

(No Model.)

J. W. McKINNON.
CAR FENDER.

No. 511,640.

Patented Dec. 26, 1893.

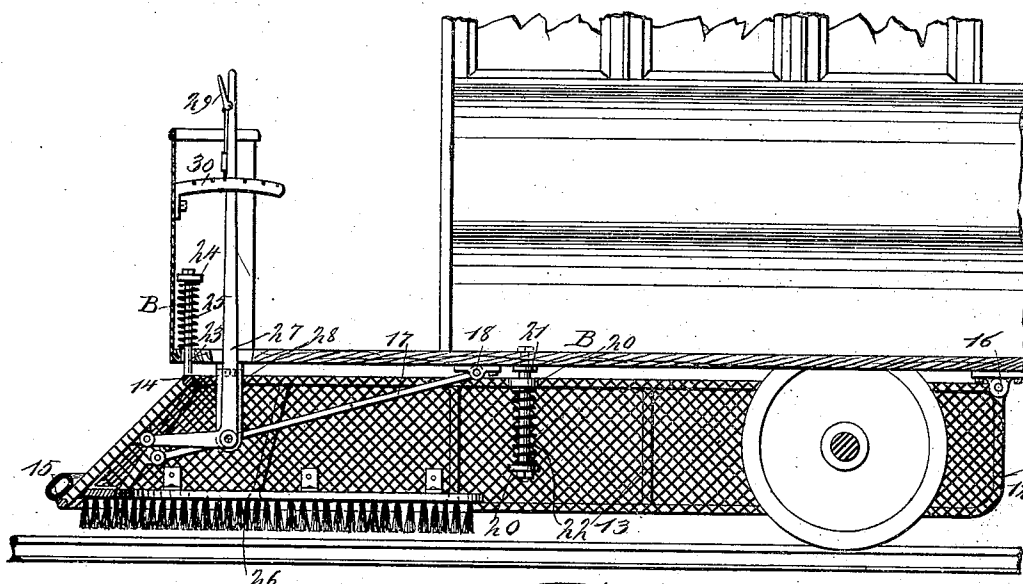


Fig. 1

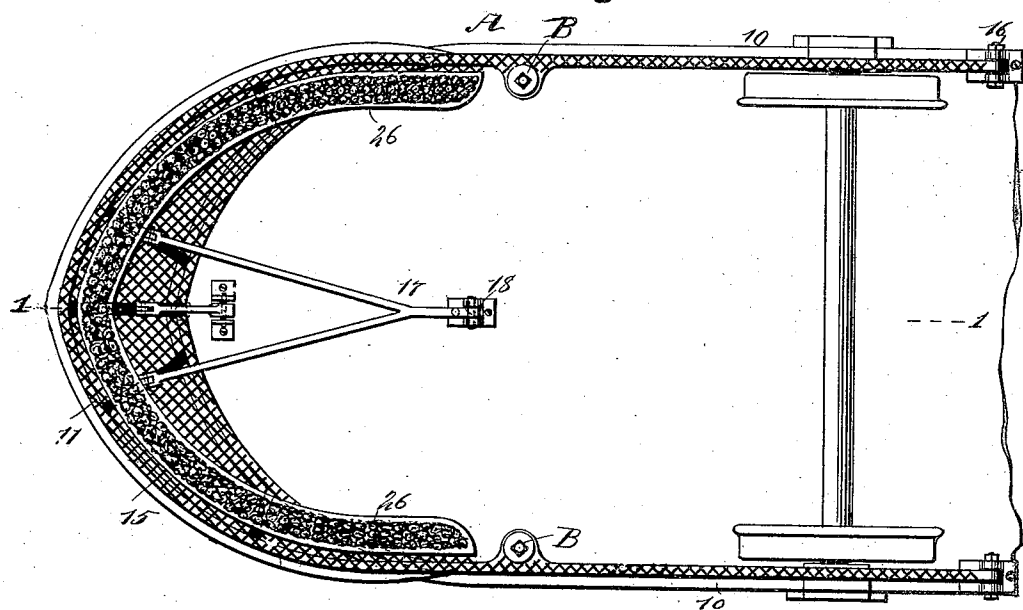


Fig. 2

WITNESSES:
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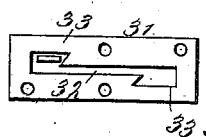


