July 9, 1957 V. BOURQUE 2,798,422

AIR RELIEF MEANS FOR DOORS

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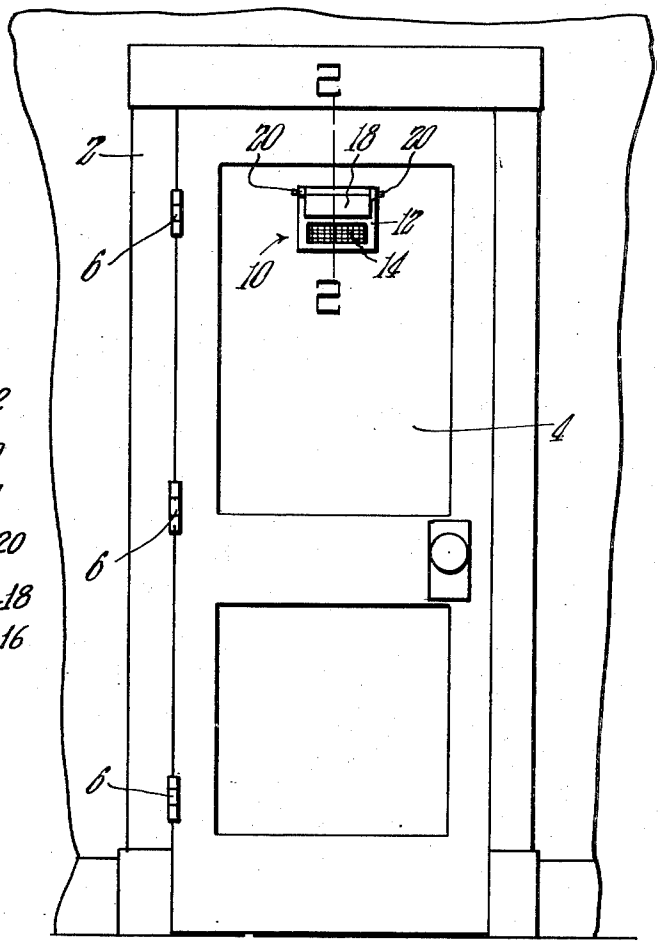


Fig. 1.

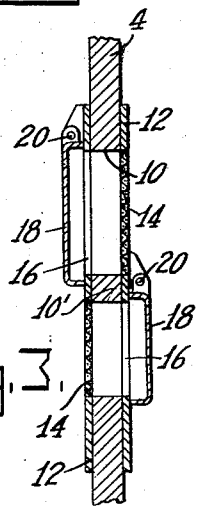


Fig. 3.

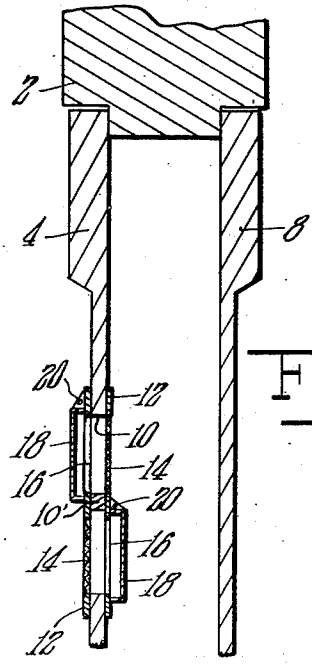


Fig. 2

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AIR RELIEF MEANS FOR DOORS

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2 Claims. (Cl. 98—87)

This invention relates to means for relieving air as one door is swung relative to another.

It is common in dwellings to provide an outer storm door for the door opening in addition to the inner door and in hotels double doors are sometimes provided between rooms or at the entrance from the corridor to a room.

Air between the doors makes the closing of one door difficult when the adjacent door is closed. Also, suction often makes the opening of one door difficult.

According to this invention, air relief means is provided for use in a door so that air is relieved as one door is closed or suction is broken as it is opened.

All of the above objects, I accomplish by means of such structure and relative arrangements of parts thereof, as will fully appear by a perusal of the description below and by various specific features which will be hereinafter set forth.

