

No. 628,271.

Patented July 4, 1899.

M. LUTHER.  
CAR FENDER.

(Application filed Mar. 7, 1899.)

No Model.

2 Sheets—Sheet 1.

Fig. 1.

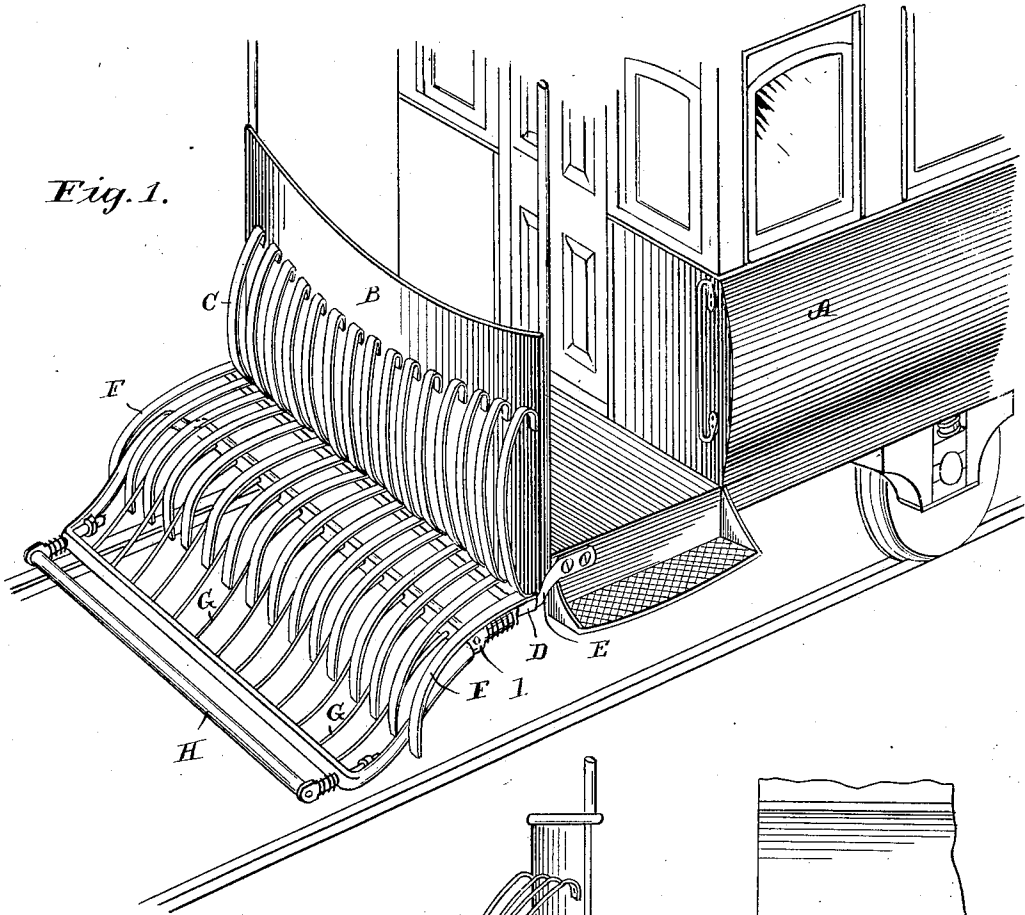
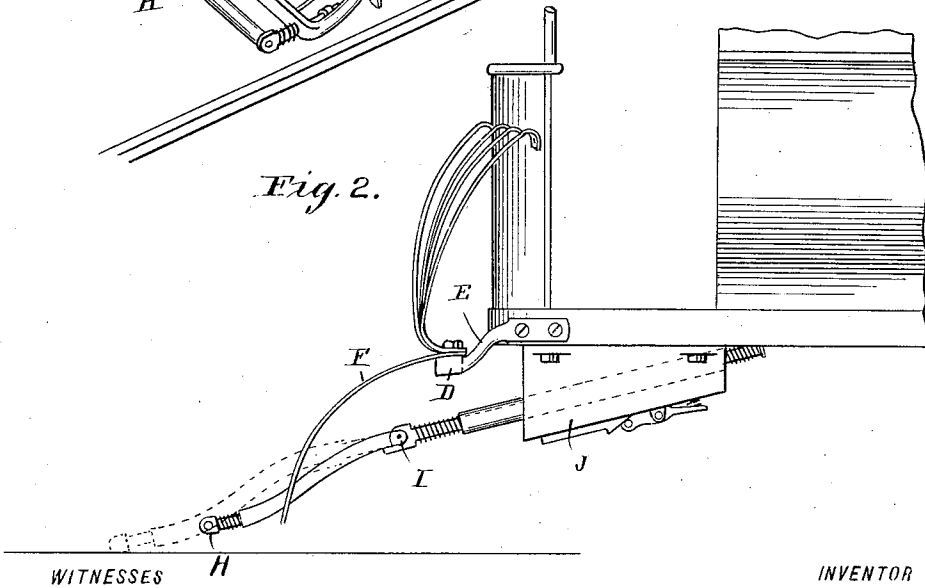


