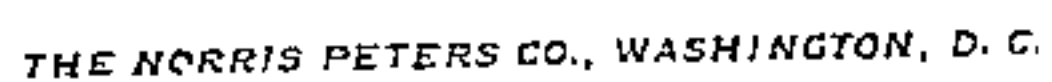


FOLDING STEPS.

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UNITED STATES PATENT OFFICE.

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FOLDING STEPS.

983,135.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES HALSTEAD, a citizen of the United States, residing at Fortress Monroe, in the county of Elizabeth City and State of Virginia, have invented certain new and useful Improvements in Folding Steps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in folding steps designed especially for use upon passenger coaches and the object in view is to produce a simple and efficient device of this character so arranged that the steps, when not in use, may be held in a folded relation underneath the permanent step and released by means of a pivotal bar and held rigidly in an extended position.

The invention comprises various details of construction and combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a perspective view of my improved folded step extended. Fig. 2 is an end view showing the steps folded. Fig. 3 is a detail view of a pivotal operating and rocking lever. Fig. 4 is a detail view of a spring socket member. Fig. 5 is a sectional view showing a projection upon the bar held in engagement with the socket member.

Reference now being had to the details of the drawings by letter, A designates a permanent step of the usual car steps and B designates a step hinged thereto by means of the hinges D, and C is a step which is connected to the step B by means of hinges C'. Chains F are fastened at their corresponding ends to the steps B and C and are designed to hold the step C substantially in a horizontal plane when unfolded. In order to reinforce the hinges of the steps, I provide rods H which, at their ends, are fastened to the hinges which connect the steps in the manner clearly shown in Fig. 1 of the drawings.

Fastened to a pivotal pin K projecting

from one end of the lower horizontally disposed step is a bar N which has a headed knob O projecting from its opposite end. Two socket members, designated by letters L and L', are fastened to the side board of the permanent steps, each of which has spring fingers L² adapted to engage the laterally projecting curved portions of said knob. In order to securely hold the steps folded or unfolded by the mechanism shown, it is desirable that two bars of similar construction be pivoted one to each end of the lower step and its other end provided with a knob and designed to engage socket members as shown and described.

Assuming the steps to be positioned as illustrated in Fig. 1 of the drawings or unfolded, the knobs at the ends of the bars are caught in the spring sockets L, thus securely holding the folding steps rigid. When it is desired to fold the steps, the knobs are released by the spring socket members L, the steps folded and the knobs pressed into the spring socket members L', thereby securely holding the steps folded. By the provision of the rod connecting the hinges, the latter will be reinforced and any strain coming upon one hinge will be transmitted to the other.

What I claim to be new is:—

1. In combination with the permanent step of a car, folding steps hinged together and to said permanent step, bars pivoted to one of the folding steps, socket members fastened to the permanent step of the car, and a knob projecting from said bar and adapted to engage one or the other of said socket members to hold the steps folded or extended.

2. In combination with the permanent step of a car, folding steps hinged together and to said permanent step, a rod fastened to and connecting the hinges which pivotally connect one step to the other, a bar pivoted to the lower of the pivotal steps and having a laterally projecting headed knob, socket members fastened at the side of the permanent step and adapted to be engaged by said knob to hold the steps folded or extended.

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

CHARLES HALSTEAD.

Witnesses:

R. V. D. LARRABEE,
F. S. LARRABEE.