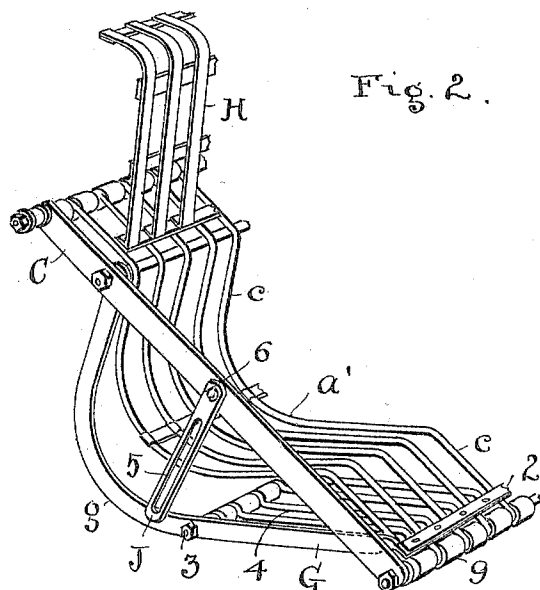
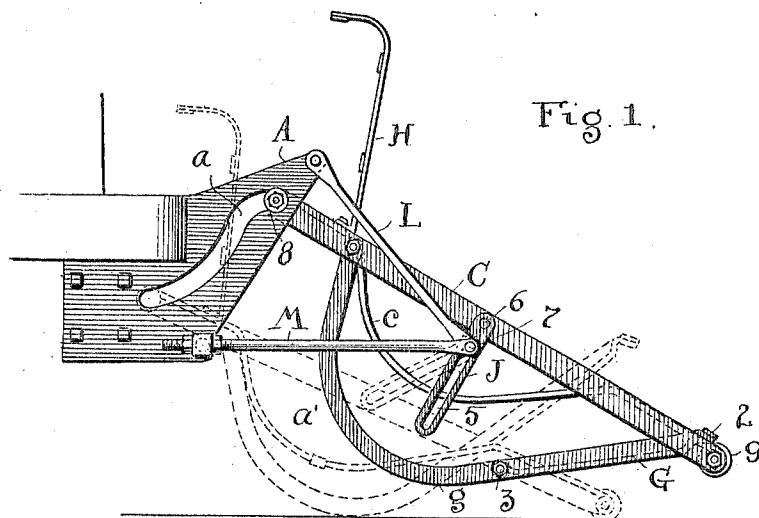


No. 817,299.

PATENTED APR. 10, 1906.

F. CUSHMAN.
SAFETY CAR FENDER.
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ATTEST
R. B. Moore
C. A. Sill

INVENTOR
Frederick Cushman

BY *H. J. Fisher* ATTORNEY

UNITED STATES PATENT OFFICE.

FREDERICK CUSHMAN, OF CLEVELAND, OHIO.

SAFETY CAR-FENDER.

No. 817,299.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed January 31, 1906. Serial No. 298,744.

To all whom it may concern:

Be it known that I, FREDERICK CUSHMAN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Safety Car-Fenders; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to 10 which it appertains to make and use the same.

My invention relates to safety car-fenders; and the invention is an improvement on the fender shown and described in my application for Letters Patent of the United States, 15 Serial No. 271,923.

In the accompanying drawings, Figure 1 is a side elevation of the invention in working position on a car, the full lines showing the parts in normal relations and the dotted lines 20 in abnormal or carrying relations, as when a body has been picked up thereby. Fig. 2 is a perspective view showing portions of the carrier and guard in relation as in full lines, Fig. 1, and showing a section of a spring-buffer 25 thereon.

As thus shown, the invention comprises a bracket or support A, fixed at each side on the end of the car body or frame and provided each with a rearwardly and downwardly extending slot *a*, a carrier-frame or carrier C, engaged in or through said slots at its rear and adapted to rest at the top of said slots when the carrier is in normal or traveling position on the car and to slide backward 30 and downward in said slots when the carrier strikes an object and comes into safety position. The frame of said carrier is provided with a basket between its sides and ends, constructed in this instance of a series of wires *c*, 35 straight at their ends and bent or curved downward between their ends at approximately the middle of the frame to form a so-called "basket" or "crib," which is adapted to carry a person who may be tripped up by 40 the fender and thrown thereon. Such suitable transverse stays as may be needed can be provided for said wires.

