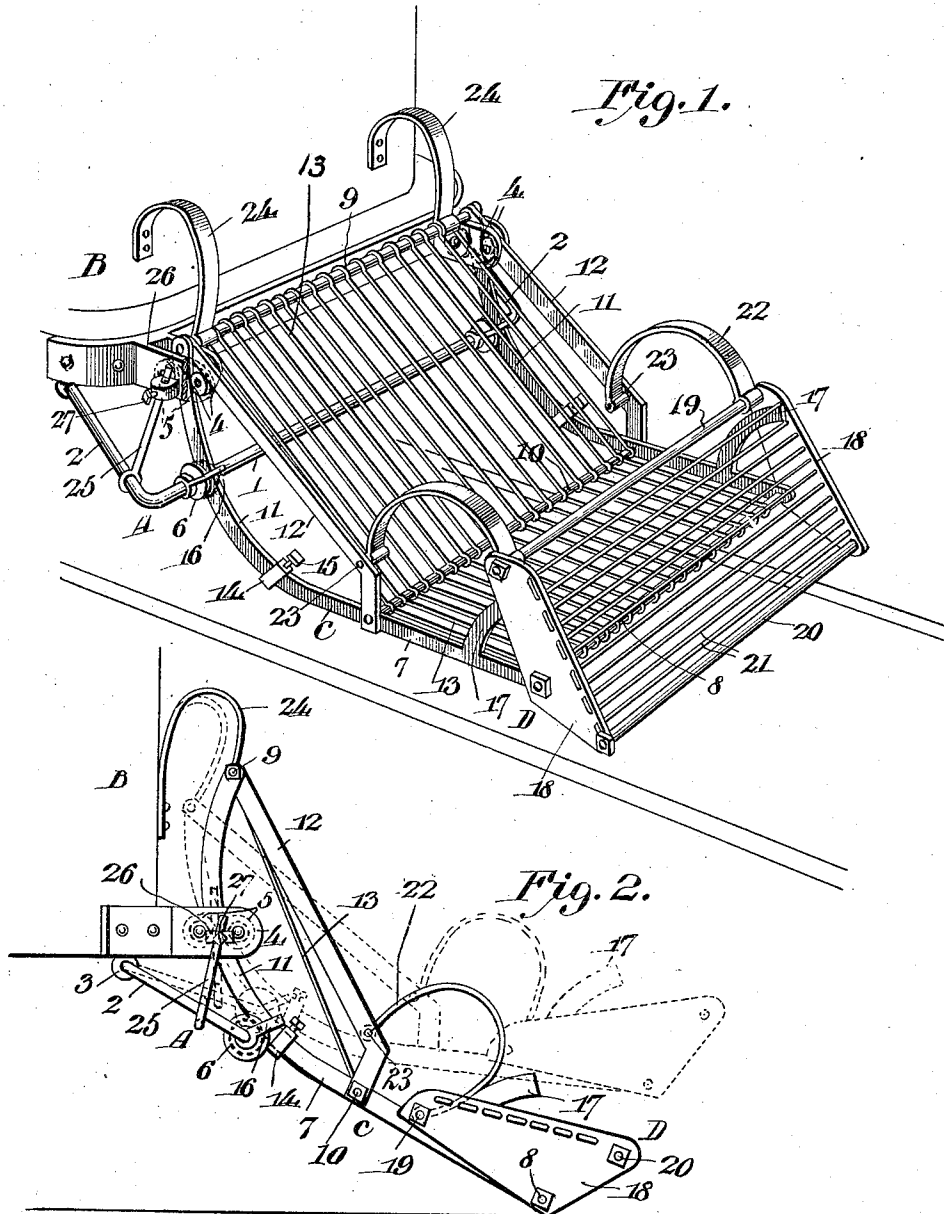


G. W. DEATRICH, SR.
CAR FENDER.
APPLICATION FILED MAY 3, 1911.

1,066,382.

Patented July 1, 1913.

2 SHEETS-SHEET 1.



Witnesses
Wm. Bagger

Inventor
George W. Deatrich, Sr.

