(No Model.) 2 Sheets—Sheet 1.

G. W. GREER.

CAR FENDER.

No. 550,448. Patented Nov. 26, 1895.

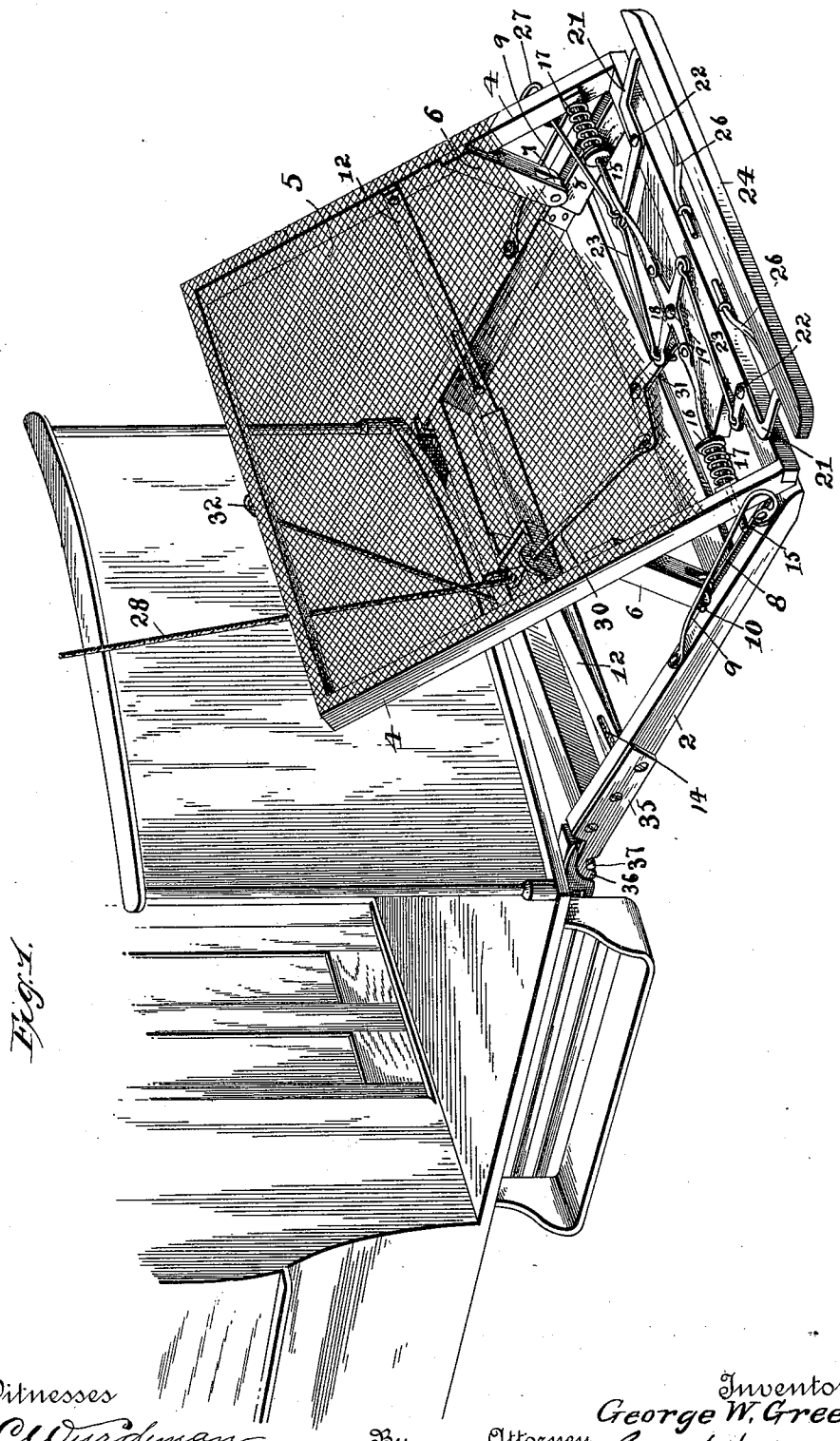

Fig. 1.

