

(No Model.)

F. I. CLARK.
SAFETY CAR FENDER.

No. 520,255.

Patented May 22, 1894.

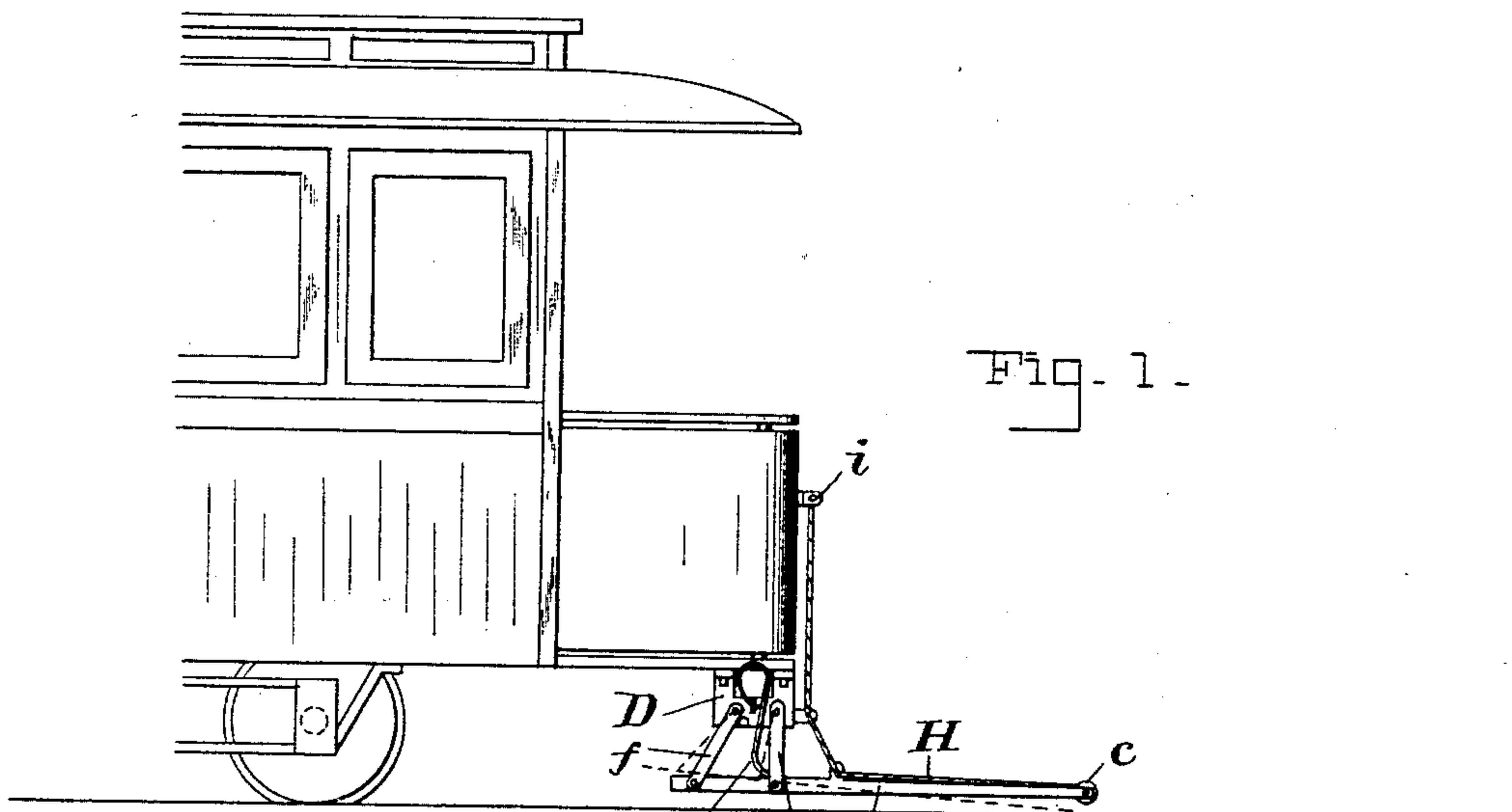


Fig. 2.

