

A. A. DULY.
Street-Car Step.

No. 98,750

Patented Jan. 11, 1870.

Fig. 1.

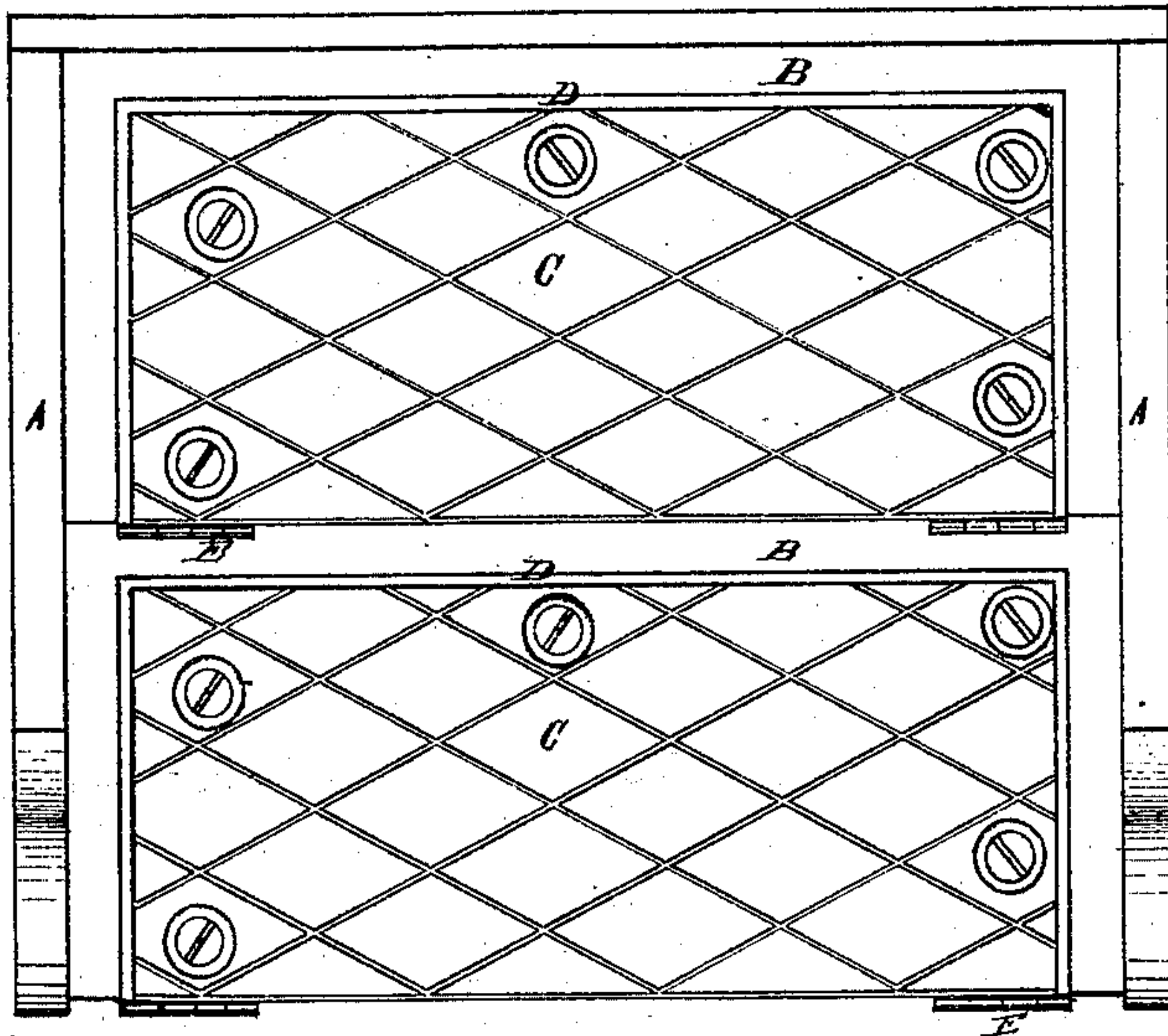
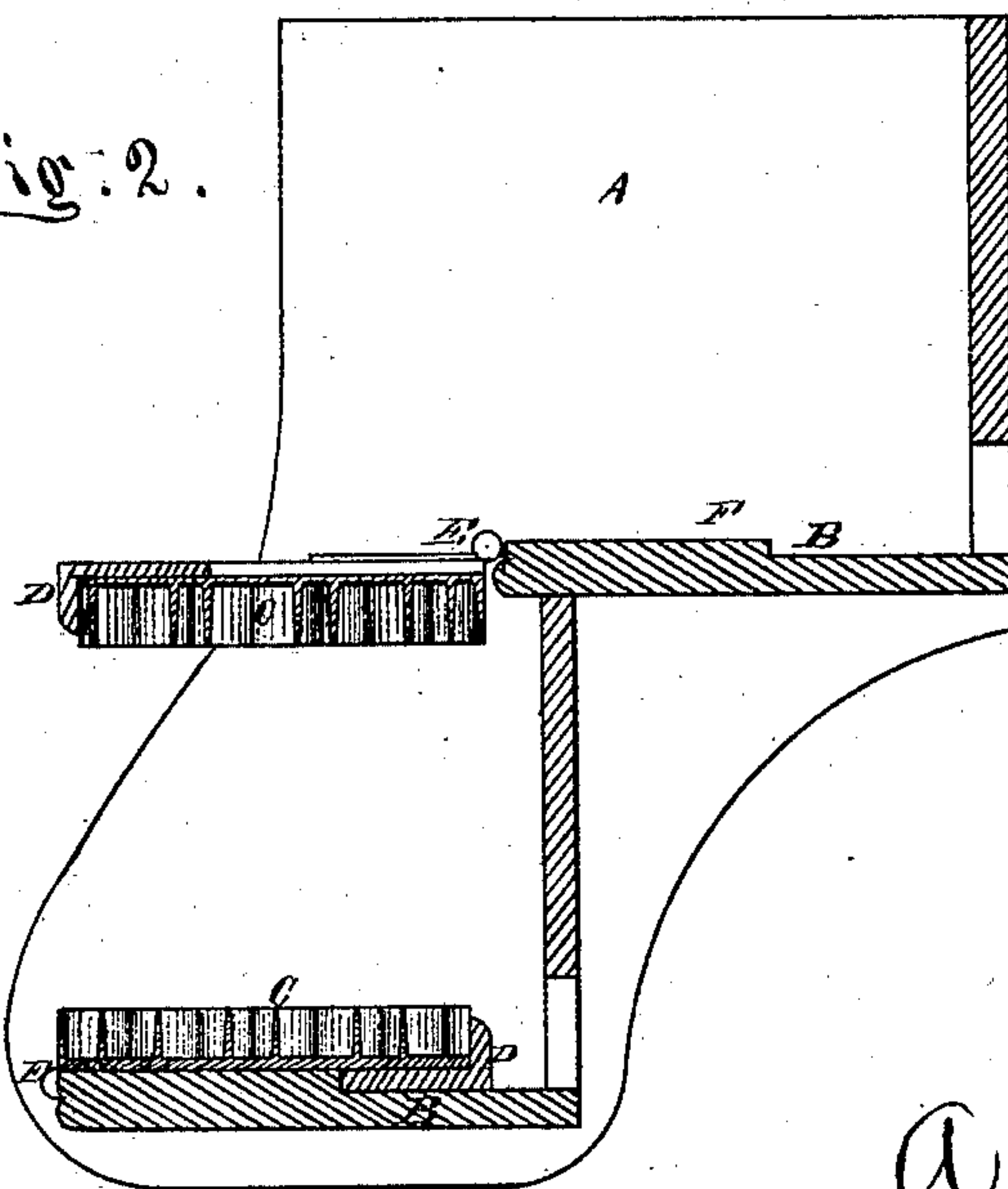