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Fig. 2.

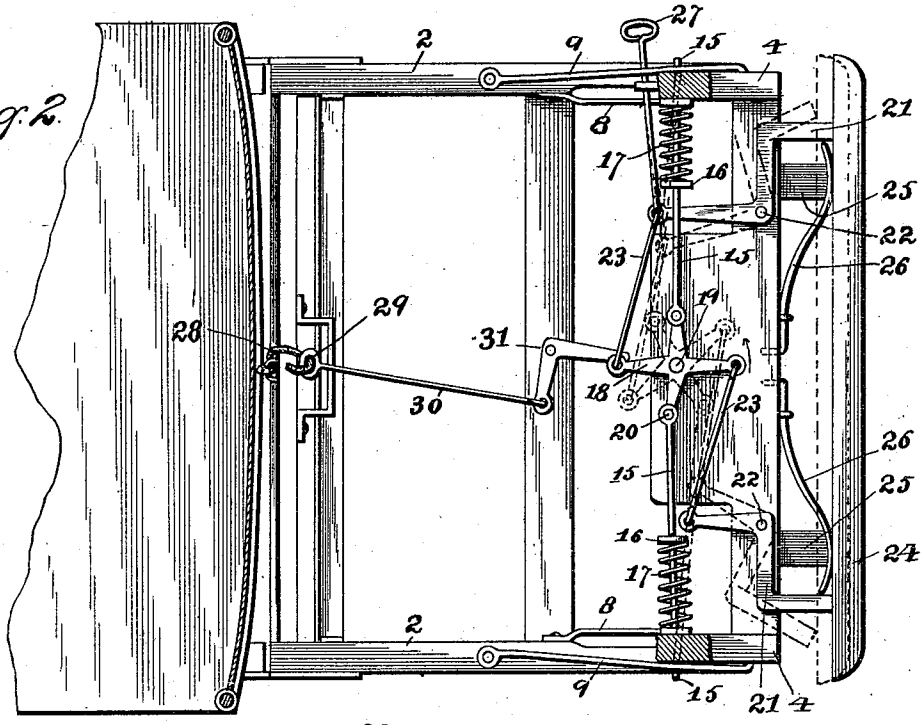

Fig. 3.

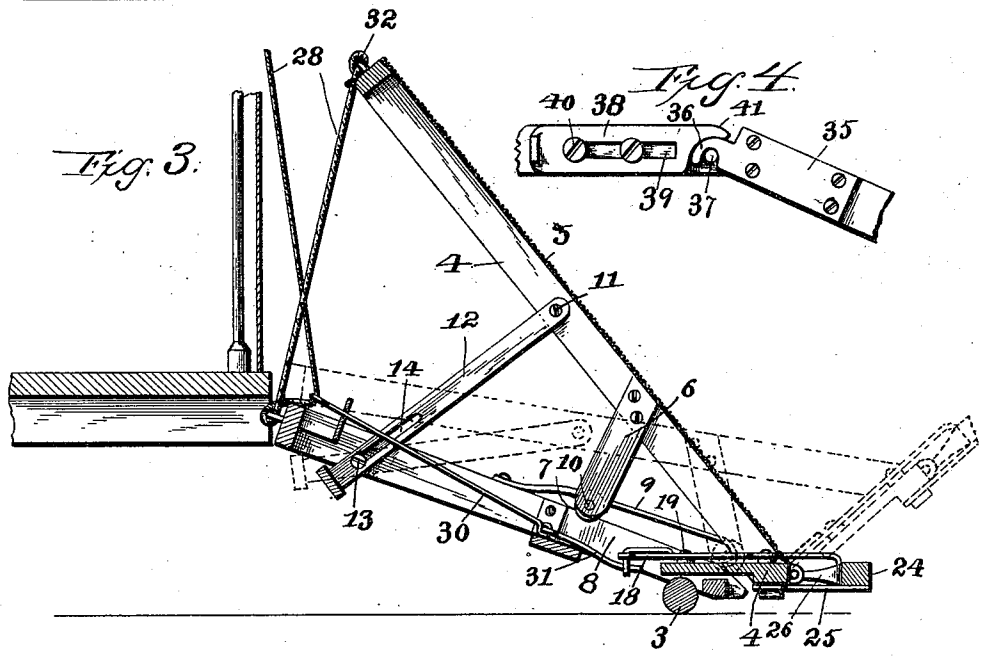

Fig. 4.