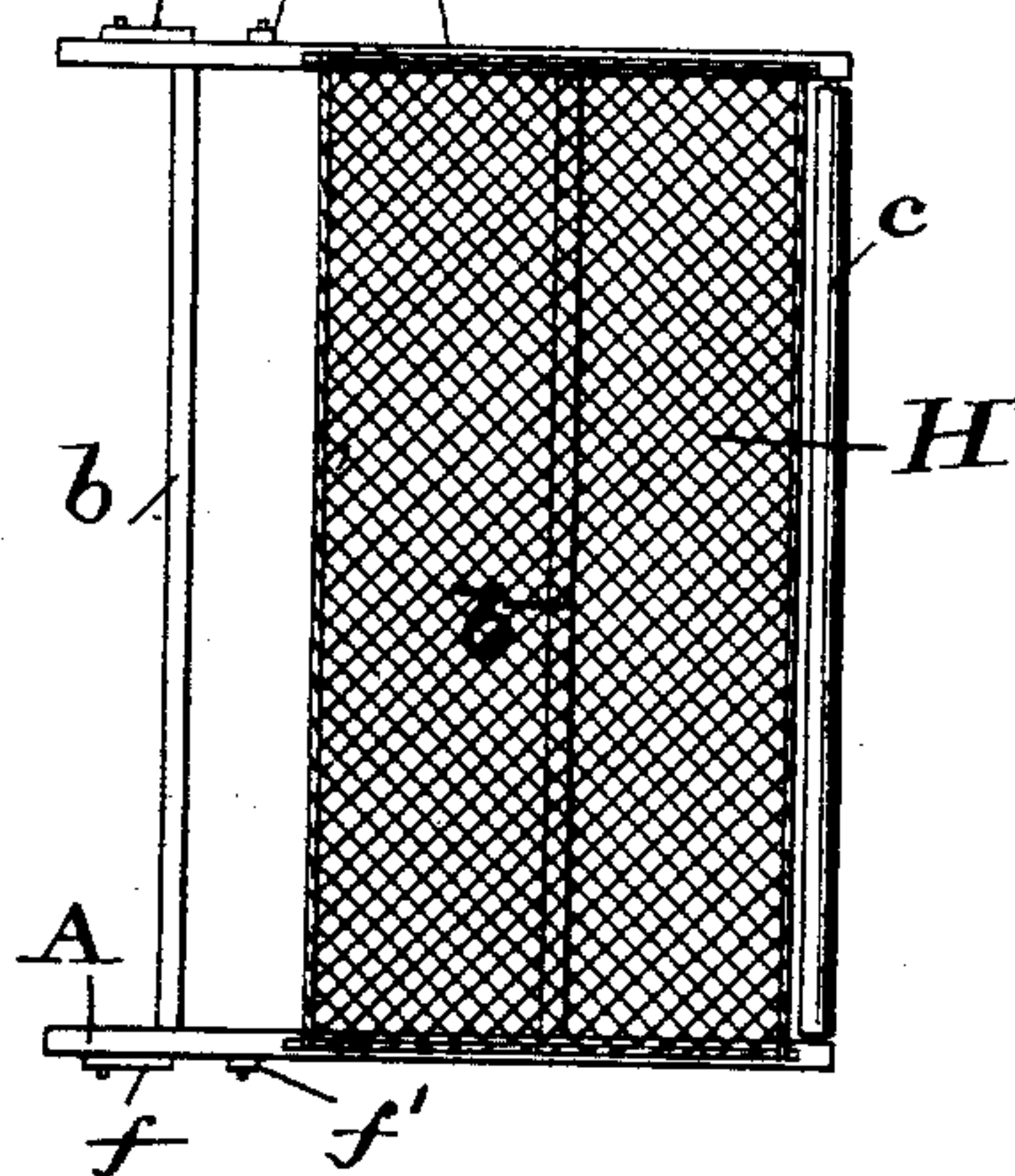
