C. LIBERMAN.

VEHICLE FENDER.

APPLICATION FILED MAY 25, 1917. RENEWED DEC. 17, 1918.

1,293,485. Patented Feb. 4, 1919.

Fig. 1.

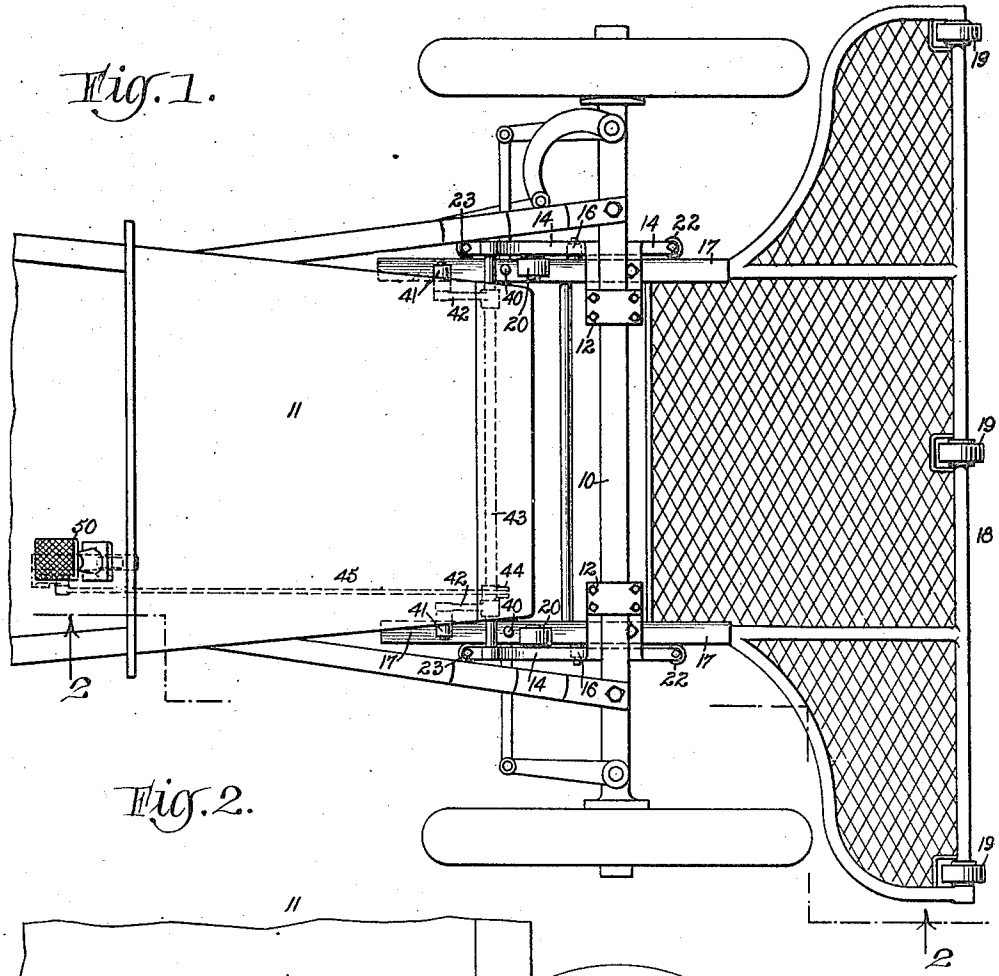


Fig. 2.