Fig. 2.



Witnesses.

J. H. Brown
L. H. How

A. A. Duly
By J. H. Brown
Atty

United States Patent Office.

ALBERT A. DULY, OF NEW YORK, N. Y.

Letters Patent No. 98,750, dated January 11, 1870.

IMPROVED STEP FOR STREET-CARS.

The Schedule referred to in these Letters Patent and making part of the same.

I, ALBERT A. DULY, of the city, county, and State of New York, have invented a certain Improvement in Steps for Street-Cars, Carriages, and for other purposes, of which the following is a specification.

Nature and Objects of the Invention.

My invention consists, chiefly, in combining a mat with a step, which may be of the ordinary or any known construction, in the manner hereinafter described, by which the mat is so secured to the step as to be secure from displacement, and at the same time so as to be capable of being readily inverted, so as to facilitate its being cleaned with ease and convenience. It is principally adapted to use on street-cars, especially in winter, when the steps are very liable to become slippery from use, and from the accumulation of snow and ice upon them.

Description of the Accompanying Drawing.

Figure 1 is a plan of two steps for street-cars, constructed according to my invention.

Figure 2 is a vertical transverse section of the same, the mat attached to the upper step being represented in fig. 2 as inverted.

General Description.

A A is the frame, in which the steps are hung, which frame is of the usual construction.

B are the steps, which are or may be also of the usual construction, except a raised portion under the mat, which will be hereafter described.

C C are India-rubber mats, made in the usual way, and attached to the frames D D, which latter are hinged to the outer edge of the steps by two hinges E E, by which the mats are so secured as to be held in place for use upon the top of the steps, in the position shown in fig. 1, and upon the lower step in fig. 2, and so that they may be turned over, as shown upon the upper step in fig. 2, to discharge any snow, or ice, or dirt which may have accumulated upon them.

To better facilitate such discharge, I make the frames D open in the middle and on the back side; or, in other words, it consists of a narrow rim running across the ends and outer or front side of the mat, so that when the mat is inverted, as shown upon the upper step in fig. 2, a blow may be struck upon the mat to discharge any dirt or snow which may adhere to it.

To support this middle portion of the mat upon the same level as that portion supported upon the frame, when in use, I make the step of the car with a raised portion, as shown at F in fig. 2, under the middle and back side of the mat; or, in some cases, if desired, the frame D may be sunk into the step of the car, so as to bring the under surface of the mat down upon the top of the step.

I attach the mats C C to the frames D D with screws and washers, as shown, so they may be readily removed when worn out, and replaced with new, or may be removed for any other purpose, if necessary.

It will be obvious that my improved step has the advantage of affording a very secure footing, that it is not liable to displacement, and that it can be very easily kept in order.

Claims.

I claim, as my invention—

1. The combination, with the step B, of a mat, C, hinged thereto, substantially as hereinbefore set forth.
2. The combination of the step B, mat C, and skeleton-frame D, having open space, upon which a blow may be struck upon the mat, as set forth.
3. The combination of the step B, mat C, skeleton-frame D, and raised portion, F, substantially as set forth.

ALBERT A. DULY.

Witnesses:

J. P. CHAMBERS,
ROWLAND BARTON.