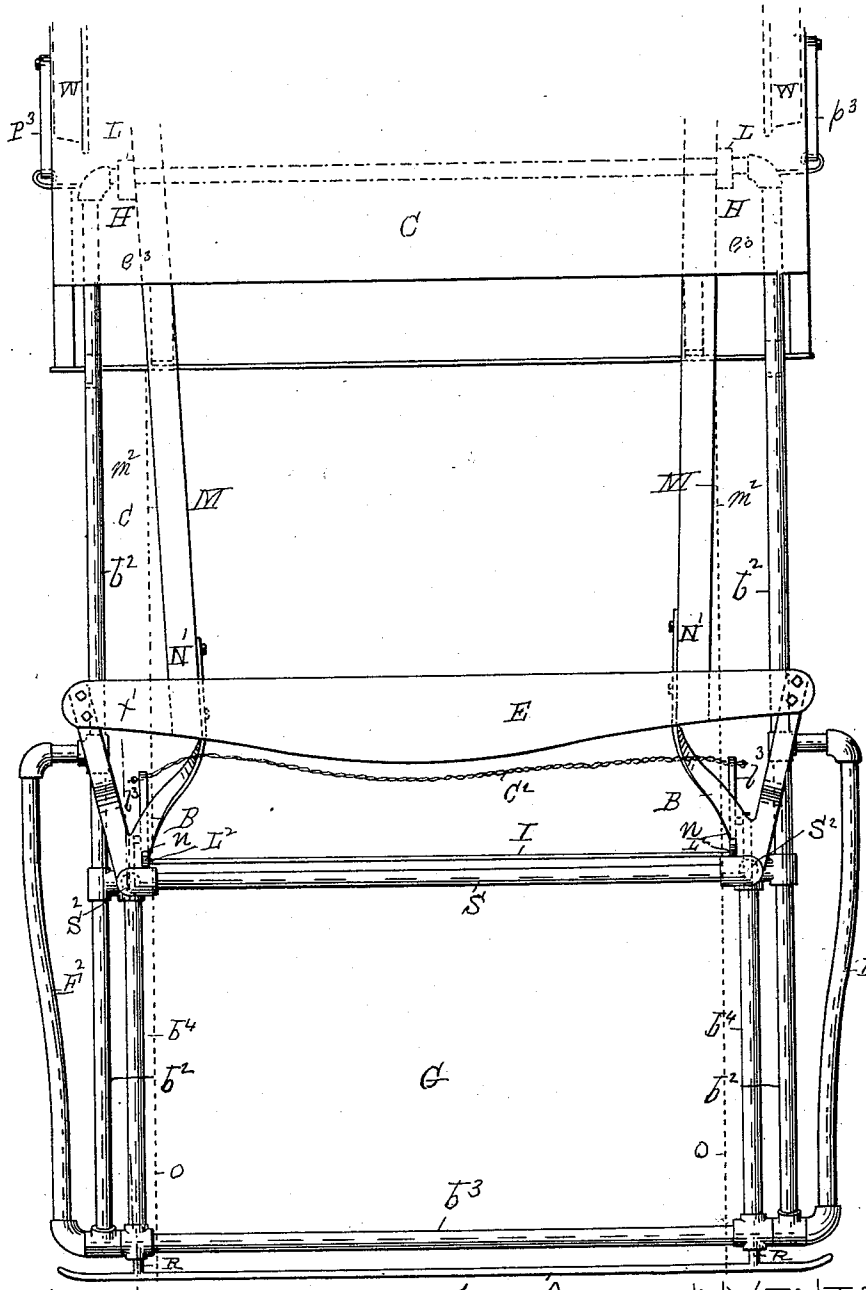
(No Model.)

4 Sheets—Sheet 1.

C. P. STIMPSON.

CAR GUARD.

No. 534,409. Patented Feb. 19, 1895.



WITNESSES

William A. Lurz

Charles S. Bimball

FIG 1

INVENTOR

Charles P. Stimpson

by W. E. Hagan atty

(No Model.) 4 Sheets—Sheet 2.

C. P. STIMPSON.

CAR GUARD.

No. 534,409. Patented Feb. 19, 1895.

