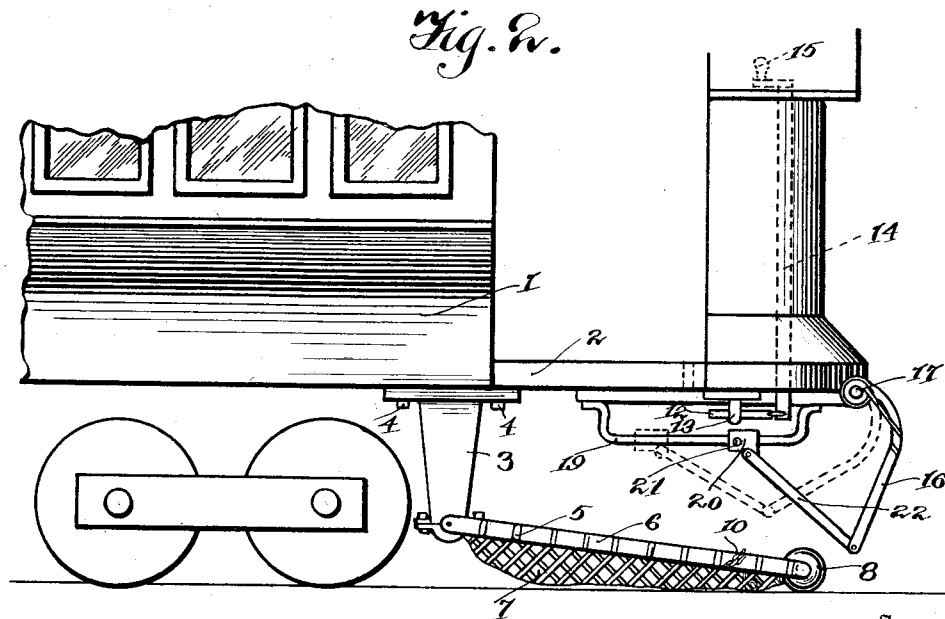
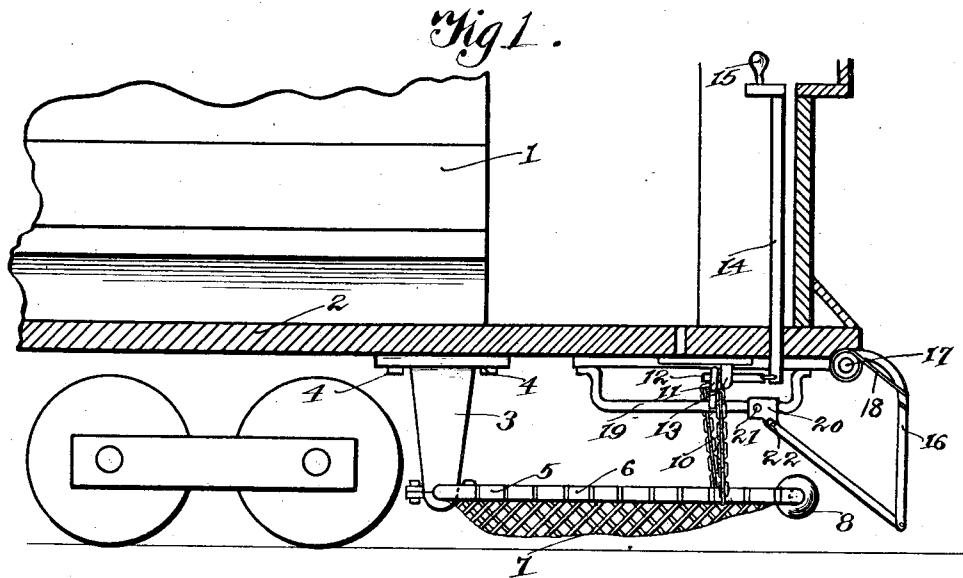


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CAR FENDER.
APPLICATION FILED MAR. 22, 1912.

1,064,750.

Patented June 17, 1913.