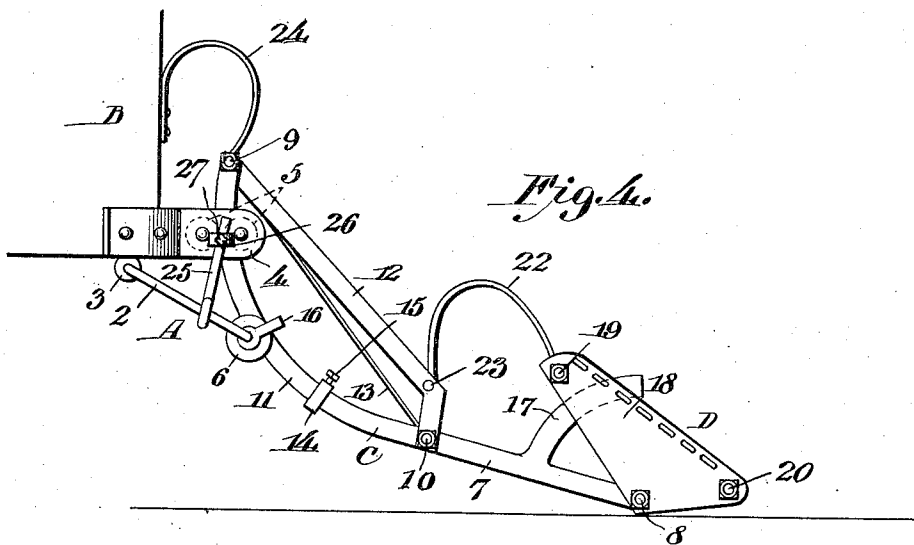
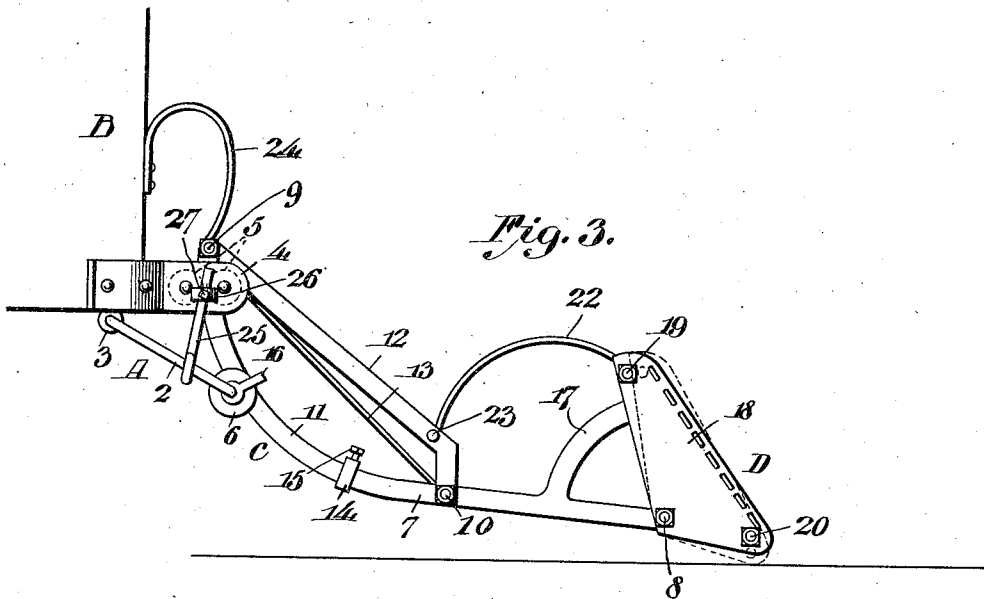
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UNITED STATES PATENT OFFICE.

GEORGE W. DEATRICH, SR., OF SCHUYLKILL HAVEN, PENNSYLVANIA.

CAR-FENDER.

1,066,382.

Specification of Letters Patent.

Patented July 1, 1913.

Application filed May 3, 1911. Serial No. 624,762.

To all whom it may concern:

Be it known that I, GEORGE W. DEATRICH, Sr., a citizen of the United States, residing at Schuylkill Haven, in the county of Schuylkill and State of Pennsylvania, have invented new and useful Improvements in Car-Fenders, of which the following is a specification.

This invention relates to car fenders, and it has particular reference to that class of fenders which, when striking an obstruction, will be moved from an initial to a receiving position, being at the same time operated to tilt or throw the obstructing object into a receptacle formed by the fender.

A particular object of the present invention is to produce an improved construction whereby the fender mechanism is actuated partly by contact with the obstructing object and partly by contact with the ground.