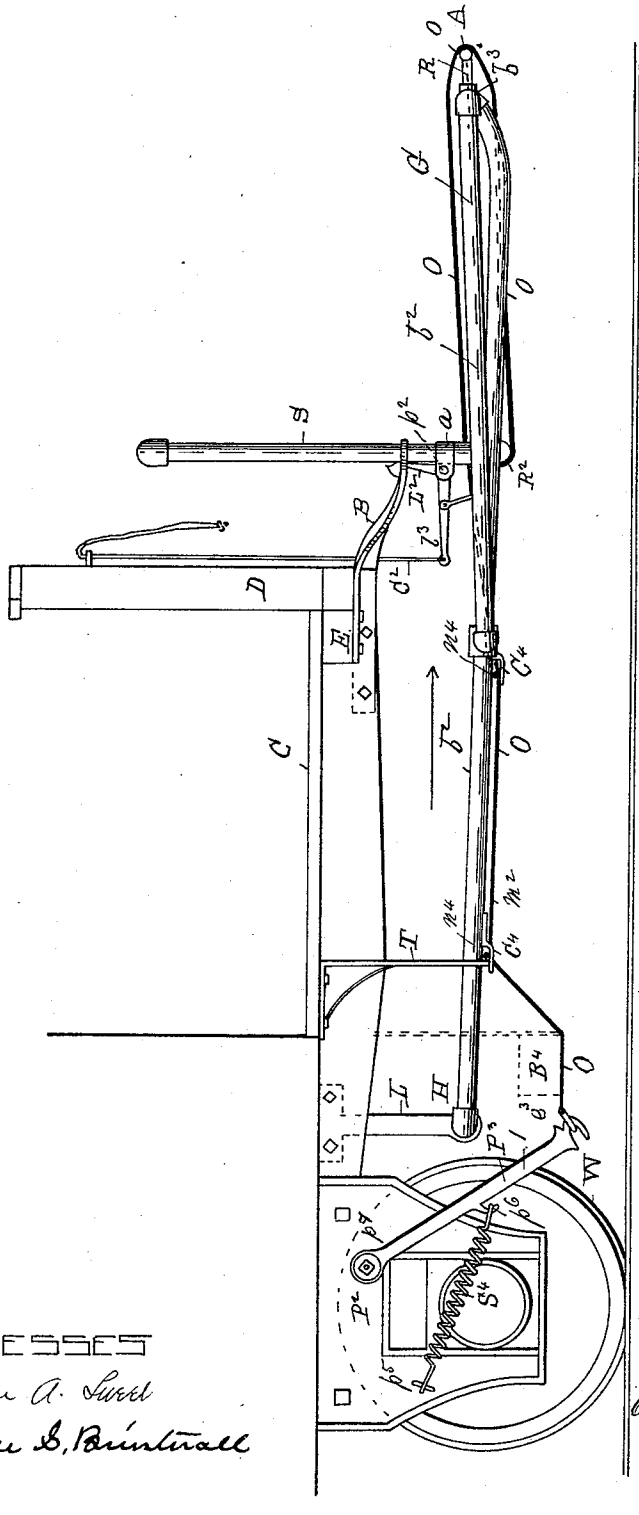


FIG 2

WITNESSES

William A. Surrd

Charles B. Brinsmaid

INVENTOR

Charles P. Stimpson

by W. & Hagan

Atty

(No Model.) 4 Sheets—Sheet 3.

C. P. STIMPSON.

CAR GUARD.

No. 534,409. Patented Feb. 19, 1895.