2 SHEETS-SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

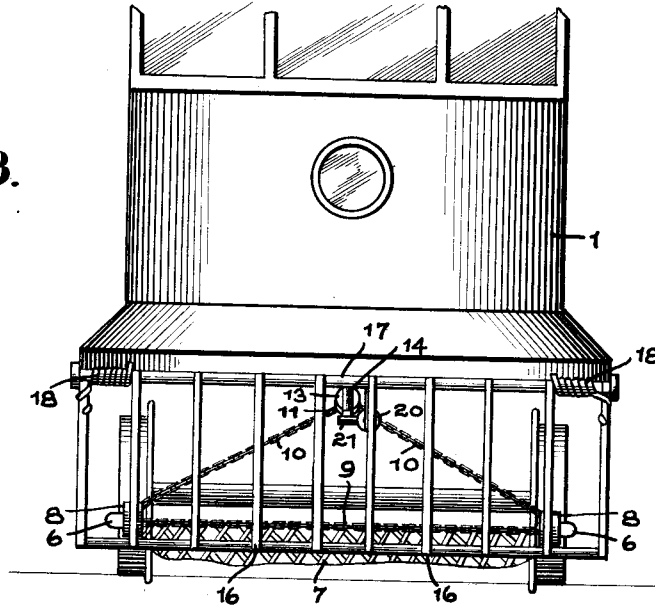


Fig. 4.

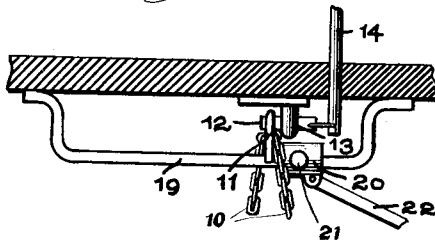


Fig. 5.

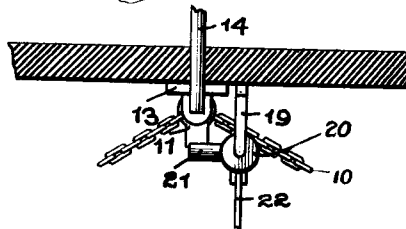
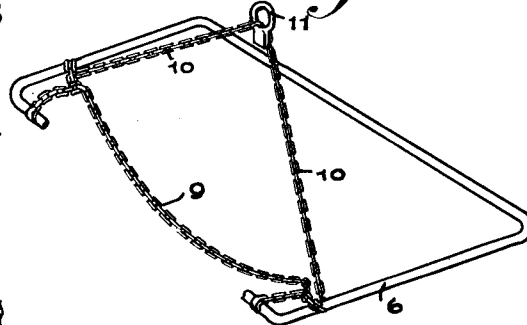


Fig. 6.



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UNITED STATES PATENT OFFICE.

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CAR-FENDER.

1,064,750.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed March 22, 1912. Serial No. 685,485.

To all whom it may concern:

Be it known that I, FREDERICK LILlich, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

My invention relates to improvements in car fenders, the object of the invention being to provide improved means for holding the car fender elevated, and provided an improved tripping fender adapted to cause the main fender to drop when the tripping fender engages a person or object on the track.

A further object is to improve upon the construction disclosed in Patent No. 1,017,431 granted to me February 13, 1912. With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1 is a view in longitudinal section illustrating my improved fender in normal set position. Fig. 2 is a view in side elevation showing the fender dropped in position to pick up a person or object on the track. Fig. 3 is a view in front elevation of Fig. 1. Fig. 4 is a view in longitudinal section on an enlarged scale illustrating the fender holding and releasing mechanism. Fig. 5 is an end view of Fig. 4, and Fig. 6 is a perspective view illustrating the main fender frame and the manner of positioning the chain support thereon.

1 represents a car from the bottom 2 of which brackets 3 depend, and are secured to the bottom of the car by bolts 4. These brackets are located a sufficient distance back of the end of the car to properly position the main fender 5. This fender 5 comprises a rod frame 6 illustrated in perspective in Fig. 6, and this rod frame is of general rectangular form bent at its front end, and at its rear end pivotally supported in the brackets 3.

The rod frame 6 is connected by a rope netting 7, and rollers 8 are located on the front end of the rod frame to roll on the ground when the fender drops. A slack

chain 9 is connected at its ends to the front portion of the rod frame, and the front portion of the rope netting 7 is connected to this chain 9, and said chain 9 operates as a drag when the fender is dropped so as to compel a person or object on the track to move onto the rope netting, and not pass under the fender.

A supporting chain 10 is secured at its ends to the drag chain 9, and is positioned around the side members of the rod frame 6, and then extends upwardly and at the intermediate portion of the chain 10, which is its highest portion normally, a ring 11 is located and is adapted to be positioned on a sliding bolt 12. This bolt 12 moves through a guide bracket 13 fixed to the bottom of the car, and is operated by a crank shaft 14 having a crank handle 15 thereon. In other words, the motorman may turn this shaft 14 so as to move the bolt 12 longitudinally, release ring 11, and allow the main fender 5 to fall.

To drop the main fender automatically, I provide a tripping fender 16 which is pivotally supported at its upper end on a shaft 17 at the end of the car, and is provided with springs 18 holding this tripping fender in normal position.

