No. 775,287. PATENTED NOV. 15, 1904.

P. BEST.

CAR FENDER.

APPLICATION FILED FEB. 23, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

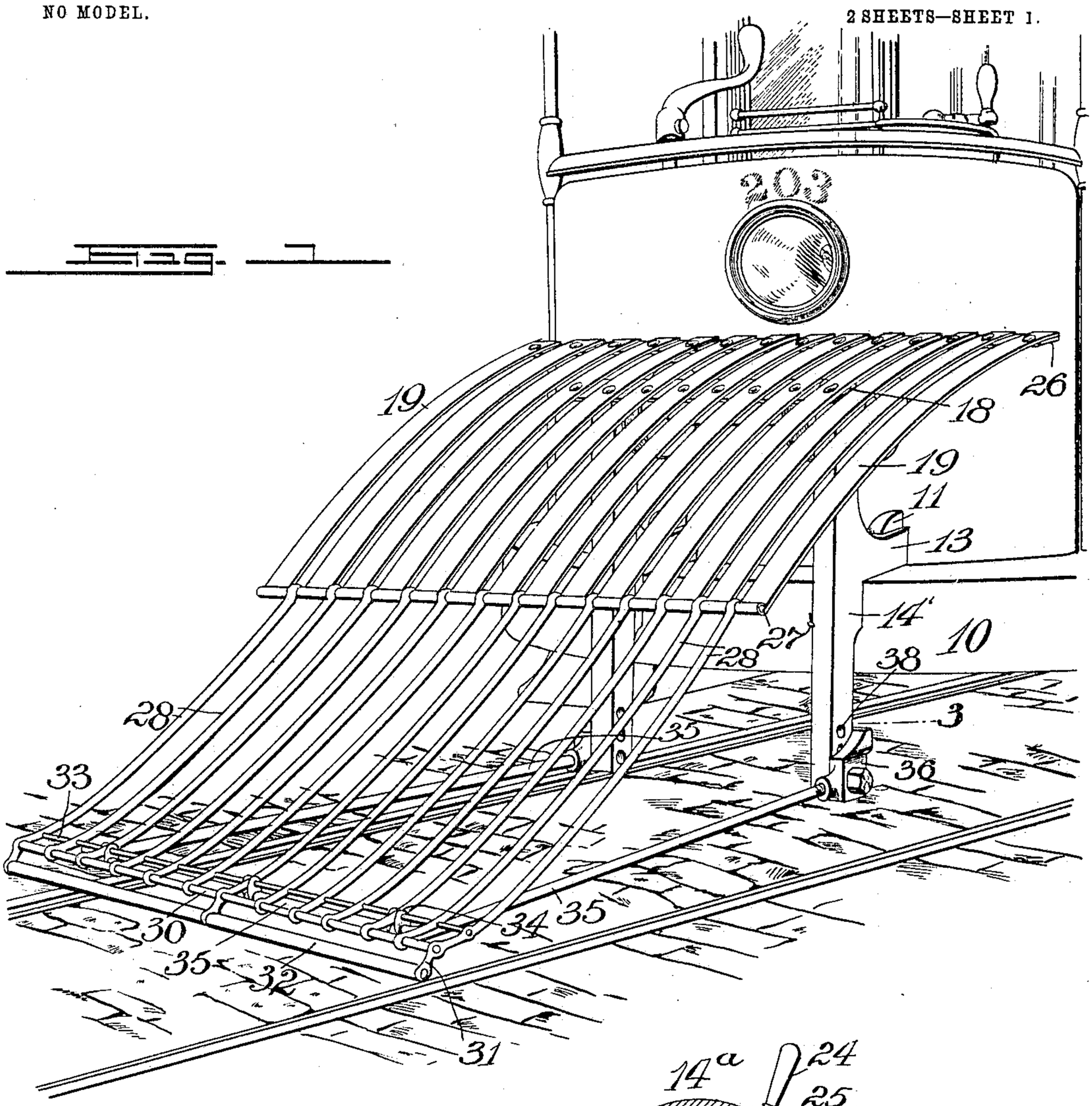


Fig. 3.

