

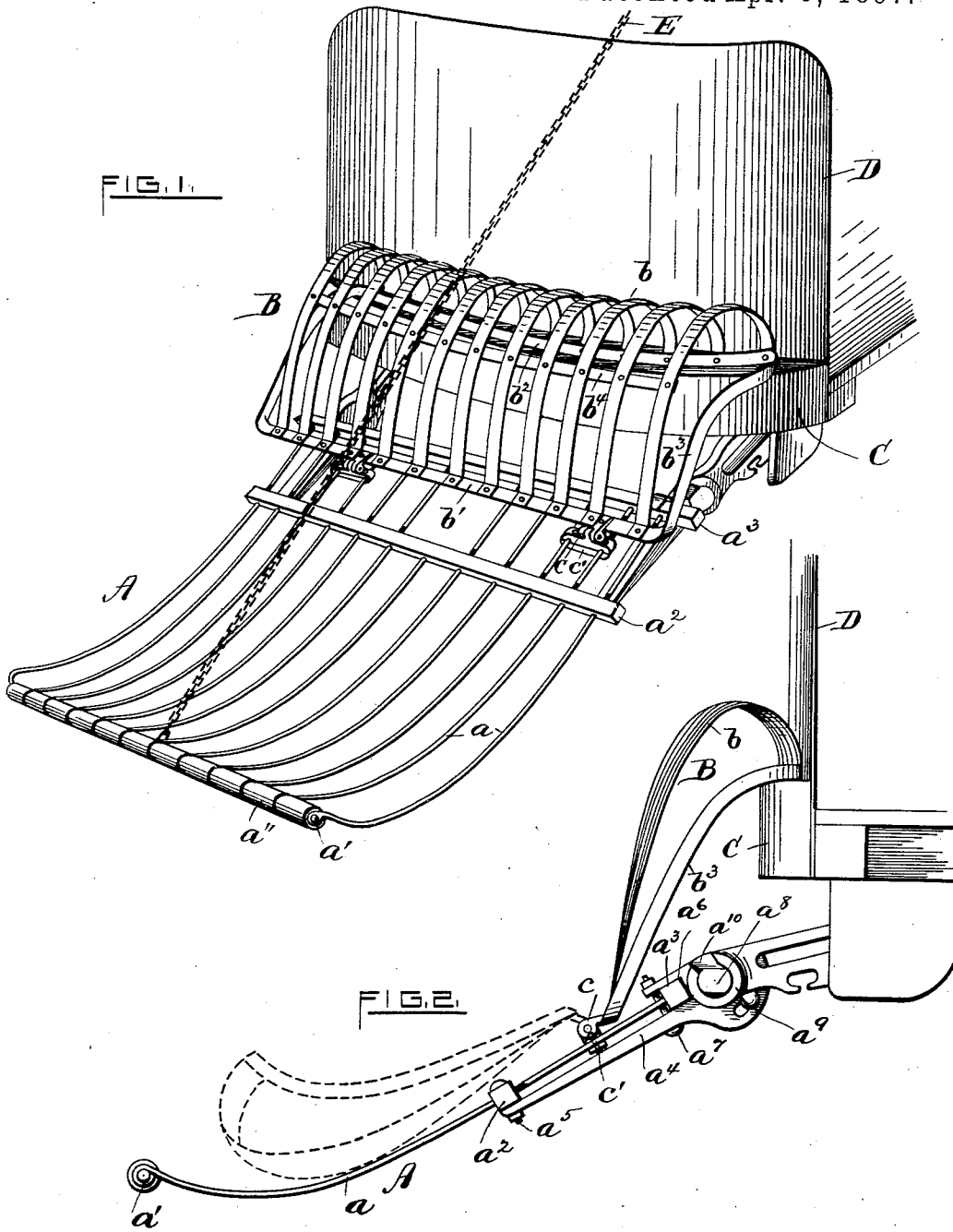
(No. Model.)

A. C. WOODWORTH.
CAR FENDER.

No. 580,119.

Patented Apr. 6, 1897.

FIG. 1.



WITNESSES,

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UNITED STATES PATENT OFFICE.

ALBERT C. WOODWORTH, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO
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CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 580,119, dated April 6, 1897.

Application filed January 22, 1896. Serial No. 576,430. (No model.)

To all whom it may concern:

Be it known that I, ALBERT C. WOODWORTH, of the city and county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Car-Fenders; and I do hereby declare the following specification, taken in connection with the accompanying drawings, forming a part of the same, to be a full, clear, and exact description thereof.

The invention relates to car-fenders which are attached to the end of street-cars for the purpose of picking up any object, animate or inanimate, which may be upon the track, and more particularly to that class of fenders which comprise a pilot member and also a guard member.

The invention comprises an improved form of guard member to be used in connection with the pilot member of the fender and which shall be arranged to overlie the buffer or other projecting part of the car and thus prevent any object picked up by the pilot member from being injured by contact with said projecting part of the car.

