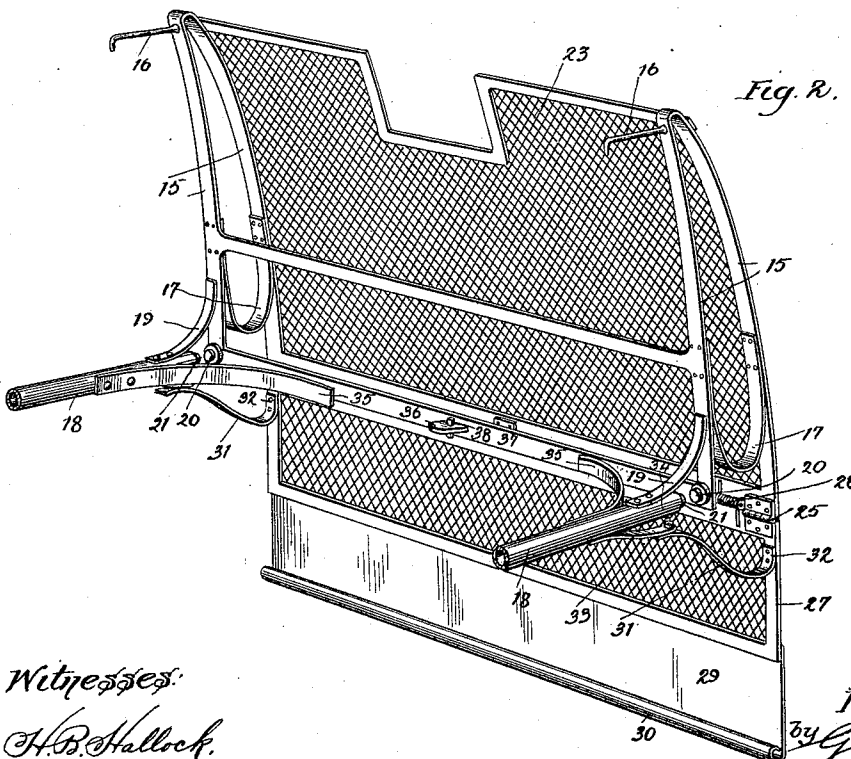
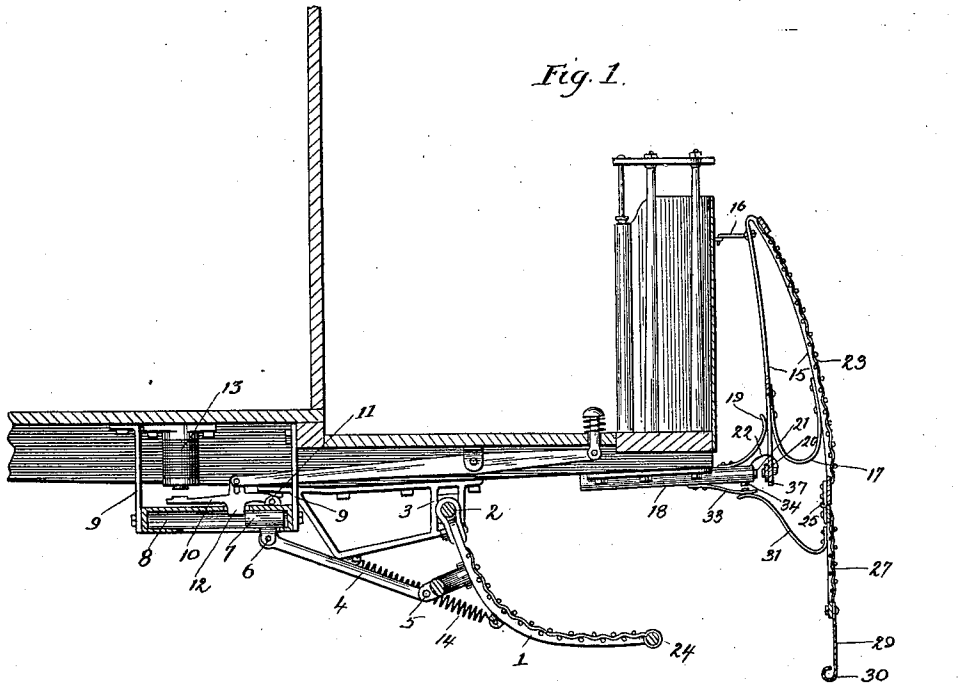


(No Model.)

