No. 829,079. PATENTED AUG. 21, 1906.

J. P. MANSON.

FENDER.

APPLICATION FILED DEC. 5, 1905.

Fig. 1.

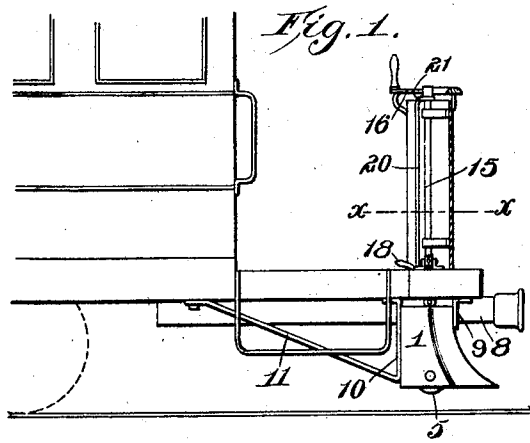



Fig. 2.

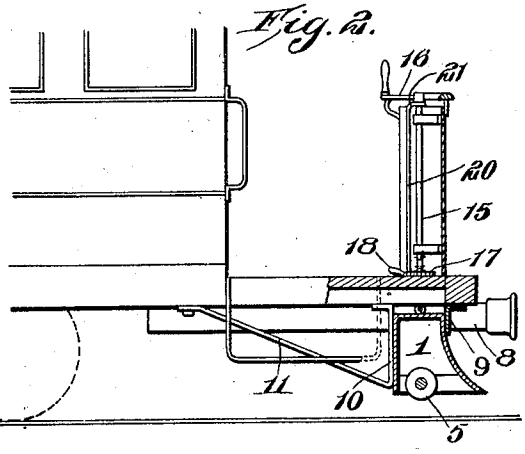



Fig. 4.

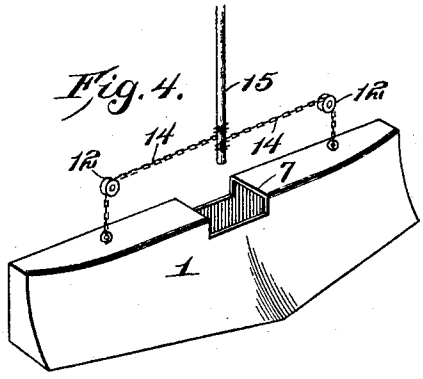



Fig. 3.

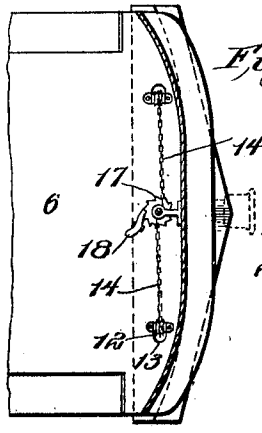



Fig. 5.

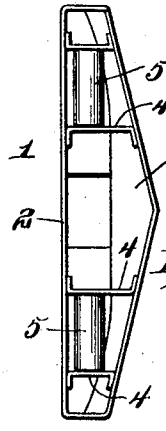
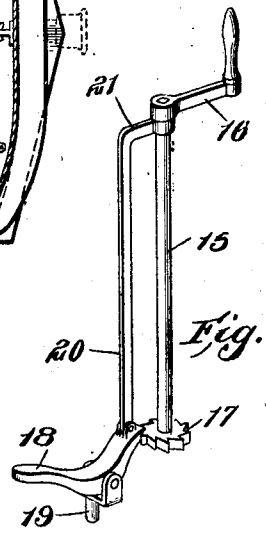



Fig. 6.

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# UNITED STATES PATENT OFFICE.

JOSEPH P. MANSON, OF HARTLAND, MAINE.

## FENDER.

No. 829,019. Specification of Letters Patent. Patented Aug. 21, 1906.

Application filed December 5, 1905. Serial No. 290,419.

*To all whom it may concern:*

Be it known that I, JOSEPH P. MANSON, a citizen of the United States, residing at Hartland, in the county of Somerset and State of Maine, have invented certain new and useful Improvements in Fenders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to guard attachments for street-railway cars.

The object is to provide a device of this character which can be readily connected to a car without requiring any particular construction of car and which can be utilized as a fender for preventing the car from passing over objects and which can also be utilized for removing snow from the track, and for various other purposes.

A still further object is to provide a durable compact guard which is normally suspended above and out of contact with the track, but which can be instantaneously dropped into operative position.

The invention consists of a guard, preferably formed of metal and which is supported by flexible devices, such as chains, adapted to be wound upon a spindle which is held by a pawl and ratchet located on the front of the car. The front of the guard is so shaped as to deflect to either side any object brought into contact therewith, and the guard is slidably mounted between guides which depend from the car-platform. Means are provided whereby the guard will roll upon the rails when lowered, so that the same will fit closely thereon and operate practically without noise.

The invention also consists of the further novel features of construction and combination of parts, the preferred form whereof will be hereinafter more clearly set forth, and pointed out in the claims.

