

(No Model.)

G. W. DONNING.  
CAR FENDER.

No. 587,187.

Patented July 27, 1897.

Fig. 1.

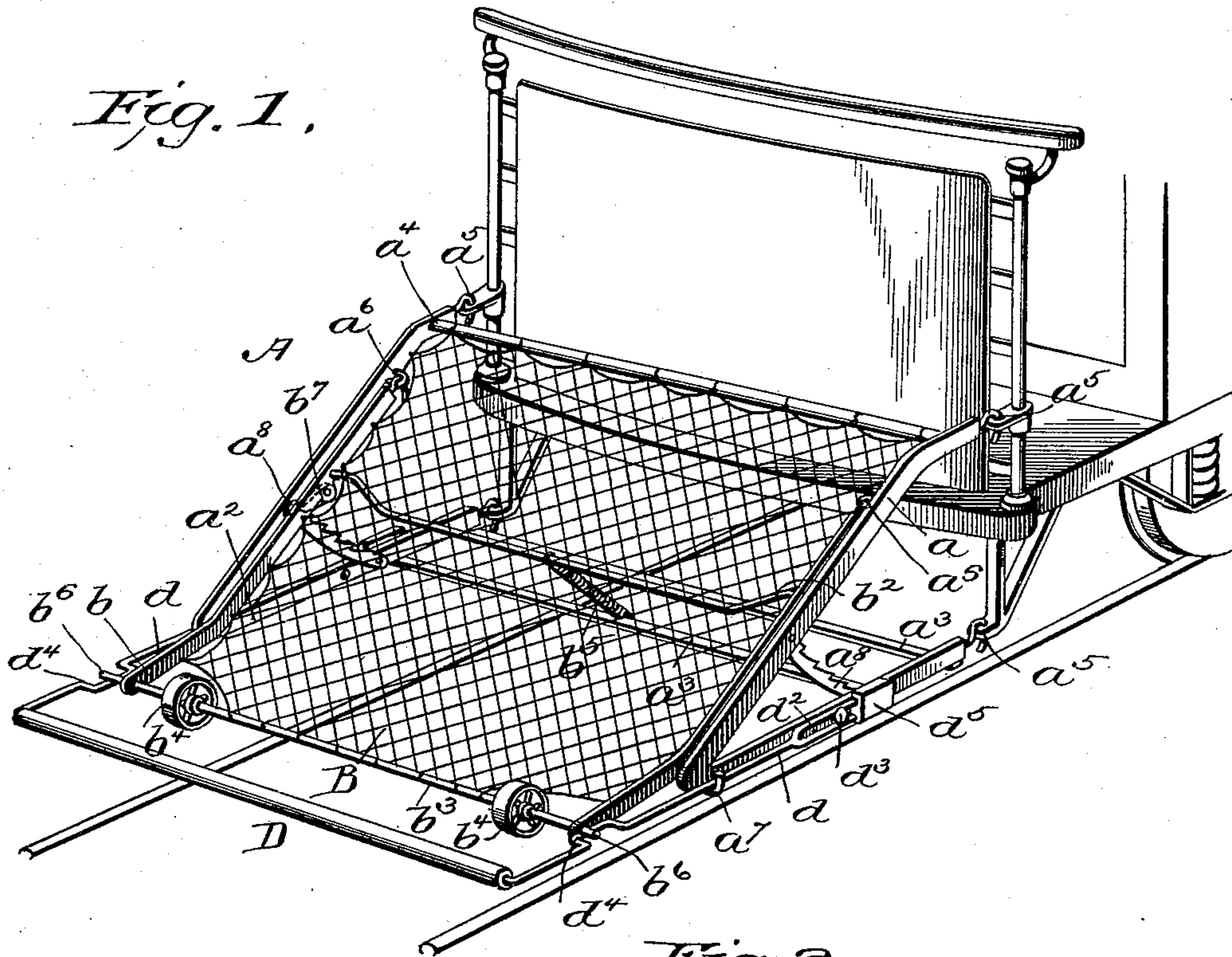
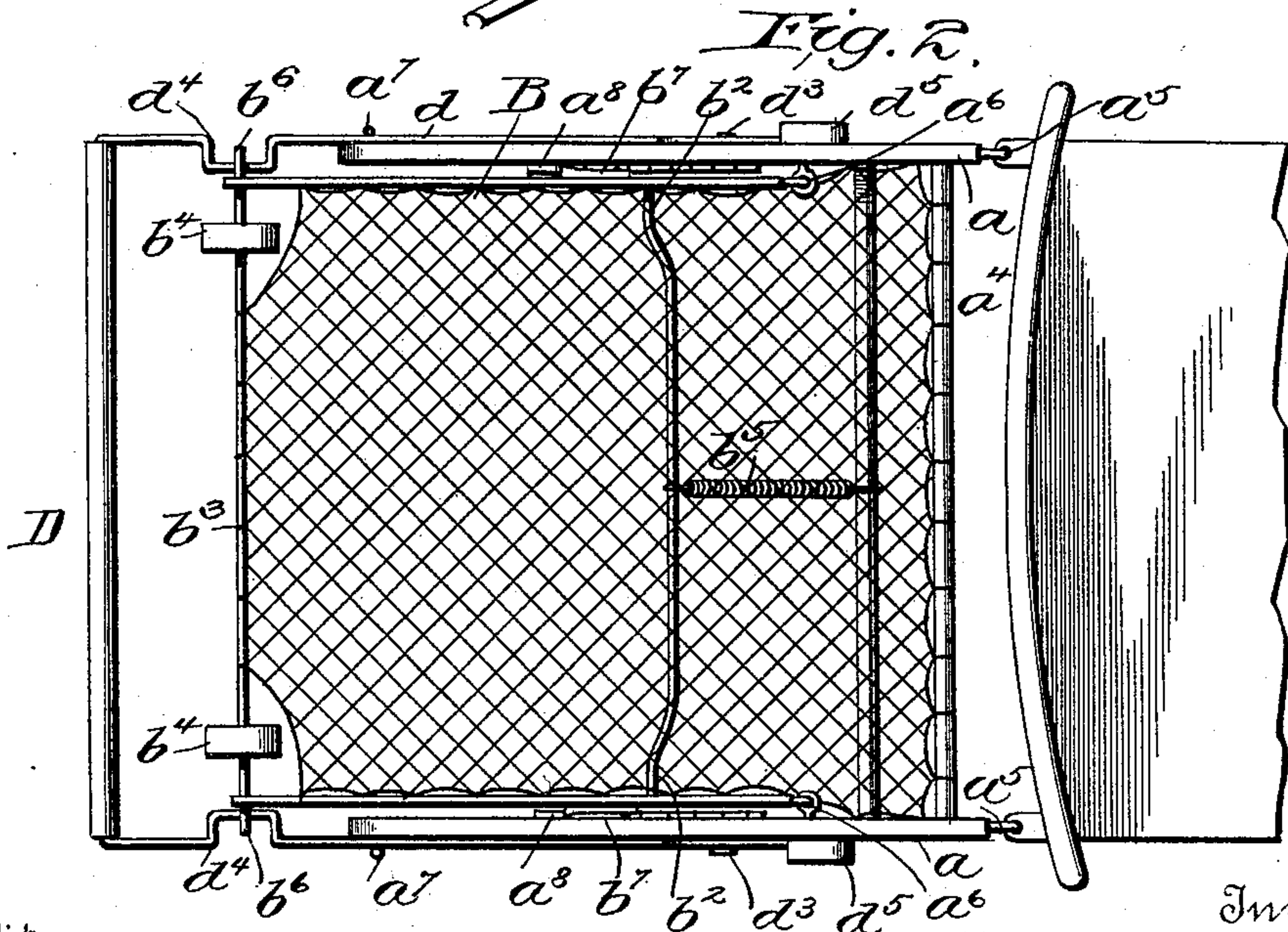


