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VENTILATING DOOR OR LIKE

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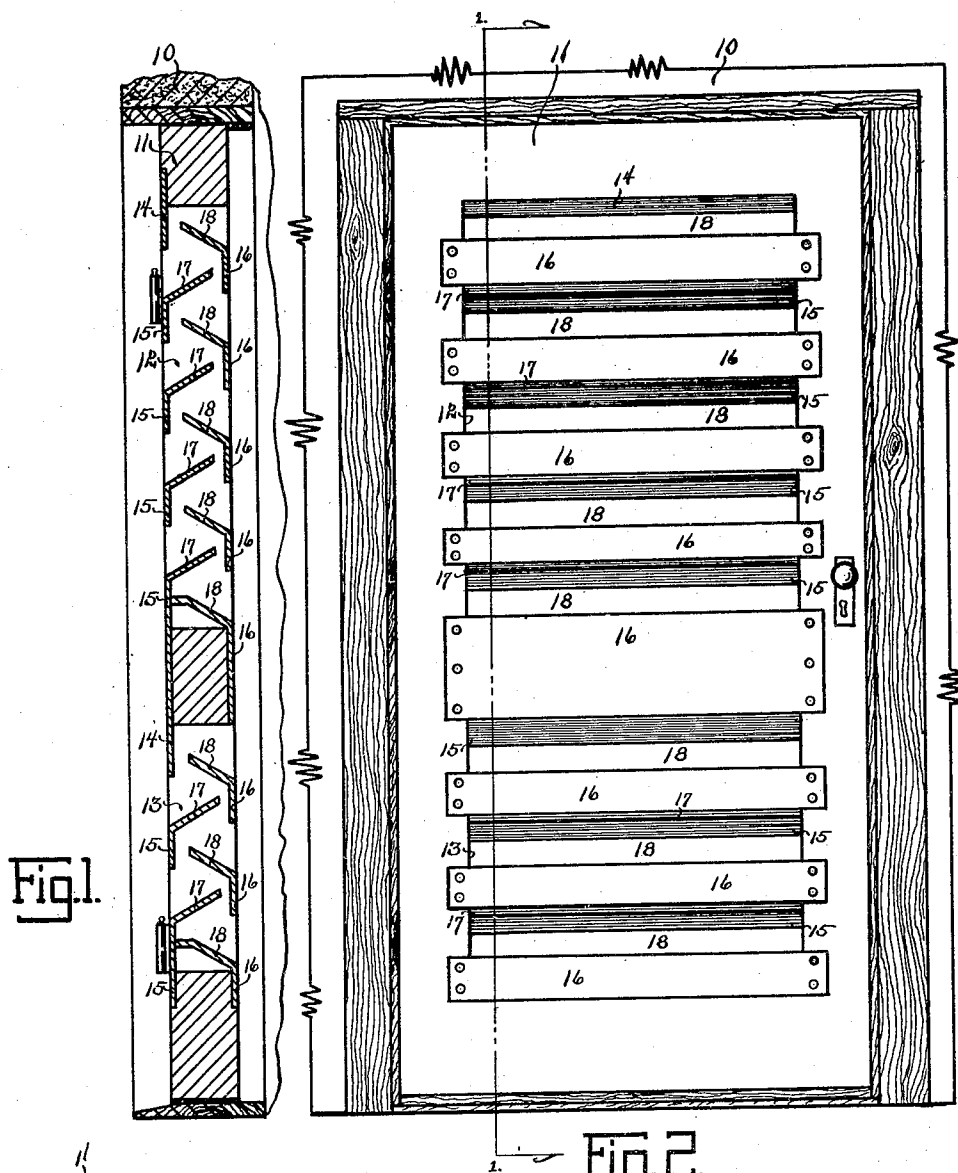


Fig. 1.

Fig. 2.

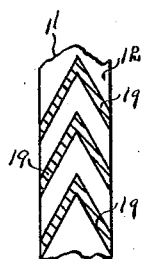


Fig. 3.

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VENTILATING DOOR OR LIKE

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The principal object of my invention is to provide a door, window or like that will freely permit the passage of air therethrough when in a closed position but will not pass undesirable matter such as rain or snow or permit visibility through the same.

A further object of this invention is to provide a ventilating door or window that is not objectionably heavy.

A still further object of my invention is to provide a door, window or like which, when in a closed position, allows the circulation of air therethrough, that is refined and attractive in appearance and is so fabricated that no reservoir or like exists in its construction to receive and retain undesirable matter such as water or dirt.

A still further object of this invention is to provide a door or window that permits the circulation of air therethrough as freely in one direction as the other, but will not permit the passage therethrough of rain, snow or the like, regardless of whether its direction of attack is to the inside or outside of the door or window.

A still further object of my invention is to provide a door, window or like permitting the circulation of air therethrough that is economical in manufacture and durable in use.

These and other objects will be apparent to those skilled in the art.

My invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Fig. 1, is a vertical sectional view of my device taken on line 1—1 of Fig. 2.

Fig. 2, is a full side view of my invention in the form of a door ready for use.

Fig. 3, is a section of a modified form of structure suggested when the complete door embodying my invention is made of wood.