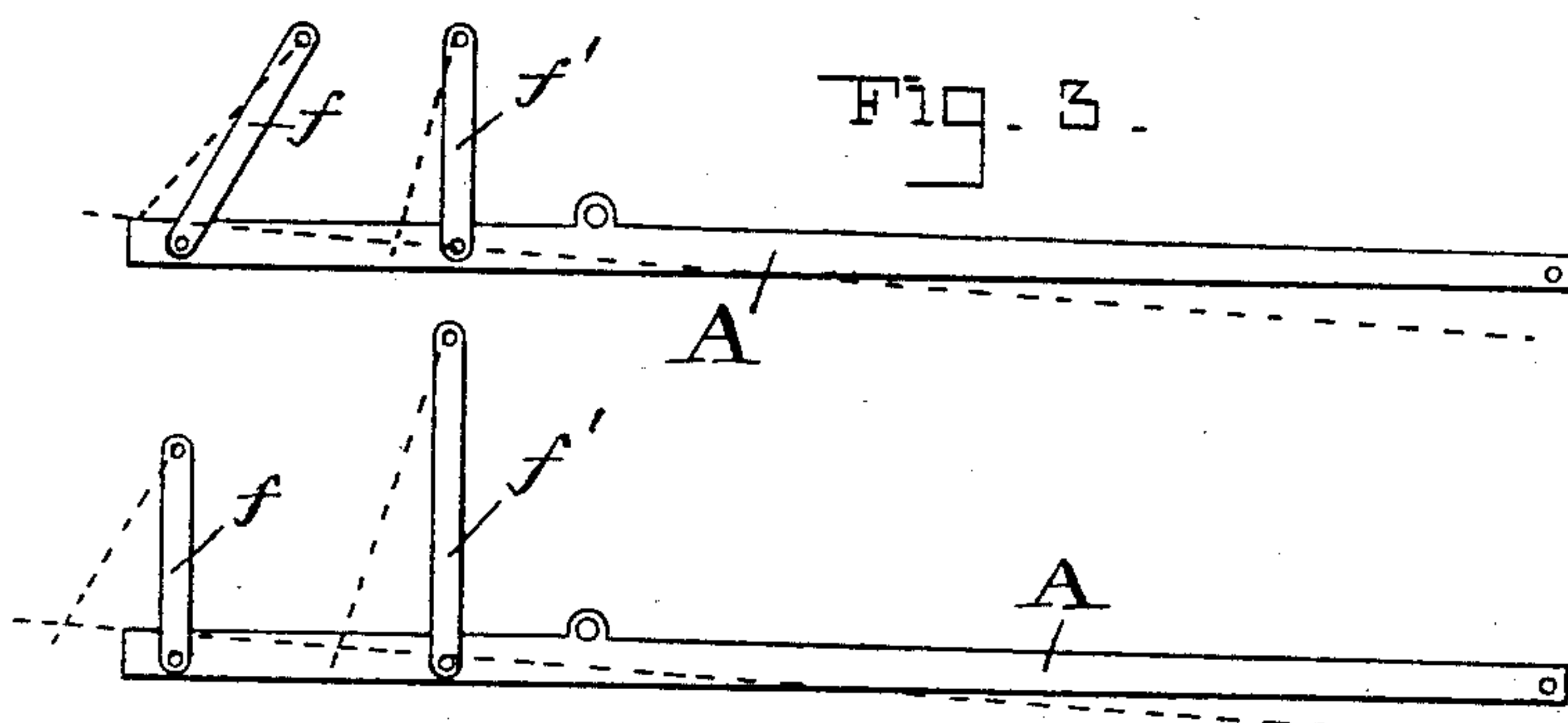


