

(No Model.)

2 Sheets—Sheet 1.

J. TOBIN.
CAR FENDER.

No. 521,741.

Patented June 19, 1894.

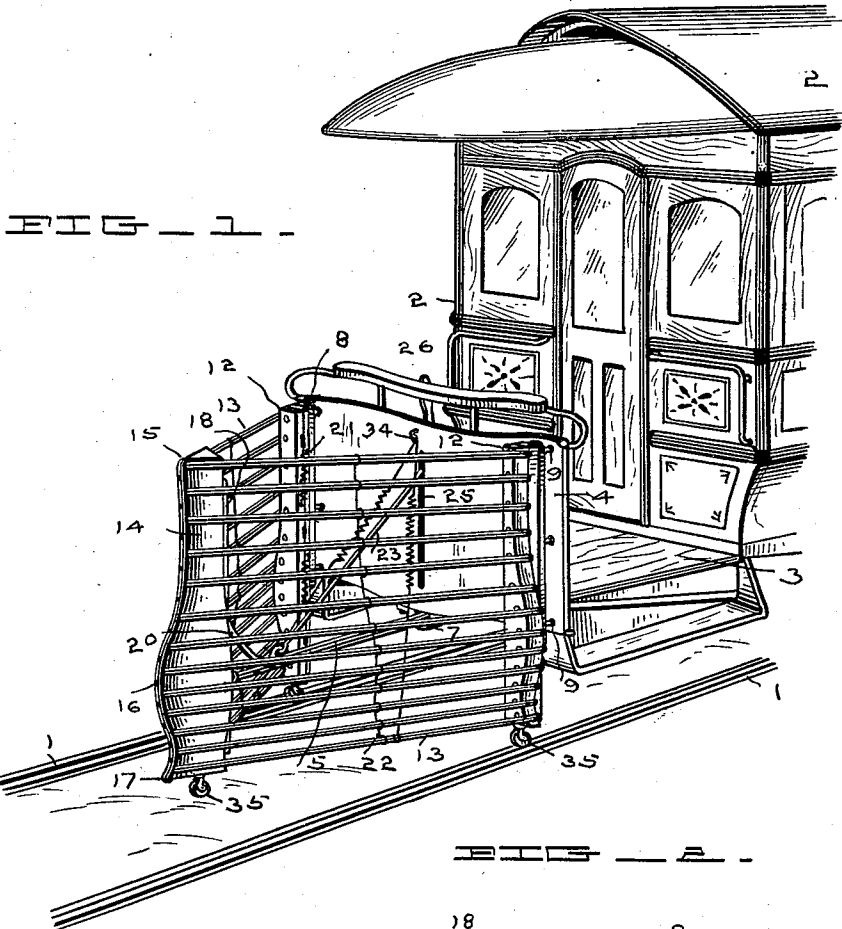


FIG. 3.

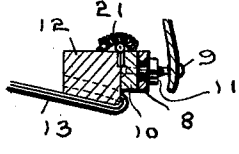
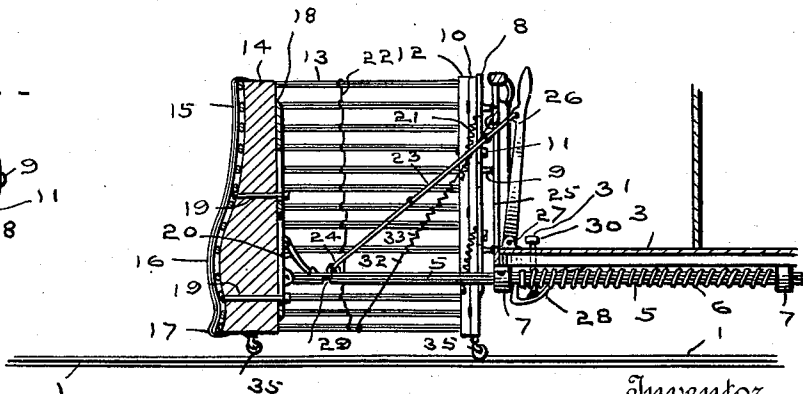


FIG. 2.



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(No Model.)