I am well aware that shutters of various patterns have been manufactured and used for a great number of years, but their chief objections are their inability to shed rain from either side, possible visibility through

them at certain angles, and frail construction. My invention overcomes these objections, is clean and sanitary and offers no possibility for the hoarding of dirt or rain water in its construction.

I have used the numeral 10 to designate a wall having a door opening. Hinged to the wall and capable of swinging to a position to inclose the opening is the frame 11 of my door or window. This frame 11 has two rectangular openings 12 and 13, as shown in the drawings, however it may have any number or only one. In Fig. 1 and Fig. 2, I use metal members to fabricate my invention. By the use of metal a light, compact and strong door embodying my invention may easily be had.

At the top of each opening 12 and 13 is a horizontally extending flat elongated metal sheet 14. These sheets are secured flat on the inside of the frame in each instance and extend downwardly a slight distance over the openings, respectively. The numeral 15 designates a plurality of equally spaced apart horizontally extending flat elongated metal strips secured flat on the inside of the frame 11 and barring the openings 12 and 13. The numeral 16 designates a plurality of similarly equally spaced apart metal strips secured on the outer side of the frame 11, barring the openings 12 and 13, but positioned in staggered elevations relative to the strips 15 as shown in Fig. 1. Integrally formed on the upper marginal edge of each of the strips 15 is an elongated flange strip 17 extending upwardly and outwardly or into the opening in the frame adjacent to it and completely across the opening.

By this construction each strip 15 with its strip 17 forms an obtuse angle extending into the opening which is being inclosed by the same. The free marginal edge of each of the strips 17 extend toward the center of one of the strips 16 which is in a slightly higher plane than the plane of the base strip 15, to which the strip 17 is formed and terminates a slight distance from that member, as shown in Fig. 1. The numeral 18 designates an elongated flange strip similar to the strips 17 but formed on the upper marginal edge of the strips 16 and extending upwardly and in-

wardly or into the opening in the frame adjacent to it. These strips 18, each have their free or upper marginal edge terminating a slight distance from the center of one of the strips 15, which is above the plane of the plane of its base strip 16 to which it is secured, as shown in Fig. 1, except the highest located strip 18 in each of the openings.

The highest strip 18 in each of the openings 12 and 13 extend toward the metal sheet 14 near the top of each of the openings. For economy in manufacture I have the sheet 14 located at the top of the opening 13 integrally formed to the lowest strip 15 in the opening 12. As a matter of fact the lowest strips 15 and 16 in each of the openings should extend downwardly to engage the frame 11, thereby forming a closed contact at their lower side portions with the door frame 11. To eliminate any possibility of the creation of a reservoir for entrapping undesirable material such as dirt and water, I have extended the free marginal edge of each of the lowest members 18 in the two openings 12 and 13 to form an extension member to the strip 15 adjacent to it, as shown in Fig. 1.

By this construction the air circulating through my door or window may easily pass upwardly into the frame opening along either of the members 17 or 18 until it strikes the opposite extending members 17 or 18 on the other side, at which point it will either turn upwardly or downwardly around that member and through the opening in the frame. Heavier material, however, such as rain and the like, would by the force of gravity be prevented from travelling such a course and, therefore, would not pass through the openings from either direction.

The strips 15 and 16 may be easily secured to each side of the frame 11 by any suitable means such as nails or screws. The complete construction makes a very light, durable and attractive door or window, and as the metal members are not transparent, visibility through the same is impossible.

Such doors or windows made under my invention may be used for a great number of purposes and may be easily installed in the place of present windows or doors of the impervious type.

In Fig. 3, I illustrate a modified form of construction recommended when an all wood door or window is desired. In this construction inverted V-troughs 19 are used and placed horizontally in the openings 12 and 13. The inverted bottom of each trough is spaced apart from the trough above it but extends into the trough above it to such an extent that rain, snow or the like would not pass through the openings. This construction also functions equally well from either direction.

Some changes may be made in the construction and arrangement of my improved ventilating door or like without departing

from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim:

1. In a device of the class described, a frame having an opening, a plurality of spaced apart, horizontally extending strips secured on one side of said frame and over said opening, a plurality of spaced apart, horizontally extending strips secured on the opposite side of said frame, over said opening and in staggered elevations relative to said first mentioned strips, a plurality of horizontal flanges formed on each of said strips extending upwardly and into said opening and terminating a slight distance from the strips on the opposite side of the opening from them, respectively, and an extension formed on the marginal edge of the lowest flange strip, connecting that flange strip to the strip adjacent to it on the opposite side of the said opening for preventing the existence of a trap to collect undesirable material.

2. In a device of the class described, a frame having an opening, a plurality of spaced apart strips secured at one side of said frame and over said opening, a plurality of spaced apart strips secured on the opposite side of said frame, over said opening and in staggered positions relative to said first mentioned strips, a plurality of flanges formed on each of said strips extending at an angle into said opening, and an extension formed on the marginal edge of one of said flanges, thereby filling the space between that flange and the strip adjacent to it on the opposite side of said opening for the preventing of the existence of a trap to collect undesirable material.

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