July 16, 1940. D. J. SEAMAN 2,208,198

DOORWAY CONSTRUCTION

Original Filed Sept. 3, 1936

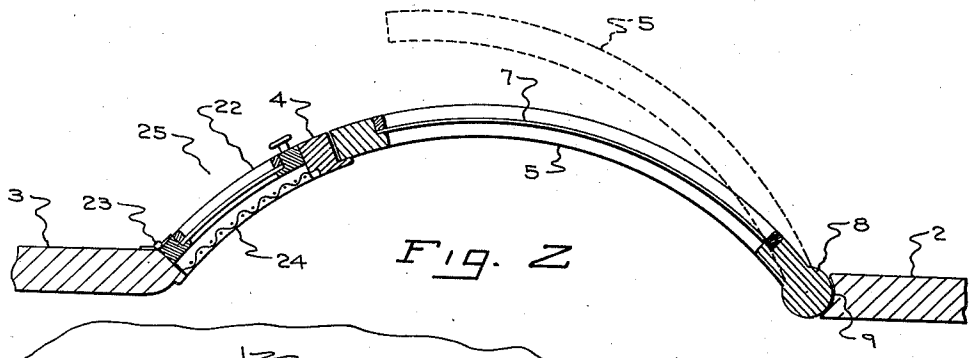


Fig. 2

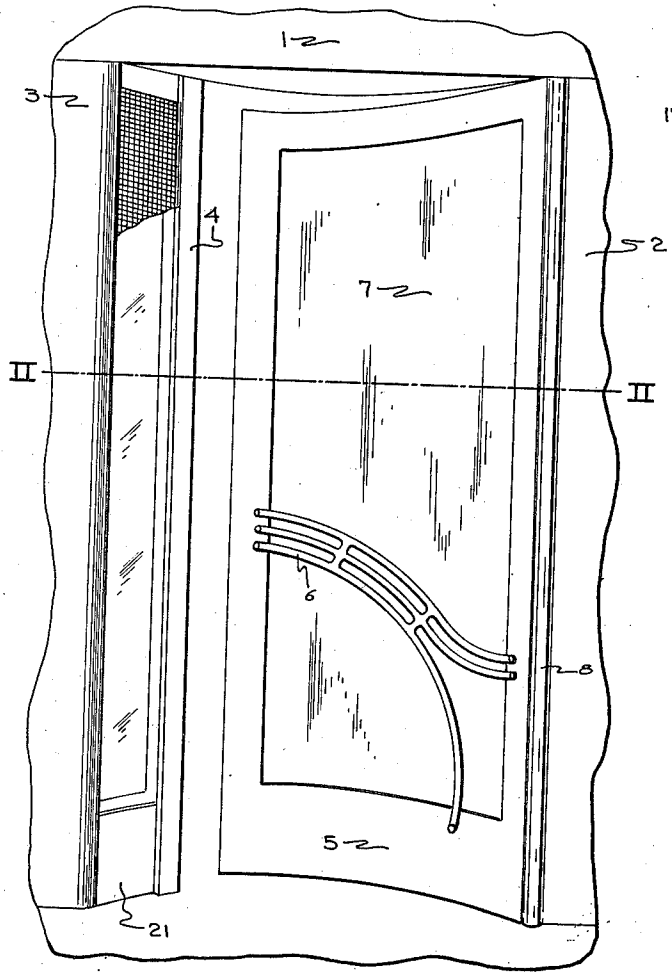


Fig. 1

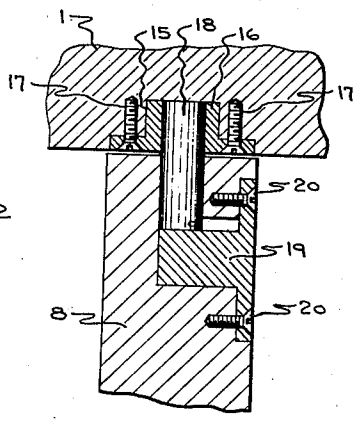


Fig. 3

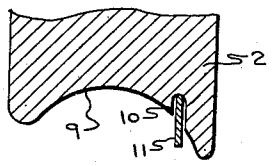


Fig. 4

Inventor

DAVID J. SEAMAN

By Beaman & Langford

Attorney

Patented July 16, 1940 2,208,198

UNITED STATES PATENT OFFICE

2,208,198

DOORWAY CONSTRUCTION

David J. Seaman, Battle Creek, Mich., assignor to Curvilinear Doors & Windows, Inc., Battle Creek, Mich., a corporation of Michigan

Original application September 3, 1936, Serial No. 99,272. Divided and this application April 17, 1939, Serial No. 268,211

4 Claims. (Cl. 20—16)

The present invention relates to improvements in door construction being particularly adapted for use in stores and buildings handling heavy pedestrian traffic. This application is a division of my copending application Serial No. 99,272, filed September 3, 1936, now Patent No. 2,154,641 patented April 18, 1939.

The aforesaid application discloses and claims a door construction wherein adjacent swinging doors for traffic in opposite directions are so designed as to suggest to the pedestrian the door through which he should pass to minimize congestion. The present invention is designed for the same purpose but different from the prior invention, in that a single door for one-way traffic is so designed and shaped as to invite to the pedestrian the use of the door and to minimize congestion at periods of heavy traffic. Furthermore, the door according to the present invention embodies safety features and at the same time is attractive in appearance.