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UNITED STATES PATENT OFFICE.

GEORGE W. GREER, OF GAP, PENNSYLVANIA, ASSIGNOR OF THREE-FOURTHS TO CHRISTIAN L. KAUFFMAN, OF SAME PLACE.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 550,448, dated November 26, 1895.

Application filed April 8, 1895. Serial No. 544,846. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. GREER, a citizen of the United States, residing at Gap, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Car-Fenders, of which the following is a full, clear, and exact specification.

My invention relates to a new and useful improvement in car-fenders, and has for its object to provide such a device that will be so carried in front of a car that upon coming in contact with a person or similar obstruction will automatically operate to pick up such person and carry him safely with the car until the latter may be stopped; and with this end in view it consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction and operation in detail, referring by number to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective of one end of a car, showing my device attached thereto; Fig. 2, a sectional plan view showing the trip mechanism; Fig. 3, a vertical section of the fender and the portion of the car to which it is attached; and Fig. 4 a detail of the detachable hinge, whereby the fender may be removed when not desired for use.

Similar numbers denote like parts in the several views of the drawings.

To the front edge of the car 1 is hinged a rectangular frame 2, in the front portion of which is journaled a roll 3, adapted to trundle upon the ground or track in front of the car and support the outer edge of the frame in close proximity to said track.

4 is the fender-frame proper, over which may be stretched a covering 5, of wire, cloth, or other suitable material, and 6 are stay-blocks rigidly secured to this frame and having journaled in their lower extremities rolls 7, adapted to travel upon the tracks 8, formed upon the frame 2. The wire guards 9, extending approximately parallel with the upper edges of the side rails of the frame 2, serve to keep the rolls upon the tracks 8 by engagement with the pins 10, projecting from the sides of the blocks 6. Pivoted at 11 to the side rails of the frame 4 are the links 12. These links are connected to the side rails of the frame 2 by the screws 13, passed through the slots 14, formed in said links. Thus it will be seen that when the upper end of the fender-frame 4 is permitted to overbalance its lower end it will tilt backward upon the rollers 7 as a fulcrum, and as these rollers are free to slide down the incline tracks 8 the said frame will take the position shown in dotted lines in Fig. 3, the slots in the links 12 permitting this movement.

In order to retain the fender-frame 4 in its elevated position, I provide the sliding bolts 15, the outer ends of which are adapted when distended to engage with the guard-wires 9, and secured to these bolts are collars 16, between which and the side rails of the fender-frame 4 are compressed coil-springs 17, the action of which tends to withdraw said bolts from engagement with the guard-wires, for the purpose presently explained.

18 is a lever pivoted at 19 to the front rail of the fender-frame 4 and composed of two longitudinal arms and two cross-arms, to the latter of which are pivoted at 20 the bolts 15 in such manner as to exert their spring-pressure upon opposite sides of the center of the lever 18 when said lever is in its normal position, (shown in full lines in Fig. 2,) so that the lever 18 is held in this normal position by the action of the springs 17 until said lever has been moved a sufficient distance in the direction of the arrow to cause said bolts to exert their spring-pressure upon the other side of the pivot-point 19, when the lever will be carried to the position shown in dotted lines and the bolts 15 retracted. This initial movement of the lever 18 is accomplished through the angle-levers 21, which are pivoted at 22 and connected to the longitudinal arms of said lever 18 by the links 23, the outer ends of the levers 21 resting against the back of the trip-bar 24, which is secured to the fender-frame 4 by the extensions 25

and adapted to slide thereon and be operated upon said bar coming in contact with an obstruction, when the mechanism just described will be caused to operate to release the fender-frame and permit it to drop by gravity to the position shown in dotted lines in Fig. 3, as before described. 26 are leaf-springs interposed between the bar 24 and fender-frame 4, so as to return said bar to its normal distended position after having been released from pressure.