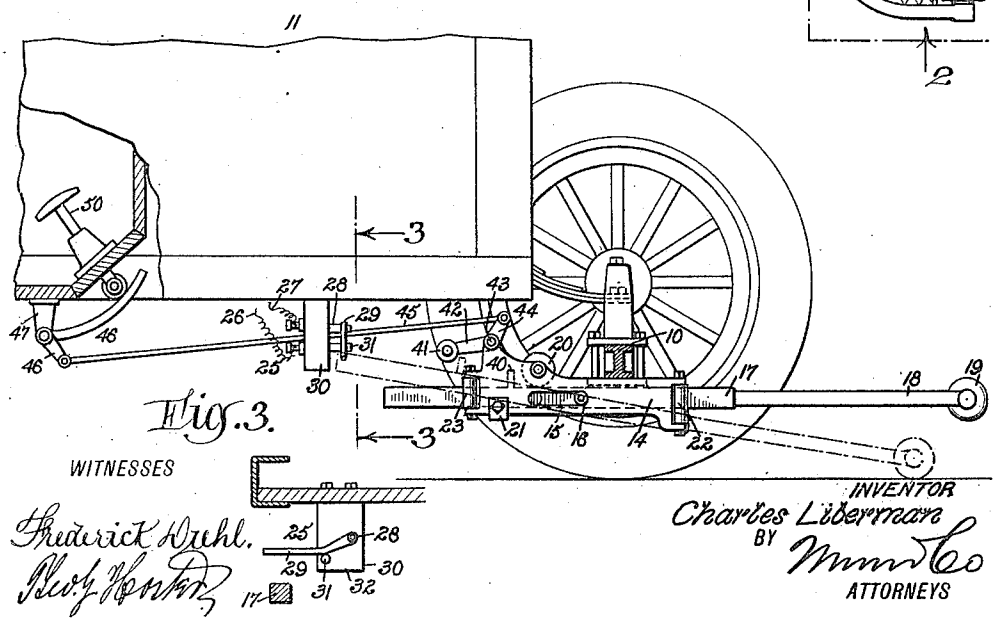


Fig. 3.

WITNESSES

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VEHICLE-FENDER.

1,293,485. Specification of Letters Patent. Patented Feb. 4, 1919.

Application filed May 25, 1917, Serial No. 170,892. Renewed December 17, 1918. Serial No. 267,214.

To all whom it may concern:

Be it known that I, CHARLES LIBERMAN, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Vehicle-Fender, of which the following is a full, clear, and exact description.

The invention relates to fenders, such as shown and described in the application for Letters Patent of the United States, No. 137,300, filed by me on December 16, 1916.

The object of the present invention is to provide a new and improved fender for automobiles, street cars and other vehicles, and arranged to normally clear ordinary obstacles in the roadway and adapted to swing downward into catching position on striking a person, with a view to pick up and safely retain such person and to automatically stop the vehicle.

In order to accomplish the desired result, use is made of a movable fender and a circuit breaker for the vehicle motor and controlled by the said fender to stop the motor automatically when the fender is actuated on striking a person or other obstacle in its path.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the fender as applied to an automobile;

Fig. 2 is a sectional side elevation of the same on the line 2—2 of Fig. 1; and

Fig. 3 is a cross section of the same on the line 3—3 of Fig. 2, and showing more particularly the circuit breaker or switch for the ignition device of the motor.

The fender illustrated in the drawings is shown attached to the front axle 10 of an automobile 11, and for this purpose use is made of clips 12 fastened to the front axle 10. The clips 12 are provided with longitudinally extending supporting arms 14 provided with slots or guideways 15 engaged by rollers 16 journaled on the side bars 17 of the apron frame 18 normally extending forward in an approximately horizontal position, as plainly indicated in Fig. 2. The front end of the apron frame 18 is provided with suitable wheels or rollers 19 adapted to travel on the roadway in case the apron frame is swung downward, as hereinafter more fully explained.

In order to hold the apron frame 18 in normal horizontal position use is made of friction rollers 20 journaled on the side bars 14 directly above the rear ends of the slots 15 at the time the apron frame 18 is in a forward position so that the side arms 17 of the apron frame bear against the under side of the friction rollers 20. It will be noticed that normally the friction rollers 16 which form the fulcrum for the apron frame 18 are in the forward ends of the slots or guideways 15, as plainly shown in Fig. 2. When the vehicle moves forward and the front end of the apron frame 18 strikes a person or other obstacle in the roadway then the impact causes the apron frame 18 to slide rearwardly with the friction rollers 16 sliding rearwardly in the slots or guideways 15, and when the friction rollers 16 reach the end of the guideways 15 then the apron frame 18 swings downward by its own weight and that of the person struck, so that the rollers 19 of the apron frame 18 travel on the roadway and the apron frame is held in a slightly inclined position, that is, rearwardly and upwardly to readily accommodate a person and thus safely hold the same from being run over by the vehicle.

In order to prevent the apron frame 18 from accidentally swinging upward when in forward position, use is made of brackets 21 attached to the side bars 14 and extending under the side arms 17 in the rear of the slots or guideways 15. In order to ease the sliding movement of the apron frame use is made of vertically disposed rollers 22 and 23 journaled on the side bars 14 at the forward and rear ends thereof. The friction rollers 22 and 23 are in contact with the outer faces of the side bars 17 to insure an easy sliding movement of the apron frame 18.