Fig. 2.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 587,187, dated July 27, 1897.

Application filed October 21, 1896. Serial No. 609,560. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. DONNING, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Car-Fenders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to street-car fenders.

The object is to produce a fender which will in operation effectually prevent injury to a person struck by it or falling upon it; furthermore, to produce a fender in which the scoop or pick-up portion will be automatically brought into position for use through the agency of the body or obstruction struck; furthermore, to produce a car-fender in which the scoop or pick-up portion will be prevented from lifting by the weight of a contained body, and, finally, to produce a car-fender which will combine great simplicity of construction with high efficiency and durability in use and cheapness of manufacture.

In a car-fender characterized by my invention I provide a guard-frame adapted to be detachably connected to the car, so as to permit of its being transferred to either end and to project beyond the dashboard thereof. This frame may be of any preferred construction and of any suitable material combining lightness and strength. Pivotally connected with the guard-frame, at a point approximately about midway of its length and between the sides thereof, is a scoop or fender-frame, the connection being such as to allow the fender-frame to operate or move freely between the said sides. This fender-frame comprises side pieces connected by suitable cross-pieces, the rear one of which is bent or dropped to allow the rope-net to have play when a body drops on it, the front one being provided with rollers or wheels adapted to contact with the rails when the fender-frame is dropped and thereby keep the same from contacting with the ground. This fender-frame is held normally out of operative position with relation to the ground by means of a suitable trigger-frame, the end whereof projects beyond the outer end of the fender-

frame and is provided with an abutting surface, such as a bar or a roller suitably covered to present a soft surface to the body struck. The trigger-frame has a sliding connection with the guard-frame, so that upon being struck it will move rearward and thereby release the fender-frame, the latter being spring-actuated in order to cause it quickly to descend when released.

In order to prevent the fender-frame from rebounding when the wheels or rollers strike the track and also from lifting when a body is resting upon it, I may in some instances provide each side of the guard-frame with a segmental rack-plate adapted to be engaged by pawls on the fender-frame. The teeth of these plates will project downward or in the direction of the ride of the pawls when the frame descends, so that the pawls will slide over them, but will prevent the return or lift of the frame until the pawls shall have been thrown out of engagement with the plates.

As a means for causing the fender-frame to drop rapidly when released by the trigger-frame I have shown in this instance a spring connected with a cross-piece on the guard-frame and with the rear cross-piece of the fender-frame, this spring or springs, as I may employ one or more, also subserving the further function of holding the outer end of the fender-frame in engagement with the trigger-frame until the former is released; but it is to be understood that in some instances I may weight the outer end of the fender-frame and cause this weight to subserve the same function as the spring or springs.

Further and more specific details of construction will hereinafter be more fully described.

In the accompanying drawings, forming a part of this specification, and in which like letters of reference indicate like parts, I have illustrated one form of embodiment of my invention, although it is to be understood that other forms of embodiment thereof may be employed without departing from the spirit of the same, and in these drawings—

Figure 1 is a view in perspective, showing the fender attached to the dashboard of a car and below the same and in position to be released for the purpose of picking up a body.



Fig. 2 is a view in plan, showing more clearly certain parts not distinctly shown in Fig. 1.

Referring to the drawings, A designates the guard-frame, consisting in this instance of two side pieces  $a$ , curved to the appropriate shape, two base-pieces  $a^2$ , and cross-pieces  $a^3$  and  $a^4$ , connecting the side and base pieces  $a$  and  $a^2$ , respectively. It is to be understood that I do not confine myself to this precise construction of frame, as any other arrangement may be employed if found necessary or desirable. This guard-frame is provided at its rear portion with suitable fastening devices, as hooks or projections  $a^5$ , to engage catches or eyes on the front of the dashboard or dashboard-standard, so as to permit of the frame being readily attached or detached when desired.

Working between the side pieces  $a$  is the pick-up or fender-frame proper, B, comprising in this instance side pieces  $b$  of any preferred shape, and cross-pieces  $b^2$   $b^3$ , connecting the side pieces, the former being curved to allow free play of the net when struck by a body and the latter cross-piece being provided with suitable wheels or rollers  $b^4$  to run upon the rails when the fender-frame is dropped and thereby hold the latter from contact with the ground. The fender-frame is pivotally connected with the guard-frame at a point intermediate of the ends of the latter, and the guard-net C is secured in common to the guard-frame and to the fender-frame in any suitable manner, as by means of eyes  $a^6$ . Secured to the cross-piece  $b^2$  is a coiled spring  $b^5$ , the other end of which is secured to the cross-piece  $a^3$  of the guard-frame, this spring exerting tension or pull in the direction requisite to cause the fender-frame to be projected downward, when the spring is free to act.