In the accompanying drawings I have shown the preferred form of my invention.

In said drawings, Figure 1 is a side elevation of a portion of a car having my improvements thereon. Fig. 2 is a similar view, the car-platform and guard thereon being shown in vertical section. Fig. 3 is a section on line *x x*, Fig. 1. Fig. 4 is a detail view of the guard and its supporting means. Fig. 5 is a bottom plan view of the guard, and Fig. 6 is a detail view of the crank-raising and ratchet-engaging mechanism.

Referring to the figures by numerals of reference, 1 is a guard, preferably formed of heavy sheet metal or any other material deemed necessary for its construction and having a straight rear wall 2, while the front wall 3 thereof is concave from its upper to its lower edges and has its lower edge inclined rearwardly from the center, so that any objects brought into contact with the wall 3 will be picked up and deflected laterally. Brackets 4 are mounted on the front and rear walls adjacent their lower edges, and rollers 5 are journaled within them. These rollers are spaced apart, so that when the guard is lowered they will come in contact with the rails and roll therealong. The entire guard is approximately equal to or slightly longer than the width of the car-platform 6, and the top of the guard is cut away, as shown at 7, so as to receive a draw-bar 8, so that the coupling of two cars will not be interfered with by the provision of this guard. The guard is mounted directly under the platform between the front guide-plate 9, which is secured to and depends from the platform and rear bracing-guides 10, which are likewise secured to the platform and have rearwardly-extending braces 11 extending from their lower ends, so that the guard will be able to withstand any resistance offered by an object brought into contact therewith. Pulleys 12 are connected to the platform adjacent apertures 13 therein, and mounted on these pulleys are chains 14 or other flexible devices, which are fastened at one end to the top of the guard near its ends and at their other ends to a rotatable spindle on shaft 15, adapted to be rotated by the crank 16. This shaft has a ratchet-wheel 17 secured to it adapted to be engaged by a dog 18. The dog 18 is pivoted in a yoke 19, swiveled on the platform, and a rod 20 is pivoted to the dog and extends upward therefrom and is provided with an extension 21, which surrounds the shaft 15 close to the crank 16. It will of course be understood that by rotating shaft 15 the chains 14 will be simultaneously wound thereon and the guard will be raised into position between the guide-plate 9 and guides 10. Should the car suddenly come upon an object which should be within its path it is merely necessary for the motorman to press his foot upon the dog 18, so as to release it from the ratchet 17. The rod 20 will be simultaneously moved upward by the dog and its extension 21 will lift the crank

from engagement with the shaft, so that said shaft will be free to rotate without swinging the crank therewith. The guard will therefore promptly fall by gravity upon the track and its rollers 5 will travel therealong regardless of the oscillation of the car. By reason of its peculiar shape the guard will deflect any object upward and laterally, and therefore the same is particularly useful as a fender for preventing injury to persons. As heretofore stated, the guard can be utilized for removing snow from the tracks. One guard can be permanently connected to each end of the car without interfering with the ordinary uses of the car or requiring any special construction. The entire attachment can be very easily connected to the car, and when so connected constitutes an efficient guard for preventing objects from passing under the wheels.

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

1. The combination with guides; of a guard slidably mounted therebetween and having a concave front wall receding from its center, flexible supporting devices connected to opposite portions of the guard, means for winding said devices simultaneously to raise the guard between the guides, and a holding device for preventing unwinding of the flexible devices.

2. The combination with a car-platform having depending guides thereon; of a winding device mounted on the platform, means for holding the device against rotation in one direction, a guard slidably mounted between the guides, and flexible supporting devices extending from the guard to the winding device.

3. The combination with a car-platform having a winding device thereon and means for holding said device against rotation in one direction; of guides depending from the platform, a guard slidably mounted between the guides and having its front face concave and receding from its center, and flexible supporting devices extending from opposite portions of the guard to the winding device.

4. The combination with a car-platform having a rotatable shaft thereon and means for preventing the rotation of the shaft in one direction; of guides depending from the platform, a guard slidably mounted between the guides and having a concave front wall receding from its center, rollers mounted upon the guard, and flexible devices extending from the guard adjacent its ends and adapted to be simultaneously wound upon the shaft to raise the guard between the guides.

5. The combination with a car-platform having a draw-bar extending thereunder; of guides depending from the platform at opposite sides of the draw-bar, a guard slidably mounted between the guides and recessed to receive the draw-bar, one wall of said guard being shaped to pick up and deflect an object contacted thereby, a rotatable shaft upon the platform, means for holding the shaft against movement in one direction, and flexible devices adapted to be wound upon the shaft and connected to the guard adjacent its ends.

6. The combination with a car-platform having a rotatable shaft thereon, a ratchet on the shaft and a vertically-movable crank on said shaft; of a pivoted dog for engaging the ratchet, means operated by releasing the dog for raising the crank, a guard, and flexible means adapted to be wound upon the shaft and to support the guard.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

JOSEPH P. MANSON.

Witnesses:
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