In order to automatically stop the vehicle at the time the apron frame moves rearward and swings downward use is made of a circuit breaker 25 arranged in the circuit wires 26 and 27 of the ignition device for the motor of the vehicle 11. The circuit wire 27 is connected with the pivotal end 28 of a switch lever 29 fulcrumed on a bracket 30 depending from the under side of the vehicle body. The switch lever 29 rests on a pin 31 connected with the circuit

wire 26, and a spring 32 presses the switch lever 29 to normally hold the latter in contact with the pin 31. Normally the switch lever 29 is in closed position but when the apron frame 18 moves rearward and swings downward then the rear end of one of the side arms 17 engages the free end of the switch lever 29 and swings the same upward out of engagement with the contact pin 31 thus breaking the ignition circuit and thereby stopping the motor of the vehicle 11. It is understood that the vehicle 11 tends to move forward after the motor is stopped by its own momentum and until either the latter is spent or the brakes are applied to bring the vehicle to a stop.

In order to permit the driver of the vehicle to reset or return the apron frame 18 to normal horizontal position, the following arrangement is made: On the top of the side bars 17 of the apron frame and in the rear of the friction rollers 20 are arranged pins 40 adapted to be engaged by friction rollers 41 mounted on arms 42 attached to a transversely extending shaft 43 journaled on the side bars 14. On the shaft 43 is secured an arm 44 connected by a link 45 with a bell crank lever 46 fulcrumed on a bracket 47 attached to the under side of the body of the vehicle 11. The free arm of the bell crank lever 46 is engaged by a pedal 50 under the control of the driver of the vehicle 11. The parts just described are normally in the position shown in Figs. 1 and 2 and when the apron frame 18 is in rearmost position, as indicated in dotted lines in Fig. 2, then the pins 40 are immediately in front of the friction rollers 41, and when the driver now presses the pedal 50 when a swinging motion is given to the arms 42 whereby the friction rollers 41 engage the pins 40 and push the same forward and with them the side bars 17 of the apron frame 18 to cause the latter to swing upward back to normal horizontal position and to travel forward until the friction rollers 16 are engaged by the forward ends of the guideways 15.

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

1. An automobile or other power driven vehicle provided with a support, an apron frame mounted to slide and to swing on the said support and having arms extending rearward from the fulcrum of the apron frame, members mounted on the support and engaging the rearward arms of the said apron frame to hold the latter in horizontal position until it moves rearwardly when the arms move out from under the members and the frame swings downwardly, and a circuit breaker having a movable member and arranged in the ignition circuit of the vehicle, the said circuit breaker member being adapted to be engaged by one of the said arms of the apron frame to break the circuit when the apron frame slides rearwardly and tilts.

2. A fender for automobiles and other vehicles, comprising a support adapted to be secured to a vehicle and provided with lengthwise extending guideways, an apron frame having side arms provided with rollers engaging the said guideways, and friction rollers journaled on the said support above the rear ends of the said guideways and engaging the said side arms of the apron frame normally hold the latter in an approximately horizontal position and to allow the apron frame to swing downward on the said apron frame rollers as the fulcrum on the said apron frame rollers moving into rearward position in the said guideways.

3. A fender for automobiles and other vehicles, comprising a support adapted to be secured to a vehicle and provided with lengthwise extending guideways, an apron frame having side arms provided with rollers engaging the said guideways, friction rollers journaled on the said support above the rear ends of the said guideways and engaging the said side arms of the apron frame to normally hold the latter in an approximately horizontal position and to allow the apron frame to swing downward on the said apron frame rollers as the fulcrum on the said apron frame rollers moving into rearward position in the said guideways, and brackets on the said support in the rear of the guideways for the said side arms to rest on and to prevent upward swinging of the apron frame.

4. In a fender, a support adapted to be secured to a vehicle, an apron frame mounted to slide and swing, means for holding the apron frame in approximately horizontal position until it moves rearwardly when said frame swings downwardly, a pivoted arm adapted to engage the apron frame to depress its rear end and to slide it forwardly, and means for operating said arm.

5. In a fender, a support adapted to be secured to a vehicle, an apron frame having arms mounted to slide and tilt on said support, said arms being provided with projections, means engaging the arms to hold them in a horizontal position, a transverse shaft provided with arms adapted to engage the arms to depress them and then to engage the projections of said arms to slide them forwardly, and means for operating said shaft.

CHARLES LIBERMAN.

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