

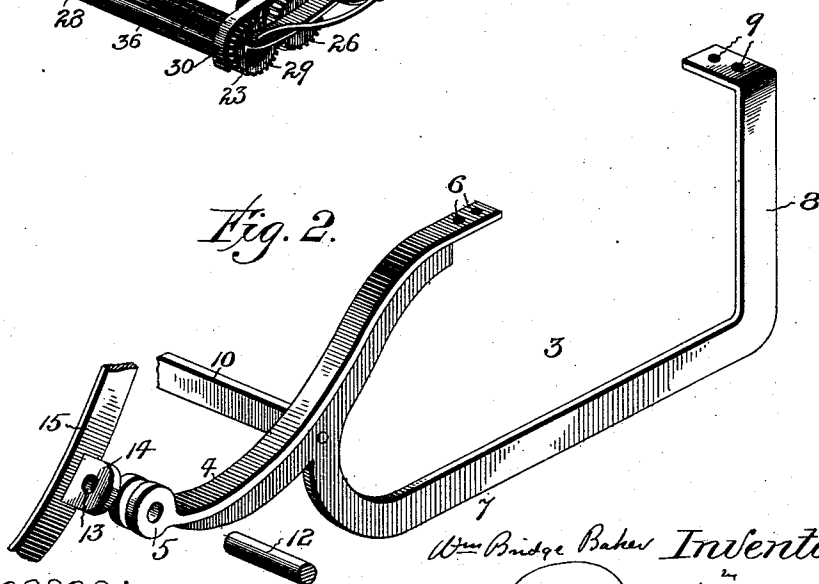
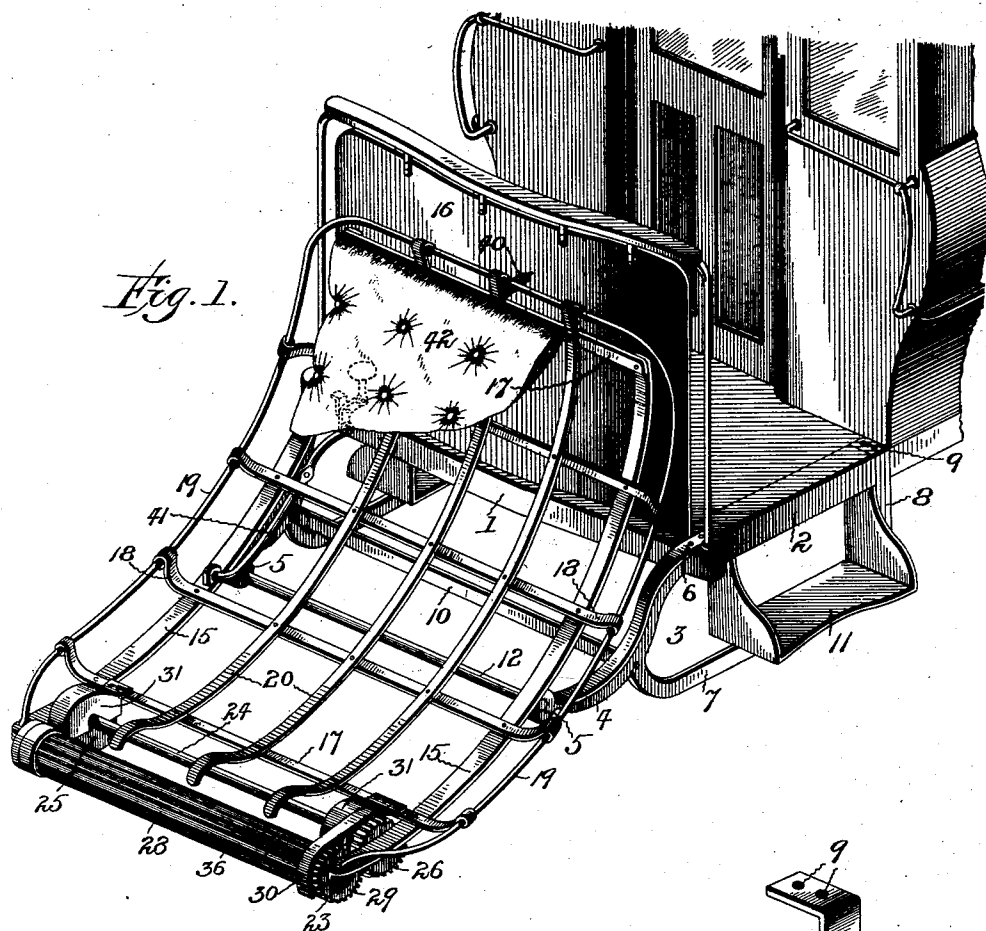
(No Model.)

