

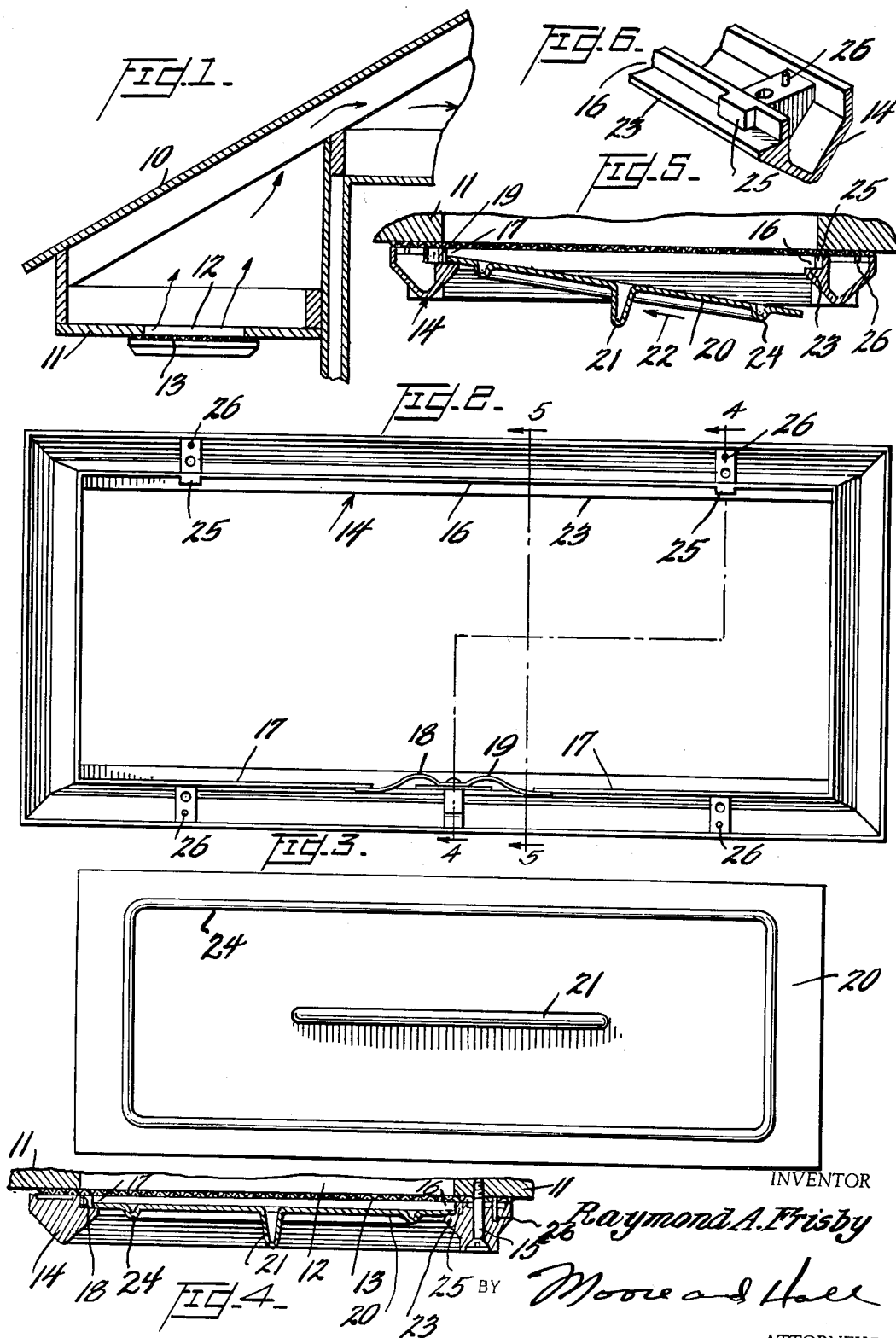
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CLOSURE FOR VENTILATORS

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1

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CLOSURE FOR VENTILATORS

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This invention relates to means for closing ventilators.

Many houses have ventilators in the eaves, in the gables, in the wall of the basement, and elsewhere, designed to admit small quantities of air flow. It is frequently desirable to close these ventilator openings. For example a house located in Florida is subjected to severe windstorms, during which the ventilators should be closed. Such ventilators in houses in the northern parts of this country should be provided with means to close the ventilators during cold periods. In the absence of means for closing the ventilator, strong winds will carry great quantities of water and/or cold air into the attic (or basement) of the house.

It is highly desirable that the means for closing the ventilator be simple, inexpensive and capable of being operated to close the ventilator in a few seconds. It is the primary object of this invention to provide a ventilator meeting these qualifications.

In carrying out the invention, I provide a rectangular frame having a screen covering the opening in the frame and supported by one side of the frame. The screen is attached to the frame near the outer edges thereof. There is a space between the screen and the frame contiguous with the opening in the frame. A plate may be inserted into the opening in the frame, parallel to the screen, to cover the latter. The plate extends into the space between the frame and the screen and may be readily slipped in and out of its operating position. A spring holds the plate in place once it is properly inserted in operating position. Further details will be apparent during the detailed description which follows:

In the drawings:

Figure 1 is a cross-section of an eave of a house showing the invention applied thereto.

Figure 2 is a back side view of the die cast frame, with the screen and the cover plate removed.

Figure 3 is a view of my device looking at it from the front.

Figure 4 is a sectional view of the device taken along the line 4—4 of Figure 2.