Supplemental to the carrier and as a necessary adjunct thereto is the body-guard G. 50 Said guard or guard member is constituted with two side bars or runners *g*, curved at their rear carrying portion to nearly a semi-circle and having their front ends connected by a cross-piece 2. A rod 3 connects said 55 sides farther back, approximately where the front runner portions of the side bars end,

and wires or flexible strips 4 connect the cross parts 2 and 3 through or between the wires *c* of the carrier. Cross-piece 2 is above the carrier, while cross-rod 3 is beneath the 60 same, and the said guard performs no function in connection with the carrier until a body has been thrown upon the carrier, and all the parts are thereby caused to automatically assume a safety position. Then it occurs that the rear of the carrier is caused to 65 run down in slots *a* and the front thereof drops down and runs on the surface of the track, while guard G is dropped onto its runner portions *g* and thrown up at the front 70 into a guarding position at the front of basket or crib *a'* and in such relation thereto and at such elevation at the front as to effectually prevent a body from being thrown forward of the fender by rebound therefrom. In 75 other words, the parts hold the relations seen in full lines, Fig. 1, until they are thrown into safety relations, dotted lines, when the body which is struck and caught up will be thrown over onto the carrier the instant it is struck 80 and before the guard member G can change its position. This brings him within the guard member, which also rises and interposes itself at his front before rebound from the carrier or spring-buffer H can occur. 85 Said buffer is preferably supported on the carrier rather than on the car-body and may be secured thereon in any suitable way.

Now, as a point of material difference over the invention as shown in my pending application above referred to, I employ the novel 90 mechanism shown for supporting the fender in working position at a suitable elevation at its front above the surface of the track. In said former mechanism I found the fender 95 too nearly poised between front and rear and too sensitive to a thrust action. This I have overcome by employing a slotted link J on each side of the carrier and pivoted thereto at one end near the middle of the carrier, 100 while the slotted end thereof is free to turn up or down, as the position of the fender may require.

The immediate supports for the fender with the link consist of rods or bars L and 105 brace bars or rods M, having a joint sliding fulcrum-point 7 at one end in slot 5 of link J, and the said lower braces or rods are adjustably fixed in the lower portion of brackets A, while supporting-rods L are pivotally connected to the upper ends of said brackets. 110 These two parts L and M are arranged in

substantially V-shaped relation, and said parts do not change their position when the fender changes, but are fixed. On the other hand, all accommodation therefrom is provided in or by links J, which occupy the position shown in full lines, Fig. 1, when the fender is in ordinary traveling position, and in position, dotted lines, with the fulcrum-point 7 at the other end of the slot 5 when the fender is down in carrying position. Thus it follows also that the first action or movement of the fender must be rearward to throw link-pivot 6 back over fulcrum-point 7 and at the same time bring the rear of the fender out of its seat 8 in the top of slot *a* and make it free to drop and retire in said slot before the fender can drop. This having occurred presumably when a person has been struck, it is obvious that the person would be thrown back upon the fender before the guard could rise to intercept him, and once behind the guard he cannot roll out at the front of the fender, because the guard confines him, and he will be held securely therein. Adjustment of braces M provides for changing fulcrum-point 7 back and forth in respect to pivot 6, or as an equivalent of this pivot 6 could be changed in frame C of the carrier, and, if found desirable, the carrier and guard G can be automatically locked together when reversal occurs, as in dotted lines, Fig. 1.

The immediate front portion 9 of the carrier may have a cushioned or other kind of yielding roller or rollers or their equivalent, so as not to injure a person struck and make a carrying medium temporarily when the carrier is down.

