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A. E. GUMZ.
CAR FENDER.

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2 SHEETS—SHEET 2.

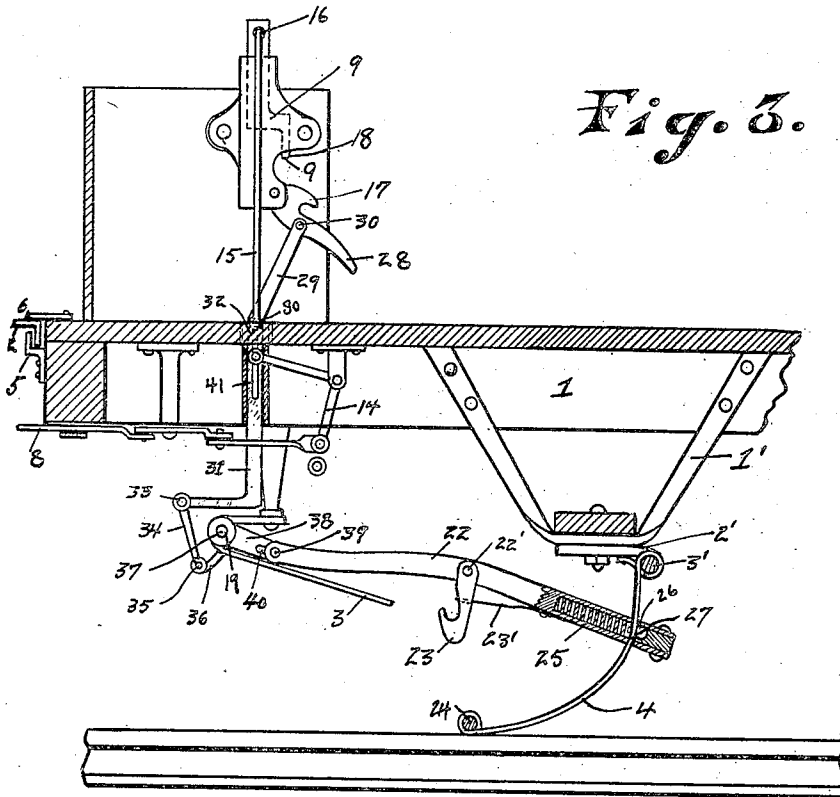


Fig. 3.

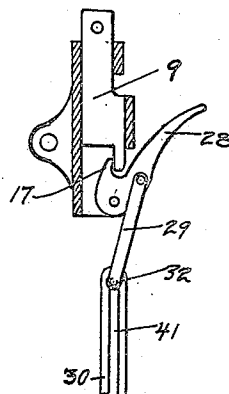


Fig. 4.

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CAR-FENDER.

No. 838,983.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALBERT E. GUMZ, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Car-Fenders, of which the following is a specification.

My invention relates to improvements in car-fenders; and it comprises, among other things, three interdependent cooperating parts—namely, first, a front guard yieldingly supported from the platform of the car; second, a series of resilient fingers connected at one end to a rigid supporting-bar, which bar is pivotally suspended beneath the platform, and, third, a carrying-scoop also pivotally suspended from such platform in rear of said resilient fingers, said carrying-scoop being normally in an elevated position above the car-supporting track, while the resilient fingers are located in a vertical position with their lower ends in close proximity to such track, said several parts being so connected that when the front guard is brought in contact with a person or other obstruction it will be thrown back, and thereby release the retaining mechanism of said resilient fingers, whereby when said fingers are brought in contact with an obstruction they will be thereby thrown backwardly and release the carrying-scoop, when said carrying-scoop will be automatically thrown down in close proximity to the track and in a position to pick up and carry the person or thing with which said guard and fingers have been brought in contact.

My invention is further explained by reference to the accompanying drawings, in which—

Figure 1 is a side view thereof in connection with a car, part in section. Fig. 2 is a bottom view of the device. Fig. 3 is a detail showing the position of the fingers and carrying-scoop in a reversed position to that shown in Fig. 1; and Fig. 4 is a detail, part in section, showing the mechanism for retaining the carrying-scoop in a raised position.

Like parts are identified by the same reference-figures throughout the several views.

1 represents the front platform of a car; 2, the front guard, which is suspended therefrom; 3, the resilient fingers, and 4 the carrying-scoop. The guard 2 is preferably re-