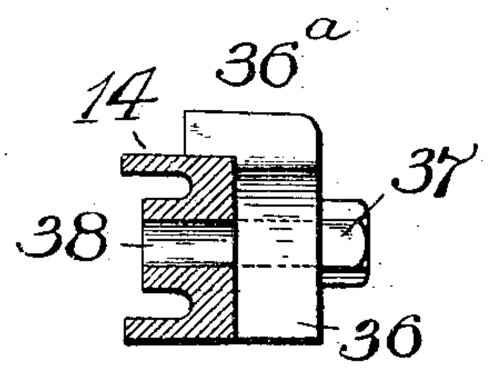
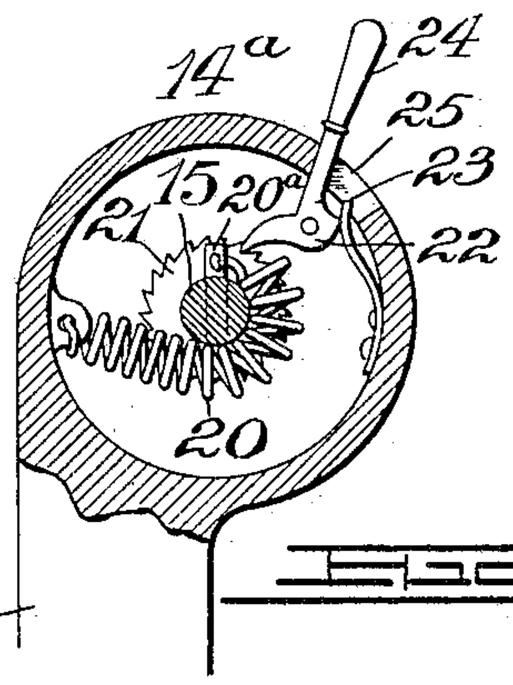


Fig. 2.



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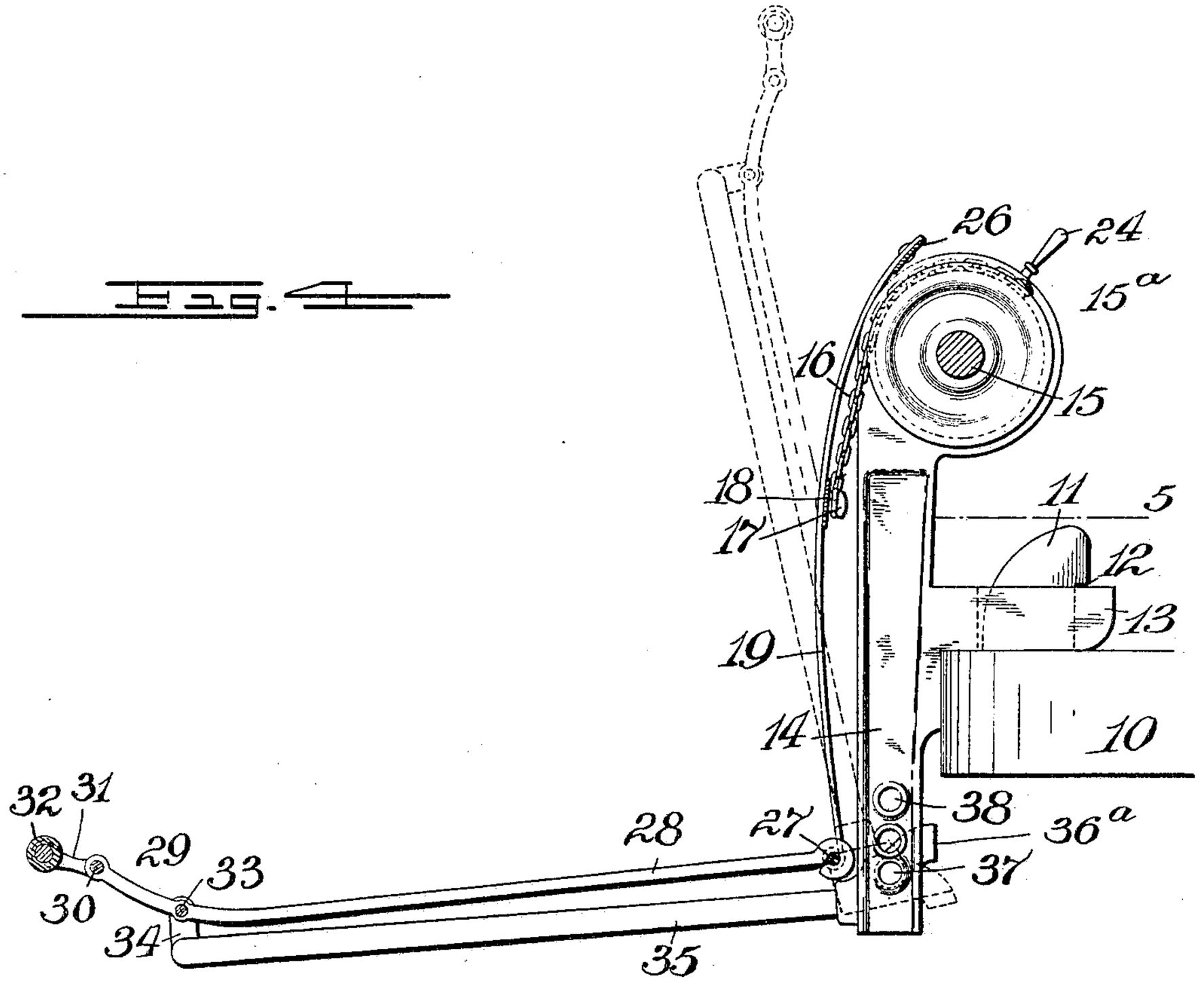
NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4



