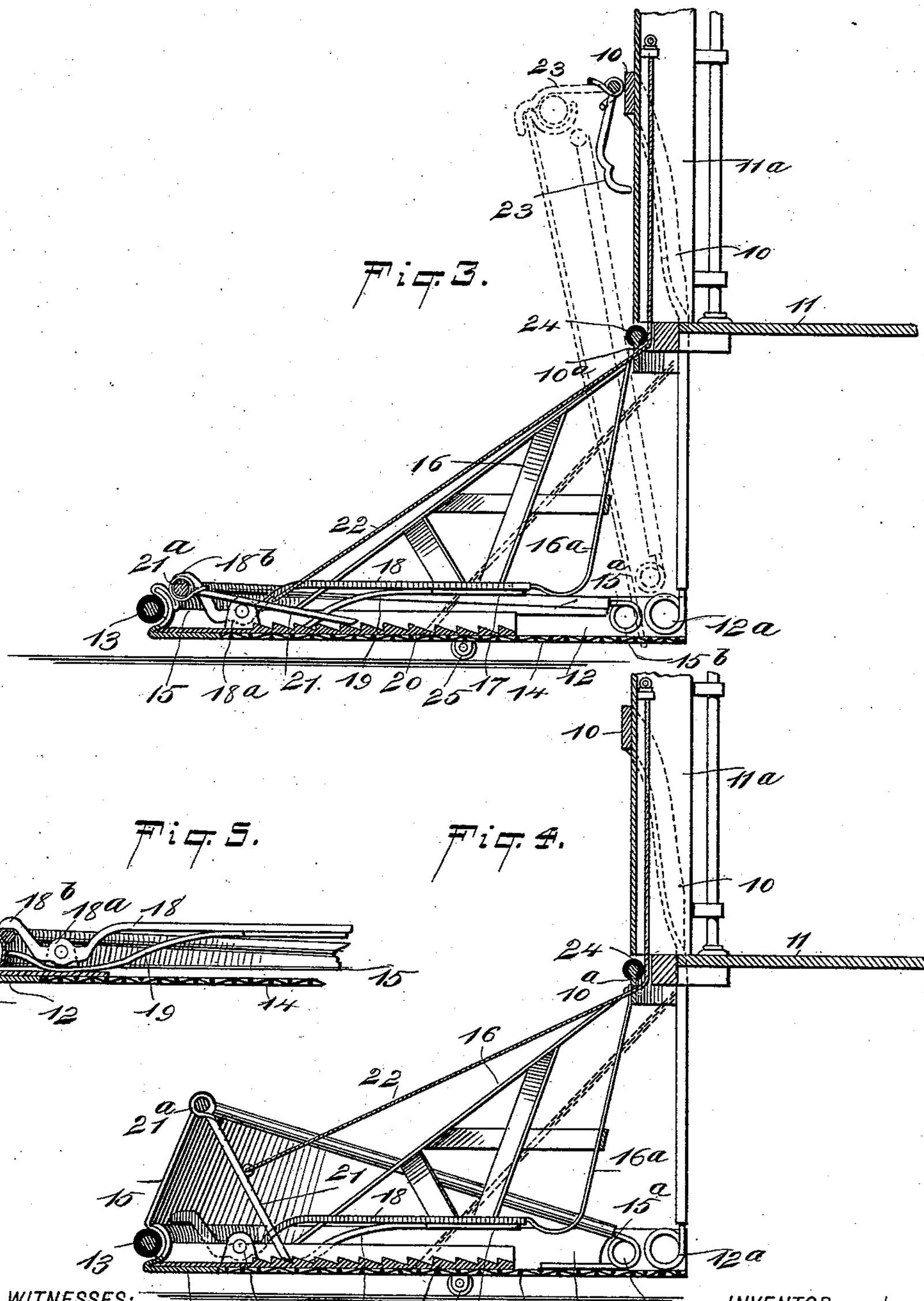

Fig. 5.

Fig. 4.

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UNITED STATES PATENT OFFICE.

EDWARD K. THODEN, OF BROOKLYN, NEW YORK.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 532,610, dated January 15, 1895.

Application filed May 23, 1894. Serial No. 512,178. (No model.)

To all whom it may concern:

Be it known that I, EDWARD K. THODEN, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Safety Attachment for Cars, of which the following is a full, clear, and exact description.

My invention relates to an improved device for the prevention of accidents to persons on railroad tracks, that may be incurred from progressively moving cars, the object being to provide a novel, simple and practical attachment for the ends of cars, and more particularly for street railway cars, which will in use prevent human beings or animals from having injurious contact with a moving car that is provided with the improvement.

To this end, my invention consists in the construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views shown.

