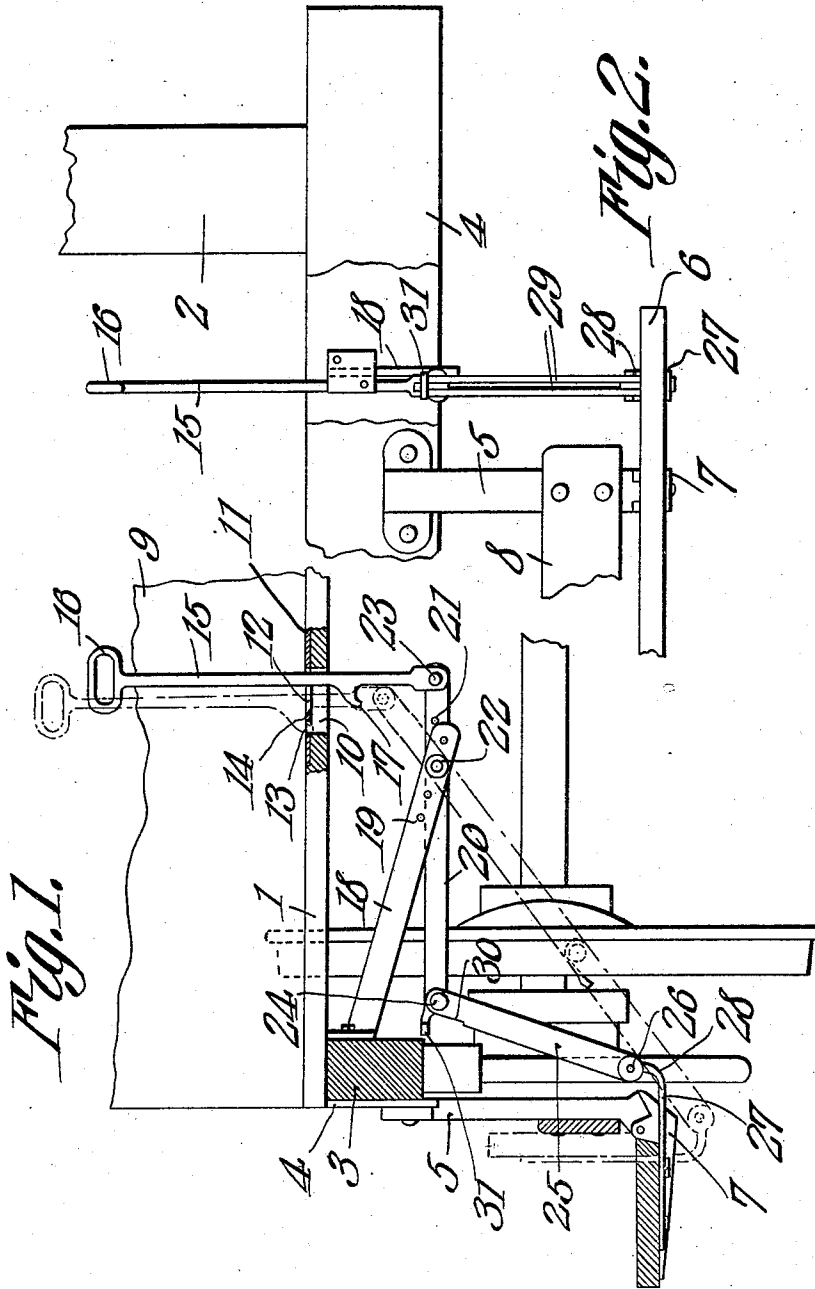


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FOLDING CAR STEP.
APPLICATION FILED MAR. 6, 1909.

929,471.

Patented July 27, 1909.



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JOHN NESBITT, OF FORT SMITH, ARKANSAS.

FOLDING CAR-STEP.

No. 929,471.

Specification of Letters Patent.

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Application filed March 6, 1909. Serial No. 481,803.

To all whom it may concern:

Be it known that I, JOHN NESBITT, a citizen of the United States, residing at Fort Smith, in the county of Sebastian and State of Arkansas, have invented a new and useful Folding Car-Step, of which the following is a specification.

