(No Model.)

W. R. FOWLER.

SAFETY CAR FENDER.

No. 515,581. Patented Feb. 27, 1894.

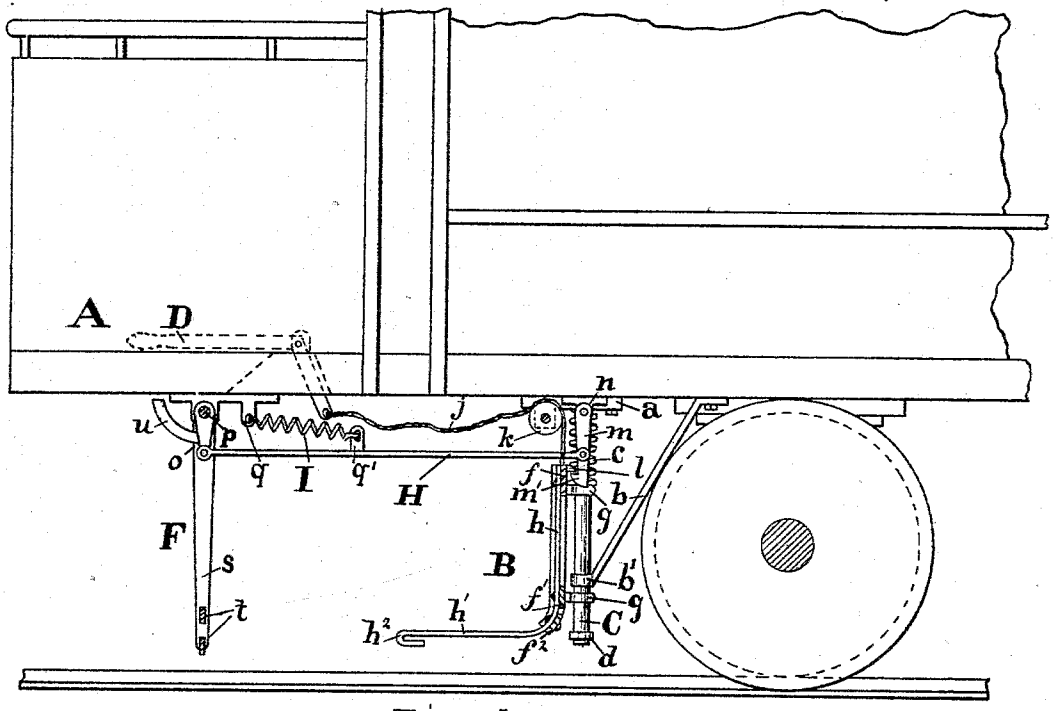

Fig. 1.

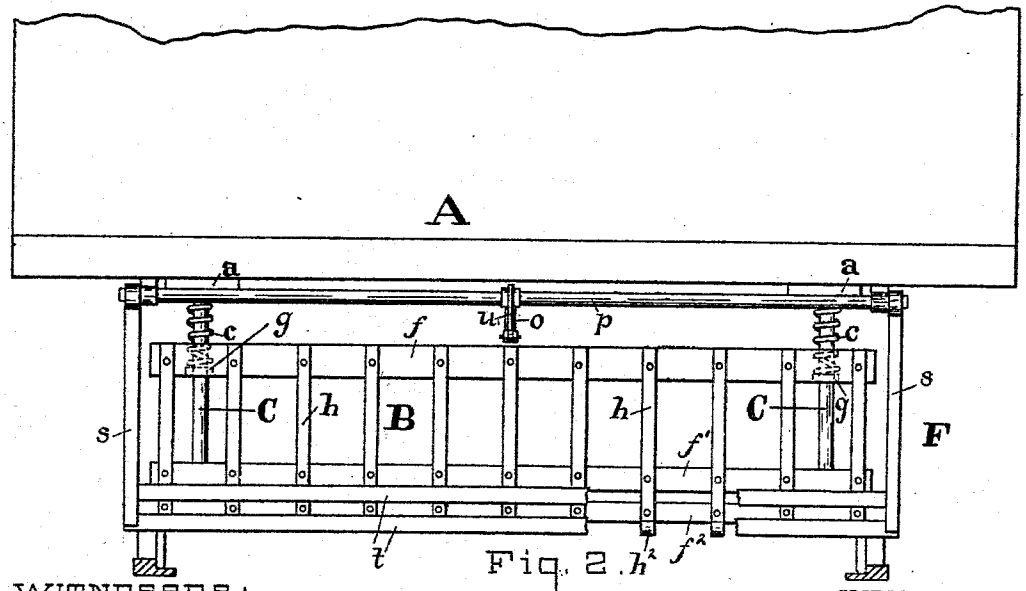

Fig. 2.

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SAFETY CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 515,581, dated February 27, 1894.

Application filed September 27, 1893. Serial No. 486,595. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. FOWLER, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Safety Car-Fenders, of which the following is a specification.

This invention relates to an automatic safety fender for street cars, and its object is to provide a fender which will automatically drop to a position flush with the street surface when a person is run down by the car and receive and hold the person in a safe position until the car is stopped. I have shown in the accompanying drawings means for carrying the same into practical effect in order to clearly demonstrate the invention, though the invention is not limited to the precise construction shown.

Referring to the drawings,—Figure 1 is a side elevation and partial section of the invention applied to a car. Fig. 2 is a front view of the same, a portion of the transverse bars on the swinging frame being broken away.

