

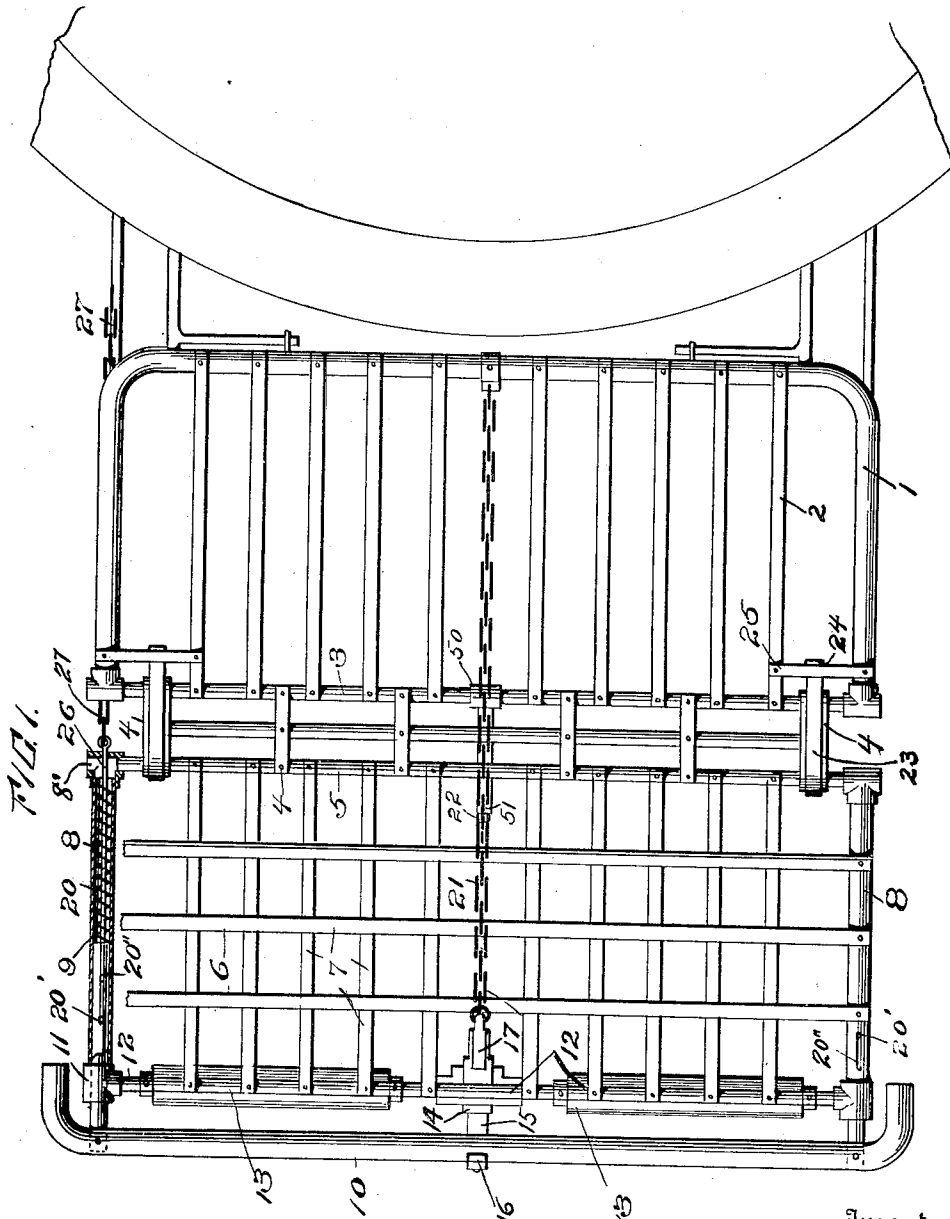
A. L. PATTERSON & A. M. FERGUSON.
CAR FENDER.

APPLICATION FILED JULY 21, 1913.

1,125,877.

Patented Jan. 19, 1915.