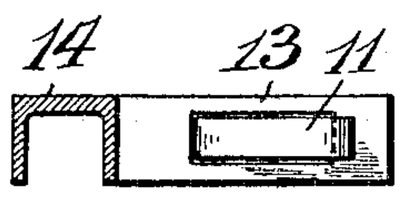


Fig.

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No. 775,287. Patented November 15, 1904.

UNITED STATES PATENT OFFICE.

PETER BEST, OF ELIZABETH, NEW JERSEY.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 775,287, dated November 15, 1904.

Application filed February 23, 1904. Serial No. 194,728. (No model.)

To all whom it may concern:

Be it known that I, PETER BEST, of Elizabeth, in the county of Union and State of New Jersey, have invented a new and Improved Car-Fender, of which the following is a full, clear, and exact description.

My invention relates to improvements in car-fenders such as are attached to the forward end of a street-car to prevent people from being injured by the car.

The object of my invention is to produce a more efficient car-fender than is generally used, and particularly to produce a simple and inexpensive car-fender which can be attached to and detached from the car with great facility to the end that it may be easily shifted from one end of the car to the other; to provide means for catching a person who comes in contact with the fender, so as to prevent him from rolling off and being injured; to produce a loose connection for the upper end of the fender which will permit the fender to readily belly in the center and form a cage to catch the person struck; to provide means for easily throwing back the fender to its normal position; to provide a convenient means for holding the fender extended and secure, and in general to produce a cheap and efficient device of the character described.

To these ends my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

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

Figure 1 is a perspective view of my improved fender as attached to a car, the fender being shown in normal position. Fig. 2 is a detail view, partly in vertical cross-section, showing the means for throwing the fender back to normal position after it has been brought into use. Fig. 3 is a detail plan, partly in section, showing how the lower frame of the fender is held in position. Fig. 4 is a sectional elevation of the fender as applied to the car, and Fig. 5 is a cross-section through one of the supporting-standards and shows the means for hanging the device to a car.

I have shown a car provided with the usual buffer 10, on the upper side of which I have produced lugs 11, which are curved or rounded on the front edges to provide for the easy removal of the fender or the easy hanging thereof, these lugs having shoulders 12 on the back side, so that when the arms 13 of the fender are in position the arms will slip beneath the shoulders and be secure. These arms 13 are slotted so that they can slip on easily over the lugs 11, and the arms are integral on or securely fastened to the standards 14, which are vertically arranged and which may be of any suitable style.

The standards 14 support at their upper ends a cross-shaft 15, which carries pulleys or drums 15^a, and to these are attached the chains 16, the said chains having their free ends connected to buttons 17 on the cross-piece 18, which is secured to the upper member of the fender, which member is composed of a series of slats 19, preferably of spring metal. The fender proper will be referred to presently more particularly.

The upper portion of the standards 14 terminate in housings 14^a, within which are springs 20, preferably spiral springs, each spring being fixed at one end in the shaft, as shown at 20^a in Fig. 2, the other end being made fast to the standard. The shaft has also a ratchet-wheel 21 in each housing, although the ratchet-wheels may of course be differently located, and the ratchet-wheel which engage a pawl 22, which is pivoted on the standard, is pressed into engagement with the ratchet-wheel by a spring 23 and has a handle 24, which extends outward through a slot 25 in the housing, and by means of the handle the pawl can be released. When a person or body strikes the fender, the latter is pulled inward and downward by contact with the body, and the pull on the chains 16 turns the shaft 15 and tightens the spring 20, which is prevented by the ratchet-wheel and pawl from throwing the fender back to place. When, however, the body is removed from

the fender, the motorman can release the pawls by means of the handles 14, and the tension of the springs 20 turns the shaft 15 back and causes the fender to immediately spring back to its normal position.