Figure 1, is a side view of an end portion of a car, and of the improved fender device in place on it. Fig. 2, is a plan view of the car portion and attached novel car fender, shown in Fig. 1. Fig. 3, is an enlarged longitudinal sectional view on the line 3—3 in Fig. 2, of the improved safety attachment on a car platform, showing the device in lowered adjustment ready for service, by full lines, and in an elevated position by dotted lines. Fig. 4, is a longitudinal sectional view of the car platform and novel car fender device, indicating the relative positions of parts when these are in a lowered condition, and after the top of the safety device has been pressed upon by the impingement therewith of a person or animal; and Fig. 5, is an enlarged longitudinal sectional view of essential portions of the improvement, on the line 5—5 in Fig. 2, showing the novel guard rim of the device held depressed by a releasable latch bar that is part of another feature of the invention.

This improved safety attachment for cars, briefly considered comprises a hinged upwardly foldable and downwardly spring-pressed catcher frame, normally projecting in a level condition from a hanger frame, the latter being removably secured across the end or dasher of a street passenger car, so as to adapt the entire device for a convenient transference from one end of the car to the other, as occasion may require.

The improvement also embodies a novel guard rim that is spring-pressed upwardly, so as to form a low wall around the edge of the catcher frame, said guard rim being made collapsible, and normally held flat by a catch hook bar projected from a skeleton platform constructed of leather or other pliable material, and which, when impinged by a falling body, will instantly release the guard rim, the latter when elevated, serving to prevent the person who may be thrown upon the safety device, from rolling therefrom, or prevent the limbs of the party thus precipitated, from dragging on the road bed.

In the drawings, 10 represents the hanger frame, which is a light, strong structure, preferably of metal, adapted in shape to conform to the outer surface of the lower portion of the dasher 11^a, on the car platform 11, said hanger frame being perforated near each side edge at an equal distance from the lower edge of the same so as to have a latching engagement with the projected hooks 11^b, that are affixed on the front of the platform; or other means may be provided to detachably connect the hanger frame with either end of a car.

The catcher frame is a composite structure, the main portion of which is a semi-circular border piece 12, which is substantially L-shaped in cross section at any point in its length, and at the ends is furnished with spring hinges such as 12^a or other equivalent spring jointed attachments, for the rocking connection of the catcher frame with the lower end of the hanger frame 10, near the side edges of the latter, the disposition of these spring hinges being to normally hold the catcher frame level and in advance of the frame 10.

Around the upright portion of the border frame 12, a tubular elastic cushion 13, is secured, the wall of the border frame engaged by the cushion being concaved so as to afford a proper seat for it, as shown in Figs. 3, 4, and 5; this cushion being designed to prevent injury to the limbs of a person who may be struck by the safety device.

There is a woven wire bed piece 14, secured by its edge on the border piece 12, and forms a slightly yielding support for any person or thing thrown on the catcher-frame of which it is a portion, the bed piece having a sufficient area to completely cover the border frame.

On the border frame piece 12, a guard rim 15, is located, this novel portion of the device being semi-circular in shape, and of such a proportionate size as will permit it to be seated on the portion 12, and have a loose contact with the rear face of the upright member of said border frame piece. The guard rim comprises a curved spring metal edge piece 15^a, which is attached to the upper edge of the leather or other strong flexible portion 15, that is the main part of the guard rim, the portion which is flexible being highest at the transverse center in front, and is therefrom sloped toward each end at the rear, where a spring connection 15^b is produced between the ends of the border piece 12, and the ends of the part 15^a, the tension of said spring hinges being such as to lift the front part of the edge piece 15^a and distend the flexible portion 15 when the guard rim entire is unrestrained.

There is a supplementary bottom wall 16 furnished for the catcher frame of the improved safety attachment, this portion of the device being formed of strong leather, canvas, or gum fabric, and may be composed of a series of connected bands as shown in Fig. 2, or if preferred can be made of a continuous sheet of the pliable material.

The supplementary bottom piece 16, has its curved edge secured to the flat portion of the border frame 12, the rear edge of said part 16, being upwardly inclined a proper degree, and a sufficient portion composed of the pliable slats 16^a, is afforded a proper slackness to permit the central portion 16^b of the bottom to be depressed by imposed weight, all of the rear edge portion having a secured engagement with a cross bar 10^a of the hanger frame 10. A rigid plate 17, is secured on the lower side of the supplementary bottom piece 16, at its center of width, said plate having a sufficient area to adapt it to receive pressure from a person who may be caused to fall on the upper side of the part 16; and from the plate 17 the latch bar 18, is forwardly extended, having a pivotal engagement at 18^a, with ears projected from the border piece, a strong plate spring 19, enforcing the depression of the front end of said bar, so that its hooked front portion 18^b, will interlock with the edge piece 15^a of the guard rim 15 and retain this depressed.

