

J. S. MUCKLE.
CAR VESTIBULE DOOR.
APPLICATION FILED SEPT. 28, 1909.

956,500.

Patented Apr. 26, 1910.

Fig. 1.

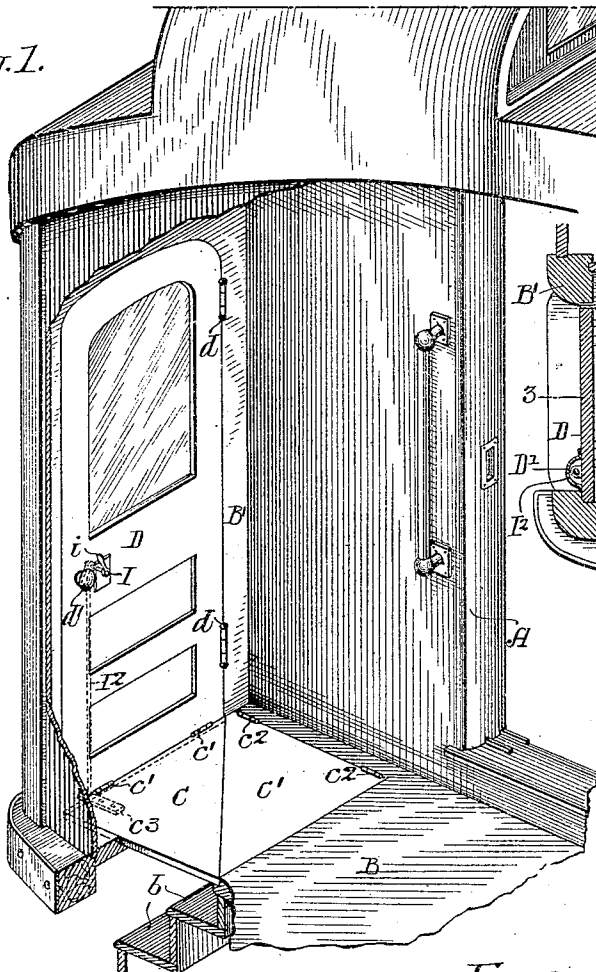


Fig. 2.

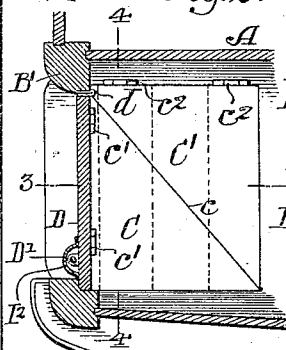


Fig. 3.

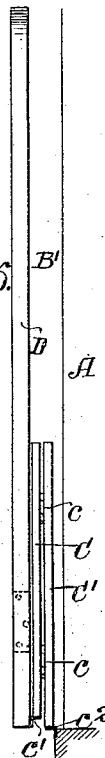


Fig. 4.

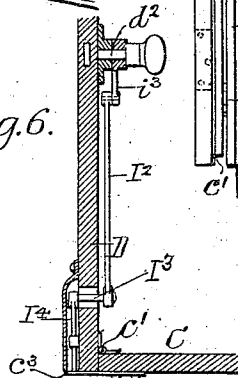
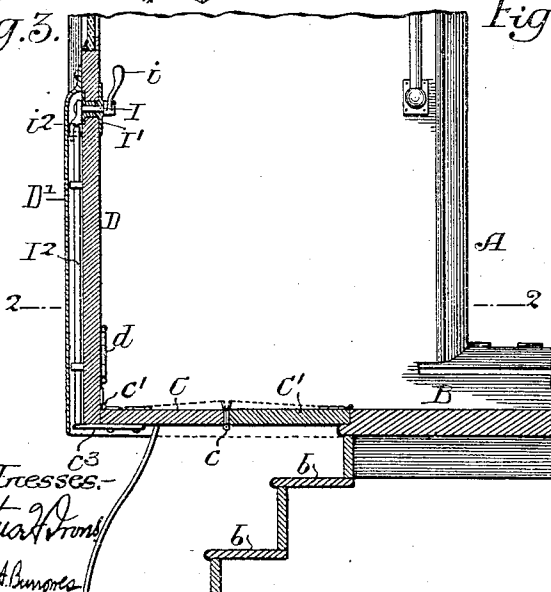
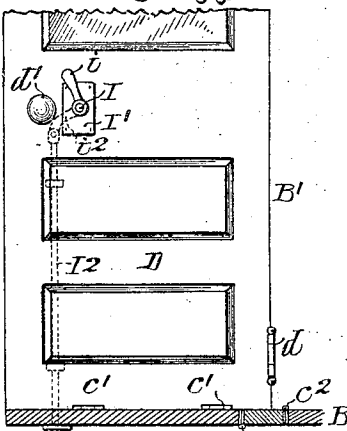


Fig. 5.



Witnesses.
Arthur J. Brown
Charles A. Brown

Fig. 6.



Inventor—
John S. Muckle.
By His Attorneys—
Horton & Horton

UNITED STATES PATENT OFFICE.