It will be seen that the loose connection between the upper part of the fender and its support makes the fender very flexible, and this flexibility is increased by the construction of the fender proper. The upper member, formed of the cross-slats 19, is provided with a cross-piece 26 at the top to stiffen it, and at the bottom it carries a cross-rod 27, which serves as a pintle and makes a hinge connection with the lower member of the fender, which comprises the parallel rods 28, which extend downward and forward, being curved slightly and having their extended lower portions 29 provided with a cross-rod 30, which forms practically the lower edge of the fender, though some of the rods 28 are extended, as shown at 31, so as to carry the buffer 32, which can be of rubber or other suitable material. The lower portion of the fender is hinged by a cross-rod 33 to the ears 34, which project upward from the front edge of the frame 35, which frame is of a generally U shape, and the side members of the frame connect, preferably, by screwing, with the clips 36, which are adjustably connected to the lower portions of the standards 14. The connection between the clips and the standards is by means of a suitable bolt 37 or equivalent fastening which can be adjusted in one of a series of holes 38 in the standard, and the clip 36 has a boss 36^a at the back, which overlaps the back part of the standard 14, and so prevents the frame 35 from tipping down too far.

It will be seen that the means just described enables the frame 35 and the lower part of the fender to be held at a desired height, that the fender, which has normally a slightly convex and flexible body, is hinged at the bottom and freely supported at the top, so that it is extremely flexible that way, a body is caught on the fender, the latter immediately buckles and forms a cage to hold the body securely, and that by reason of the free connection at the top the fender is made especially flexible, while at the same time the free connection provides by its action on the tension device a convenient means for throwing the device back to place.

It will be noticed that the fender extends normally into position for use and that by reason of its hinged construction in the center and at its connection with the lower part of the standards 14 the fender may be swung upward to the position shown in dotted lines in Fig. 4 when the fender is not in use, in such case the fender turning on its hinged pintle 27, while the frame 35 swings upon the bolts 37.

It will be observed that this fender by the action of the ratchet does not rebound after a weight has buckled it to throw the weight off, as the ratchet taking up the tension of the spring what little rebound there is is caused only by the natural flexibility of the material.

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

1. An apparatus of the kind described, comprising supporting-standards having means for attachment to a car, a forwardly-extending frame carried by the standards, and a flexible fender-body having its lower portion supported on the frame and its upper portion carried by the standards, the upper end of said upper portion being arranged to move vertically or horizontally.

2. An apparatus of the kind described, comprising supporting-standards having means for attachment to a car, a flexible fender-body having its lower edge supported on the lower portion of the standards and its upper portion carried by the top portions of the standards, and a flexible connection between the upper portion of the fender and the standards.

3. The combination with the car and the vertically-arranged lugs thereon, of the standards having slotted arms to engage the lugs, and a fender carried by the standards.

4. An apparatus of the kind described, comprising supporting-standards having means for attachment to a car, a forwardly-extending frame adjustably supported on the standards, a rotatable cross-shaft on the standards, and a flexible fender-body having its lower edge pivotally connected with the frame and its upper part supported from and flexibly secured to the cross-shaft.

5. The combination with a buckling or bending fender, of a spring device, the tension of which is increased by the buckling of the fender, and means for retaining and releasing the tension of the spring device, whereby the fender may be retained in its buckled condition or returned to normal position.

6. The combination with a fender constructed to buckle or bend in the middle, of a rotary shaft supporting the fender, a spring connected with the shaft and stretched by the buckling of the fender, and means as a ratchet-wheel and pawl, for controlling the action of the spring and shaft.

7. The combination with the supporting-standards having means for attachment to a car, of the forwardly-extending frame, the clips supporting the frame and carried by the standards, the said clips having bosses or stops to limit the swing of the frame, and a fender supported partly on the frame and partly from the upper part of the standards.

8. The combination with the supporting-standards and the frame carried thereby, of the spring-returned shaft carried by the stand-

ards, means as a ratchet-wheel and pawl for controlling the shaft, and a buckling fender having a flexible connection with the shaft at one end, and a pivotal connection with the frame at the other end.

9. The combination with the supporting-standards and the frame carried thereby, of a buckling fender comprising a pair of panels pivotally connected, the lower panel being pivotally connected at the front end of the frame, and a flexible connection secured to the standards and to the upper panel of the fender at a point intermediate between its pivoted and free ends.

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