P. JONES.
CAR FENDER.

No. 578,105.

Patented Mar. 2, 1897.



Witnesses:

H. B. Hallack.

A. Williamson

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UNITED STATES PATENT OFFICE.

PAUL JONES, OF CINCINNATI, OHIO.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 578,105, dated March 2, 1897.

Application filed July 17, 1896. Serial No. 599,482. (No model.)

To all whom it may concern:

Be it known that I, PAUL JONES, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

My invention relates to a new and useful improvement in car-fenders, and has for its object to improve upon the construction shown in Patent No. 557,206, granted to me upon the 31st day of March, 1896, so as to adapt my improvement therein shown for use in connection with cars where it is desirable to arrange the scoop-frame beneath the platform of the car, in order that it shall be out of the way in storing or coupling said car to another, as well as to prevent the objectionable feature of a protruding fender passing out of line with the track when the car is turning a curve.

With these ends in view my invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction and operation in detail, referring by numbers to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a longitudinal section of a portion of a car, showing my improvement applied thereto; and Fig. 2, a perspective of the improved portion of the fender.

In carrying out my present invention I arrange the scoop-frame 1, which may be of any ordinary construction, beneath the platform of the car and there secure it by pivoting, as at 2, to suitable depending brackets 3. This scoop-frame is supported out of contact with the road-bed and at a sufficient elevation thereabove to prevent injury thereto when the car is passing rapidly along the track by a link 4, being pivoted at 5 to said frame and at 6 to the piston 7, the latter adapted to slide within the tube 8, which is supported by suitable brackets 9 in the same manner as that described in the above-mentioned patent.

10 is the armature pivoted at 11, having the detent 12 depending therefrom, which when

in its normal position serves to lock the piston against rearward movement, and the outer end of this armature is in the magnetic field of the electromagnet 13, so that when said magnet is vitalized the armature will be turned upward, thereby releasing the piston 7 and permitting it to slide rearward by the downward movement of the scoop-frame, which may be assisted by the spring 14; but as these elements and movements are fully described in my aforesaid patent I will not enter into a further detailed description thereof.

My present improvement, which especially relates to a shield or buffer adapted by contact with a person to close a circuit for vitalizing the magnet whereby the scoop-frame will be put into operative position, is as follows:

The buffer-frame is composed of the side bars 15, each of which is so bent as to have the general shape of an A and are connected by suitable cross-strips, so as to become a rigid frame, and by means of the hooks this frame may be secured to the dashboard of a car, so as to be readily detached therefrom. Springs 17 are secured to one side of the side bars 15 and are so bent as to bear against the opposite sides, and since these side bars are composed of thin strip metal it will be seen that the outer ends thereof when sufficient force is applied thereto will spring inward toward the opposite ends, the object of which is to reduce the force of impact between a person struck and the frame, after the manner of a cushion. Tubes 18 are secured upon the under side of the platform, to the outer ends of which are secured the springs 19, curved upward and adapted to bear against the rear surface of the side bars 15, and these springs are of less tension than the springs 17, so that when the buffer-frame comes in contact with an obstruction it will first be forced rearward against the action of the springs 19, and this rearward movement will bring the points 20 and 21 into contact with each other, the former being connected by the wires 22 to the electromagnet 13 and the latter leading from the feed-wire by which the motor is supplied with electrical energy.