2 SHEETS-SHEET 1.



Witnesses
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W. H. Wakefield

Inventors
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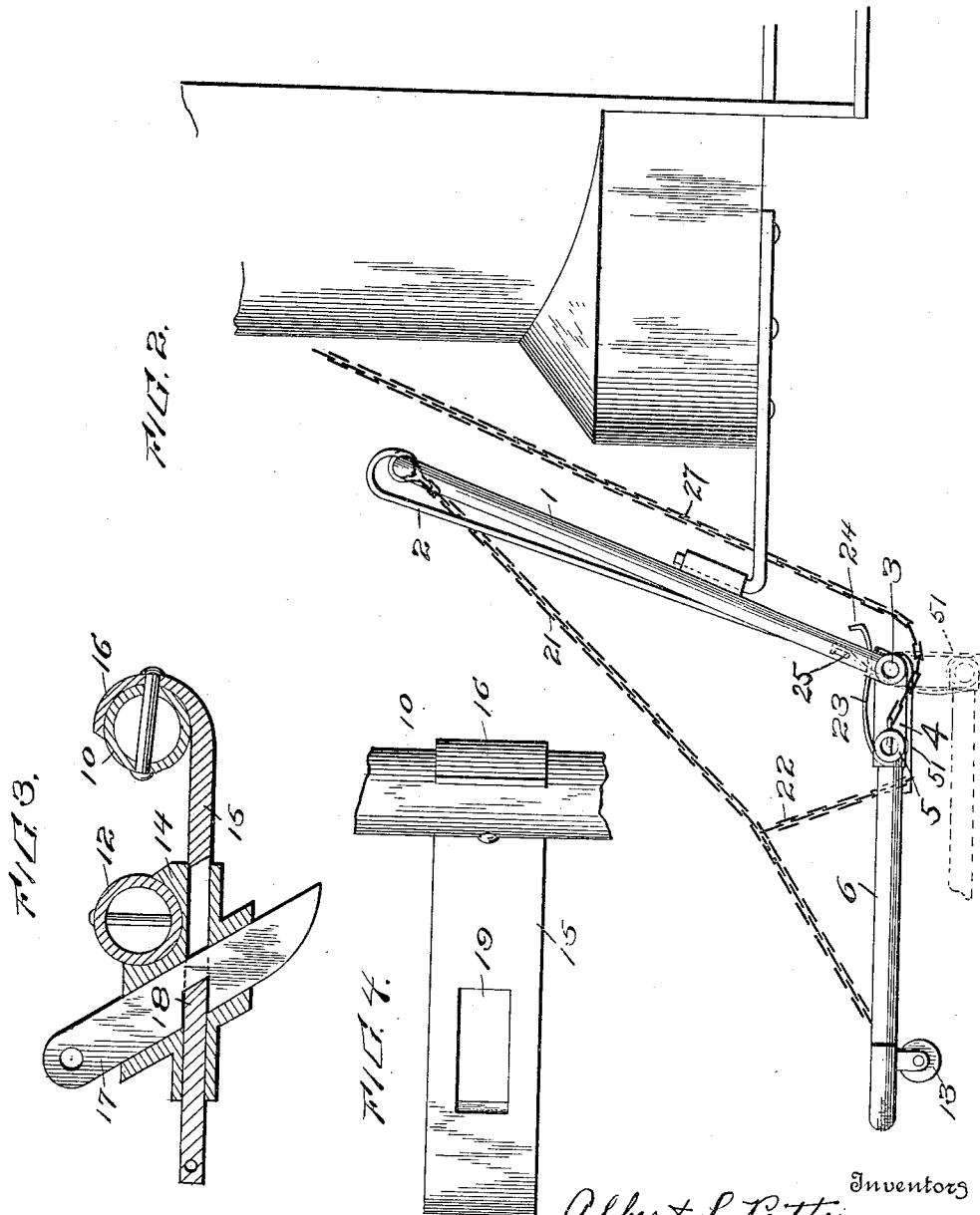
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UNITED STATES PATENT OFFICE.

ALBERT L. PATTERSON AND ALBERT MILTON FERGUSON, OF SEATTLE, WASHINGTON,
ASSIGNORS TO NATIONAL AUTOMATIC FENDER COMPANY, OF SEATTLE, WASHINGTON, A CORPORATION.

CAR-FENDER.

1,125,877.

Specification of Letters Patent.

Patented Jan. 19, 1915.

Application filed July 21, 1913. Serial No. 780,273.

To all whom it may concern:

Be it known that we, ALBERT L. PATTERSON and ALBERT M. FERGUSON, citizens of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Car-Fenders; and we 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.