Figure 5 is a sectional view of the device taken along the line 5—5 of Figure 2.

Figure 6 is a detail view showing a portion of the die-cast aluminum frame.

In Figure 1, a house to which the invention is applied has a roof 10 and an eave 11. An opening 12 for ventilating purposes is preferably covered by a screen 13. As shown in Figure 4 the screen is held in place by a die cast aluminum frame 14 which is connected to the eave 11 by screws 15. There are indents 16 and 17 along the inner walls of frame 14 on opposite sides of the opening in it. Located in the indent 17 are springs 18 and 19, which may be of any well known shape, and which may be compressed toward the wall of the frame and which exert a force outward when so compressed. In addition there is flat plate 20 having a handle 21 which may be inserted into the indents 16 and 17. In order to do this, one edge of the plate 20 is first laid against

2

springs 18 and 19, as shown in Figure 5, and pressure on plate 20 is exerted in the direction of arrow 22. This compresses springs 18 and 19, allowing the free end of plate 20 to clear the projection 23 of frame 14. When the plate 20 is rotated around its left end (as in Figure 5) until it is parallel to and adjacent the screen, no further pressure is exerted toward the left, hence springs 18 and 19 press the plate 20 under projection 23 and into indent 16 and against stop members 25. The cover plate 20 is therefore firmly confined in front of the screen 13 to block strong winds from passing therethrough. If cover plate 20 is made of thin metal, it may be provided with indents 24 for purposes of reinforcement.

In order to lay a basis for the terminology to be used in the claims, it may be stated that the portion of the frame 14 surrounding the head of screw 15 together with projection 23 constitutes the base of frame 14. That upstanding portion of frame 14 in contact with screen 13 is a ledge carried by the base and supporting the screen.

I contemplate that in marketing the invention, a device consisting of the screen 13, frame 14, springs 18 and 19, and plate 20 would be sold as a unit. Screws 15 could be sold with the unit, or furnished separately, but in any event they are first put in place during ultimate installation. It is desirable to retain the screen 13 attached to frame 14 during shipping and during that part of the installation procedure prior to insertion of screws 15. For this purpose four small rivets 16 permanently affix the screen 13 to the frame 14. These rivets remain in place during and after installation of the device and do not interfere with installation in any way. However, it is of course understood that once the device is installed the screws 15 are primarily relied upon to hold the frame 14 and screen 13 in their proper places. It is also possible to use pins in place of rivets 16. Pins will not permanently affix the screen to the frame, but are useful during installation to hold the screen in proper position until screws 15 are put in place.

The device may be installed anywhere that a ventilating opening is provided. For example some houses have a basement under only a part of the house and a ventilating opening from the basement to the space existing between the ground and the rest of the house. My device can be used to cover that opening.

I claim to have invented:

1. A ventilator comprising a rectangular frame having a rectangular central opening, ledges on one side of the frame along opposed edges thereof, a screen, means for fastening the screen to said ledges in parallel relation to the frame, said frame defining holes therethrough perpendicular to the plane of the screen whereby the frame may be mounted on a base with the screen held between the frame and the base, said ledges being narrower than the frame whereby there are spaces between the screen and the frame along the inner walls of the ledges, a spring mounted on one of the ledges and extending into the space adjacent that ledge toward the opposing ledge, and a rectangular closure plate having one dimension slightly greater than the distance from the spring to the opposing ledge and having its other dimension slightly less than the complementary dimension of the rectangular opening and being held by said ledges under the action of said spring.

2. A device adapted to be mounted on the surface of a wall to cover a hole in the wall comprising a frame larger than the hole to be covered and having means enabling it to be mounted on the surface of the wall, a screen which may be mounted between the frame and the wall when the frame is mounted on the wall, said frame having a central opening through which the hole in the wall is exposed, said frame having cover plate retaining indents along opposite inner edges thereof, a

3

spring in one of the indents, and a cover plate which may be inserted into said indents and held thereby by pressing one edge thereof against said spring in one of said indents and inserting the other end into its complementary indent.

3. A device as defined in claim 2 in which the screen extending beyond and spaced inwardly from said indents is attached to one surface of the frame.

4. A device adapted to be mounted on the surface of a wall to cover a hole in the wall comprising a rectangular frame larger than the hole to be covered and having a rectangular central opening therein, said frame having holes therethrough perpendicular to the plane thereof whereby it may be screwed to the wall at points around the hole in the wall, said frame having a surface adapted to face the wall and cover plate retaining indents in the frame along opposing inner edges thereof, the indents extending from the plane of said surface inwardly for a limited distance, a spring mounted in one of said indents, and a rectangular closure plate having a dimension slightly larger than the spacing of the said opposed inner edges and having its other dimension slightly shorter

4

than the distance between the remaining two inner edges of the frame and fitting into said opposing indents and held thereby under the action of said spring.

5. A device as defined by claim 4 having in addition a screen larger than the hole in the wall to be covered and adapted to be mounted between the screen and the wall spaced from said indents.

6. A device as defined in claim 4 having in addition a screen mounted on said surface and extending across the central opening in the frame.

References Cited in the file of this patent

UNITED STATES PATENTS

15	249,050	Huffman	Nov. 1, 1881
	313,844	Anderson	Mar. 17, 1885
	684,610	Marshke	Oct. 15, 1901
	1,900,177	Fien	Mar. 7, 1933
	2,316,526	McDonald	Apr. 13, 1943
20	2,595,595	McKay	May 6, 1952
	2,664,599	Zitomer	Jan. 5, 1954