To the above cited and other ends and with the foregoing and various other novel features and advantages and other objects of my invention as will become more readily apparent as the description proceeds, my invention consists in certain novel features of construction and in the combination and arrangement of parts as will be hereinafter more particularly pointed out in the claims hereunto annexed and more fully described and referred to in connection with the accompanying drawings wherein:

Fig. 1 is an elevational view of a door frame and door having the novel features of the invention associated therewith;

Fig. 2 is an enlarged sectional view on the line 2—2 of Fig. 1; and

Fig. 3 is an enlarged view similar to Fig. 2 through the outer door and device of the invention.

Referring now to the drawings more in detail, the invention will be fully described.

A door frame is represented by 2 in Fig. 1. A door 4 is hinged thereto at 6 and this door may be considered an outer door. Another similar door 8 is hinged to the frame and the upper portion thereof is shown in Fig. 2.

The device of the invention is represented by 10 and is associated with the outer door 4 for purposes of disclosure.

The door 4 is provided with an opening 10 therethrough and plates 12 are secured to opposite sides of the door around the opening therethrough. Said plates are provided with screened openings 14 and unscreened openings 16. The opening 10 may be divided by a transverse member 10' to provide upper and lower separate openings.

Preferably, the screened opening of one plate will be opposite to the unscreened opening of the other plate.

Closures 18 are hinged to the plates 12 at 20 for free swinging and will normally hang in closed positions to cover up the openings 16.

As one of the doors is swung to an open position, any suction exerting resistance to, swinging of the door is overcome by, opening of the lower inner closure 18.

When one of the doors is swung to closed position, air entrapped between the doors acts on the outer upper closure 18 through the inner upper screened opening 14 so that said closure swings outwardly whereby the one door swings freely to its closed position.

The screened openings are in communication with the opening of the door 4 for purposes of circulation.

Preferably, the device will be of small size so as to not detract from the appearance of the door and, while shown at the top of the door, the device may as well be located at the bottom.

The invention may be embodied in other specific forms without departing from the essential characteristics thereof. Hence, the present embodiments are therefore to be considered in all respects merely as being illustrative and not as being restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all modifications and variations as fall within the meaning and purview and range of equivalency of the appended claims are therefore intended to be embraced therein.

What it is desired to claim and secure by Letters Patent of the United States is:

1. The combination with inner and outer doors independently hinged in relatively spaced relation to inner and outer sides of a casing around a door opening of means for relieving pressure and suction in the swinging of the doors comprising, one of the doors being provided with an opening extending therethrough, inner and outer plates secured to inner and outer sides of said door around said opening and a horizontal partition across and dividing said opening into separate upper and lower passageways, said plates provided with upper openings and with lower openings in communication with said upper and lower passageways respectively, outer and inner closures hinged to said outer and inner plates on horizontal axes disposed above the upper and lower openings of said outer and inner plates respectively adopted for independent swinging between closed positions over said openings and open positions away therefrom.

2. The combination with inner and outer doors independently hinged in relatively spaced relation to inner and outer sides of a casing around a door opening of means for relieving pressure and suction in the swinging of the doors comprising, one of the doors being provided with an opening extending therethrough, inner and outer plates secured to inner and outer sides of said door around said opening and a horizontal partition across and dividing said opening into separate upper and lower passageways, said plates provided with upper openings and with lower openings in communication with said upper and lower passageways respectively, outer and inner closures hinged to said outer and inner plates on horizontal axes disposed above the upper and lower openings of said outer and inner plates respectively adopted for swinging between closed positions over said openings and open positions away therefrom, and screens secured over the lower and upper openings of the outer and inner plates respectively.

References Cited in the file of this patent

UNITED STATES PATENTS

657,743	Miller	Sept. 11, 1900
2,060,002	Brinkley	Nov. 10, 1936
2,224,494	White	Dec. 10, 1940
2,297,892	Jacobs	Oct. 6, 1942

OTHER REFERENCES

"369 Practical Job Pointers." A book published 1938 by American Builder Magazine, page 152.