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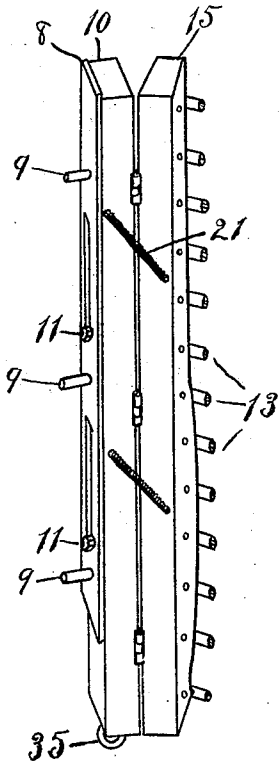


FIG. 4.

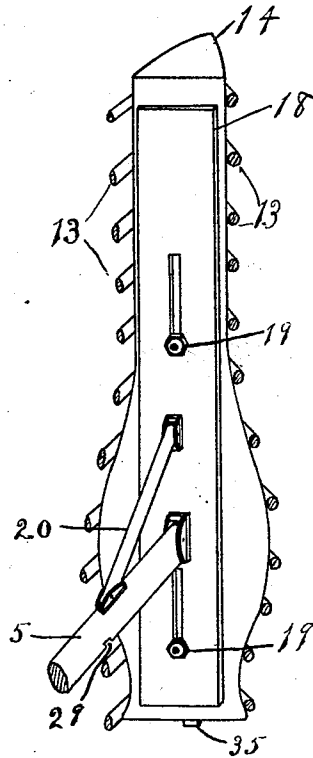


FIG. 5.

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UNITED STATES PATENT OFFICE.

JAMES TOBIN, OF INDIANAPOLIS, INDIANA.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 521,741, dated June 19, 1894.

Application filed December 28, 1893. Serial No. 495,158. (No model.)

To all whom it may concern:

Be it known that I, JAMES TOBIN, of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Car-Fenders; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like figures refer to like parts.

My invention relates to a car-fender intended to pitch a person from the track in such manner as to do him the least personal injury, or to enable him to catch the fender and hold to it until the car stops. Heretofore fenders have been made scoop like to catch a person, but they did the person as much injury as if they had been struck by the car. In fact where those devices have not been rigid but have been yielding, the person would still come in contact with the dash-board or front end of the car. The devices built on this principle, so far as I am aware, do not save the person from danger to life and limb, as the car would not strike them any harder than the fender would. Other forms have been in use shaped somewhat like the old fashioned cow-catcher for the purpose of throwing the person from the track, but they have been so made that they would strike a person near the feet, throwing him down on the fender in a helpless position and then throwing him off in front of or to one side of the car. These forms have been unyielding and as dangerous to encounter as the car itself and liable to throw the person forward on the track.

The form in which I have embodied my invention consists of a V-shaped fender nearly as high as a man, formed chiefly of rubber hose or other similarly yielding material and is so arranged that it can catch the person or will yieldingly push him to one side off the track, or if he chooses he can readily catch it and stand on the fender holding to it until the car stops.

The features of my invention will appear more fully from the drawings and the following description.

In Figure 1 there is shown the perspective of the front end of a street car with the fender in place, the rear of the street car being broken away. Fig. 2 is a central, vertical,

horizontal section of the parts shown in Fig. 1. Fig. 3 is a cross section of the means of attaching the fender to the car. Fig. 4 is a view in perspective from the driver's position of the means whereby the fender is adjustably connected to the front of the car, and Fig. 5 is a view in perspective of the rear of the front upright of the fender showing its means of mounting.

In detail 1 is a street car track and 2 a street car, having the front platform 3 and the dash-board 4. Beneath the platform I place a plunger 5 actuated by a spiral spring 6, as shown in Fig. 2. It is mounted loosely in suitable brackets 7 and extends in front of the car about three feet.

