(No Model.)

H. B. WILLIAMS.

STREET CAR FENDER.

No. 496,146. Patented Apr. 25, 1893.

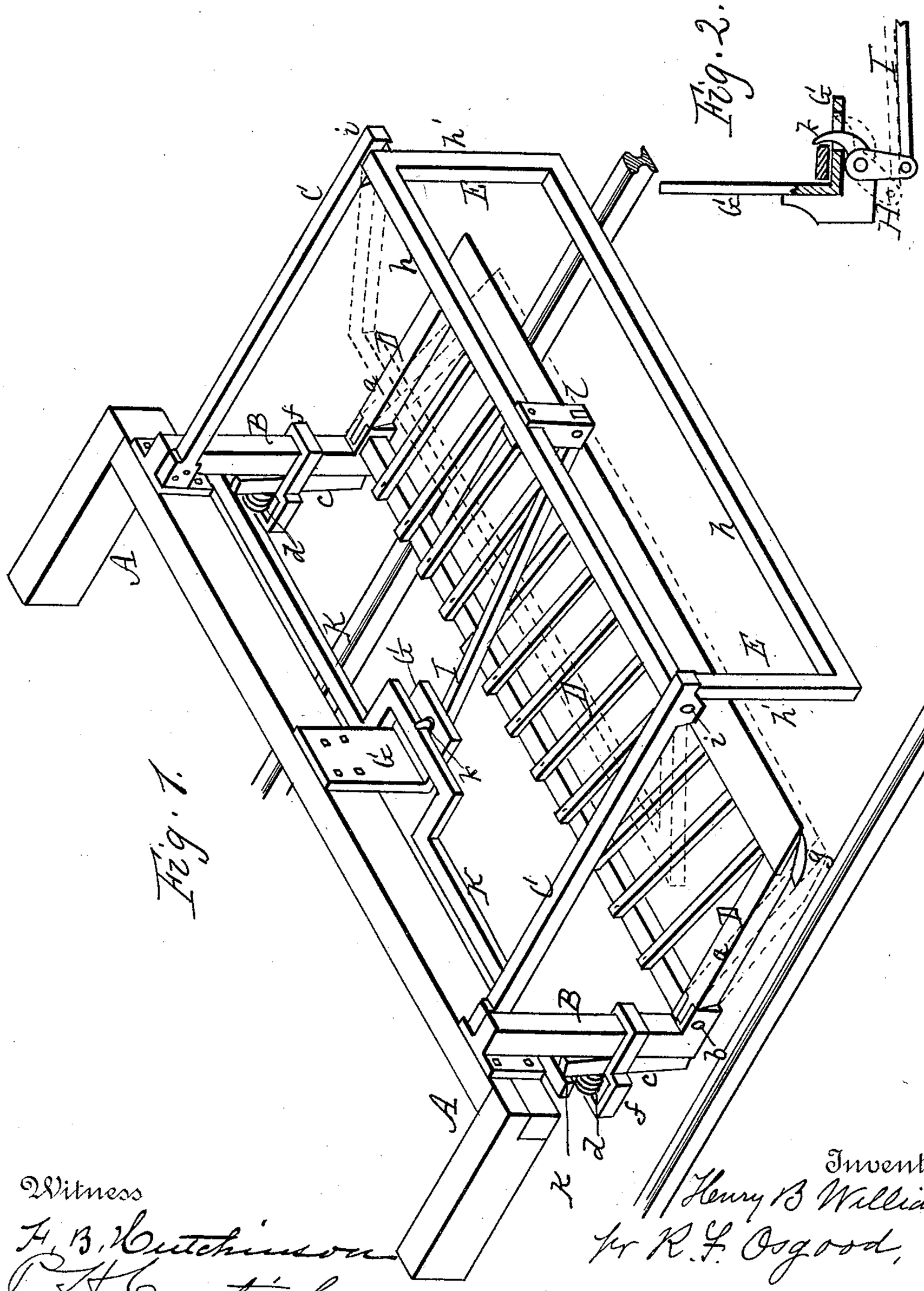

Fig. 1.

Fig. 2.

Witness
F. B. Hutchinson
P. A. Costich

Inventor
Henry B Williams,
by R. F. Osgood,
Attorney

UNITED STATES PATENT OFFICE.