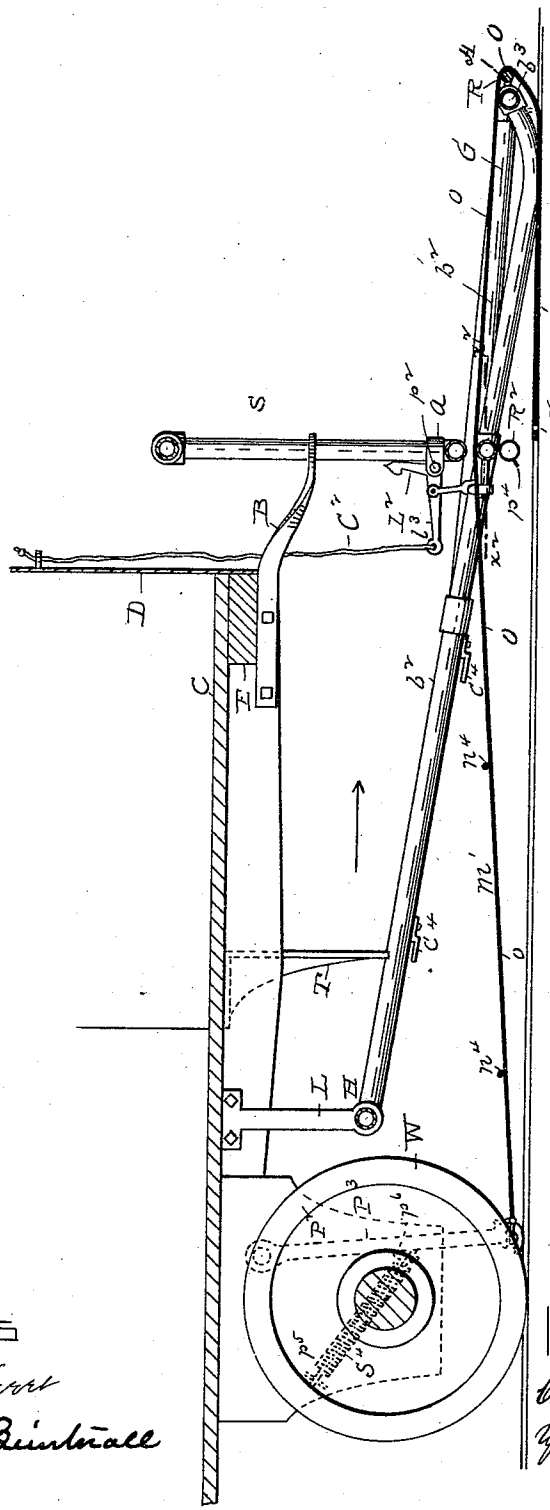


Fig 3

WITNESSES

William A. Swart

Charles B. Brimhall

INVENTOR

Charles P. Stimpson

by W. E. Hagan

atty

(No Model.) 4 Sheets—Sheet 4.

C. P. STIMPSON.

CAR GUARD.

No. 534,409. Patented Feb. 19, 1895.

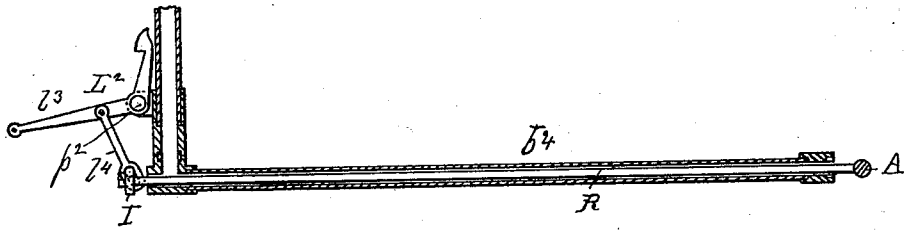


Fig 5

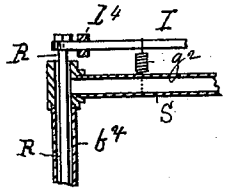


Fig 6

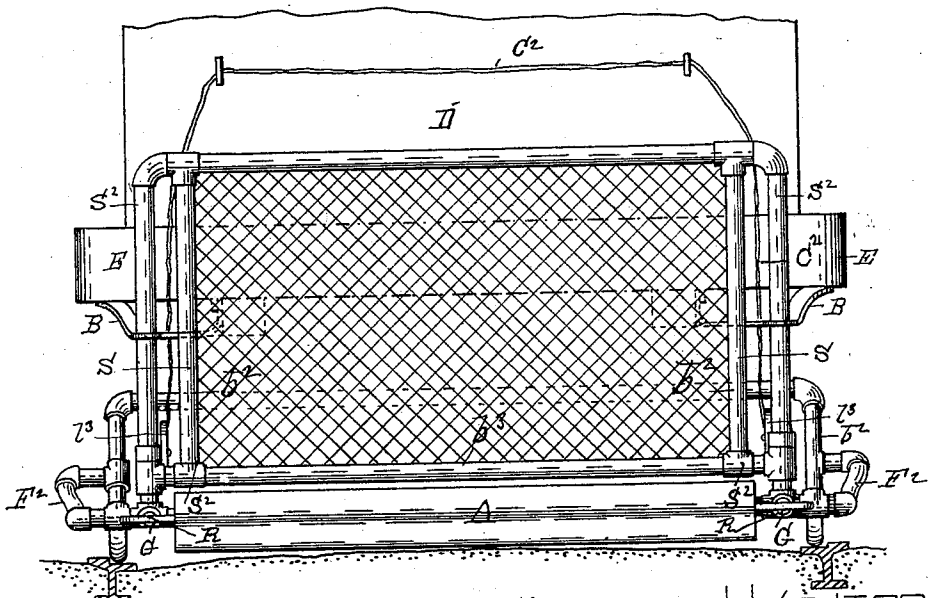


Fig 4

WITNESSES

William A. Street

Chester B. Burtnett

INVENTOR

Charles P. Stimpson

by W. E. Hagan atty

UNITED STATES PATENT OFFICE.