2 Sheets—Sheet 1.

W. B. BAKER.
CAR FENDER.

No. 568,969.

Patented Oct. 6, 1896.



Witnesses:
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J. W. W. Lane.

Wm. Bridge Baker Inventor
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

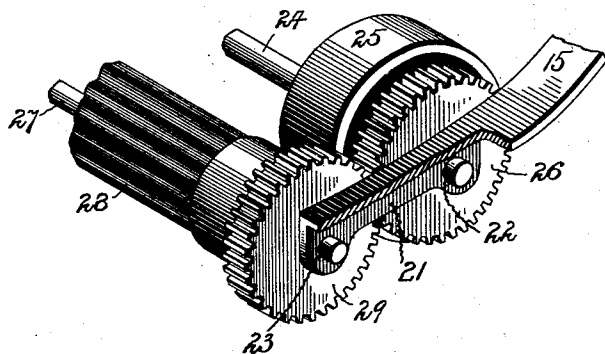
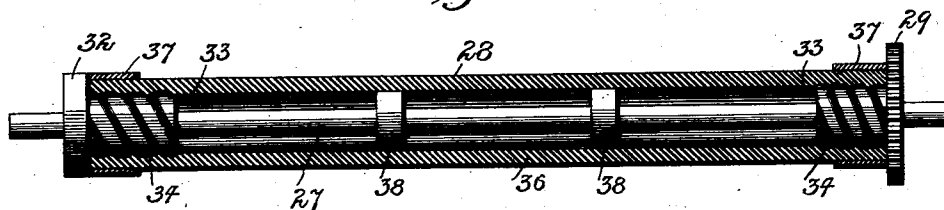


Fig. 4.

Fig. 5.

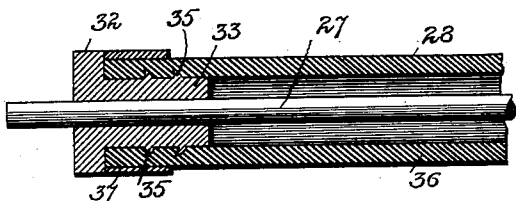
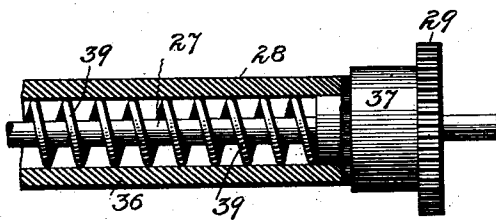


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM BRIDGE BAKER, OF SHAMOKIN, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO WILLIAM E. KLUMBACH, OF SAME PLACE.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 568,969, dated October 6, 1896.

Application filed February 21, 1896. Serial No. 580,188. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BRIDGE BAKER, a citizen of the United States, residing at Shamokin, in the county of Northumberland and State of Pennsylvania, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to car-fenders or life-guards, and more particularly for use upon street or tram cars, and may be termed a "rotating" fender.

The device may be briefly described as of the usual cushioned or basket form, projecting forward of which is a rotating guard or pilot, this last operating to lap or lift up any object struck in the transit of the car, and to place the same upon the basket or cushioned portion of the fender.

I will first describe my invention in its details, showing the working of it when in use, and for this purpose will make use of the accompanying drawings, in which—

Figure 1 is a perspective view of my fender with the parts for attaching the same to the structure of the car, with a portion of the said car structure. Fig. 2 is a detail view of the portions for attaching the invention to the car. Fig. 3 is a longitudinal section of the rotating guard. Fig. 4 is a view of the gear mechanism. Figs. 5 and 6 are details of the rotating guard.

In all of the figures the same numeral represents the same part.

1 indicates the end sill of the car structure with side beams 2, to both of which are bolted the integral bracket-plates 3. The bracket 3 comprises the extended arm 4, with a spindle-bearing 5 at its outer end. The arm 4 is bolted to the front sill 1 of the car at the holes 6, and depending from the same and bending to the rearward is the wheel-guard plate 7, with upward extension 8, bolted to the side beam 2 at holes 9. When the bracket-plates 3 are in place, they are stayed by the stay-brace 10.

