

(No Model.)

E. B. CLARK.
CAR FENDER.

No. 552,348.

Patented Dec. 31, 1895.

Fig. 1

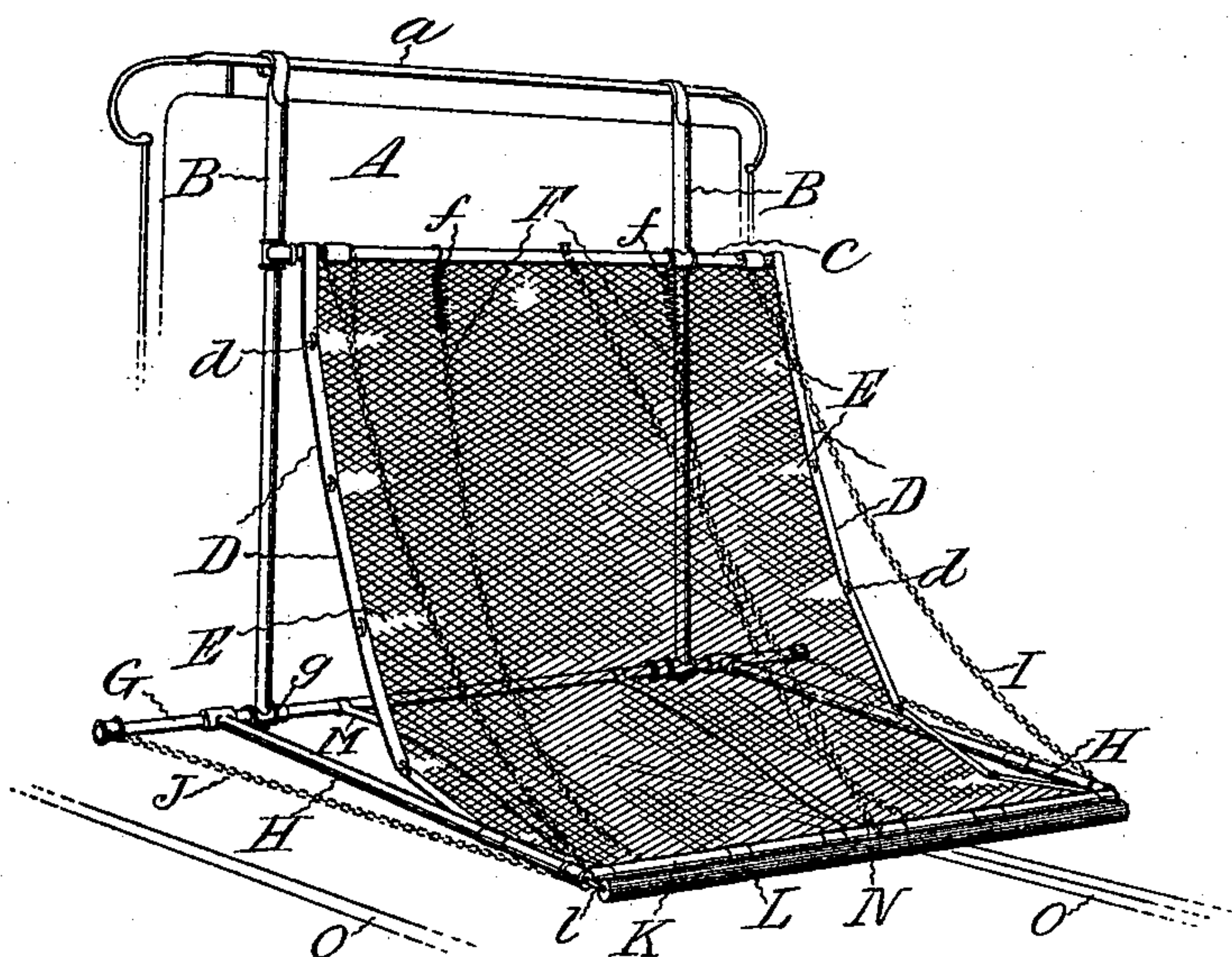
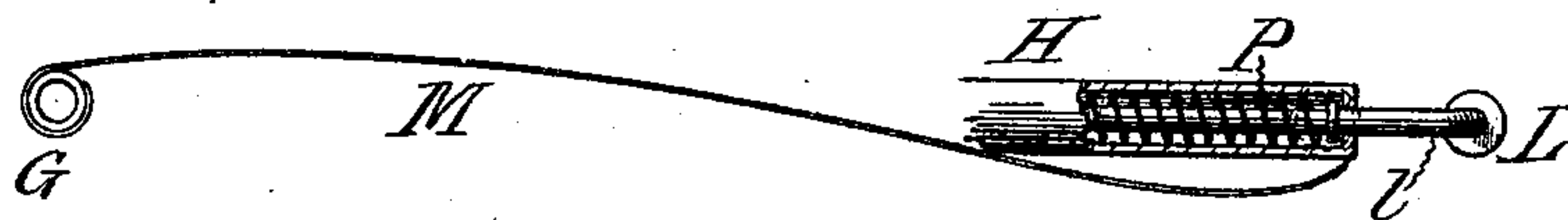


Fig. 2



Witnesses:

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UNITED STATES PATENT OFFICE.