CHARLES P. STIMPSON, OF TROY, NEW YORK, ASSIGNOR OF ONE-HALF TO PHEBE R. GUNNISON, OF SAME PLACE.

CAR-GUARD.

SPECIFICATION forming part of Letters Patent No. 534,409, dated February 19, 1895.

Application filed October 15, 1894. Serial No. 525,866. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. STIMPSON, of the city of Troy, county of Rensselaer, and State of New York, have invented a new and useful Improvement in Car-Guards, of which the following is a specification.

My invention relates to that class of apparatus which are termed car guards or fenders, and are adapted to, as placed at the front end of a moving car, to prevent persons struck by, or falling in front of it from being injured by the wheels, it being the object of my invention and improvement to better adapt this class of devices to the uses for which they are designed, and to make them so that they can be operated by the motor man, or actuated automatically when coming in contact with the body of a person who has fallen in front of the car or thereat comes in contact with the apparatus.

Accompanying this specification to form a part of it there are four sheets of drawings containing six figures illustrating my invention, with the same designation of parts by letter reference used in all of them.

Of the illustrations Figure 1 is a top view of my invention shown as attached to the front end of a motor car and with the canvas indicated by a dotted line. Fig. 2 shows a side view of the apparatus, with its outer end raised and in a position to be operated automatically or by the motor man, so as to come in contact with the body of a person who has fallen in front of, or who is in front of the moving car. Fig. 3 is another side elevation with the apparatus shown as tripped, and in a position to intervene between a person who has fallen, and the car wheels. Fig. 4 is an end view of the apparatus. Fig. 5 is a section taken on the line x', x', of Fig. 1. Fig. 6 is a section taken on the line x^2, x^2, of Fig. 3.

The several parts of the apparatus thus described are designated by letter reference and the function of the parts is described as follows:

The letter C designates the car platform; E, its end sill; N', its side beams, and W, its front wheels, when moving in the direction indicated by the arrows, shown upon Figs. 2 and 3.

The letters B designate brackets of which there is one at each side projected downwardly and laterally, from where forked at their upper ends to connect with the end-sill E, and side-beams N'.

The letter S designates a vertical screen, arranged to pass upwardly through said brackets in front of the dashboard D, with the lower ends of the screen sides at S^2, each connecting with one of the horizontal bars b^2, b^2, of the guard G. This latter is preferably made of gas-pipe in the form of a frame F having its sides b^2, b^2, and outer end b^3, arranged at right angles to each other, with the sides b^2 b^2, extended rearwardly and at their inner ends at H, hinged to the pendent leg L, on which connection the outer end of the guard G, can be raised and depressed.

The guard or fender G, when not in use, or acted upon by coming in contact with the body of a person falling in front of it, as moved by the car, is raised up at its front end to be in the position shown at Fig. 2, and it is held in this position by means of latches L^2, of which there is one at each side of the guard. Each of these latches is pivoted at p^2, to a strap a, which latter is clamped in each instance of its use on to one of the sides S^2, of the screen S. Each of these latches is adapted to catch into a notch n, made in each of the brackets B, and each of these latches is constructed with a lever l^3, to the outer end of which there is attached a chain C^2, passing up in front of the dash-board D, where within the reach of the motor man, and by pulling upon the chain C^2, the latches L^2, are tripped and the guard or fender G, will descend by gravity on its hinged connection at H, with the parts in the position as shown at Fig. 3.

