

R. W. SEMPLE.  
Door.

No. 203,202.

Patented April 30, 1878.

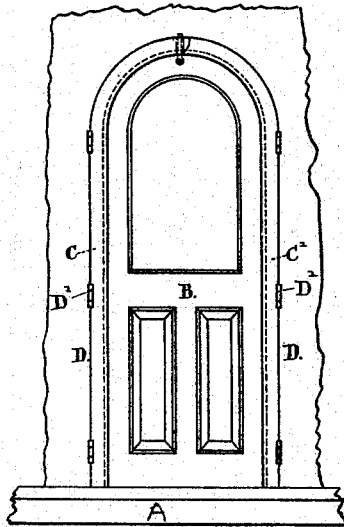


Fig. 1.

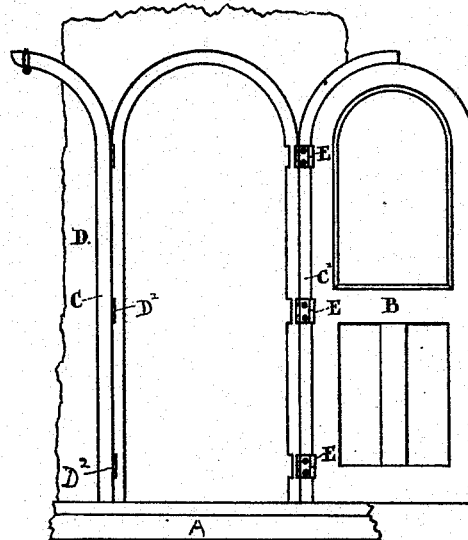


Fig. 2.

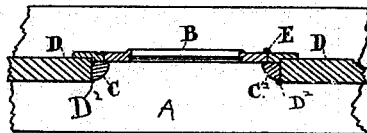


Fig. 3.

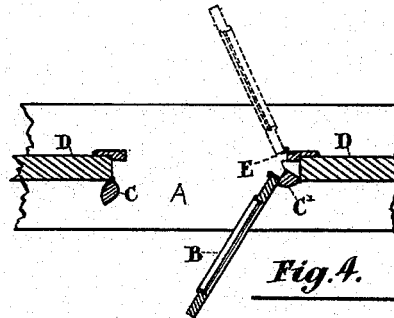


Fig. 4.

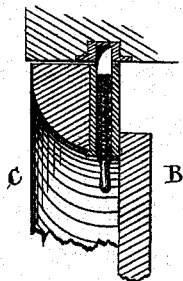


Fig. 5.

Witnesses.

H. H. Warren.  
L. Whitehead.

Inventor.

R. W. Semple.  
by Kidder, Child & Co.  
Attys

# UNITED STATES PATENT OFFICE.

ROBERT WILLIAM SEMPLE, OF TORONTO, ONTARIO, CANADA, ASSIGNOR OF  
ONE-HALF HIS RIGHT TO GEORGE A. SHAW, OF SAME PLACE.

## IMPROVEMENT IN DOORS.

Specification forming part of Letters Patent No. 203,202, dated April 30, 1878; application filed  
October 18, 1877.

*To all whom it may concern:*

Be it known that I, ROBERT WILLIAM SEMPLE, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, mechanical engineer, have invented certain new and useful Improvements in Doors, which improvements are fully set forth in the following specification and accompanying drawing.

My invention relates more particularly to an improved form of door-stop, so arranged that, while permitting the door to be opened to the inside in the ordinary way, it will, when required, permit the door to open in the opposite direction.

My invention consists of a movable stop divided into two parts, which parts are hinged or otherwise fastened to the sills of the jambs in such manner that, when a certain pressure is brought to bear on the stops, they will swing out of place clear of the door-opening. To one of these stops the door is hinged, and swings freely in either direction. The stops are held in place when the door is shut, or when the door is opened to the inside, by a spring-bolt, latch, or other suitable contrivance that will permit the passage of the stops outward when a given pressure is applied to the inside face of the door. The limit of action of the bolt or latch may be varied to suit circumstances.

The object of my invention is to provide a door which, while retaining all the advantages of opening to the inside on ordinary occasions, may, on extraordinary occasions, be opened outward, to permit a large or excited number of people to pass out quickly, as in railway-cars, public halls, churches, &c.

In the accompanying drawings, Figure 1 is a front view of a car-door, (shown as closed,) in which my improvements are embodied. Fig. 2 is a view of the same door when opened to the outside. Fig. 3 is a sectional plan, with the door closed; and Fig. 4 is a sectional plan of door shown open on both sides. Fig. 5 is a detail view of stop.

A is the frame of a car, but which, for the purpose of illustration, may represent the wall of a house or other structure in which doors

are used. B is the door, in this case made in a single flap, but which may, with equal advantage, be made in two or more flaps, as desired. C C' are the door-stops hung to the jambs D D by hinges D', which hinges permit the stops to swing outward only.

The stops may be supported upon the jambs in several different ways, and be movable without the use of hinges, as by pivoting them at the bottom and top. The door is hinged to the stop C' with hinges E, in order that it may swing in either direction. The stops are secured in place for the ordinary use of the door that is to open inward by a spring-bolt, or any other suitable contrivance which can be adjusted to hold the stops firmly in place until a certain fixed pressure is brought to bear on the door.

In the case of the spring-bolt, the spring is arranged to yield at the given pressure, and, the bolt receding, allows the stops and door to fly outward.

Doors constructed according to my invention will be found of great value on railway-cars and road vehicles, which, from the nature of things, are constantly liable to, and frequently subject to, accidents in which numbers of lives are lost through people closing the doors in their hurry to escape.

In public halls, churches, theaters, &c., doors constructed on my model would be of great advantage, as they could be used to open to the inside until occasion required them to be opened to the outside—a door opening to the inside being always preferable.

I claim as my invention—

The combination, with a door arranged to swing inwardly and outwardly, of the swinging stops C C', adapted to arrest the ordinary closing movement of the door from within, and to give way outwardly to extraordinary pressure from within, substantially as shown and described.

R. W. SEMPLE.

Witnesses:

GEO. A. AIRD,  
L. WHITEHEAD.