

(No Model.)

D. G. RUSH.
REVOLVING STORM DOOR.

No. 501,538.

Patented July 18, 1893.

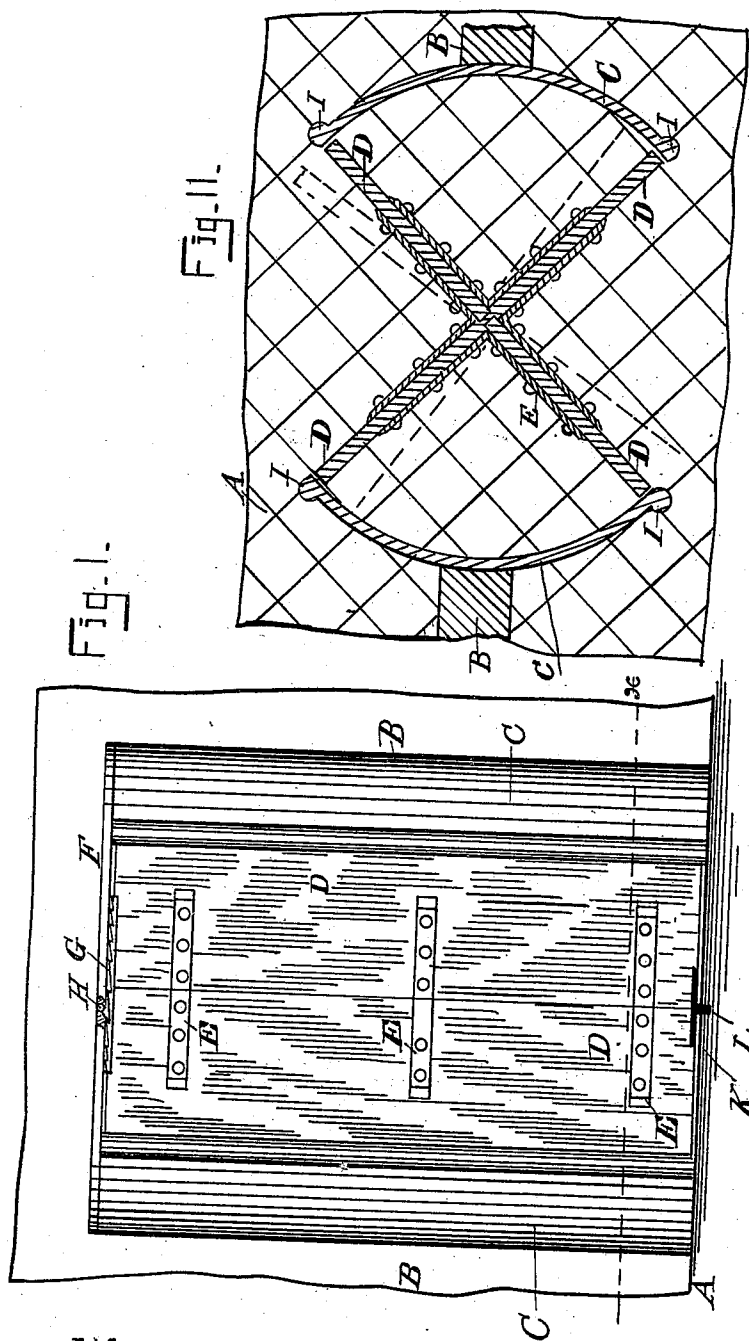


Fig. I.

Fig. II.

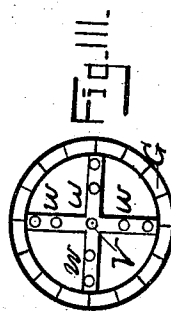
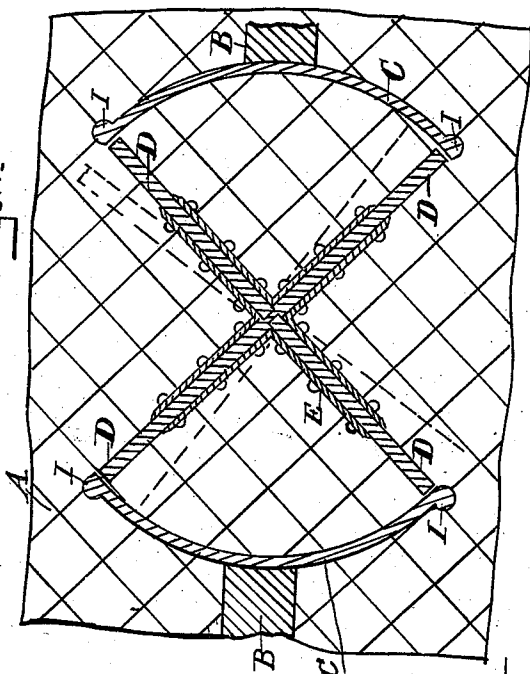


Fig. IV.