A designates the front of a car to which the safety fender, B, is applied. In the present instance a platform is shown, but it is immaterial whether the car has a platform or not, as the invention may be as readily applied to cars without platforms. The fender, B, is supported by two pendent rods, C, which are suitably secured to blocks, *a*, bolted to the under side of the car-frame; to prevent backward movement these rods have inclined braces, *b*, the upper ends of which are bolted to the car and the lower ends formed into an eye, *b'*, which embraces the pendent rod; each rod also has at its upper part, a spiral spring, *c*, and at its lower end a head or stop, *d*, both for a purpose to be presently described. The fender, B, has transverse bars, f, f', f^2, two of which have eyes or clips, *g*, which embrace the pendent rods, C, loosely, so that thereby the fender can slide freely up and down on the said rods when desired. Slats, *h*, constructed of spring metal are bent substantially at a right-angle and have their vertical portion attached to the said transverse bars, their lower and horizontal portion, *h'*, projects forward a suitable distance and their front ends are turned down and back to form a hook-like blunted end, h^2; the lower transverse bar, f^2, braces the horizontal portion of the slats but leaves each one separate and free to yield vertically. The spiral spring, *c*, on each of the pendent rods, C, presses down against the eyes or clips, *g*, on the upper transverse bar, *f*, and normally keeps the fender in a lowered position, in which instance the hook-like ends, h^2, of the fender-slats will slide along the surface of the ground when the car is moving, the spring metal of which they are formed yielding sufficiently to prevent breakage. A lever, D, shown in dotted lines in Fig. 1, is on the car-front in proximity to the position of the motorman or gripman, and a cord, chain or wire, *j*, has one end attached to the lever and the other end secured to the upper part of the fender; between the lever and fender the cord passes over a pulley, *k*. The purpose of this lever and cord is to enable the gripman or motorman to raise the fender, when down, to a position above the street surface where it is held by a suitable mechanism which will now be described. The upper bar of the fender carries a projecting lip, *l*, and a latch, *m*, having a curved broadened lip, *m'*, at its free end, is pivoted at its upper end to a bracket, *n*, so as to swing freely; the lip, *m'*, of the latch engages the lip, *l*, on the fender and thereby holds the fender up; one end of a rod, H, is pivoted to the latch, *m*, and projects forward of the fender and the other end is pivoted to a depending arm, *o*, which is rigid on a horizontal rod, *p*. A bracket, *q*, has a hole through which one end of a spiral spring, I, is passed, and the rod, H, has an upwardly projecting lug, *q'*, with a hole to receive the other end of the spring; this spring draws the rod and latch normally forward, so as to keep the latch engaged with the lip on the fender. A swinging frame, F, is attached to the aforesaid rod, *p*, forward of the fender; this frame comprises vertical arms, *s*, rigidly attached to and depending from either end of the said rod, *p*, and the arms are connected at their lower ends by transverse bars, *t*, in the present instance two in number. When the frame, F, swings the rod, *p*, rocks and causes the arm, *o*, to swing.

From the above description it will be seen that when a person is run down by the car and is struck by the swinging frame, the latter forces the rod, H, back, and it in turn disengages the latch, *m*, from the lip, *l*, on the fender, whereupon the springs, *c*, on the pendent rods, C, force the fender down to a position where the back-turned ends, h^2, of the slats are flush with the street surface where they will prevent a person passing under the wheels of the car by scooping the person up on the horizontal portion, *h'*; the downward movement of the fender is limited by the stop, *d*, on the pendent rods. When it is desired to elevate the fender the motorman or gripman by operating the lever, D, raises the fender, and the lip, *l*, thereon strikes against the curved lip, *m'*, and then engages with it by reason of the action of the spring, I, connected with the rod, H. A stop, *u*, attached to the arm, *o*, limits the forward movement of the swinging-frame and latch, so that the latter is always in position to engage the lip, *l*, of the fender.

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

1. A safety fender for street cars comprising rigid pendent rods; a fender attached loosely to and vertically movable on said rods and provided with a projecting lip; springs on the pendent rods serving to force the fender downward; a pivoted latch having a lip-hook to engage the lip on the fender, a pendent swinging-frame forward of the fender; and a rod attached to the pivoted latch and operated by the swinging frame to release it.

2. A safety fender for street cars comprising rigid pendent rods; a fender attached loosely to and vertically movable on said rods and provided with a projecting lip; springs on the pendent rods serving to force the fender downward; a pivoted latch having a lip-hook to engage the lip on the fender; a pendent swinging-frame forward of the fender; a rod attached to the pivoted latch and operated by the swinging-frame to release it; a lever on the car; a roller; and a cord attached to the lever and to the fender and passing over the roller, whereby the fender may be elevated.

3. A safety fender for street cars comprising rigid pendent rods; a fender attached loosely to and vertically-movable on said rods and provided with a projecting lip; springs on the pendent rods serving to force the fender downward; a pivoted latch to engage the lip on the fender; a pendent swinging-frame forward of the fender; a rod attached to the latch and operated by the swinging-frame; a spring, I, to restore the latch to its normal position for engagement with the said projecting lip on the fender and hold it in such engagement; and a stop limiting the forward movement of the swinging-frame and latch.

4. A safety fender for street cars having in combination a fender provided with spring-metal slats each bent to form a vertical and also a horizontal portion the latter having a bent-back or hook-like end and said fender connected with the car so as to have a vertical movement; springs to force the fender downward; a latch having a lip-hook to sustain the fender elevated; a pendent swinging-frame forward of the fender; and a connection between the latch and swinging-frame which is operated by said swinging-frame to disconnect the latch.

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

WILLIAM R. FOWLER.

Witnesses:

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