The invention also comprises the combination of said guard member with the pilot member and other features and combinations which will be more fully described, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective view of the preferred form of fender embodying the present invention, and Fig. 2 is a side elevation of the same.

The pilot member A of the fender is constructed of resilient material, preferably in the form of spring-rods a , which are secured at their front ends to the bar a' and extend back through the cross-bar a^2 , and have their rear ends secured to the cross-bar a^3 . The cross-bar a^2 is secured to the arms a^4 by means of bolts a^5 and the bar a^3 is secured in the recesses a^6 , formed in said arms by bolts a^7 .

The pilot member A is preferably detachably pivoted to the front end of the car in any convenient manner, and is shown so attached by means of the trunnions a^8 , formed on arms a^4 , and mounted in bearings a^9 , secured to the front of the car. The bearings a^9 are cut away at a^{10} and the trunnions a^8 are flattened on two sides, so that the pilot

member A may be tipped up and readily detached from the car, the parts being so related that when the fender is in an operative position the trunnions are locked in the bearings a^9 . The rod a' is provided with rubber rollers a^{11} between the rods a .

The pilot member A is preferably held normally above the track, but adapted to be dropped thereon from the car-platform in any well-known manner, such as shown in the patent to A. J. Thornley, No. 534,982, granted February 26, 1895.

The guard member B of the fender is also preferably constructed of resilient material, and in the form shown consists of a series of spring-strips b , secured at their lower ends to the cross-strip b' , and having their upper ends curved over and downward and secured to the cross-strip b^2 , the cross-strips b' and b^2 being connected together by the curved end strips b^3 . The strips b' , b^2 , and b^3 are preferably constructed of a single strip of wrought-iron bent into the proper form. A tie-strip b^4 is secured to the strips b and prevents their spreading or being displaced. It is preferred to make the upper end of the guard of a curved form to conform somewhat to the curve of the car-dasher. Secured to the strip b are the hinges c , provided with the clamps c' , adapted to be clamped to the rods a of the pilot member A. By loosening the clamps c' the guard may be adjusted as desired.

The guard B is preferably secured to the pilot member in the position shown with the strip b^2 resting on the top of the buffer C of the car, but out of contact with the dasher D. On some cars, however, the buffer may be at a greater distance above the pilot member, in which case the upper end of the guard may rest against the end of said buffer. In either case, however, it will be noted that the upper end of the guard is not secured in any way, but is free to move, except so far as its rearward movement may be limited by the contact with the end of the car, and thus the guard in no way interferes with the free movements of the pilot member, although secured and supported by said pilot member. Thus when the pilot member is dropped onto the track the upper end of the guard is free to move forward slightly on the buffer, or when

the member A is turned up against the end of the car by the chain E the free end of the guard rides up the dasher. Moreover, the guard may be readily turned down into the pilot member, as shown in dotted lines in Fig. 2, when the fender is to be detached from the car and shifted from one end of the car to the other.

By detachably securing the guard to the fender a broken guard can be readily replaced or the guard member may be removed and the pilot member used alone.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a car-fender the combination, with the pilot member adapted to be pivoted to the end of a car, of a guard member pivoted to said pilot member and having its upper end free, substantially as described.

2. In a car-fender the combination, with the pilot member adapted to be detachably pivoted to the end of a car, of a guard member pivoted to said pilot member and having its upper end free, substantially as described.

3. In a car-fender the combination, with the pilot member adapted to be pivoted to the end of a car, of a guard member pivoted to and supported by said pilot member, said guard member comprising a series of resilient strips and having its upper end free, substantially as described.

4. In a car-fender, the combination, with the pilot member adapted to be detachably pivoted to the end of a car, of a guard member consisting of a series of resilient strips, said guard member having its lower end pivoted to said pilot member and its upper end free, substantially as described.

5. In a car-fender, a guard member, and adjustable means for detachably and adjust-

ably connecting the same to the pilot member, substantially as described.

6. In a car-fender, a guard member comprising a series of resilient strips, and adjustable means for detachably and adjustably connecting the same to the pilot member, substantially as described.

7. In a car-fender, a guard consisting of a frame provided with cross and end strips, a series of resilient strips secured at one end to one of said cross-strips, and having their other ends bent over and downward, and secured to the other cross-strip, substantially as described.

8. In a car-fender the combination with a pilot member, of a guard member, and adjustable means for securing said guard member, whereby said guard member may be adjusted bodily with relation to said pilot member, substantially as described.

9. In a car-fender the combination, with a pilot member, of a guard member, and adjustable means for connecting said guard member to said pilot member whereby said guard member may be adjusted bodily with relation to said pilot member, substantially as described.

10. In a car-fender the combination, with a pilot member comprising parallel rods, of a guard member provided with clamps engaging said rods, substantially as described.

11. In a car-fender the combination, with a pilot member comprising parallel rods, of clamps engaging said rods, and a guard member pivoted to said clamps, substantially as described.

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Witnesses:

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