A further object is to provide a simple and improved construction whereby a portion of the fender, when the latter is moved to a receiving position, shall still be in position for practical operation in case of several obstructing objects being in the path of the car to which the fender is applied.

Still further objects of the invention are to simplify and improve the general construction and operation of a device of the character described.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawings,—Figure 1 is a perspective view showing the improved fender in its initial position for operation. Fig. 2 is a side elevation showing the fender in the position which it assumes after striking an obstruction and when the obstructing object is deposited upon the fender. Fig. 3 is a side elevation showing the fender in its initial position in full lines with dotted lines to show the position assumed when

first striking an obstructing object. Fig. 4 is a side elevation illustrating the position assumed by the fender after striking an obstructing object and while being moved partly by contact with such object, and partly by engagement with the ground, toward the receiving position shown in Fig. 2.

Corresponding parts in the several figures are denoted by like characters of reference.

A designates a supporting frame consisting of a cross bar 1 having arms 2, 2, the ends of which are pivotally connected with eyes 3 upon the underside of the frame of the car B to which the fender is applied. The car frame is also provided with forwardly extending brackets, each comprising a pair of lugs 4, 4, each of said brackets carrying a pair of guide members which are shown as consisting of grooved wheels 5 which are supported for rotation between the lugs 4. Guide rollers 6 are journaled upon the cross bar 1 of the supporting frame A approximately in alinement with the rollers or guide members 5.

The fender frame C is composed of side members 7 which are connected adjacent to their front and rear ends by cross bars 8, 9, and intermediate their front and rear ends by a cross bar 10. The portions of the side bars 7 lying in front of the cross bar 10 are substantially straight, while the portions lying in rear of said cross bar are arcuate, being curved upwardly, as shown at 11. Braces 12 connect the ends of the rear cross bar 9 with the ends of the intermediate cross bar 10, thereby reinforcing the curved or arcuate portions of the side bars. The cross bars 8, 10 and 9, 10 are connected by strips 13, which may be of any suitable material and connected with the cross bars in any suitable manner, to form surfaces upon which the obstructing object engaged by the fender may be supported.

The curved portions 11 of the side members 7 of the fender frame are guided between the wheels or rollers 5, 5 which are supported by the bracket members 4, 4 and over the wheels or rollers 6 provided upon the cross bar 1 of the frame A. Said wheels, rollers or guide members 5 and 6 serve to support the fender frame, which may ride upon said guiding and supporting means, the movement of the fender frame in a downward direction being limited by the brace members 12 contacting with some of

the guide members 5. To limit the movement of the fender frame in an upward direction the curved portions 11 of the side members 7 are provided with stop members 5 which are preferably adjustable, and which may consist of sleeves or collars 14, having set screws 15, whereby they may be secured in adjusted position to limit the upward movement of the fender frame by contact with the guide members 6. The latter are preferably protected by means of guards 16 which may be suitably associated with the cross bar 1, said guards serving also to keep the side members 7 from jumping out of engagement with said guide rollers 6.

The side members 7 of the fender frame are provided adjacent to their front ends with guard members 17 which may consist of arcuate arms extending upwardly and forwardly from the straight portions of said side members intermediate the cross bars 10 and 8. Pivotaly mounted upon the ends of the latter cross bar, adjacent to the outer faces of the side members 7 are the side members of an auxiliary frame D, said side members consisting of approximately triangular plates 18, said plates being connected together by the upper and lower cross bars 19 and 20. The front edges of the triangular plates 18 are connected together by cords or webbing 21, said cords or webbing constituting what may be regarded as a resilient contacting and supporting surface.

The auxiliary frame D is connected with the main frame C of the fender by means of leaf springs or flat springs 22 of suitable construction, each of said springs being terminally connected with the cross bar 19 and with one of the brackets 12, respectively, said brackets being provided with laterally projecting pins or studs 23 with which the springs are pivotally connected at one end, the opposite ends of said springs being in like manner pivoted on the cross bar 19. The springs are so arranged that when the frame D is in its initial position, the point of connection of the springs 22 with the cross bar 19 will lie above the plane in which the axis of the pivotal rod 8 and that of the connecting pins 23 is located, while, when the frame D occupies the tilted position shown in Fig. 2, the cross bar 19 with which the springs are connected will be disposed below such plane. It follows that the tension of the springs 22 will be exerted to maintain the auxiliary frame D in either its initial or its tilted position. In like manner, the upper end of the main fender frame C is connected with the car body B by means of springs 24 which are terminally connected with the cross bar 9 and with the car body, respectively, the arrangement being such that the spring 24 will resiliently support the rear end of the fender frame in any

of the various positions to which it may be adjusted, that is to say, either in a projected position when the upper ends of the brace members 12 contact with the outermost guide members 5, or in a retracted position, shown in Fig. 2, in which the stop members 14 contact with the guide members 6.