On each side of the dash-board is a slotted guide 8 made preferably of metal and bolted to the dash-board by the bolts 9. Vertical bars 10 made preferably of wood are connected by bolts 11 which operate loosely in the slotted guide 8. To the wooden bar 10 is hinged the upright 12 of the fender to which are secured a series of hose 13 or other yielding strips or bars, which pass around a wooden upright 14, at the front end of the fender. To secure the hose to the uprights 12, I bore a series of holes in such wooden bars and after inserting the ends of the hose in the holes I secure the hose by putting in a wooden plug. Any other means of course can be used to secure the hose to the uprights 12. I secure the hose to the front block 14, which is triangular in cross section, by cutting notches in the front edge and letting the hose into such notches. Then I place a piece of hose 15 vertically on the front edge of such block 14 from top to bottom. This strip of hose thus holds the series of horizontal hose to the block 14, and also serves as a guard or cushion on the front end of the fender. Of course any other kind of cushion could be used in place of the hose 15, provided it protects the individual from being injured by coming in contact with the front edge of the block 14. A cushion there tends to push him to one side or the other. The triangular block 14 is made preferably in the shape shown in the drawings with a bow or swell 16 about knee high from the ground, so that when the fender strikes a person it will not upset him but be inclined to lift him. The wooden uprights

12 are formed likewise with a bow extending outward about knee high from the ground, so that the swell shown in the uprights 12 and the block 14 will exist in the series of hose
 5 on both sides of the fender. By this construction wherever a person may come in contact with the fender, it will tend to lift him off the ground, leaving him in a vertical position instead of upsetting him, as the other forms of
 10 fenders do. At the lower end of the block 14 is a prow or point 17 which extends forward, but not quite so far forward as the bow 16. This point 17 is for the purpose of pitching small objects from the track. The block 14 is supported and carried by a vertical iron bar 18
 15 by means of bolts 19 extending through the block 14 and working in vertical slots in the bar 18. The bar 18 is rigidly secured to the front end of the plunger 5 and made secure
 20 by the brace 20.

21 are springs extending from the bar 10 to the upright 12 and by compression keeping them closed against each other. The object of this arrangement is to render the sides of
 25 the fender yielding when struck, as the upright 12 will in such case be somewhat swung back on its hinges against the springs 21. The hose or flexible bars 13 are secured in place between the uprights by a rod or strong
 30 wire 22 which extends from top to bottom and to which each line of hose or bar is secured. This enables the fender to support a man who may jump on it and also hold the flexible bars at proper distance apart.

35 23 is a jointed rod pivoted at 24 to the plunger 5 near its front end and extends diagonally therefrom upward through a vertical slot 25 in the dash-board of the car. At its
 40 upper end the rod 23 is pivoted to the upper end of a hand lever 26 which is mounted at its lower end to a bracket 27 in the platform of the car. The object of this construction is to enable the driver to draw the fender
 45 back against the dash-board of the car which he does by throwing the hand lever 26 back. When the fender is drawn to the dash-board as described, the plunger on which the fender is mounted is locked by means of a spring
 50 pawl 28 adapted to engage a notch 29 in the under side of the plunger near its front end. When the plunger is thus locked, the fender will be held against the dash-board. To unlock it in order to throw the fender out in its
 55 normal position, a spring supported bolt 30 mounted in the platform of the car extends downwardly through the platform, so that when the head 31 is pushed down by the foot of the driver the lower end of the bolt will engage the spring pawl 28 and cause such
 60 spring pawl to disengage the plunger, whereupon the plunger is thrown forward by the spring 6.

In order to prevent the folds of hose or other material of which the fender is constructed from bending down and coming in
 65 contact with the ground when the fender is closed up against the dash-board, I provide

rods 32 which are secured at their lower ends to the lower hose or bar. These rods 32 are supported by the springs 33 that are con-
 70 nected to the dash-board at 34.

My fender is held preferably four inches from the ground, but to prevent it coming in contact with the street surface at any
 75 time, I provide a caster 35 under each corner of the fender. These casters should preferably extend within about two inches of the ground.