The objects of the invention are, generally, the provision, in a merchantable form, of a device of the class above specified, which shall be inexpensive to manufacture, facile in operation and devoid of complicated parts; specifically, the provision of a device of the class above specified, which shall be adapted to be mounted upon and assembled with car bodies of different sizes, the said device being adapted to tilt a step or foot-board into different positions demanded by the exigencies of traffic, and to hold the said foot-board locked in an upstanding and out-of-the-way position; other and further objects being made manifest hereinafter as the description of the invention progresses.

The invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the accompanying drawings, and particularly pointed out in that portion of this instrument wherein patentable novelty is claimed for certain distinctive and peculiar features of the device, it being understood that within the scope of what is hereinafter thus claimed, divers changes in the form, proportions, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings.

In the accompanying drawings:—Figure 1 shows my invention in front elevation. Fig. 2 is a side elevation thereof.

In the accompanying drawings, the numeral 1 denotes generally the floor of a car, the front wall of the forward vestibule or the dashboard of the car being denoted by the numeral 2, and the forward end of the car proper being denoted by the numeral 9. The car is shown as being provided upon its lower side adjacent its edge with a longitudinally disposed sill 3, and upon the outer face of this sill 3 is mounted a plate 4, from which depends an arm 5, a foot-board 6 being pivotally connected by means of a suitable hinge 7 with the arm 5, and a strip 8 being mounted

upon the arm 5 at right angles to the foot-board 6.

In the drawings I have shown but one end of the foot-board 6, and but one set of the means whereby it is assembled with the body of the car, but it is to be understood that the other end of the foot-board 6 is connected to the car body in a manner similar to that shown in the drawings, the illustration of the other end of the foot-board 6 being considered unnecessary.

The elements hereinbefore described go to make up a common car construction, and they are shown and described, merely to show one form of car to which my invention is adapted to be attached, it being understood that the same is equally applicable to many other forms of cars.

It is to be understood that the foot-board 6 is adapted to be turned upward into a vertical position or downward into a horizontal position, the relation between the arm 5 and the hinge 7 being such that when the foot-board 6 is turned down it will normally be held in a horizontal position.

The floor 1 of the car is provided with a slot 10, and over this slot 10 is placed a striking plate 11 provided with apertures 12 and 13, spaced apart, a portion of the striking plate being left between them to form a detent 14. An operating handle 15 is shown, the body portion of which is adapted to slide vertically in the slot 12 of the striking plate 11. This operating handle 15 is provided at its upper terminal with a suitable grip 16, and intermediate its ends with a laterally projecting shoulder 17, the same being downturned terminally to form a hook to engage the detent 14 of the striking plate 11.

Mounted upon the body of the car and preferably projecting inward from the sill 3 is a bracket 18, provided near its inner terminal with a plurality of apertures 19. I further provide a lever 20 having intermediate its ends a plurality of apertures 21, each of which is adapted to register successively with one of the apertures 19 in the bracket 18, the lever and the bracket being assembled by means of a suitable pivot bolt 22, adapted to register in the aperture 21 of the lever and the apertures 19 of the bracket. At its inner end the lever 20 is united with the lower terminal of the operating handle 15 by means of a pivot bolt 23, and another pivot bolt 24 unites the outer terminal of the

lever 20 with the upper terminal of a rigid connecting element 25, the lower terminal of which is united by means of a pivot bolt 26 with an arm 27, the outer terminal of which is rigidly assembled with the foot-board 6, the inner end of the arm 27 being upwardly bent as denoted by the numeral 28, in order to receive properly and successively the thrust and the pull of the connecting element 25, as the foot-board is raised or lowered.

Referring particularly to Fig. 2 of the drawings it will be seen that the connecting element 25 is composed of a pair of parallel plates 29, between the upper ends of which is mounted one terminal of the lever 20, the portion 28 of the arm 27 being included between the lower terminals of the said parallel plates 29. It will be further seen, as clearly disclosed in Fig. 1, that near their upper terminals the plates 29 are cut away to form a shoulder 30. The outer terminal of the lever 20 is extended beyond the pivotal connection between the lever 20 and the connecting element 25, and this extended portion of the lever is made to project laterally to form a head 31, arranged to engage the outer edges of the members 29 and to be received by the shoulder 30 therein.