To return the fender-frame to its normal elevated position it is only necessary to bear upon its front end and manipulate the bolts 15 through the hand-bar 27 to engage the outer ends of said bolts with the guard-wires 9; so it will be seen that should a moving car carrying my improved fender come in contact with a person with sufficient force to operate the trip-bar 24 the fender-frame 4 would be released and by its weight thrust forward, picking up said person and precipitating him upon the fender-frame during its forward and downward movement until said frame assumed the horizontal position shown in dotted lines in Fig. 3, where the person would safely lie until the car could be stopped.

Should the trip-bar fail to release the fender-frame or the latter not act quickly enough, the motorman may expedite said movement of the frame by pulling upon the cord 28, which, passing through the eye 29 of the draw-rod 30, would operate the angle-lever 31 to impart the initial movement to the lever 18 in order to retract the bolts 15, and when said bolts have been withdrawn any further pull upon the cord 28 will be exerted upon the upper end of the fender-frame 4, to which the said cord is attached at 32, thus depressing the rear end of the fender-frame and picking up the desired object, as before described.

For convenience in removing the fender from a car when it is desired to couple to another car or to the opposite end of the car I construct the hinges by which the fender is connected to the car in the manner shown in Fig. 4, which consists in a plate 35, bolted to the side rail of the frame 4 and terminating in a hook 36, which is adapted to engage with the pin 37, projecting from the side rail of the car, and to prevent disengagement of said hook from said pin I provide the plate 38, in which is formed the slot 39, through which pass the bolts 40 in securing said plate to the car-rail, and 41 is a lip formed with the plate 38 and adapted to pass over the upper side of the hook 36, whereby said hook is prevented from disengagement with the pin 37.

To remove the fender it is only necessary to slide back the plates 38 a sufficient distance to disengage the lips 41 from the hooks 36, when the fender may be lifted out of place.

I am aware that many modifications may be made in the construction of my improved fender without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

1. A fender consisting of a base frame removably secured to the car, a fender frame secured to the base frame by link and bolt connections, guard wires arranged on the base frame, spring pressed bolts on the fender frame engaging the guard wires, a central lever having connection with a second lever with forwardly extending arms and a spring pressed trip for actuating the same as and for the purpose described.

2. A fender consisting of a base frame removably secured to the car, a fender frame secured to the base frame by link and bolt connections, guard wires arranged on the base frame, spring pressed bolts on the fender frame engaging the guard wires, a central lever having connection with a second lever with forwardly extending arms and means for tripping the mechanism as and for the purpose described.

3. In a car fender, the combination of the frame 2, adapted to be pivoted to the front end of a car, and provided with a trundling roll for supporting its outer end in close proximity to the track, a fender frame supported by the frame 2, an automatical trip bar secured to said fender frame, angle levers 21, and a lever 18, adapted to receive its initial movement from said angle levers, the bolts 15, adapted when distended, to lock the fender frame in its normal elevated position, and springs 17, for withdrawing said bolts, as shown and for the purpose set forth.

4. In a car fender, the frame, a roll journaled on the frame, guard wires secured on the frame, a fender frame, supporting blocks secured thereto, links pivoted to the frame 4 and connected with the side rails of the frame 2, a lever pivoted to the frame 4, spring pressed bolts operated thereby, levers 21 connected to the arms of lever 18, and an automatic trip bar, as and for the purpose described.

5. The herein described combination of a frame 2 pivoted to a car, a roll journaled to the frame, guard wires on the side rails of the frame, 2, a fender frame 4 secured to the frame 2, supported by blocks, links pivoted to the fender frame, and connected with the lower frame, spring pressed bolts 15 connecting with a lever 18, links 23 connecting the levers 18 and 21, a spring pressed trip bar secured to the front of the frame, as and for the purpose described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

GEORGE W. GREER.

Witnesses:
C. L. KAUFFMAN,
HENRY FOX.