If it is desired, the structure of 7 and 8 may be utilized to support an integral step-plate 11 for the car-platform.

Pivotaly connected to the spindle-bearings

5 by the removable pin 12 is the main portion of the fender, the said pin 12 being likewise thrust through the holes 13 in the bearing-plate 14 of the said fender portion.

The main or removable portion of the fender comprises the side bars or frame 15, to which is secured the plate 14 at a point where the removable portion of the fender is substantially balanced upon the pivotal points or pin 12. The purpose of this will be hereinafter more fully explained. The side bars 15 are curved from the front end upwardly to a point approximating the dashboard 16 of the car. At the ends of the bars 15 are secured in a substantial manner the end bars 17, and intermediate of these are a number of structural strips, preferably of ribbon-steel, secured to the bars 15 at their ends, and projecting over the same into curved supports 18, carrying the longitudinal side rail 19 some eight inches above the body of the fender, this rail at the ends of the fender turning in to the main frame 15.

Extending the full length of the fender, and secured to the end bars 17 thereof, is a series of strips 20, either of steel or light wood. These strips at the lower end of the fender project over the bar 17, for the purpose that will be hereinafter described.

At the lower end of the fender and integral with the side bars 15 there is located a double bearing-plate 21, which is preferably a depending flange, as shown in the drawings, and which contains bearings 22 and 23. In the bearing 22 rotates the axle 24 of the tread-wheel 25, preferably a smooth pulley, and adapted, when lowered to a contact with the rail, to rotate. At either end or, if preferred, both ends of the axle 24 is secured the gear-wheel 26.

In the bearings 23 rotates an axle 27, mounted upon which is a pneumatic roller-guard 28, to be hereinafter more fully described, and a gear-wheel 29, meshed with the before-described gear-wheel 26. Over the gear-wheels and protecting the same is a guard-plate 30. In a like manner the tread-wheels 25 are protected by a hood 31. As has been already noted, the ends of the strips 20 project in such a manner as to protect the axle 24.

The roller-guard 28 presents certain complexities of construction that will now be made plain. The axle 27 has near its ends, but well within the bearings therefor, certain annular flanges 32, with a shoulder 33 thereto. Upon this shoulder, if desired, there may be a convoluted groove 34 or annular ridges 35, these being to aid in the firm attachment to a corrugated cylinder or tube 36, of rubber or other flexible material, which is fitted over the shoulder 33 and, if desirable, glued thereto. A ferrule 37 is then slipped into place, completing the device for giving or imparting to the pneumatic roll 28 a partial rigidity. This may be increased by the insertion in the tube of the rubber disks 38, mounted upon the axle 27, or of a spiral spring 39 for substantially the same purpose.

It has been remarked that the main or removable portion of the fender is pivoted to the car in such a fashion as to be practically balanced, for which reason slight pressure will operate to raise and lower the tread-wheels 25 to contact with the rails. This balancing of the fender may be further secured by the use of the spring 40, and the fender may be raised and lowered by the motorman at will by means of the tilting-lever 41.

If desired, the fender may be further protected by the matting or canvas padding 42.

Having described my invention in detail, I will now tell of its operation.

The fender when in place, as already indicated, is so balanced that the tread-wheels

25 are an inch or two above the rails and held out of contact; but the moment the pneumatic roll 28 strikes a body or obstruction, as a body of a person, in the way, either in an upright or prostrate position, the pressure will throw the fender downward and the tread-wheels will at once rotate, and by the train of gears rotate the pneumatic roller in an opposite direction. This roller will then by the said rotation "lap" or "lick up" the obstructing body onto the fender proper and maintain it there during the motion of the car.

Having described my invention and its operation, I will now define the matter I wish to secure in my Letters Patent to be—

In a car-fender, a fixed portion therefor comprising a metallic bracket and a depending wheel-guard therefrom, a removable portion pivotally attached to the said fixed portion, and comprising the side and end bars, the cross-ribbons therefor and the longitudinal slats, double bearing-plates at the forward end thereof, the tread-wheels mounted therein and geared to a rotating pneumatic roller, combined with a tension-spring to counterweight the said removable portion, substantially as described.

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

WILLIAM BRIDGE BAKER.

Witnesses:

WILLIAM EDWARD KLUMBACH,
HENRY KASE PRICE.