Let it be supposed that the device is in the position shown in Fig. 1; then when it is desired to raise the foot-board 6, the operation is as follows:—The grip 16 may be seized and the operating handle 15 drawn upward. As the operating handle 15 thus moves upward, the lever 20 fulcruming at 22 upon the bracket 18 will move downward at its outer end, and as the outer end of the lever 20 moves downward it will carry with it in its downward movement the rigid connection 25. This connecting element 25 will exert a thrust upon the arm 27, whereby the foot-board 6 will be tilted upward into the position shown in dotted line in Fig. 1. The head 31 of the lever 20, engaging the outer edges of the members 29 of the connecting element, will limit the foot-board 6, when upturned, to the proper, predetermined position. In many cars the strip 8 is dispensed with entirely and the function of the head 31 is then doubly important, since, when this strip 8 is dispensed with it is possible for the foot-board 6 to tilt inward into a position from which it could not well be dislodged. When the foot-board has thus been uptilted against the side of the car the operating handle 15 is moved outward in the slot 12 to bring the shoulder 17 above the detent 14 of the striking plate 11. The operating handle 15 may then be allowed to drop and the hooked portion of the shoulder 17 will engage the detent, securely locking the foot-board in its upturned position. When it is desired to lower the foot-board the operation hereinbefore described may be reversed.

By providing the apertures 19 and 21 in the bracket 18 and in the lever 20 respectively, I have contrived a means whereby the invention may be mounted upon cars of different sizes and of different constructions, and by means of the apertures in the lever and the bracket it is possible, under all circumstances, so to assemble the parts of the device that a positive and satisfactory operation is assured. By referring to Fig. 1 it will be seen that the mechanism whereby the device is operated is disposed well up beneath the body of the car, and not likely to be struck by obstacles which may be disposed along the right of way.

It will be seen that the hereinbefore described mechanism, although simple in construction, results in a structure whereby the foot-board of a car may readily be raised and lowered from the vestibule of a car, thereby obviating the necessity for the motorman or conductor to dismount when it is desired to raise or to lower the foot-board.

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

1. The combination with a car body, of a foot-board pivoted thereto; plates pivotally connected adjacent one end with the foot-board; a lever pivotally mounted between the plates adjacent the other ends of said plates and extended beyond the pivotal union between the lever and the plates, to form a head to engage the plates; means for pivotally assembling the lever with the car body; and means for operating the lever.

2. The combination with a car body, of a bracket projecting therefrom; a foot-board pivoted to the car body; a rigid connecting element, and means for pivotally uniting the same with the foot-board; a lever fulcrumed upon the bracket and being united adjacent one end with the connecting element, the extremity of the lever being prolonged beyond the pivotal connection between the lever and the connecting element, and being transversely extended to form a head to engage the connecting element; and means for operating the lever.

3. The combination with a car body, of a foot-board pivoted thereto; a bracket projecting from the car body and being provided adjacent one end with a plurality of apertures; a lever having a plurality of apertures intermediate its ends, each arranged to register successively with an aperture in the bracket; a pivot member to engage the apertures of the lever and the bracket; means pivoted to one end of the lever for operatively connecting the lever with the foot-board, and means pivoted to the other end of the lever for operating the same.

4. The combination with an apertured car body, of a bracket projecting therefrom and being provided adjacent one end with a plu-

5 rality of apertures; a lever having a plurality
of apertures intermediate its ends, each ar-
ranged to register successively with an aper-
ture in the bracket; a pivot member to en-
10 gage the apertures of the lever and of the
bracket; a foot-board pivoted to the car
body; means for operatively connecting the
foot-board with the lever; a striking plate
disposed above the aperture in the car body
and being slotted to form a detent; an oper-
ating handle slidably mounted in the slot in

the striking plate and being provided with a
shoulder to engage the detent; the said oper-
ating handle being terminally pivoted to the
lever.

15 In testimony that I claim the foregoing as
my own, I have hereto affixed my signature
in the presence of two witnesses.

JOHN NESBITT.

Witnesses:

E. SCHEIHING,
S. A. HUGHES.