The front of the buffer-frame is covered with a wire or other suitable netting 23, and from the above description it will be seen

that should a person come in contact with this netting or the frame the circuit in which the electromagnet is included will be made, thus energizing said magnet and releasing the scoop-frame, which will immediately drop into such position as to bring the buffer-rod 24 into contact with the road-bed, so that should said person be knocked down and pass beneath the car he would be picked up by the scoop-frame and safely carried thereon until the car could be stopped.

Hinged at 25 to the side bars 15 is a shield 27, extending downward and provided with the coiled springs 28, so arranged as to hold said shield in its normally forward position against the action of the oscillations of the car and inertia, which would tend to affect the position of said shield by the forward movements of the car.

From the lower portion of the shield 27 depends an apron 29, of sheet metal, but of sufficient thickness to prevent being bent out of shape when coming in contact with an obstruction, and I prefer to have the lower edge of this apron turned inward, as indicated at 30.

Springs 31 are secured at 32 to the shield 27, and are bent inward and upward, and adapted to bear against the under sides of the springs 33, which are secured to the under side of the tubes 18, their free ends supporting insulated contact-points, which, when forced into engagement with the contact-points 34, will also close the circuit in which the electromagnet is located by the wire 22 being connected with the springs 33 and the feed-wire being connected with the points 34. Thus it will be seen that when the shield is struck by an obstacle sufficient to force it backward against the action of the springs 28 the springs 31 will act upon the springs 33, so as to close the circuit and vitalize the magnet, which in turn will so act upon the armature as to permit the scoop-frame to drop into operative position. The object of this arrangement is to prevent the liability of the car passing over a person who may be prostrate upon the road-bed, and this object is accomplished by the location of the shield and apron carried thereby in such close proximity to the road-bed that it can in no wise pass over a person without being forced backward sufficiently to close the circuit, and thus bring the scoop-frame into operative position, which will pick the person up when coming in contact therewith.

To prevent injury to the contact-points 20 and 21, I secure two curved bars 35 to the tubes 18 in such relative position to the side bars 15 as to receive the greater portion of the shock occasioned by the sudden rearward movement of the buffer-frame when coming in contact with a person, and to prevent the springing outward of the outer portion of the buffer-frame a tongue 36 is secured to said

outer portion and projects through a suitable slot in the cross-bar 37, where it is retained by a pin 38, thus permitting the free inward movement of the frame, but limiting its outward movement, as will be readily understood.

Slight modifications might be made in my improvement without departing from the spirit of my invention, and I therefore do not wish to be limited to the exact details of construction here shown.

Having thus fully described my invention, what I claim as new and useful is—

1. In combination with a car and an electrically-operated fender carried beneath said car, of a buffer-frame carried upon the end of said car, contact-points carried by said frame, contact-points carried upon the car, a shield hinged to said buffer-frame, and means for closing the circuit for vitalizing the magnet when said shield is swung rearward, substantially as and for the purpose set forth.

2. In combination with a fender of the character described, a buffer-frame secured to the end of the car, contact-points carried by said frame, contact-points carried by the car, springs for holding the frame in a forward position, wires for connecting the contact-points with the circuit, a shield hinged to the frame, an apron depending from the shield, springs carried by said shield, springs carried by the car, against which the first-named springs bear, whereby when either the buffer-frame or shield is forced rearward the circuit will be closed, substantially as and for the purpose set forth.

3. The herein-described combination of a scoop-frame pivoted to the under side of the car, mechanism for holding said fender in an elevated position, means—as an electromagnet and armature located within the field thereof—for tripping said frame, contact-points located upon the car, a buffer-frame secured to the end of the car, springs for holding said frame in a forward position, contact-points arranged upon said frame, wires for connecting the last-named contact-points with the feed-wire, wires for connecting the first-named contact-points with the magnet, a shield hinged to the buffer-frame, an apron depending from said shield, springs for holding said shield and apron forward, springs so arranged as to serve as circuit-makers, and springs 31 secured to the shield and adapted to so move the springs 33 as to make the circuit, substantially as and for the purposes set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

PAUL JONES.

Witnesses:

S. S. WILLIAMSON,
CHAS. BRICKLEY.