

(No Model.)

J. O'DONNELL.
CAR FENDER.

No. 548,815.

Patented Oct. 29, 1895.

Fig. 1.

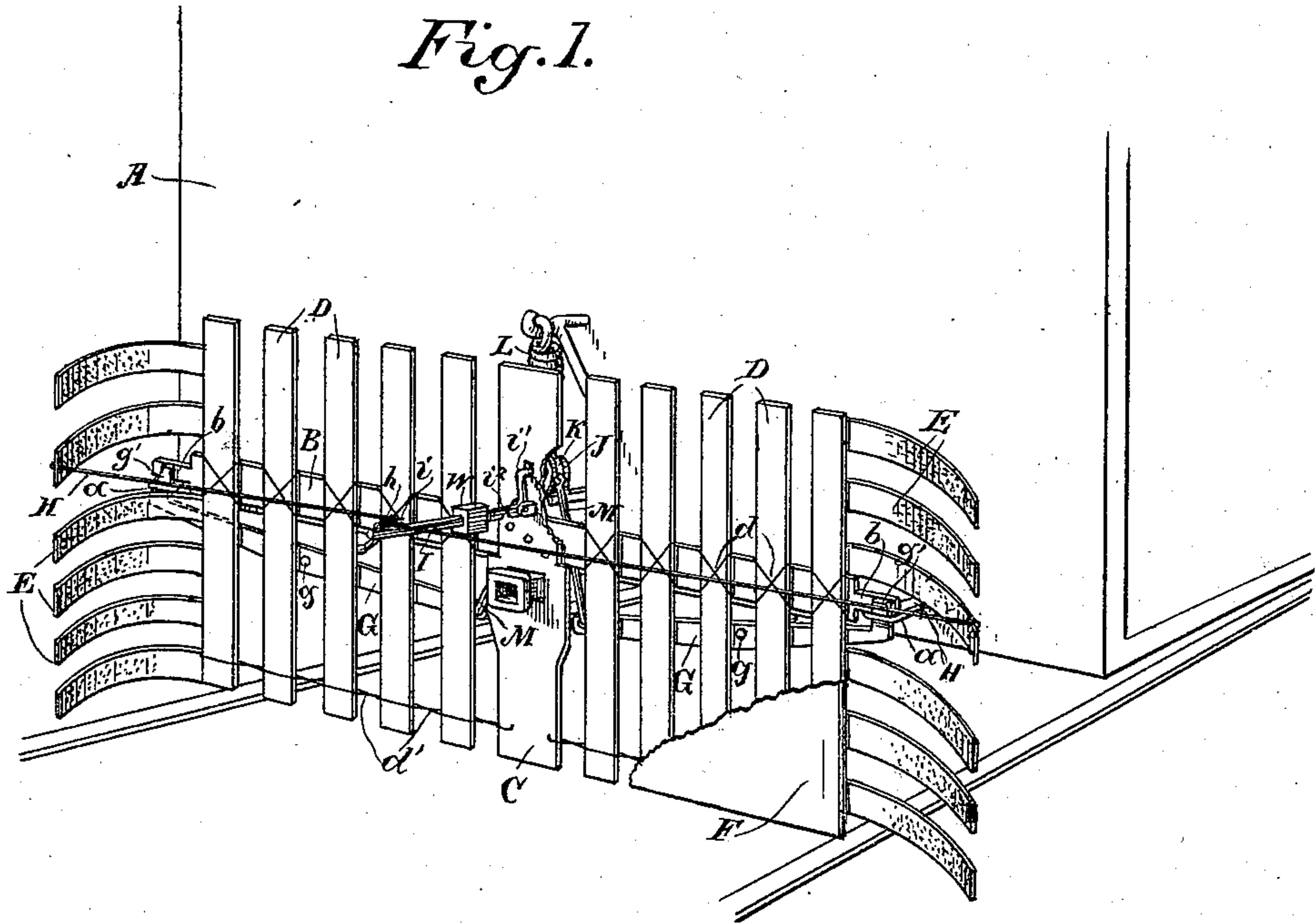
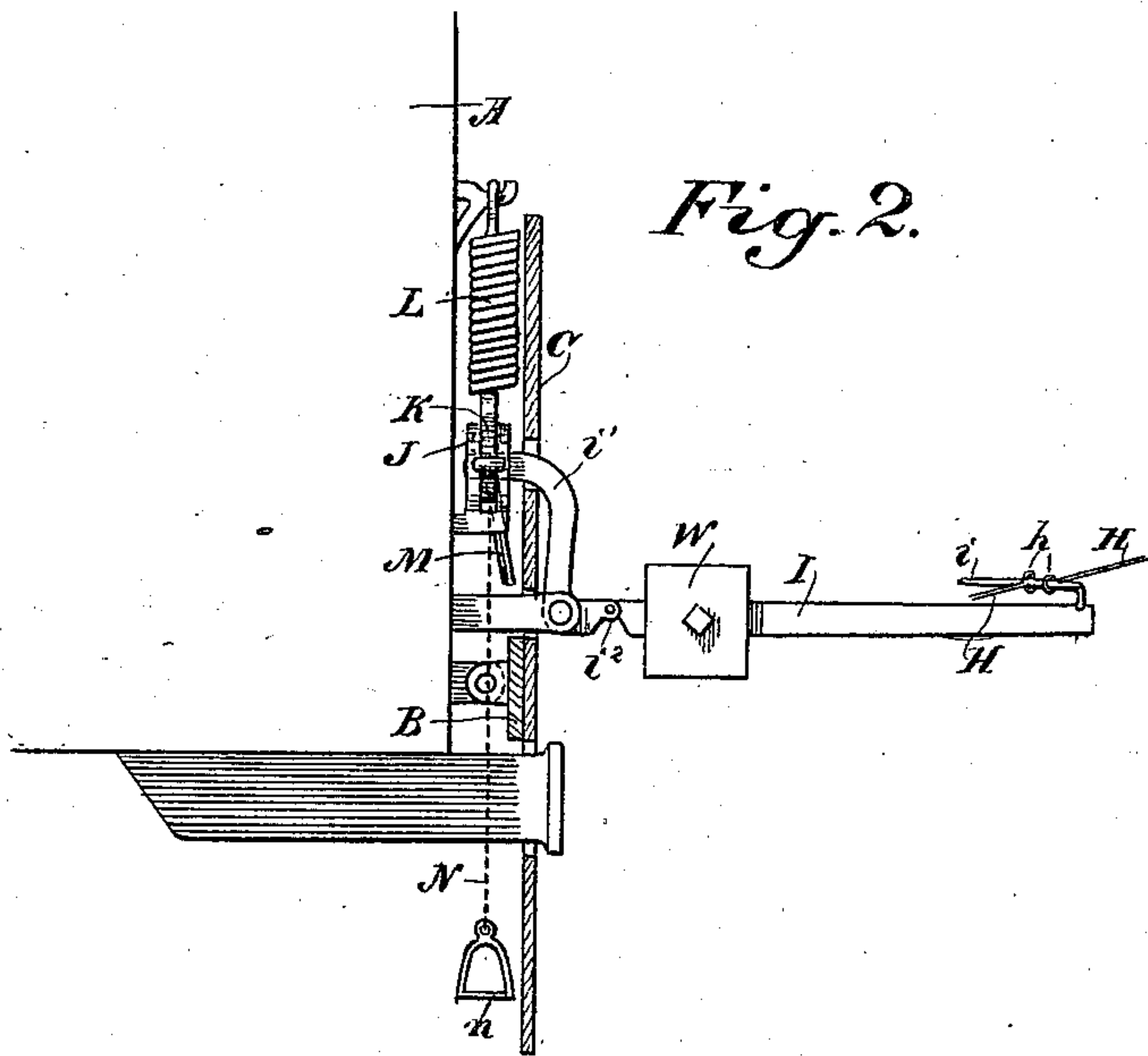