While I have shown but one spring, it is to be understood that two or more may be employed if found necessary.

The fender-frame is held normally out of engagement with the ground by means of a trigger-frame D, comprising side pieces  $d$ , which are slotted, as at  $d^2$ , in order to permit the trigger-frame to move longitudinally with relation to the guard-frame, a screw or bolt  $d^3$ , extending through the slot of each arm, serving to hold these arms in proper operative position with relation to the frame. In this instance an ordinary bolt is shown; but it is to be understood that, if desired, a roller may be mounted on the bolt to facilitate the working of the trigger-frame. The outer portion of this frame is bent or is provided with inward-extending projections  $d^4$ , which are designed to engage with projections  $b^6$ , extending outward from each side of the fender-frame, as clearly shown in Fig. 2. When the parts are in the position shown in Fig. 1, these two sets of projections are in engagement with each other and are held there by means of the spring or springs  $b^5$ ; but as soon as the front of the trigger-frame contacts with an object these two sets of projections are thrown out

of locked engagement with each other and the spring projects the fender-frame downward with great rapidity.

If desired, the rear ends of the arms of the trigger-frame may be weighted, as at  $d^5$ , or be spring-pressed or spring-pulled, so as to cause this frame to lift and assume a vertical position or drop back upon the guard-frame when the fender is in use, after having released itself from contact with the object picked up, the front portion of this trigger-frame being suitably held and guided by means of guides or ways  $a^7$  on the sides of the guard-frame.

In order to prevent the fender-frame from lifting when a body is resting upon the netting, rack-plates  $a^8$  are employed, which are secured to the inner face of the sides of the guard-frame and are engaged by pawls  $b^7$ , carried by the fender-frame.

It is to be understood that, if desired, but one rack-plate may be employed; also, that instead of employing a spring or springs to project the fender-frame downward I may employ a weight or weights secured to the outer end of the fender-frame, or, if preferred, I may construct the outer portion of the fender-frame heavier than the rear portion and thereby cause this additional weight to subserve the same function as the spring.

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

1. A car-fender comprising a guard-frame, a fender-frame pivotally connected therewith, a trigger-frame for holding the fender-frame normally raised, said trigger-frame being adapted to move horizontally, and to project beyond the fender-frame, whereby to contact with an obstruction, to release the fender-frame, means for projecting the fender-frame downward, when released by the trigger-frame, and means for lifting the trigger-frame upward and above the fender-frame, so as to clear the object picked up by the fender-frame, substantially as described.

2. A car-fender, comprising a guard-frame, pivotally secured to the front of the car, a fender-frame pivoted thereto intermediate of the ends of the guard-frame, a pick-up net secured to the guard-frame and to the fender-frame, said fender-frame being projected beyond the outer end of the guard-frame, a trigger-frame carried by the lower portion of the guard-frame, and adapted to move longitudinally thereon, said trigger-frame being projected beyond the guard-frame, and provided with projections for sustaining the fender-frame in its raised position, and to release the fender-frame when struck, a spring for projecting the fender-frame downward, when released, and a weight for tilting the trigger-frame upward, substantially as described.

3. A car-fender comprising a guard-frame, a fender-frame pivotally connected therewith, a trigger-frame for holding the fender-



frame normally raised, said trigger-frame being adapted to move horizontally and to project beyond the fender-frame, whereby to contact with an obstruction to release the fender-frame, means for projecting the fender-frame downward when released, means for lifting the trigger-frame upward and above the fender-frame, so as to clear the object picked up by the fender, and means for preventing the fender-frame from lifting when a body is resting upon the netting thereof,

comprising rack-plates secured to the guard-frame of the fender, and pawls carried by the fender-frame for engaging the rack-plates, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. DONNING.

Witnesses:

ARMAND T. GIRARD,  
EDWARD J. BRIDGES.