To have the guard or fender G, drop automatically the following mechanism is used: The letter A, designates a tripping bar which is arranged in front of the end b^3, of the guard, and from this tripping-bar there is a rod R, which is extended rearwardly through the pipe-form side-bar b^4, at each side of the guard. The letter I, designates a cross-bar which at each of its ends connects with one of these guide-bars R, and g^2, is a spring arranged between this cross-bar and the bottom of the screen S, there being one of these springs at each end of the bar I, and their function

being to keep the tripping-bar or fender A, extended beyond the front end cross-bar b^3, of the guard and against the force of which spring the tripping fender or bar is moved inwardly. The letter F^2 designates fenders of which there is one at each side of the guard G, their function being to give lateral extension of the guard. The letters l^4 designate a link or pivoted lever, the lower end of which is pivoted to one of the latch levers l^3, there being one of these levers or links l^4, at each side of the guard frame, each connecting with one of the rods R, and one of the latch levers l^3. As thus made and arranged to be operated, when the tripping fender A, at the front end of the guard comes in contact with an object as the guard is moving with the car, the bar or fender is pushed rearwardly and this trips the latches L^2, allowing the guard to descend at its outer end to rest on the track or ground.

To further adapt my improved guard or fender to answer the purpose, a canvas strip O, is used in connection with the apparatus. This canvas strip or sheet is at one end, and that end nearest the front of the guard, wound upon a spring curtain roller R^2, which at its outer ends is attached to the sides b^2, b^2, of the guard proper, and therefrom the canvas is carried frontwardly, around and over the tripping-bar or fender A, to be therefrom extended rearwardly over the frame F. This roller R^2 is provided with the usual interior spring by the action of which it may be operated to roll up the canvas.

The letter p^4, designates a pin on the roller, and e^2 designates eyes or holes made in the canvas at its end adjacent to the roller and by means of which after the spring has been turned so as to store up its torsional action, the canvas may at its front end be rolled upon the roller, and when the canvas is pulled upon frontwardly until the canvas end, as being unwound reaches the pins, the canvas is detached from the roller and it falls to rest on the ground, with the parts appearing as shown at Fig. 3.

At the inner end e^3 of the canvas, the latter is preferably cut out centrally at M, so as to leave at each side of the cut out area, a strip m^3, the latter being indicated by a dotted line at Fig. 1. Each of these side-strips of canvas as extended rearwardly is at its rear end attached to the lower end of a pendent link P^3, each of which at its upper end is pivoted at p^7, to the pedestal P^2, on its outer face.

The letter S^4 designates a spiral spring, which at its rear end at p^5, is pivoted to the pedestal P^3, and at its front end at p^6, is connected with the link P^3.

The letters C^4, C^4, designate clips which are arranged on the under side of each of the side bars b^2; and the letters n^4, n^4, designate rods which are sewed into the canvas crosswise, with their outer ends projecting beyond the canvas and so that the ends of the rods n^4, where thus projecting from each of the canvas strips m^2, will engage with the clips and the canvas be held up thereby when the guard has not been tripped, but when the latter occurs, as the guard descends, the canvas strips will be released from the clips to fall, with the parts appearing as shown at Fig. 2. To insure such engagement of the said rods with the said clips a bracket T is attached to the platform at each side thereof, extending vertically downward as shown, behind the laterally protruding end of one of the said rods so as to prevent the latter from being drawn backward from the said clip by the action of the spring S while the mechanism is in the normal position as shown in Fig. 2.

The operation of this canvas apron or screen as thus constructed in connection with the guard G, is as follows: When the guard is raised and in position to be tripped, the canvas does not touch the ground, but when the guard is tripped by the operation of the fender A, coming in contact with the body of a person, or is tripped by the motor man, as the guard falls at its front end, the canvas becomes disconnected from the clips, and by the action of the springs S^4, the canvas is drawn rearwardly so as to underrun the wheels, the movement of the car drawing back the canvas, so as to carry the person resting upon it on to the top of the guard.

The letter B^4 designates the brake-beam under which the canvas strips pass at each of its ends.

While I have described canvas as the material best adapted to extend over the top of the guard, as well as under it, and to also extend rearwardly to underrun the wheels, I do not limit my invention to its use, for any material equally flexible may be used when employed substantially in the same manner.

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

1. In a car guard or fender the combination with a rectilinear form frame, provided with a covering, and having its sides extended rearwardly and at their inner ends hinged to the car, in whih connection said frame may swing upwardly or downwardly on its outer end, of a bracket laterally extended forwardly from the car-side and end-sill at each side of the frame, each of said brackets provided with a latch catch; a latch at each side of the frame, having a latch lever, and a tripping fender or bar arranged in advance of the frame at its front end, and mounted on guide-rods of which there is one passing through each side of the frame, each of said guide-rods adapted when moved rearwardly by the tripping fender or bar to trip one of said latches, substantially as, and for the purposes set forth.

