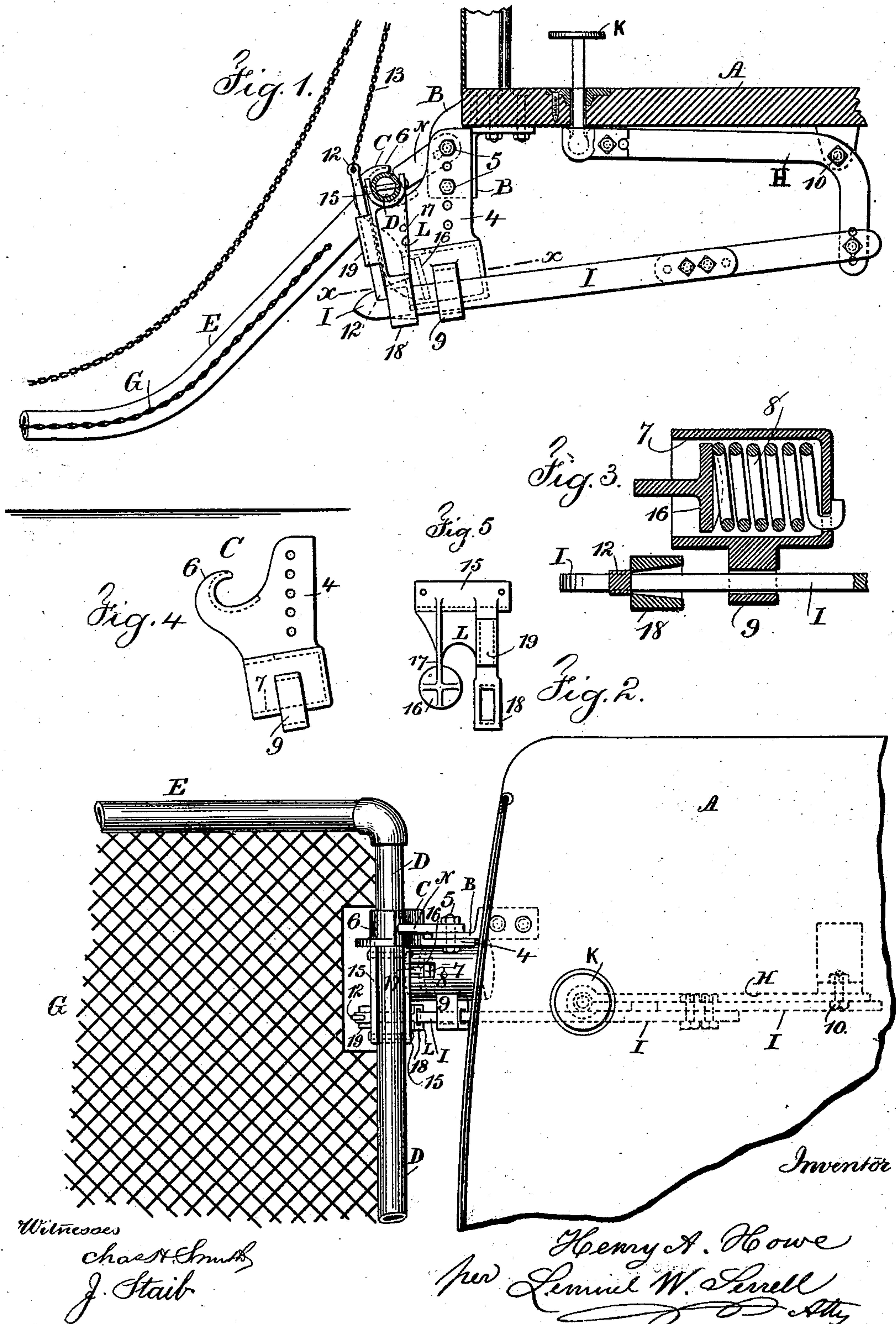


(No Model.)

H. A. HOWE.  
GUARD FOR STREET CARS.

No. 548,805.

Patented Oct. 29, 1895.





# UNITED STATES PATENT OFFICE.

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## GUARD FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 548,805, dated October 29, 1895.

Application filed August 8, 1895. Serial No. 558,578. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY A. HOWE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented an Improvement in Guards for Street-Cars, of which the following is a specification.

In Letters Patent No. 538,873, granted to me May 7, 1895, a guard is represented having a frame or cross-bar supported in bearings that extend out from the front of the car, and there is a spring acting upon an arm extending from the bearing and tending to raise the front end of the car. There is also a latch-bar acted upon by a lever passing up through the platform of the car and under the control of the driver or motorman, so as to bring down the front edge of the guard toward the pavement to underrun an obstruction or person that may be in the way of the car.

The present improvements are for accomplishing the same object and are modifications of the foregoing devices for simplifying the construction and lessening the cost and for providing for lifting off the guard from one end of the car and applying it at the other end of the car with facility.

In the drawings, Figure 1 is an elevation, partially in section, representing the bearing and connection for the guard. Fig. 2 is a plan view showing the bearing and connection at one side of the car. Fig. 3 is a detached horizontal section at the line *xx* of Fig. 1 in larger size. Fig. 4 is an elevation of the bearing, and Fig. 5 is an elevation of the cylindrical segment and its arm.