Fig. 2.



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UNITED STATES PATENT OFFICE.

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CAR-FENDER.

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Application filed July 8, 1895. Serial No. 555,316. (No model.)

To all whom it may concern:

Be it known that I, JAMES O'DONNELL, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Car-Fenders; and I hereby declare the following to be full, clear, and exact description of the same.

My invention relates to fenders or safety-guards for cars; and it consists, essentially, in a shield having a normal tendency to fold, whereby it is adapted to embrace the obstructing body, means for holding said shield expanded and open when not in use, and means which are best controlled by contact with the obstructing body for tripping said shield and allowing it to fold.

It also consists in details of construction, arrangement, and combination which I shall hereinafter fully describe and specifically claim.

The object of my invention is to provide a fender or safety-guard which shall secure against accident by reason of immediately grasping and sustaining the obstructing body and preventing it from being knocked down.

In many safety-guards the necessary result of striking the body is to overthrow or knock it down, and this, while regarded as a necessity, has been ameliorated, as to consequences, as much as possible, by providing for striking a cushioned blow or otherwise preventing the injury, which is likely to result from the overthrow. In contradistinction to this my guard is intended to avoid knocking the body down, and this result is accomplished by providing means for seizing or grasping the body, so that it will be prevented from falling down under the contact with the fender.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my fender. Fig. 2 is a vertical central section of same.

A represents the front of the car. B is a plate-spring horizontally disposed across the car-front, and having secured to it, at its middle, the main central bar C, extending vertically.

Other vertical bars D are secured to the plate-spring B at intervals throughout its length, and I prefer, in order to avoid weak-

ening said plate-spring, to secure the bars D thereto by means of lashings of suitable nature, as shown at *d*, and said bars are also secured together by lashings *d'* below. Only the central main bar C is riveted to the plate-spring B. At the ends of this frame or structure formed by the spring B and the bars C and D are curved fingers E, those on one side lying in different horizontal planes to the corresponding ones on the other side, so that when the device folds up said fingers pass between one another.

The spring B is so made that its normal tendency is to fold up, thereby contracting the entire frame into substantially a cylindrical shape with the fingers intermeshing. This framework is to be suitably padded or cushioned, a portion of the cushion being shown at F, said pad or cushion being of any suitable nature, tending to prevent injury. The framework or shield thus formed is held in an expanded or open position across the front of the car by the following means: Levers G, pivoted at *g* to suitable brackets extending from the car, have their outer extremities formed into hooks *g'*, which pass up through staples *a*, extending from the car-front, and said hooks lie directly in front of the ears *b*, projecting from the ends of the plate-spring B. When thus in place, the levers G hold the plate-spring B in an expanded or open position. To trip these levers and allow the shield to fold, I have the following mechanism:

Secured to the ends of the shield and extending across its concave front is a cord, line, or wire H, severed at its middle, and its severed ends provided with rings *h*. These rings fit loosely over a backwardly-extending hook *i* on the end of the horizontal arm of a bell-crank lever I, the vertical arm of which is provided with a point *i'*, which plays through the extremity of a bracket J, extending from the car-front, and through an intervening eye K on the end of a spring L, secured to the car-front above. To this eye K are secured the upper ends of links M, the lower ends of which are connected with the levers G.

A weight W is placed upon the horizontal arm of the lever I to insure its action, and in order to overcome the binding effect or cramping of the point *i'* in the bracket J and eye K, I form an abutting hinge-joint *i''* in

the horizontal arm of lever I, whereby the weighted end will acquire sufficient momentum, before bringing up against the joint, to insure by its descending force the withdrawal of the point *i'*.

The operation of the device is as follows: The shield being expanded or opened is held in that position by means of the hooks *g'* of the levers G, which said levers remain in this position by gravity. When an obstructing body is met and comes in contact with the trigger wire or line H, it forces inwardly the severed ends of said line, thereby throwing its rings *h* off the hook *i* of the lever I. Said lever thereupon drops and withdraws its upper point *i'* from the eye K. Thereupon said eye being free, the spring L immediately draws it upwardly and through the links M raises the inner ends of the levers G, thereby drawing down their hooks *g'* and freeing the ears *b* of the spring B, and thereupon the whole shield collapses or folds around the obstructing body and grasps or seizes it and prevents it from falling.

In order to set the device ready for operation again, I have a chain or cord N connected with the lower end of the eye K, said chain or cord having on its lower end a ring *n*. By standing in front of the guard and with the hands pressing its ends backwardly to an open position the foot may be placed in the ring *n* and the eye K drawn downwardly, thereby allowing the levers G, by gravity, to return to their locking position.

The framework or structure comprising the shield may be made of a light, yielding, and springy nature, so as to avoid injury as much as possible, and its width may be proportioned to the necessities of the case.