2. In a car guard or fender the combination with a rectilinear form frame having rearwardly extended sides, which at their inner

ends are hinged to the car, said frame having a covering of canvas; of a screen having wire lattice work, and upwardly projected from said frame; a bracket provided with a latch-catch at each rear corner of said frame; a latch provided with a pivoted lever mounted on the rear of said frame at each side thereof, and a tripping fender mounted on guide rods in advance of the outer end of said frame, with said guide rods passing through the frame sides and adapted to trip said latches and allow the frame to descend on its hinged connection, substantially as and for the purposes set forth.

3. In a car guard or fender, the combination with a rectilinear form frame having rearwardly extended sides which at their inner ends are hinged to the car, said frame having a covering of canvas, a bracket provided with a latch catch at each rear corner of said frame; a latch provided with a pivoted lever mounted on said frame at each of its rear corners, and a chain connected at each of its ends with one of said latch levers, and intermediately extended upwardly in front of the car dash-board, substantially in the manner as and for the purposes set forth.

4. In a car guard or fender the combination with a frame which on the inner ends of its rearwardly underlapping sides is provided with a hinged connection to the car on which the outer end of the frame may rise to be latched to the car, and tripped to descend to the ground substantially as described, of a canvas strip having about the same width as the frame and having its front end connected by pins to a spring roller from which when unwound it will become detached automatically and fall to the ground, with the canvas passed from the roller under the frame frontwardly over its front end, and top, and by being extended rearwardly to connect with a link at each side of the car, each of which latter at its upper end is pivoted to the car, and is provided with a spring adapted to carry the canvas downwardly and rearwardly beneath the wheels when the fender or guard is tripped, substantially in the manner as and for the purposes set forth.

5. A car guard or fender in combination consisting of a frame which is hinged to the car, on which connection it may be raised to latch, or tripped to descend to the ground; a canvas strip having at its front end where overlapping and underlapping the frame about the same width as the latter, with its free end attached to a spring roller beneath the frame on to which roller it is wound by the torsion of the roller spring and from which roller it may be detached and fall to the ground automatically when unwound therefrom, with said canvas where extended rearwardly made at its rear end to connect with a link at each side of the car, each of said links being provided with a spring whereby said canvas will be drawn rearwardly, and carried downwardly to pass beneath the wheels, substantially in the manner as and for the purposes set forth.

6. In a car-guard or fender the combination with a frame which at its inner end is hinged to the car, on which connection it can be operated to rise and be latched, or tripped so as to fall and rest upon the ground at its front end—of a canvas sheet connected to the under-side of the frame and therefrom extended under, around the front end of, and over the said frame and extended rearwardly to connect with links having springs whereby when said frame is tripped and unlatched said canvas will as the frame descends at the front be drawn rearwardly to pass beneath the car-wheels substantially in the manner as and for the purposes set forth.

7. In a car-guard or fender the combination with the frame F, having the rearwardly extended sides b^2, b^2, provided with clips C^4, and hinged to the car at H, said frame having the curtain roller R^2, on its under side—of the canvas O, arranged to connect at its front end with the said roller by means of pins on the latter, and to be unwound from said roller against the torsional action of the roller spring, said canvas O, being carried from the curtain roller under, around the front end of and over the top of said frame and therefrom extended rearwardly to rest in said clips when the frame is raised, and to become detached therefrom when the outer end of the frame descends; and links P^3, P^3, provided with a spring S^4, and each of said links pivoted at its upper end to the car and at its lower end connected to said canvas—constructed and arranged to operate substantially in the manner as and for the purposes set forth.

8. The combination with the frame F, having rearwardly extended sides b^2, b^2, provided with clips C^4, and hinged to the car at H, the latches L^2, L^2, connected to said frame, and the latter having the tripping bar A, provided with guide-rods R, R, and having the curtain roller R^2,—; of the canvas O, connected to said curtain roller by means of pins from which it is detached when unwound—said canvas being extended from the curtain roller beneath, around, and over said tripping-bar, to pass over the frame top and therefrom extended rearwardly; links L^3, L^3, which at their upper ends are pivoted to the car, and at their lower ends connected to said canvas; and springs S^4, S^4, each connecting at one of their ends with one of said links and at their other end with the car, constructed and arranged to be operated substantially in the manner as and for the purposes set forth.

Signed at the city of Troy, this 8th day of October, 1894, in the presence of the two witnesses whose names are hereto written.

CHAS. P. STIMPSON.

Witnesses:
W. E. HAGAN,
CHARLES S. BRINTNALL.