An object of the invention is to provide an improved door and door jamb of arcuate configuration to invite pedestrians to use it and to minimize congestion.

Another object of the invention is to provide an arcuate door in association with an arcuate door jamb.

These and other objects and advantages residing in the construction and arrangement and combination of parts will become apparent on the following specification when taken with the accompanying drawing, in which

Fig. 1 is a front elevation of my improved door construction,

Fig. 2 is a section on the line II—II of Fig. 1,

Fig. 3 is a vertical section taken through the swivel about which the door is swung in operation, and

Fig. 4 is an enlarged section showing details of construction of the door jamb.

Referring particularly to the drawing, the reference character 1 indicates a wall in which door jambs 2 and 3 are disposed. Offset from the line of the jambs 2 and 3 is a third jamb 4. Co-operating with the jambs 2 and 4 is an arcuate door 5. The door 5 may be of any suitable construction. As shown, it is provided on one side with a hand rail 6 and a glass pane 7. It will be understood that either of these details may be omitted or other features may be employed.

The door 5 is pivotally supported about the vertical axis of the edge portion 8, in contiguous relation with the arcuate edge surface 9 of the jamb 2. The edge portion 8 is generally of cylindrical form, as shown particularly in Fig. 2 of the drawing. It is preferred that the radius of the curve of the edge surface 9 of the jamb 2 be equal to that of the edge portion 8, so that as the door swings about the vertical axis of the edge portion 8 it will at all times be in close association with the jamb 2. If desired, a vertical channel 10 may be disposed in the surface 9 of the jamb 2 for the purpose of receiving a weatherstrip 11 which will coact with the edge portion 8 of the door to provide a weather seal.

The structure for supporting the edge portion 8 for pivotal movement about its vertical axis is shown in Fig. 3. Secured in a recess 15 in the wall 1 is a metallic bushing 16 held in place by screws 17. Pivotally mounted in the bushing 16 is a pin 18 supported in alignment with the axis of the edge portion 8 of the door 5 and held in the bushing 16 by a plug 19 removably secured in position in the edge portion 8 and beneath the pin 18 by screws 20. A similar or equivalent structure may be employed to pivotally support the bottom of the edge portion 8.

Between the jambs 3 and 4 is a panel 21 arcuate in configuration and conforming to the general curve of the door 5. Disposed in the panel 21 may be a door 22 pivotally secured to the jamb 3 by hinges 23. Also if desired, a screen 24 may be disposed between the jambs 3 and 4.

In the use of the door, according to the present invention, it will be readily apparent that should two persons attempt to pass through the door at the same time, in opposite directions, the person toward whom the door is swung in going from closed to open position does not have to step back and try to avoid the outer swinging edge of the door as he would in the case of the conventional straight door. In view of this fact, confusion and congestion is largely eliminated. Furthermore, the curvilinear portion of the doorway defined between the jambs 3 and 4 defines a recess such as at 25 into which a person desiring to pass out of the door may step to permit someone entering to pass through ahead of him. The presence of the recess 25 has the self-suggesting effect on directing a person thereinto to permit the person entering to pass through the door first. Another advantage of the present construction is that the curvilinearity of the door 5 has the tendency to direct cold air from the outside along the interior wall of the building in which the door is disposed, rather than directly into the interior of the building structure. The swinging door 22 provides a convenient method for ventilation through the doorway in warm weather with the

door 5 closed. While the structure disclosed in the foregoing specification is designed particularly for use in commercial doorways, it will be apparent that the invention may be employed in private residences not only for doors but for windows as well, and it being particularly adaptable for bay windows.

Having thus described my invention, what I desire to secure by Letters Patent and claim is:

1. A doorway for pedestrian traffic, disposed in a wall, comprising spaced door jambs, a door supported for swinging movement and independent operation upon a vertical axis having one vertical edge thereof disposed adjacent one of said jambs, said door being curvilinear in cross-section to present a concavity on one side into which traffic in one direction is directed in the direction of door opening, and a structure associated with said door, completing the doorway and defining with the wall a recess upon the opposite side of said door in which a pedestrian may stand prior to passage through said door following the opening thereof, said door and structure being projected out of alignment with said wall.

2. A doorway for pedestrian traffic comprising a pair of spaced aligned door jambs, an additional jamb offset from said aligned jambs, a door curvilinear in cross-section supported for swinging movement and for independent operation about an axis adjacent one of said jambs, said door when closed engaging with said additional jamb, and structure disposed between said additional jamb and the other of said aligned jambs carrying out the general curvilinearity of said door.

3. A doorway comprising a frame, a door curvilinear in cross-section supported for swinging movement about an axis adjacent one side of said frame, a door jamb offset from the plane of said frame with which said door coacts when in closed position, a window frame defined between said jamb and the other side of said frame, and a window disposed in said frame, said window and window frame carrying out the general curvilinearity of said door.

4. A door frame having side members, a door curvilinear in cross-section disposed in said frame, a jamb for said door disposed out of the plane of said frame, and structure between said jamb and frame carrying out the same general curvilinearity of said door providing a recess between said frame and said door when in closed position.

DAVID J. SEAMAN.