The platform A is of any desired character, and the guard is made with a frame E, preferably tubular, and with netting or similar material at G within the frame, substantially the same as the aforesaid patent. There is a plate or flange B permanently fastened to the platform of the car and near each side thereof, extending out sufficiently in the front for the reception of the bearing C, which is made advantageously of one casting having the parts hereinafter designated—that is to say, the vertical plate portion 4 is perforated with holes for the reception of bolts 5, by which the bearing is connected to the plate or flange B, and

by providing several holes for such bolts 5 the bearing C can be raised or lowered in properly placing such bearing upon the car. This bearing is also made with a hook 6, extending outwardly and curving upwardly and backwardly, so that the cross-bar or tubular portion D of the guard can be placed within the hooks of the bearings that are near the edges of the platform at each side of the same and in front of the car, and the shape of the hooks 6 is such that the cross-bar can be easily placed in or removed from such hooks advantageously by swinging the guard upwardly and pressing the cross-bar D backwardly toward the platform and raising the same, and when the hooks are made in the shape represented there is no fear of the guard becoming unhooked while in use.

Upon the bearing C and below the hook is a cylindrical recess 7, into which is received a spring 8, which is preferably of coiled wire, and the inner end is permanently connected in place so that the spring will not fall out, and there is also formed with the bearing C a loop 9, through which slides the latch-bar I, and this latch-bar may be connected with a knee-lever, such as shown in my aforesaid patent; but I have represented the same as extending back to the bent lever H, pivoted at 10 upon the platform, and the long end extending forward under the platform and provided with a foot-piece K, the upper end of which passes through the platform, so that the driver or motorman by placing his foot upon the piece K can press the same down and by the bent lever H and latch-bar I draw down the forward edge of the guard G in a manner similar to that described in my aforesaid patent.

I provide an arm L, having at its upper end a cylindrical segment 15, that receives the cross-bar D, and the two are permanently connected by suitable bolts or rivets, and upon this arm L, which extends downwardly, is a disk 16, adapted to press against the spring 8 within the recess in the bearing C, and it is to be observed that the upper part of the cylindrical recess 7 is slotted or notched for the plate portion 17, which carries the disk 16, so that the spring can act freely against the disk 16 and hold up the guard at its front edge at the desired distance above the roadway, and



upon the descending arm L is a mortise-loop 18 for the latch end of the bar I to pass freely into and project beyond such mortise-loop, and upon the arm L is a box 19, through which  
 5 the drop-bolt 12 passes freely, and there is to this drop-bolt a chain 13, by which the same can be raised as in my aforesaid patent, and it will now be understood that when the parts are in place and the driver or motorman de-  
 10 sires to press downwardly the front edge of the guard, and he places his foot upon the piece K, thereby tending to draw back the latch-bar I, the bolt 12 in the notch of such latch-bar holds the parts together, and the de-  
 15 pression of the forward edge of the guard is easily effected.

When the guard is to be taken from one end of the car to the other end, it is only necessary to raise the bolt 12 and disconnect the same  
 20 from the latch-bar, and the latch-bar remains in position and is supported by the loop 9, and the entire guard, including the arm L, can be removed and applied at the other end of the car to similarly-constructed bearings, and as  
 25 the parts are placed in position and received by the hooks 6 the mortise-loop 18 receives the latch-bar that is in position at that end of the car, the disk 16 presses against the spring as the guard is lowered to place, and the bolt  
 30 12 drops into the notch of the latch-bar, and the parts are in position for use. By this construction the guard and attachments are simplified and the guard is easily taken from one end of the car to the other. It can also  
 35 be swung up against the dashboard when not required, and the efficiency of the guard is promoted and the expense of the second guard at the opposite end of the car is avoided.

It will be apparent that both bearings may  
 40 be similarly made; but as only one latch-bar is required the second bearing may be simply a hook for receiving the cross-bar of the guard. In this case only one spring will be made use

of and one arm L with the parts formed therewith. 45

By providing a swinging key N, pivoted on the flange B, the same will act to prevent the cross-bar of the guard separating from the hook until the key is raised up. The lower  
 50 end of the swinging key will rest in the hook behind the cross-bar D.

I claim as my invention—

1. The combination with the guard having a round cross bar at its upper and back edge, of bearings fastened to the platform of the  
 55 car, each bearing having a hook for receiving the cross bar and one of the bearings having a recess for a spring within the recess, an arm connected with the cross bar of the guard and acted upon by the spring to hold up the front  
 60 end of the guard, substantially as set forth.

2. The combination with a guard for street cars having a round bar at the upper and back edge, of hooks connected with the platform of  
 65 the car and receiving removably the cross bar of the guard, a spring supported upon one of the hooks, an arm on the cross bar of the guard acting upon the spring, substantially as set forth.

3. The combination with a guard and a latch  
 70 bar under the control of the driver or motorman, of a bearing having a hook for receiving the cross bar of the guard, a loop for supporting the latch bar and a cylindrical recess, a spring secured within such recess, an arm fas-  
 75 tened to the cross bar of the guard and having a disk for acting against the spring, and a mortise loop through which a latch bar projects, and a case upon the arm and a drop bolt within the said case engaging the notch of the  
 80 latch bar, substantially as set forth.

Signed by me this 6th day of August, 1895.

HENRY A. HOWE.

Witnesses:

GEO. T. PINCKNEY,  
 WILLIAM G. MOTT.