Fig. 2.



WITNESSES

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INVENTOR

Michael Luther

BY

Chamberlain & Newman  
ATTORNEYS

R. H. Newman

Edward A. Nicholson

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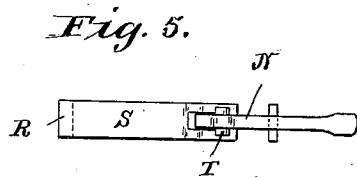
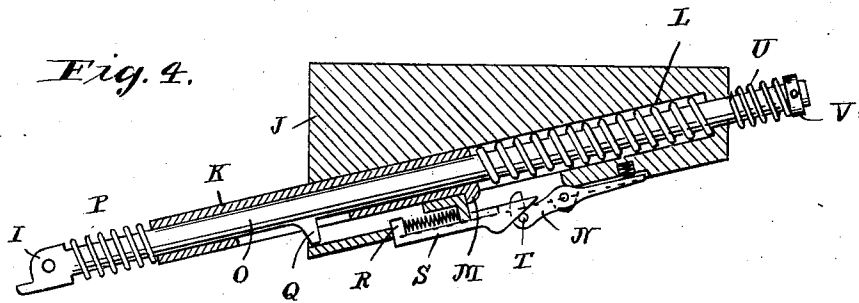
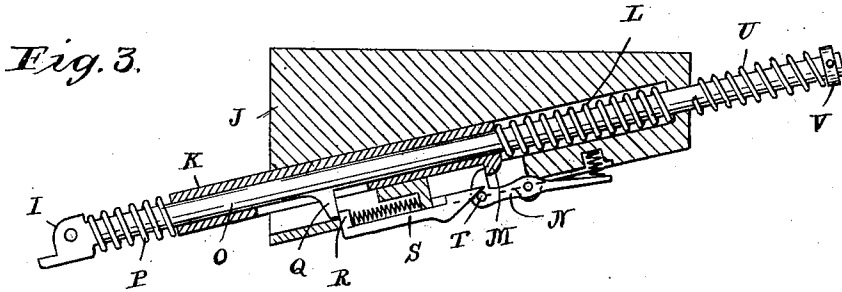
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*R. H. Newman.*

*Edward K. Nicholson*

INVENTOR

*Michael Luther*

BY

*Chamberlain & Newman*  
ATTORNEYS

# UNITED STATES PATENT OFFICE.

MICHAEL LUTHER, OF BRIDGEPORT, CONNECTICUT.

## CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 628,271, dated July 4, 1899.

Application filed March 7, 1899. Serial No. 708,162. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL LUTHER, a citizen of Hungary, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

This invention relates to new and useful improvements in fenders for trolley, cable, and other motor cars, such as are used for local purposes, and particularly to that class known as the "automatic drop-fender," as will later be more particularly described.

It is the object of my invention to improve upon drop-fenders of the above class by producing a more effective device than is now used and at the same time to simplify and cheapen their construction and method of operation.

With the above object in view my invention resides and consists in the novel construction and combination of parts shown in the accompanying drawings, forming a part of this specification, and upon which similar characters of reference denote like or corresponding parts throughout the several figures, and of which—

Figure 1 shows a perspective view of the forward end of a car having my improved fender attached thereto. Fig. 2 is a detail side elevation of my fender shown attached ready for use. Fig. 3 is a central vertical longitudinal section of one of the supports for the fender and showing the mechanism for retaining said fender in its normal position and whereby it is automatically thrust forward when an object is struck. Fig. 4 shows a similar sectional view, the parts, however, being in an extended position. Fig. 5 is a detail inverted plan of the pawl and slide shown in the two preceding figures and employed to retain and release the fender-supports.