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

1. A car fender consisting of a shield, the normal tendency of which is to fold around an obstructing body, said shield having horizontally spaced fingers at its ends adapted to pass between each other when the shield is folded, means for holding said shield in an expanded or open position, ready for use, and means for tripping the holding devices whereby the shield may fold upon the obstructing body.

2. A car fender consisting of a shield, the normal tendency of which is to fold about an obstructing body, said shield having its outer free sides provided with horizontal spaced fingers adapted to pass between each other when the shield is folded, means for holding said shield in an open or expanded position, ready for use, and means adapted by contact with the obstructing body, to trip the holding devices to permit the shield to fold around said body.

3. A car fender consisting of a shield having a horizontally disposed controlling spring, the tendency of which is to fold said shield about the obstructing body, said spring having its sides formed or provided with spaced

fingers, with the fingers at one side lying in a different plane to the corresponding fingers on the other side whereby said fingers pass between each other when the shield folds up, means for holding the shield in an open or expanded condition ready for use, and means for tripping said holding devices to permit the shield to fold around the obstructing body.

4. A car fender consisting of a shield composed of a horizontally disposed spring plate in front of the car, the normal tendency of said plate being to fold up to encircle the obstructing body, suitable bars secured in vertical planes to said spring, and a pad or cushion covering the frame or structure, means for holding said shield in an open or expanded position, and means for tripping the holding devices to permit it to fold.

5. A car fender consisting of a shield composed of a horizontally disposed spring plate in front of the car, the normal tendency of said plate being to fold up to encircle the obstructing body, suitable bars secured in vertical planes to said spring, curved fingers at each end adapted to pass between each other, and a pad or cushion covering the frame or structure, means for holding said shield in an open or expanded position, and means for tripping the holding devices to permit it to fold.

6. A car fender consisting of a shield, the normal tendency of which is to fold about an obstructing body, means for holding said shield in an open or expanded position, consisting of pivoted levers having hooks adapted to pass in front of the ends of the shield, and bearings secured to the car for holding said hooks, and means for tripping the levers to permit the shield to fold.

7. A car fender consisting of a shield, the normal tendency of which is to fold about an obstructing body, means for holding said shield in an open or expanded position, consisting of pivoted levers having hooks adapted to pass in front of the ends of the shield, and bearings secured to the car for holding said hooks, and means for tripping the levers to permit the shield to fold consisting of the spring-controlled vertically movable eye, the links connecting the eye with the levers, and means for controlling said eye.

8. A car fender, consisting of a shield, the normal tendency of which is to fold about an obstructing body, means for holding said shield in an open or expanded position, consisting of pivoted levers having hooks adapted to pass in front of the ends of the shield, and bearings secured to the car for holding said hooks, and means for tripping the levers, to permit the shield to fold, consisting of the spring-controlled vertically movable eye, the links connecting the eye with the levers, the bell-crank lever adapted to hold and relieve said eye, said lever having a hook and the cross line or cord having the rings engaging said hook and adapted to be released therefrom by contact with an obstructing body.

9. A car fender, consisting of a shield, the

normal tendency of which is to fold about an obstructing body, means for holding said shield in an open or expanded position, consisting of pivoted levers having hooks adapted to pass in front of the ends of the shield, and bearings secured to the car for holding said hooks, and means for tripping the levers to permit the shield to fold consisting of the spring-controlled vertically movable eye, the links connecting the eye with the levers, the bell-crank lever adapted to hold and relieve said eye, said lever having a hook and a butt-joint or hinge in its horizontal arm, and the cross line or cord having the rings engaging said hook and adapted to be released therefrom by contact with an obstructing body.

10. A car fender consisting of a shield, the normal tendency of which is to fold about an obstructing body, means for holding said shield in an open or expanded position, con-

sisting of pivoted levers having hooks adapted to pass in front of the ends of the shield, and bearings secured to the car for holding said hooks, and means for tripping the levers, consisting of the spring-controlled vertically movable eye, the links connecting the eye with the levers, the bell-crank lever adapted to hold and relieve said eye, said lever having a hook, and the cross line or cord having the rings engaging said hook and adapted to be released therefrom by contacting with an obstructing body, and the depending line for drawing the eye down again to reset the fender.

In witness whereof I have hereunto set my hand.

JAMES O'DONNELL.

Witnesses:

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JESSIE C. BRODIE.