A ratchet toothed rack plate 20, is longitudinally secured on the woven wire bed piece 14, the teeth on which plate are forwardly hooked, so that the swinging dog 21, that is loosely secured on the edge piece 15^a, may engage its free end with any of the teeth within its range, and thus lock the guard rim in elevated adjustment, the dog being spring-pressed at 21^a to enforce its descent.

From the dog or pawl 21, a preferably flexible connection 22, is extended rearwardly and upwardly, its upper end being loosely retained on the fender of the car platform, so that draft strain may be readily applied to the upper end of the rope or chain 22, to elevate the entire fender device into an upwardly folded condition as indicated by dotted lines in Fig. 3, said fender being thus retained until needed, by the hinged and spring-pressed keeper hook 23, that when not in service is held pendent at the front of the dasher. A tubular or other elastic covering 24, is secured on the hanger frame cross bar 10^a, to prevent the head or limbs of a person thrown into the catcher frame of the device from receiving injurious concussion.

In case the device is not required for the protection of the life or limbs of a pedestrian, it is maintained in an upwardly folded condition, as before mentioned, and should it be necessary to lower the catcher frame into a horizontal position, this adjustment is automatically produced by the release of the hook 23.

The depression of the catcher frame is limited by the contact of two similar small wheels 25, which will impinge the railway track when the safety device is lowered, and thus adapt it for progressive movement, these wheels being pivotally secured on the border frame piece 12, so as to freely rotate when in connection with the rails or road bed of the railroad.

It will be seen that the car driver, gripman of a cable car or motor man of an electrically propelled car, will have at hand ready for instant use a practical and superior safety device, that by the simple act of release from the dasher above, will have an enforced contact with the track rails, a short distance above them. This will adapt the improvement to catch a person that may be struck by the elastic front edge portion of the catcher frame of the improvement, and who will fall on the supplementary bottom piece 16, which will vibrate the latch bar 18, so as to release the guard rim of the device, which will instantly rise into the position shown in Fig. 4, and be locked from depression by the dog 21, thus retaining the incumbent person, until the car is stopped, injury to the party struck being prevented.

As the safety attachment can be readily moved from one end of the car to the other end in case the direction of movement for said car requires such a change, but one fender attachment need be provided for a car, which will reduce the expense of fitting a number of cars with the improvement.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A car fender, comprising a forwardly curved suspensible catcher frame, a partly

flexible and curved folding guard rim thereon spring pressed upwardly, and a device that holds the guard rim depressed, releasing said rim to unfold its flexible portion when actuated by imposed weight, substantially as described.

2. A car fender, comprising a removable hanger frame that is curved outwardly on the forward edge a downwardly spring pressed catcher frame, means to detachably secure the catcher frame elevated on a car front, an upwardly spring pressed and partly flexible folding guard rim over the curved margin catcher frame, and a device arranged to retain the guard rim folded, and release it when actuated by weight imposed on the catcher frame, substantially as described.

3. In a car fender, the combination with a removable hanger frame on the car, a hinged and downwardly spring pressed catcher frame thereon, and a securing hook that holds the catcher frame elevated, of a supplementary bottom piece for the catcher frame, an upwardly spring pressed folding guard rim on said frame, a latch bar on the supplementary bottom a ratchet and pawl arranged to hold the guard rim elevated, and means to fold the catcher frame up toward the car, substantially as described.

4. In a car fender, the combination with a hanger frame, a hinged and downwardly spring pressed catcher frame comprising a border piece, a slightly yielding bed piece thereon, and a yielding supplementary bottom piece, of a hinged and upwardly spring pressed guard rim on the catcher frame, a pivoted catch bar vibrated by weight on the supplementary bottom piece, a ratchet rack and dog arranged to hold the guard rim elevated, and a flexible connection extended from the catcher frame to a point on the car whereon the fender is hung, substantially as described.

5. In a car fender, the combination with a hanger frame, a hinged and downwardly spring pressed catcher frame, an elastic cushion piece upon the hanger frame and an elastic cushion piece at the forward edge of the catcher frame, of an upwardly spring pressed guard rim on the catcher frame, a pivoted latch bar on a supplementary bottom piece of the catcher frame, a ratchet rack, and a spring pressed dog arranged to retain the guard rim elevated and a flexible connection extended from the dog to a point on the car whereon the fender is hung, substantially as described.

6. In a car fender, the combination with a catcher frame arranged to horizontally project from a car, of a bellows folded, hinged and upwardly spring pressed guard rim at the edge of the catcher frame, means to hold said guard rim lap folded, and a device to release the guard rim when struck by an imposed weight, substantially as described.

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Witnesses:
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JNO. M. RITTER.