Referring to the characters of reference marked upon the drawings, A indicates a car, and B the dash thereof, all of which may be of the usual or any preferred construction.

In connection with the operative portion of my fender I desire to use a popular form of cushioning, as is clearly shown in Figs. 1 and 2, wherein is employed upon the face of the dash a series of bowed metallic strips C,

the upper ends of which are preferably attached directly to said dash, while the lower ends are similarly attached to a cross-bar D, which is in turn secured in place by brackets E E upon either side of the platform. In addition to the vertical metallic strips above mentioned I also show a corresponding series of forwardly and downwardly projecting strips F, the fixed rear ends of which are attached to the bar D before mentioned. The forward end of the horizontal strips are deflected downward and project through the longitudinal openings of the fender proper, so as to completely inclose any space between the fender and cushion. As arranged this form of cushioning is particularly desirable, for should an object strike it at any point the proper and desired yield would be afforded.

The fender proper (see Fig. 1) consists of a metallic frame having a series of longitudinal rods G extending from front to rear, all of which are bowed and dished to correspond with the shape of the fender-frame, as will be apparent from Fig. 1.

The fender is preferably provided with an advanced engaging roll H, which is journaled in spring-actuated slidable bearings I on either side, as clearly shown.

This fender is attached at either side to slidable supports, as appears in Figs. 1 and 2, said connection being a hinged one, thus permitting the fender to be closed up against the cushion of the dash when not in use. In practice I preferably use two of the supports above mentioned, (which are alike in construction,) one at either side of the fender and supported beneath the platform of the car. These supports are of special construction and comprise mechanism for retaining the fender in its normal raised position, as shown in the full lines of Fig. 2, and means for automatically thrusting said fender forward when an object is struck, as shown in dotted lines of the same view. This mechanism will be best understood from Figs. 3, 4, and 5 of the drawings, wherein it will be observed that I employ a suitable casing having an inclined longitudinal bore therein, with recesses from the under side opening into said bore. Within the bore is slidably mounted a tube K, which is adapted to be thrust forward by means of a spring L. The inner

end of this tube is provided with a lug M, (see Fig. 3,) which is engaged by a spring-actuated pawl N, and whereby said tube is held in its normal retracted position against the force of the spring L until such time when it is released. This release is effected as follows: Within the tube K is slidably mounted a rod O, which is provided with a spring P, mounted between the forward end of said tube and the outer head of said rod, which latter constitutes the place of attachment for the fender. Upon the slide-rod is also formed a lug Q, which extends downward and normally engages a corresponding lug R upon the spring-actuated slide S, the forward end of which slide is inclined and engages pins T upon the inner end of the pawl N in such a manner that when the slide-rod is suddenly shoved backward by reason of the fender striking an object the lug R will force the slide S backward in a manner to cause the pins T to ride up the incline and disengage the pawl from the lug N, thus permitting the tube and rod to both be thrust forward, carrying with it the fender. In order to provide a cushion for the forward thrust of the parts above recited, I provide a spring U, which is mounted upon the rear end of said rod, between a collar thereof and the casing.

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

1. In a car-fender, the combination with a fender, of a support comprising a slide-rod, of a spring-actuated tube to operate said rod

in a forward direction, means to engage said tube to retain it in a retracted position, a slide for engagement by a lug upon the rod aforesaid and whereby the retaining means for said tube is released.

2. The combination with a car-fender proper, of two or more movable supports to which it is attached, each comprising a suitable casing, a slide-rod and tube mounted in said casing means to engage the tube and retain it in a retracted position against the action of a spring, a slide to operate said retaining mechanism, a lug upon the rod to operate said slide in a manner to release the tube, whereby the latter and its rod are thrust forward to drop the fender, substantially as described.

3. The combination with a car-fender, of two or more supports therefor, each comprising a slide-rod to which the fender is attached, a casing to retain said rod, means to thrust said casing and rod to a forward position, a pawl to engage a lug upon the tube and retain it in a retracted position, an inclined slide to engage and release said pawl, connections between the rod and the slide whereby the latter is operated, substantially as and for the purpose described.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 4th day of February, A. D. 1899.

MICHAEL LUTIER.

Witnesses:

C. M. NEWMAN,  
JOHN MATUS.