HENRY B. WILLIAMS, OF ROCHESTER, NEW YORK, ASSIGNOR OF ONE-HALF TO LEMUEL A. JEFFREYS, OF SAME PLACE.

STREET-CAR FENDER.

SPECIFICATION forming part of Letters Patent No. 496,146, dated April 25, 1893.

Application filed June 6, 1892. Serial No. 435,758. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. WILLIAMS, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Street-Car Fenders; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

My improvement relates to safety guards for street cars, and consists of a guard which can be raised and lowered over the track, and can be set so as to spring downward in striking any object in advance.

The invention consists in the construction and arrangement of parts hereinafter described and claimed.

In the drawings—Figure 1 is a perspective view of one end of a street car truck and my improvement applied thereto, the guard being shown in full lines in the elevated position, and in dotted lines in the depressed position. Fig. 2 is a detail view showing a side elevation of the crank device for locking the guard in the elevated position.

A indicates the street-car truck, which is of usual form and construction.

B B are fixed hangers or bearings of the same at the corners, the same extending down vertically, the lower ends standing a little distance above the track.

C C are two stiff arms extending outward horizontally and serving as the bearings for the guard in front.

D is the fender, attached to the front of the truck and riding above the rails. This fender may be made of any desired materials and form, but is preferably grated as shown. The end pieces *a a* are jointed to the bottoms of the hangers B B, as shown at *b b*, so that the fender can turn up and down. The end pieces extend through slots of the hangers and are provided, back of the hangers, with upright arms *c c*, which rest against stiff springs *d d*, resting in bearings *f f* permanently attached to the hangers. It will be seen that the tendency is to depress the fender by reason of the springs bearing against the arms *c c*. The fender is provided with shoes *g g* at opposite ends, and intermediately if desired, which, when the fender is thrown down, run on the ground.

E is a guard hung to the arms C C in front of the truck. It consists of a rectangular frame composed of two longitudinal bars *h h* and two end bars *h' h'*. The upper bar is jointed at *i i* to the horizontal arms C C, while the lower bar rests above the track and extends from side to side.

G is a bracket attached midway of the front of the frame, and H is a crank pivoted on its under side. The crank is provided with a pin *k*, which passes up through a hole in the bracket and projects above when the crank is thrown forward, but is withdrawn beneath the surface when the crank is thrown back.

I is a rod connecting the crank H with a crank arm *l*, attached to the upper bar *h* of the guard E.

K is a bar extending across the front of the truck, resting over the bracket G, and its ends attached to the ends of the upright arms *c c*.

In its normal position the fender D stands horizontally some six inches above the track, as shown in full lines, and it is held in this position by reason of the cross bar K resting back of the pin *k*, which then projects up through the bracket G in front of it. This holds the arms *c c* against the pressure of the springs *d d*. At the same time the guard E stands vertically in front of the fender, as shown by full lines. In this position should the guard E strike any object on the track it is swung inward by the concussion and tripped. This action causes the rod I to swing the crank H backward, thereby withdrawing the locking pin *k* from its hold in front of the bar K and releasing the latter. The springs *d d* then throw the arms *c c* forward and turn the fender D down closely over the rails and in position to catch the object if it has not already been thrown off of the track. The position of the fender when depressed is shown by the dotted lines in Fig. 1.

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

1. The combination, of the hangers B B, the fender D jointed thereto so as to swing up

and down, the stiff arms *c c* attached to the back of the fender, the bearings *f f* attached to the hangers, and the springs *d d* resting against the arms *c c*, as shown and described and for the purpose specified.

2. The combination of the hangers B B, the fender D jointed thereto, the stiff arms *c c* attached to the back of the fender, the bearings *f f* attached to the hangers, the springs *d d* resting against the arms *c c*, the cross bar K connected with the arms, and a locking attachment for holding the cross bar, as and for the purpose specified.

3. The combination of the hangers B B, the fender D jointed thereto and provided with the stiff arms *c c*, the springs *d d* resting in permanent bearings and pressing against the arms *c c*, the cross bar K connected with the arms *c c*, the locking attachment consisting of the crank H provided with the pin *k*, the pivoted guard E hung in advance of the fender, and the rod I, connecting the guard with the locking attachment, as and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY B. WILLIAMS.

Witnesses:
R. F. OSGOOD,
CHAS. A. WIDENER.