For the purpose of regulating and adjusting the initial position of the fender frame, the side arms 2 of the supporting frame A are provided with links 25 extending upwardly through guides 26 upon the car body which are provided with set screws 27 for the purpose of retaining the links in adjusted position, thereby retaining the frame A and associated parts in any position to which it may be adjusted, as indicated in dotted lines in Fig. 2. When the position of the frame A is changed, the positions of the stop members 14 upon the side members of the frame C must be correspondingly changed in order that the parts of the device may properly coöperate.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood. Initially the fender occupies the projected position illustrated in full lines Figs. 1 and 3, the auxiliary frame D being supported in a substantially upright position, and the frames C and D being maintained in their respective positions by the action of the springs 24 and 22, respectively. Should an object be struck by the cross bar 20 of the frame D, said frame will first be tilted to the position approximately indicated in dotted lines in Fig. 3, causing the forward corners of the triangular side members 18 to engage the surface of the ground. The rearward strain thus exerted upon the entire fender will cause the frame C to be retracted against the tension of the springs 24, while the frame D will at the same time be tilted against the tension of the springs 22 until the retracted position shown in Fig. 2 has been attained, when the frame D has been tilted back upon the frame C. In the act of thus tilting, the cross bar 20 of the frame D swings upward, while the cross bar 19 of said frame moves downward, and the obstructing object will thus be easily and naturally tilted back upon the fender. The front cross bar 8 of the fender frame now occupies a position directly above the surface of the ground, while the cross bar 20 of the auxiliary frame D occupies a relatively elevated position. Thus, if a further obstruction should be encountered it will be engaged by the cross bar 8 and thrown upon the main frame C of the fender to the rear of the webbing of the auxiliary frame D.

The improved fender, as will be seen, is simple in construction and is capable of being easily applied to trolley cars, motor cars

and the like, and will be found to be thoroughly efficient in operation for the purpose of averting accidents.

Having thus described the invention, what is claimed as new, is:—

1. In a car fender, a slidable fender frame, bracket members having pairs of guide wheels between which the side members of the frame are guided, a pivoted supporting frame having guide wheels upon which the side members of the frame are guided, and means for adjusting the supporting frame and for retaining said frame in adjusted position.

2. In a car fender, a slidably supported fender frame, an auxiliary fender frame pivotally connected therewith, and springs connecting the auxiliary frame with the main frame to maintain said auxiliary frame in position at the limits of its movement.

3. In a car fender, a slidably supported fender frame, springs associated therewith to support the rear end of said frame in projected and retracted positions, an auxiliary frame pivotally connected with the fender frame, and springs associated therewith to retain said auxiliary frame in position at the limits of its movement.

4. In a car fender, a slidable fender frame including side members having arcuate rear ends, and cross bars connecting said side members both adjacent to and intermediate their ends, supporting means for said frame including rotary guide members engaging the side members of the frame, brace mem-

bers connecting the rear cross bar with the intermediate cross bar of the fender frame, said brace members constituting stop members to limit the movement of the frame in one direction, and stop members adjustable on the side members of the fender frame to limit the movement of said frame in the opposite direction.

5. A slidably supported fender frame including side members front and rear cross bars, and a cross bar connecting said side members intermediate their front and rear ends, springs associated with said frame to give it resilient support in projected and retracted positions, guard members connected with the side members of the frame adjacent to the front cross bar, an auxiliary frame including approximately triangular plates, pivoted upon the cross bar of the main frame adjacent to the outer faces of the side members, cross bars connecting said plates adjacent to their upper and lower corners, and webbing strips threaded through the plates adjacent to their front edges, and springs connecting the auxiliary frame with the main frame to maintain said auxiliary frame in position at the limits of its pivotal movement.

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

GEORGE W. DEATRICH, Sr.

Witnesses:

WM. BAGGER,
H. LITTMAN.