This invention relates to improvements in car fenders, and an object of the invention is to provide a two-part fender, one of which parts is adapted to be lowered in case of an emergency, the lowering of the section being accomplished automatically when the obstacle engages the fender.

A further object of the invention is to provide a car fender with a pivoted section with means for limiting the backward movement of the said pivoted section.

A still further object of the invention is to provide means under control of the motor-man or other car attendant which will enable him to drop the pivoted section of a two-part fender at will.

With these and other objects in view, the invention consists in certain novel constructions, combinations and arrangements of the parts as hereinafter fully described, and then specifically pointed out in the claims.

In the drawings, where like reference characters designate corresponding parts, Figure 1 is a top plan view of the fender as applied to the front part of the car, part of the fender being shown in section; Fig. 2 is a side elevation of the fender showing the same in normally elevated position, the dotted position indicating the lowered position of the pivoted section; Fig. 3 is a vertical section through the support-releasing device; Fig. 4 is a top plan view of the trip shown in Fig. 3.

This invention is an improvement upon the device shown in the application filed June 29, 1912, Serial No. 706,783, which application was filed by Harry T. Williams-Eaton. The application above referred to has a movable section pivoted to a rigidly held section of the car fender, and provided with means for releasing the pivoted mem-

ber so that the latter may drop to a lower position when desired, but it is found that the means employed in that application for dropping the member does not limit the backward movement thereof. This backward movement of the pivoted member is undesirable, and it is the object of the present invention to provide simple means which will effectively limit this backward movement of the dropping section of the car fender.

Referring to the drawings, it will be seen that the car, shown diagrammatically, is provided with suitable means for supporting a stationary section 1 of the fender, which is provided with the usual flexible straps 2 and a lower cross rod 3, forming part of the frame of the section 1. Pivotally connected to the rod 3 is a plurality of links 4, the lower ends of which are adapted to receive a rod 5 forming part of the frame of a movable section 6, this section 6 being provided with the usual net or lattice work 7. Pivotally mounted on each end of the bar 5 is a fitting 8' secured to the tube 8 within each of which tubes 8 is slidably mounted a slide rod 9 pivotally connected at the outer end thereof with a cross bar 10. The slide rods 9 are adapted to pass through collars 11, and are guided in their movement by the sides of the tube 8. Extending between the collars 11 is a rod 12, which is adapted to support in any suitable way, a pair of rollers 13, which are adapted to engage the track or road bed when the movable or pivoted section 6 is dropped to its lowermost position.

Rigidly connected at the central portion of the bar 12, is a bracket 14, through which passes a trip rod 15, the outer end of which is turned at 16 to receive the obstacle-engaging bar 10. Passing through the bracket 14 and preferably at an angle, as shown at Fig. 3, is a catch or trigger 17 provided with a catch slot 18 which is adapted to pass through an opening 19 in the trip rod 15. The springs 20, mounted within the tubes 8, exert a constant pressure outwardly upon the rods 9, so that the oppositely engaging bar 10 is normally in its outermost position, so that the catch 17 is normally held in the opening 19 of the trip 15. In order to limit the inward movement of the obstacle-engag-

ing bar 10, each of the rods 9 is provided with a pin 20' which passes through a corresponding slot 20'' in the tube 8, this feature being shown in Fig. 1.

5 Pivottally connected to the upper end of the catch 17, is a suitable chain 21, the upper end of which chain is secured in any suitable manner to the stationary member 1. If desired, an auxiliary chain 22 may be
10 connected at a suitable point with the chain 21, and connected also to the cross bar 5 of the pivoted section 6 for the purpose of supporting said section 6.

From the structure thus far described, it
15 will be noted that when an obstacle is engaged by the bar 10, the rods 9 will be pushed backward into the tubes 8 against the springs 20, the rod 13, in its backward movement, carrying with it the trip 15. As
20 soon as the trip 15 moves backwardly sufficient to release the trigger 17, the section 6 will swing downwardly to the dotted position shown in Fig. 2, about the rod 3 as a pivot. The length of the upper end of the
25 chain 21 and the auxiliary chain 22, is made sufficient to admit of this downward movement of the section 6.