ELIJAH B. CLARK, OF COHOES, NEW YORK.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 552,348, dated December 31, 1895.

Application filed October 25, 1895. Serial No. 566,925. (No model.)

To all whom it may concern:

Be it known that I, ELIJAH B. CLARK, a citizen of the United States, residing at Cohoes, in the county of Albany and State of New York, have invented certain new and useful Improvements in Car-Fenders; and I 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.

The object of my invention is to provide a car with a fender which shall be simple and strong in construction and effective in operation. This I accomplish by the means illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a fender embodying my invention applied to a car. Fig. 2 is a side view, partly in section, of a runner and forward end of frame-bar.

As illustrated in the drawings, the fender-frame is composed of a vertical section and a vertically-movable horizontal section. The vertical section is composed of the vertical bars B and cross-bar C, and the horizontal section is composed of the longitudinal bars H, front cross-bar K, and rear cross-bar G, which rotates in a bearing *g*, so as to permit the horizontal section to be folded up against the car. The frame may be, if desired, provided with an auxiliary bar L, which has its ends bent parallel, and inserted in the forward hollow ends of the longitudinal bars H, which hollow ends also contain spiral spring P, which bears against the parallel ends of the bar L. This cross-bar L is preferably covered with rubber tubing. An apron is secured at its upper end to the upper cross-bar C of the frame, and at its lower end to the lower front cross-bar K. This apron is made reticulated in form and is preferably composed of wire-cloth. The side edges of the apron are provided with binding-strips D, which are flexibly connected together by means of a ring *d* or other similar means. The sides of the apron are also provided with laterally-extending cut-away portions *e*, which take away the natural tendency of a wire-netting to rebound when an object is thrown onto it. Stay-cables F are placed back of the apron to help sustain any weight that may be imposed on the apron itself, and these cables are provided

with springs *f* to permit the cables to conform to the apron. Spring-runners M, which also serve as braces to the frame, extend from the cross-bar G of the frame to the front cross-bar K, and are curved downward slightly at their forward ends to bear with such portions against the track. I prefer to extend the lower cross-bar G of the frame outward and to extend a guard-cable J from the outer end of such bar to the forward end of the bar H of the frame. A lifting-chain N, or other suitable device is connected at its lower end to the forward lower portion of the frame and its upper end may be detachably secured in any suitable manner to the upper bar C, or to the car itself. The front end of the horizontal frame is supported by the cables I.

The lower section of the fender is ordinarily held slightly above the ground by means of the lifting-chain N, in substantially the position indicated in Fig. 1 of the drawings. When an obstacle is met in the path of the car, the operator, by releasing the upper end of the lifting-chain N, permits the forward end of the fender to drop at once to the ground, with the forward ends of the runners in contact with the rails. The yielding cross-bar L as it strikes such obstacle is pressed back slightly by means of the spiral springs P, so as to reduce the shock. A rubber tubing catches or picks up such an obstacle more readily than a bar having a hard outer surface. When the forward end of the frame is raised into a perpendicular position by means of the lifting-chain N, the car-coupling is exposed so that another car may be attached, if desired.

The entire fender may be readily removed from the car by lifting the frame vertically and releasing the curved end of the bars B from the forward end of the car.

What I claim is—

1. In a car fender, an apron having its sides provided with laterally extending cutaway portions and binding strips flexibly connected together, substantially as shown and described.

2. In a car fender, the combination of a main frame having a vertical section, and a vertically movable horizontal section, and an apron having its sides provided with binding strips flexibly connected together, and with

laterally extending cutaway portions, substantially as shown and described.

3. In a car fender, the combination with a frame having a vertical section, and a pivoted
5 horizontal section; of an apron, an auxiliary bar covered with yielding material and having its ends connected with springs, and spring runners extending from the front to the rear of said horizontal section, substantially as
10 shown and described.

4. In a car fender, the combination with a main frame having a vertical section and a

vertically movable horizontal section, of an apron having its sides provided with binding strips flexibly connected together, and with
15 laterally extending cut away portions, and stay cables beneath said apron provided with springs, substantially as shown and described.

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

ELIJAH B. CLARK.

Witnesses:

ROBERT W. HARDIE,
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