Fig. 3

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JAMES W. MCKINNON, OF NEW YORK, N. Y., ASSIGNOR OF TWO-THIRDS TO SARAH B. MCLEOD AND ANN M. DOWNS, OF SAME PLACE.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 511,640, dated December 26, 1893.

Application filed August 4, 1893. Serial No. 482,367. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. MCKINNON, of New York city, in the county and State of New York, have invented a new and Improved Car-Fender, of which the following is a full, clear, and exact description.

My invention relates to an improvement in car fenders, and it has for its object to provide a fender capable of being attached to any form of tram car, and of being expeditiously and conveniently raised clear from the track for a predetermined distance, or lowered to sweep any obstacle or object from the track.

A further object of the invention is to so construct the fender that it will act in the capacity of a pilot for an engine, removing objects from the track and preventing them from passing under the cars or remaining in the path of the wheels.

A further object of the invention is to construct the fender with a yielding bottom surface, and to provide a means for attaching the fender to a car mainly through the medium of cushions.

Another feature of the invention is to provide a fender which will be simple, durable and economic in its construction.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal section through the improved fender and through a portion of the car to which it is applied, the section being taken practically on the line 1-1 of Fig. 2. Fig. 2 is a bottom plan view of the fender and a portion of the car; and Fig. 3 is a detail view, illustrating the manner of locking a foot lever when it is employed in the manipulation of the fender.

In carrying out the invention the fender A is given practically the shape of the end portion of the car, and may be made to extend

as far as desired in the direction of the center of the car. The fender is ordinarily somewhat of horse-shoe or oblong shape, and its side sections 10 are usually made straight, while its front section 11 is made more or less inclined or tapering from the top downward and outward. The body of the fender may be made of any suitable or approved material; usually it is made of woven wire, as shown in the drawings, or of interlaced or plaited wire rods or bars; or any material may be employed in its construction which will be light and durable as well as strong.

A network body is attached to a frame 12, and the said frame comprises an upper rod and a lower rod, the two being connected at the rear and at the front and intermediate of these points through the medium of connecting bars 13, the upper rod or bar of the frame being designated as 14 and the lower one as 15. The inner ends of the side sections of the fender are hinged or pivotally connected with the car bottom, as shown at 16 in the drawings; and a brace rod or bar 17, is ordinarily employed to directly connect the forward portion of the body of the fender with the forward portion of the car. The connecting rod or bar 17 is pivoted or hinged to the under surface of the car at any desired point in front of the forward axle, as shown best at 18 in Figs. 1 and 2, and the outer end of this connecting rod or bar is bifurcated, and the members are pivotally attached to the inside of the body of the fender at each side of its central forward surface, as is best shown in Fig. 2.

Spring cushions 19, are employed as a further connection between the car and its fender. These cushions are of any suitable or approved construction, and may be located either above the car platform or bottom, or below it, as in practice may be found most desirable. When the cushions are located below the car bottom or platform, they are constructed as shown at the right in Fig. 1, in which it will be observed that lugs 20, are formed upon the body of the fender, one below the other, and a pin or post 21, is secured in the bottom of the car, and is passed loosely

down through the lugs 20 upon the body of the fender, and a spring 22, is then coiled around the pin or stud 21 between the said lugs 20. It will thus be seen that when the fender is lowered at its forward end the springs 22 will be compressed, and when the fender is released from downward tension the springs will act to assist in restoring the fender to its upper or normal position.