In order to prevent the section 6 from moving too far backwardly, there is secured
30 in any suitable manner, to a suitable number of the links 4, resilient strips 23, the outer end 24 of these resilient strips being hooked, as shown most clearly in Fig. 2. Secured to the stationary section 1 of the fender, is a
35 corresponding number of braces 25, these braces being so located upon the member 1, as to engage the hook 24 when the movable section has assumed approximately the position shown in dotted lines in Fig. 2. In this
40 position, the resilient member 23 will engage the cross rod 3, and effectively prevent any further backward movement of the pivoted member 6.

In order that the motorman or other car
45 attendant may have it within his power to drop the section 6 at will, there is secured to the rod 9 an auxiliary rod 26 which is connected at its outer end with the chain 27 leading to the car. This auxiliary rod 26
50 may be provided on one side of the movable section 1 or upon both sides, as may be desired. Inasmuch as the chain 27 is connected to the rod 9, which is pivottally connected to the cross bar 10, it will be seen that
55 any pull upon said chain 27, will accomplish the same result as though the cross bar 10 had engaged an obstacle and the catch 17 will be released with the result that the movable section 6 will fall into its lowermost position.
60

It will thus be seen that this invention provides a fender and movable section which is provided with means for effectively limiting the backward movement of said movable
65 section, and further, that it is within the

power of the attendant to drop such movable section whenever desired. It will also be noted that the means for automatically dropping the pivoted section acts to positively release the supporting chain.

In order to hold the rear end of the movable section in the position shown in Fig. 2, there is pivottally mounted upon the rod 3 the sleeve 50 having extending therefrom an arm 51 rigid with the sleeve. The lower end
75 of the length of chain 22 is secured to the end of the arm 51 as shown in Fig. 2. When the forward end of chain length 21 is released the weight of the movable section will fall upon the arm 51 which being pivottally connected to the member 3 will rotate to allow the movable section to fall to the dotted line position shown in Fig. 2.

What we claim is:

1. In a car fender, a stationary section,
85 links pivoted to the stationary section, a movable section pivoted to the links, resilient members secured to the links and provided with hooks, braces secured to the stationary member and adapted to be engaged
90 by the hooks as the removable section drops, and means for dropping the latter.

2. A two section car fender having one section pivottally connected to the other section, a resilient member pivottally connected
95 to one of said sections and provided with a hook at one end thereof, a brace rigid with the other section and adapted to be engaged by the hook of the resilient member when the first named section drops, and means for
100 dropping said first named section.

3. A two-section car fender having one of said sections held rigidly and the other section pivottally connected thereto, means for dropping the pivoted section, and means
105 pivoted to the pivoted section adapted to engage the rigidly held section for limiting the movement of the pivoted section.

4. In a car fender, a pivottally mounted section, an obstacle-engaging bar yieldingly
110 mounted in the section, supporting means detachably engaging the section, a trip secured to the said bar and adapted to release the supporting means when the bar yields, and a flexible member connected to said bar
115 and adapted to draw the said bar in the yielding direction.

5. In a car fender a pivottally mounted section, an obstacle engaging bar yieldingly
120 mounted within the pivottally mounted section, supporting means detachably connected to the pivottally mounted section, and means secured to the obstacle engaging bar for detaching the supporting means when the bar engages an obstacle.
125

6. In a car fender, a pivottally mounted section, an obstacle-engaging bar slidably
130 mounted on the pivoted section, a supporting member provided with a catch and a trip secured to and moving with the obsta-

cle-engaging bar and normally engaging the catch, the trip being adapted to release the catch when the said bar engages an obstacle.

7. A car fender comprising a stationary member, a movable member pivoted thereto, an arm pivoted to the stationary member extending under the rear of the movable section, a supporting element extending from the stationary member to the forward end of the movable member and an auxiliary supporting element secured to the first mentioned supporting element secured to the end of said arm, and means adapted to release the first mentioned supporting element from the movable element.

8. A car fender comprising a stationary member, links pivoted thereto, a movable member pivoted to the links, an arm pivoted

to the stationary member and extending under the rear portion of the movable member, a flexible supporting element connecting the forward end of the movable member with the fixed member, an auxiliary flexible supporting element extending from the first-named supporting element and connecting with the end of said arm, and means adapted to release the first mentioned supporting element from the movable element.

In testimony whereof we affix our signatures in presence of two witnesses.

ALBERT L. PATTERSON.
ALBERT MILTON FERGUSON.

Witnesses:

G. WARD KEMP,
W. B. NEIGHBORS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."