JOHN S. MUCKLÉ, OF PHILADELPHIA, PENNSYLVANIA.

CAR-VESTIBULE DOOR.

956,500.

Specification of Letters Patent. Patented Apr. 26, 1910.

Application filed September 28, 1909. Serial No. 519,914.

To all whom it may concern:

Be it known that I, JOHN S. MUCKLÉ, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Car-Vestibule Doors, of which the following is a specification.

My invention relates to certain improvements in railway cars in which the platforms are closed by doors at the sides of the platform and the steps are covered by trap doors which are moved out of position when the door is opened and when the door is closed the trap doors completely protect the steps.

The object of the invention is to prevent the opening of the side doors while a person is standing on the trap doors, and also to prevent the opening of the trap doors without actuating the mechanism on the side door. By this construction it will be impossible for any one to maliciously open the trap door, and accidents which are liable to occur by children tampering with the operating mechanism of the trap door will be avoided.

In the accompanying drawings, Figure 1, is a perspective view of a platform of a railway car illustrating my invention; Fig. 2, is a sectional plan view on the line 2—2 Fig. 3; Fig. 3, is a sectional elevation on the line 3—3 Fig. 2; Fig. 4, is a sectional view on the line 4—4 Fig. 2; Fig. 5, is a view showing the side door open and the trap doors raised, and Fig. 6, is a sectional view illustrating a modification of my invention.

A is the body of the car, B is a platform of the usual type having steps *b* which are within the sides of the car as in the ordinary type of steam railway cars, the width of the platform being less than the width of the car. Doors D are provided at one or both sides of the car body, and in order to close the steps between the door and the edge of the platform B directly over the steps, I provide a trap door made in two parts C—C' hinged together at *c*. The door D is hinged to the side of the platform frame B' at *d* and the triangular section C of the trap door is pivoted to the door at *c'* and the section C' is pivoted to the end of the car body A at *c''*. The door D opens inwardly and as the door D opens the two sections of the trap door fold up between the door and the end of the car body A, as in Fig. 5.

In some types of cars the trap doors can be opened without actuating the doors at the side of the platform, and both the side doors and trap doors can also be opened by trip mechanism. This trip mechanism is so arranged that a child can operate it, and many accidents have occurred due to children opening the trap doors and falling through the space between the steps and the side doors while the train was in motion.

The platform doors equipped with my invention cannot be opened by a child and cannot be opened by any person unless they stand on the fixed portion of the platform and reach over the trap doors and actuate the mechanism which will first raise the trap doors above a certain point, after which the side doors can be opened, as the trap door locks the side door when in the closed position.

d is the knob of the lock which secures the side door in the closed position and at one side of this knob is a lever *i* for lifting the trap door previous to its being raised completely by the movement of the side door. This lever is attached to a spindle I which extends through a bearing I' in the door, and on the opposite end of the spindle is an arm *i''* connected to a rod I² which is adapted to guides on the door and presses against a heel plate *c''* attached to the section C of the trap door, so that when the lever *i* is moved, it forces the rod I² down on the heel plate *i''* and the two sections of the trap door will be raised slightly, as shown in dotted lines in Fig. 3, after which the knob *d* can be turned and the side door D drawn back in position, the sections of the trap door folding back of the door D and against the end of the car body A. The lifting device cannot be operated while a person is standing on either section of the trap door, so that the operator must stand on the fixed portion B of the platform and reach over the trap doors, actuate first the lever *i* and then the knob *d'* before the door can be opened.

I preferably inclose the rod *i* by a casing D' secured to the door, but this is not essential and may be dispensed with. In some instances the lever may be mounted on the spindle of the door knob, as in Fig. 6, *i''* being the lever and *d''* being the spindle of the door knob. The rod is connected to the lever *i''* and is attached to an arm on a spindle I³ extending through the door, and

this spindle in turn has an arm connected to a rod I⁴ bearing upon a heel c³ of the section C of the trap door, so that when the door knob is turned the lever will be first
5 actuated and then the bolt of the door will be withdrawn.

Thus it will be seen that I provide a very simple and effective means for locking the trap door and the side doors of the platform
10 of a railway car in which the platform is inclosed, which can not be actuated by any one unless they reach over the trap doors and operate the mechanism carried by the side door.

15 I claim:

1. The combination in a car platform of a side door, a two part trap door, the two parts being hinged together, one being pivoted to the fixed portion of the car, the other
20 part being hinged to the side door, a heel on one part of the trap door and mechanism carried by the side door for pressing down

upon the heel to lift the two sections of the trap door prior to the opening of the side door.

25 2. The combination in a car platform of a side door, a two part trap door, the two parts being hinged together so as to open upward, one part being hinged to the side door, the other part being hinged to a fixed
30 portion of the car, a knob, a lever at one side of the knob, a vertically movable rod connected to the lever, a heel projecting from the rear of the section of the trap door hinged to the side door and in line with the actu-
35 ating rod.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

JOHN S. MUCKLÉ.

Witnesses:

WM. E. SHUPE,
WM. A. BARR.