When the cushions are located above the car bottom or platform, they may be constructed as illustrated at the left in Fig. 1, in which the post or pin 23, is secured to the upper portion of the frame of the fender and is passed upward through a suitable opening in the platform of the car, for example, and through a lug 24, located upon the dash-board of the platform, or any convenient support, and a spring 25, is coiled around the pin or post 23, having bearing upon the platform and against the lug 24.

A brush or broom 26, is secured to the bottom surface of the fender at the front and at a portion of its side surfaces, the brush being adapted to strike the surface of the ground between the rails, and to run upon the rails when the fender is lowered, and thus remove even small obstacles that may lie in the path of the car.

In the construction of the fender a rubber cushion may be, and preferably is located at the outer edge of the fender at the bottom, especially at the front and sides adjacent to the front, in order that should the fender strike a human being the cushion will cause the shock to be lessened, and likewise prevent serious injury to the person.

The fender may be raised and lowered in many ways, but a lever 27, is ordinarily employed for the purpose. This lever may be a hand lever, as shown in Fig. 1, or a foot lever, as shown in Fig. 2. The lever shown is of the elbow or crank type, and is pivoted at the extremity of one member to the central inner portion of the fender at the front, and at the junction of its two members the lever is fulcrumed in a suitable support 28, projected downward from the bottom of the car, while the vertical member, when the lever is a hand lever, is carried upward within convenient reach of the driver for example, and is provided with a thumb latch 29, for engagement with a rack 30, or other form of keeper, located upon a fixed support. When the lever is a foot lever the rack may consist of a plate 31, having a slot 32, formed in it, in which the lever has movement, and pockets 33 at the ends of the slot, which will lock the lever either when it has forced the fender downward or has lifted it upward.

It will be understood that sufficient play is allowed for at the pivots through the medium of which the fender is connected with the car.

This device is exceedingly simple, it is du-

rable and economic, and it is capable of being expeditiously and conveniently applied to any form of tram car; as heretofore stated, it may be manipulated expeditiously and conveniently in a manner to drop it down close to the track, or the surface between the rails of a track when any obstacle is in front of the car which it is desirable to remove without stopping the car; furthermore, with a fender of the described type, persons miscalculating the speed of the car and attempting to cross the track under such miscalculation, will not be injured to any appreciable extent if struck by the fender. When the car is in its usual running order, the fender is held a predetermined distance above the surface between the rails of the track.

It will be understood that the lift lever 27 may be of any desired form, and that in practice it is proposed to carry the lever as close to the dash board as possible.

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

1. A fender adapted for pivotal or hinged engagement with the car at its rear ends, spring cushions carried by the fender and adapted to be interposed between it and the car, and an adjusting mechanism connected with the forward portion of the fender, whereby it may be raised and lowered, as and for the purpose specified.

2. A fender for cars, the same being adapted to extend from a point near the forward axle of a car along the sides and across the ends, the fender having a hinge at its rear end adapted for attachment to the car, an adjusting device connected with the forward end of the fender whereby it is raised and lowered, said adjusting device being adapted to be operated from the car, the lower forward portion of the fender being provided with a brush surface, as and for the purpose specified.

3. The combination, with a car, of a fender extending a predetermined distance along the sides and across the front, the rear ends of the fender being hinged to the bottom portion of the car, spring cushions connecting the fender with the car at its forward portion and between said forward portion and its rear ends, the fender being capable of upward and downward movement, upward movement with the tension of the spring and downward movement against the spring tension, a lever adapted to extend through the bottom of the car, said lever being pivotally connected with the fender at its front, and locking devices for the lever, as and for the purpose specified.

4. The combination, with a car, of a fender located beneath it and extending across an end of the car, a hinged connection between the inner portions of the fender and the bottom of the car spring cushions connecting

the sides and forward portion of the fender with the body of the car, normally holding the fender in an upper position and permitting of its downward movement, a lift lever
5 adapted to extend upward through the bottom of the car, fulcrumed to a fixed support and pivotally connected with the fender, lock-

ing devices for the lever, and a yielding bottom formed upon the fender, as and for the purpose set forth.

JAMES W. MCKINNON.

Witnesses:

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