It is to be noticed that slot 5 in the links J terminates a certain distance from the pivot-point 6, which leaves an end above the fixed fulcrum on which the carrier is adapted to rock. Normally the pivot 6 is just in front of the dead-center of the fulcrum and may be more or less so as to remove it more or less from the dropping position, which is behind said fulcrum.

What I claim is—

1. A safety-fender for motor-cars comprising a carrier and a guard therefor adapted to rise across its front, and fixed fulcrums for the carrier at about its middle and sides on which the carrier is adapted to be shifted back and forth.

2. A safety-fender for motor-cars comprising a suitable carrier and a movable guard across the front thereof, in combination with supports on which the rear of the carrier is adapted to move up and down and fixed fulcrums on which the carrier is adapted to rock to higher or lower positions.

3. A safety-fender for motor-cars comprising a carrier having a basket portion at its middle and a shifting-guard at the front supported on said carrier, in combination with

fixed rear supports in which the carrier is adapted to slide up and down, links engaged with the sides of the carrier substantially midway their length and fixed fulcrums for said links.

4. A safety-fender for motor-cars comprising a carrier having a basket portion and a pivoted guard adapted to rise in front of said basket portion when the fender drops, in combination with fixed supports constructed to permit the rear of carrier to rise and fall therein, and slotted links at the sides of the carrier and fixed fulcrums engaged in said links.

5. In safety car-fenders, a carrier, a guard member pivoted thereon at its rear and adapted to rise above the carrier and having rocker-shaped sides adapted to support said member when the fender is down, in combination with slotted links pivotally connected with the sides of the carrier near its middle and a fixed fulcrum in the slots of said links.

6. A safety-fender for motor-cars provided with a carrier having wires bent to form a basket and a guard member to rise to an inclined position at the front of said basket when the fender strikes an obstruction and drops, in combination with slotted links at the sides of said carrier and fixed fulcrums on which said links are pivotally and slidably engaged.

7. A fender for cars comprising a carrier adapted to drop at both ends when it strikes an obstruction and to retire in its supports, and a guard pivoted on said carrier and adapted to rise to inclined position above the front portion thereof, thus serving to intercept and confine a body that may be thrown upon the carrier, in combination with slotted links at the sides of the carrier and fixed fulcrums for the carrier engaged in said slots.

8. In car-fenders, a carrier and supports therefor upon which the carrier is adapted to drop to a lower plane and to retire within limits when it strikes an object, in combination with a guard member pivoted on said carrier and provided with runners to ride upon the ground when said carrier is lowered, slotted links engaged with the sides of the carrier and fixed supports for the middle of the carrier engaged in said slotted links.

9. In fenders for cars, a carrier-frame and a basket, in combination with a guard member having rocker-bars at its sides and wires across its front between said bars, said wires terminating at their rear substantially at the front of the said basket, brackets at the rear upon which said carrier is slidable up and down, fixed side supports and slotted links pivotally connecting the middle of the carrier with said supports.

10. In car-fenders, a carrier-frame and hangers having retreating guideways in which the carrier is engaged at its rear and means to sustain the elevation of the front of

the carrier from said hangers, said means comprising fixed braces and supporting-rods providing fixed fulcrums at their ends, and slotted links engaged on said fulcrums and pivotally connected with the carrier.

11. The carrier having a basket and a guard member pivoted at its rear behind said basket and free at its front to rise above the carrier, said guard member having rocker-bars at its sides beneath the plane of said basket in their bent portion, and fixed supports for said carrier at its rear and middle on which the carrier is adapted to be held in a raised position and guided to a lower position.

12. The carrier and slotted links pivoted at the sides and middle thereof, in combination with slotted guides for the rear of the carrier and fixed fulcrums at its sides engaged in the slots of said links, and the said links constructed to maintain a definite space between said fulcrums and the pivots of said links on the carrier, thus providing for a rocking movement of the carrier on its fulcrums.

In testimony whereof I sign this specification in the presence of two witnesses.

FREDERICK CUSHMAN.

Witnesses:

R. B. MOSER,

C. A. SELL.