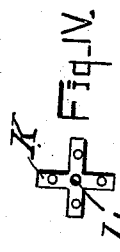


Fig. V.

Witnesses:
M. E. O'Brien
Fred M. Chapin.

Inventor.
David G. Rush
by G. L. Chapin Att'y.

UNITED STATES PATENT OFFICE.

DAVID G. RUSH, OF CHICAGO, ILLINOIS.

REVOLVING STORM-DOOR.

SPECIFICATION forming part of Letters Patent No. 501,538, dated July 18, 1893.

Application filed December 5, 1892. Serial No. 454,115. (No model.)

To all whom it may concern:

Be it known that I, DAVID G. RUSH, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented new and useful Improvements in Four-Winged Revolving Storm-Doors, of which the following is a specification, reference being had to the accompanying drawings, illustrating the invention, in which—

Figure 1 is an elevation of my improved revolving storm door and its connections in position, as when in use; Fig. 2, a horizontal section of the same on line *x*, looking down; Fig. 3, a plan view of the ratchet wheel removed from the top of the door; Fig. 4, an inverted view of the lower pivot; Fig. 5, a detail of the door attachment.

The purpose of this invention is to provide such means for opening and closing passages in high buildings, that the pressure of cold air will not affect the doors to the extent of making it both difficult and dangerous to open them. In some of the high buildings in Chicago, the unforeseen force of cold air rushing into compartments, has become a serious objection; so much so that any means which will obviate the difficulty must be employed. My means to this end are as follows:—

A, represents a portion of the floor of the building, and B, B, portions of the partition wall at either side of the door-way.

C, C, represents two segments of a cylinder, each registering ninety degrees or more; and they are respectively, firmly secured to the partition wall B, B. The segments rest on the floor A, and a cover F—Fig. 1—extends over both of them and is rigidly attached thereto, as shown at F,—Fig. 1—so that no air can pass through one compartment to the other except what lies between the segments and the four winged door D, D, D, D. This door may be made of any desired material, and pivoted to turn round by any suitable means. It is preferable, however, that the wings of the door be made to contain as much glass as is required for light. The four wings D, are supported by angle metal straps E, and the door at the bottom turns on a pivot L, which is rigid to the wings K; and said wings are secured to the four wings of the door by screws. A circular rack G, is secured to the four wings at the top of the door by means of the arms *w*, and screws; and the upper pivot to the door is shown at V, Fig. 3.

A gravity pall H, pivoted to the cover F, operates on the notched rack and prevents the door from being turned except in the direction desired. The segments C, C, may also be made of any suitable material, but if they are filled largely with glass it would make the passage way more desirable. To prevent the possibility of the fingers being injured between the wings D, and the segments C, I employ rubber as at I, on the vertical edges of the segments; and place on the edges of the wings D, U-shaped rubber strip J, as shown in the enlarged horizontal section at Fig. 5.

It has been the custom, as shown in the patent to T. Van Kannel, No. 387,571, dated August 7, 1888, to employ three doors secured to a central post so that one or more doors may swing independently of the others, and to connect all the wings with flexible chains, cords, or ropes, and to operate the three winged door within a case having openings in its opposite portions, to be used as passages, the construction being such that but two wings have a cut off on a single side segment at a time; while, as shown in Fig. 2, in applicant's device, two wings on opposite sides have each a cut off on the side segment thus forming two dead air chambers. This construction is important inasmuch as in cold weather a current of cold air cannot enter a compartment, as is the case when only one door, or wing, has a cut off against the side segment; and the crack between the door and segments permits these elements to pass through. The art also shows a single door concentrically placed between two segments, and the door at each edge carrying sliding segments to close the openings between the main segments. I disclaim these constructions as being no part of my invention and confine myself to the elements claimed.

I claim as new and desire to secure by Letters Patent of the United States—

A four winged door integral of itself and without a central post, and centrally pivoted above and below in combination with opposite side segments of such a width each as to inclose the spaces between the opposite two wings; as and for the purpose specified.

DAVID G. RUSH.

Witnesses:

G. L. CHAPIN,
A. M. WILLARD.