A guide bar 19 is secured to the bottom of the car, and a sleeve 20 is mounted to slide thereon. This sleeve 20 has a laterally projecting finger 21.

The ring 11 is provided with an extension adapted to project in the path of the finger 21, so that the tailed ring thus formed can be slipped off from the bolt 12 by the said finger when the sleeve is caused to move rearwardly by the movement of the tripping fender. The sleeve is connected to the tripping fender by a link 22 which compels the fender and sleeve to move together.

It will therefore be noted that with my improvements, while the main fender 5 may be dropped by the motorman, it will also be automatically dropped when a person or object on the track is engaged by the tripping fender 16.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and al-

terations as fairly fall within the spirit and scope of the appended claims.

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

1. A fender comprising a frame, a flexible slack drag at the forward end of the frame, a flexible device connected at its ends to the drag, a sliding bolt on the car adapted to engage the flexible device and normally hold the fender elevated, manually operated means for moving the bolt to release the fender, a tripping fender pivotally connected to the car and in position to engage a person or object on the track, and means operated by the tripping fender to move the flexible device out of engagement with the bolt and permit the fender to drop, substantially as described.
2. A fender comprising a frame, a flexible slack drag at the forward end of the frame, a flexible device connected at its ends to the drag positioned around the frame, a sliding bolt on the car adapted to engage the flexible device and hold the fender elevated, means for moving the bolt to release the flexible device, a tripping fender pivotally connected to the car and in position to engage a person or object on the track, and means operated by the tripping fender to move the flexible device out of engagement with the bolt and permit the fender to drop, substantially as described.
3. A fender comprising a frame, a flexible slack drag at the forward end of the frame, a flexible device connected at its ends to the drag positioned around the frame, a sliding bolt on the car adapted to engage the flexible device and hold the fender elevated, means for moving the bolt to release the flexible device, means for moving the flexible device off the bolt, said last-mentioned means comprising a trip fender pivotally connected to the end of the car, a guide rod, a sliding sleeve on the guide rod, a pin on the sleeve adapted to engage the flexible device, and a link pivotally connecting the sliding sleeve and the trip fender, substantially as described.
4. The combination with a car, brackets depending from the car, a fender pivoted at its rear end to said brackets, a slack drag at the forward end of said fender, a guide bracket secured to the bottom of the car, a bolt mounted in said guide bracket and movable longitudinally of the car, a ring connected to said flexible drag and adapted to be supported on the rear end of said bolt, a tripping fender pivotally connected to the car and in position to engage a person or object on the track, and means operated by the tripping fender to move the ring off the

bolt and permit the fender to drop, substantially as described.

5. The combination with a car, brackets depending from the car, a fender pivoted at its rear end to said brackets, a slack drag at the forward end of said fender, a guide bracket secured to the bottom of the car, a bolt mounted in said guide bracket and movable longitudinally of the car, a ring connected to said flexible drag and adapted to be supported on the rear end of said bolt, a guide bar secured to the bottom of the car, a sleeve mounted to slide on said guide bar, a tripping fender, and a link connecting said tripping fender with said sleeve, whereby the movement of the sleeve moves the ring off of the bolt and permits the first-mentioned fender to drop, substantially as described.

6. The combination with a car, brackets depending from the car, a fender pivoted at its rear end to said brackets, a slack drag at the forward end of said fender, a guide bracket secured to the bottom of the car, a bolt mounted in said guide bracket and movable longitudinally of the car, a ring connected to said flexible drag and adapted to be supported on the rear end of said bolt, a tripping fender pivotally connected to the car and in position to engage a person or object on the track, and means operated by the tripping fender to move the ring off the bolt and permit the fender to drop, and means for moving said bolt forwardly to release the ring, substantially as described.

7. The combination with a car, brackets depending from the car, a fender pivoted at its rear end to said brackets, a slack drag at the forward end of said fender, a guide bracket secured to the bottom of the car, a bolt mounted in said guide bracket and movable longitudinally of the car, a ring connected to said flexible drag and adapted to be supported on the rear end of said bolt, a guide bar secured to the bottom of the car, a sleeve mounted to slide on said guide bar, a tripping fender, a link connecting said tripping fender with said sleeve, whereby the movement of the sleeve moves the ring off of the bolt and permits the first-mentioned fender to drop, and means for moving said bolt forwardly to release the ring, substantially as described.

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

FREDERICK LILLICH.

Witnesses:

R. H. KRENKEL,
CHARLES E. POTTS.