When an individual comes in violent contact with the front angle of the fender the
 80 cushion there and the peculiar form of the front edge of the fender will not throw him down, but push him to one side while he still maintains a vertical position. The fender being nearly as high as a man it not only
 85 strikes him below the knees, as the forms heretofore used have done, but strikes his body and his shoulders, thus pushing the man to one side off the track in as nearly a vertical position as is possible. The blow of the fender
 90 will not hurt him as it will yield a great deal. Not only will the individual hose yield with which he comes in contact, but the whole fender will yield somewhat to a blow against it by reason of the plunger 5 being spring
 95 actuated. Therefore so far as the construction of the fender is concerned there is nothing in it which can harm a person who is violently struck by it, and this can be said of no other fender of which I am aware. The only
 100 injury then that can result to the man struck is due to his coming in violent contact with the street surface, and the action of this fender when it forces a man from the track is such, because of its peculiar construction,
 105 as to make his contact with the street surface as free from danger of injury as is possible with any construction. As has been said, if the person run down by the car is in proper position he can by grasping the fender
 110 which is high enough for him to grasp, save himself from any injury whatsoever. By the spring hinge arrangement shown in detail in Fig. 3 the sides of the fender near the car will yield back when they come in contact
 115 with individuals.

This form of fender is also useful in avoiding injury to vehicles that may be run down. If the center of the fender strikes the vehicle the whole fender will yield say about two
 120 feet and greatly deaden the blow, which will tend greatly to save the vehicle from injury as well as the car from a violent shock. If a vehicle be crossing at an angle, or if it is almost off the track this fender will gently push
 125 it entirely off without injuring either the vehicle or the car.

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

1. In combination with a car, a spring actuated bar connected to the car with an end extending in front of the same, and a triangular flexible fender supported at one of its corners on the projecting end of the bar and at
 130

the other corners attached to the car, substantially as shown and described.

2. In combination with a car, a substantially vertical fender triangular in form and with its sides flexible, and a horizontally acting spring device adapted to keep the forward corner of the fender to the front, substantially as shown and described.

3. In combination with a car, a plunger connected to the car with an end extending in front of the same, a fender mounted on the projecting end of the plunger, and a link and a lever mounted on the car and adapted when operated to withdraw the plunger, substantially as shown and described.

4. In combination with a car, a plunger connected to the car with an end extending in front of the same, a fender mounted on the projecting end of the plunger, a link and lever mounted on the car and adapted when operated to withdraw the plunger, a pawl adapted to lock the plunger when it is in, and means of releasing such pawl, substantially as shown and described.

5. In combination with a car, a horizontal plunger connected to the car with an end extending in front of the same, a vertical bar secured on the outer end of such plunger, a vertical bar secured to each end of the dash board, and flexible strips extending from the forward vertical bar to those secured to the dash board.

6. In combination with a car, a horizontal plunger connected to the car with an end extending in front of the same, a vertical bar secured on the outer end of such plunger, a vertical bar secured to each end of the dash board, flexible strips extending from the forward vertical bar to those secured to the dash board, and a stay located between the vertical bars and secured to each flexible strip to keep them at the proper distance apart.

7. In combination with a car, a horizontal plunger connected to the car with an end extending in front of the same, a vertical bar secured on the forward end of such plunger a vertical bar secured to each end of the dash board, flexible strips extending from the for-

ward vertical bar to those secured to the dash board, a stay located between the vertical bars and secured to each flexible strip to keep them at the proper distance apart, and spring supported rods extending from the lower flexible strip up to the car and adapted to centrally support such flexible strips.

8. In combination with a car, a substantially vertical triangular fender, and means of so securing the fender to the car that the fender will be as a whole vertically movable automatically, substantially as shown and described.

9. In combination with a car, a fender, bars secured to the car and provided with vertical slots, and bolts extending from the fender and operating loosely in such slots, substantially as shown and described.

10. In combination with a car, a fender, a plunger connected to the car with an end extending in front of the same, a bar mounted on the forward end of such plunger provided with vertical slots, and means of so connecting such fender to such bar that the fender will be vertically movable, substantially as shown and described.

11. In combination with a car, a substantially vertical triangular fender whose sides are flexible, and spring actuated hinges connecting the fender to the car in such manner that the sides of the fender will automatically yield inwardly when they contact with an object, substantially as shown and described.

12. In combination with a car, a fender consisting of three uprights, one in front and two attached to the car, such uprights being enlarged outwardly at a point about knee high from the ground, and flexible bars connecting such uprights and extending about the outer surface of the same, substantially as shown and described.

In witness whereof I have hereunto set my hand this 4th day of December, 1893.

JAMES TOBIN.

Witnesses:

V. H. LOCKWOOD,
N. D. TILFORD.