movably connected with the platform by a plurality of retaining-brackets 5, which engage in the retaining-keepers 6 or in any other convenient manner. The central portion of the guard is connected to a bracket 7, which extends downwardly in contact with the longitudinal slide 8 in such a manner that as an obstruction is brought against the front side of the guard the said bracket 7 will be thrown rearwardly, thereby communicating a longitudinal rearward movement to said slide 8, whereby motion is communicated to the locking mechanism 9 of the resilient fingers 3, by which the action of the resilient fingers 3 is controlled, and whereby said fingers are released from such locking mechanism preparatory to being thrown rearwardly by contact with any resistance which may be brought to bear against them. Motion is communicated to the locking mechanism 9 from the slide 8 through the pin 10, lever 11, pin 12, link 13, elbow-crank 14, and vertical rod 15, which rod 15 is pivotally connected at its upper end in aperture 16 with said locking mechanism 9. Thus it is obvious that as said slide 8 is thrown rearwardly by contact of said bracket 7 said rod 15 being acted upon through the mechanism described will be thrown upwardly, carrying with it said locking mechanism 9, whereby the retaining-hook 17 will be released from the lug 18 of said locking mechanism, when said resilient fingers 3 will be free to be thrown rearwardly, as stated, when brought against an obstruction. When said resilient fingers are thus released and thrown rearwardly by contact with the obstruction, the hook 23, which supports the carrying-scoop 4, will be disengaged from said scoop, when said scoop will be automatically thrown downwardly from the position shown in Fig. 1 to that shown in Fig. 3, motion being communicated from the finger-supporting shaft 19 to the supporting mechanism of the carrying-scoop through the arm 20, arm-connecting pin 21, and supporting-bar 22, said bar 22 being provided with a supporting-hook 23, which is adapted to engage the connecting-rod 24, by which the lower ends of the bars which form the carrying-scoop are connected together. When the rod 24 has been thus released from engagement with the hook 23, said carrying-scoop will not only be caused to move downwardly by

its own gravity, but it will also be acted upon by the recoil of the spiral spring 25, which is located in the free end of the arm 22 and bears against the center of the bar 26, which bar is connected at its respective ends to the two most central bars 27 27 of the scoop, whereby said spring, acting with gravity, will cause said scoop to be thrown downward the instant it is released from said catch 23.

After the obstruction has been removed said scoop is brought to a horizontal position (indicated in Fig. 1) by raising the lever 28 until the hook 17 is again brought into engagement with the lug 18 and locking mechanism 9, motion being communicated from the lever 28 to said scoop through the link 29, pivotal connection 30, vertical moving L-shaped bar 31, pivotal connections 32 and 33, link 34, pivotal connection 35, arm 36, finger-supporting bar 37, arm 38, pivotal connection 39, operating in elongated aperture 40, and from thence to said scoop-supporting hook 23, through said bar 22, whereby it is obvious that by raising the free end of said arm 28 said scoop 4 will be brought from the vertical position (shown in Fig. 3) to substantially the horizontal position, (shown in Fig. 1,) while said resilient fingers 3 will be brought from the substantial horizontal position (shown in Fig. 3) to the vertical position. (Shown in Fig. 1.) The upper end of the bar 31 is provided with an elongated slot 41 for the reception of the pivotal connection 32 of the link 29. Thus it is obvious that the locking mechanism 9 may be raised and the lever 28 released and the pivotal connection 32 moved downwardly in said slot 41 without communicating any motion to the vertical moving bar 31 or without actuating the resilient fingers 3, and, if desired, such parts may be normally used in such condition without the locking mechanism being engaged with the hook 17, in which case the carrying-scoop 4 will also be released as soon as any obstruction will be brought in contact with the resilient fingers 3, whether such obstruction has been brought in contact with the guard 2 or not. Whenever it is desirous to operate a car with the fingers down, as might be the case when running a car over a snow-covered track, said fingers will be locked in the vertical position when the hook 17 is brought into engagement with the locking mechanism 9, and said resilient fingers will not be thrown rearwardly and the carry-

ing-scoop 4 will not be thrown downwardly until said guard has first been brought in contact with an obstruction, as previously described.

The rear end of the carrying-scoop is pivotally connected with the platform of the car 1 through the bracket 1', supporting-bars 2', and pivotally-connecting rod 3'. The scoop-supporting hook 23 is pivotally connected with the bar 22 by the pin 22', and said hook is yieldingly retained at right angles to its supporting-bar 22 by the spring-plate 23'.

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

1. In a car-fender the combination of a guard yieldingly suspended from the front platform of a car, a carrying-scoop suspended beneath the platform, a series of normally vertical fingers interposed between the said guard and carrying-scoop, means for locking said fingers in their vertical position, means for locking said carrying-scoop in its raised position, means actuated by said guard when moved rearwardly for releasing said vertical fingers from said locking mechanism and means actuated by said fingers when inclined rearwardly for releasing said carrying-scoop from its retaining mechanism.

2. In a car-fender the combination of a guard yieldingly suspended from the front platform of a car, a carrying-scoop suspended beneath the platform of a car, a series of normally vertical fingers interposed between said guard and carrying-scoop, means for simultaneously raising said carrying-scoop from the vertical to the horizontal position and lowering said series of fingers from their raised to the vertical position, and means for locking said scoop and fingers in such positions by the manual act of a person, means actuated by said guard when moved rearwardly for releasing said vertical fingers from their retaining mechanism, and means actuated by said fingers when inclined rearwardly for simultaneously releasing said carrying-scoop and throwing the same from its raised to its vertical position, substantially as specified.

In testimony whereof I affix my signature in the presence of two witnesses

ALBERT E. GUMZ.

Witnesses:

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