Fig. 3.



WITNESSES:

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Fig. 4.

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SAFETY CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 520,255, dated May 22, 1894.

Application filed January 29, 1894. Serial No. 498,300. (No model.)

To all whom it may concern:

Be it known that I, FRANK I. CLARK, 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.

My invention relates to an improvement in safety fenders for street cars, and has for its object to provide means to cushion the shock or impact received by a person who may be run down by the car, and to support the front edge of the fender when the car is running at a certain elevation above the street surface and to cause the said front edge of the fender to automatically drop to a position flush with the street surface, to prevent said person from getting under the car wheels, as will be hereinafter described.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a car embodying my invention,—the lowered position the fender automatically takes when an obstruction on the track is encountered, being indicated by broken lines. Fig. 2 is a top view of the fender. Fig. 3 is a detail of the fender arm and the supporting links attached thereto. Fig. 4 shows a modification of the supporting links.

The fender frame comprises two side arms, A, connected by transverse rods, b, and having at the front edge a roller, c, which may have a sheathing or covering of rubber or other elastic material; this frame is filled with woven wire, or woven rope, or canvas to form a platform. Two hangers or supports, D, are connected to the car—one on each side near the front thereof,—the fender frame or platform is hung to the lower extremity of the hangers by means of two pivoted links, f, f', the pivotal points of attachment of said two links being a greater distance apart on the side arms, A, than on the said hanger, D, whereby the platform may swing back and forth, and the peculiar effect is that in the backward swing the front edge of the platform will incline down toward the street surface. A spring, g, in the present instance is on each hanger and is attached by one end to the hanger, and by its other end to the swinging side arm, A, and its functions are,

first, to cushion the shock or impact which occurs when the fender or platform strikes an object, and, second, to maintain the fender or platform so that its front edge will be elevated a certain distance above the street surface, and to allow it to swing back and tilt or drop down when it strikes an object, and then, when the object is removed, to return the fender to its normal raised position. I prefer to have a netting, H, of rope, wire or other suitable material suitably attached to the side arms and to the front roller and then extending continuously from the roller back to the hangers and then up to a transverse connecting rod, i, on the car-front where its upper portion is attached.

The operation is as follows: When a person is run down by the car and is struck by the roller, c, the impact will cause the platform to move backward and its front edge to incline downward, so that the roller will be in contact with the street surface, and any further forward movement of the car will cause the said person to be scooped or picked up and deposited on the platform, where he will be held in a safe position until the car is stopped. A separate fender may be on each end of the car, or the fender from one end may be readily removed and attached to the opposite end.

While I have shown my invention as being applied in front of the car, it is obvious that it may be attached below the platform of the car, if desired, and still be as effective in operation, although not projecting in front. In the present instance the pivotal points of attachment of the two links, f, f', to the fender frame have a greater distance apart than the pivotal points of attachment to the hangers, and this gives the desired result, but the greater distance between the pivotal points may be on the hanger and a similar result be obtained.

Fig. 4 shows a modification in the arrangement of the supporting links, wherein one of the links is longer than the other and the two links are parallel.

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

1. In a safety fender for street cars, the combination of suitable hangers attached to

the car; a fender frame or platform which is normally raised above the street surface; two links pivotally connected by one end to each hanger and by the other end to the fender frame or platform, the pivotal points of attachment to one of said parts being of a greater distance apart than the pivotal points of attachment to the other part,—the said links serving to swing the fender backward and incline the front edge thereof downward when an object is encountered; and a spring to automatically raise said fender from the lowered inclined position and maintain it so that its front edge will be elevated.

2. In a safety fender for street cars, the combination of suitable hangers, D, attached

to the car; a fender frame or platform having the two side arms, A; and two links, *f, f'*, pivotally connected by one end to each hanger and by the other end to the fender frame or platform,—the pivotal points of attachment of said two links to one of said parts being of a greater distance apart than the pivotal points of attachment to the other part, substantially as described.

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

FRANK I. CLARK.

Witnesses:

THOS. C. BAILEY,

GEO. M. S. CROWLEY.