May 15, 1951 H. R. RAWSON 2,552,735

THERMOSTATIC WINDOW VENTILATOR

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FIG. 1.

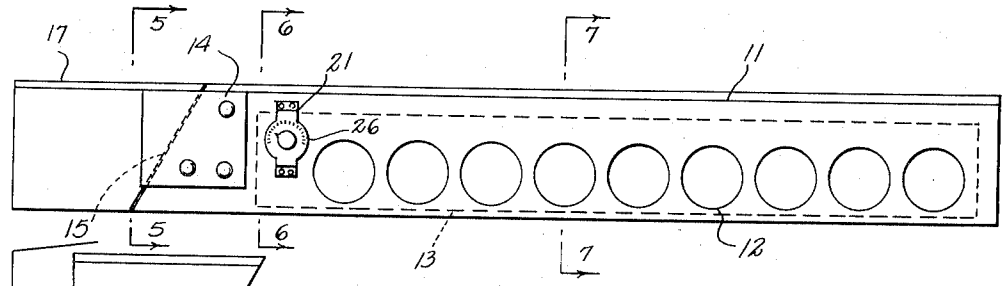


FIG. 2.

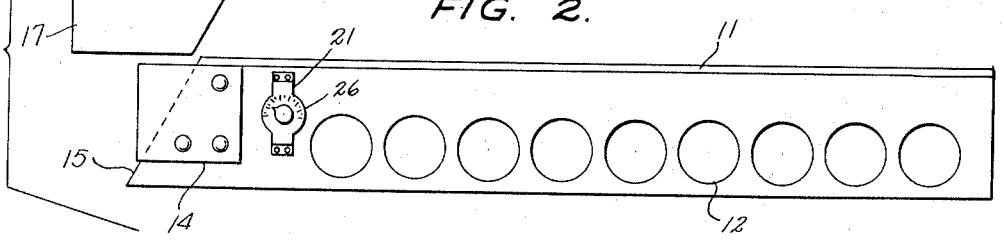
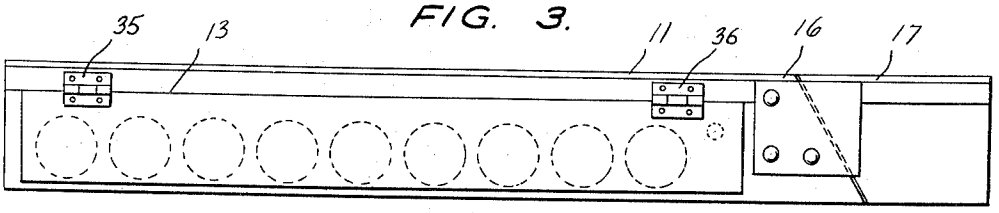


FIG. 3.



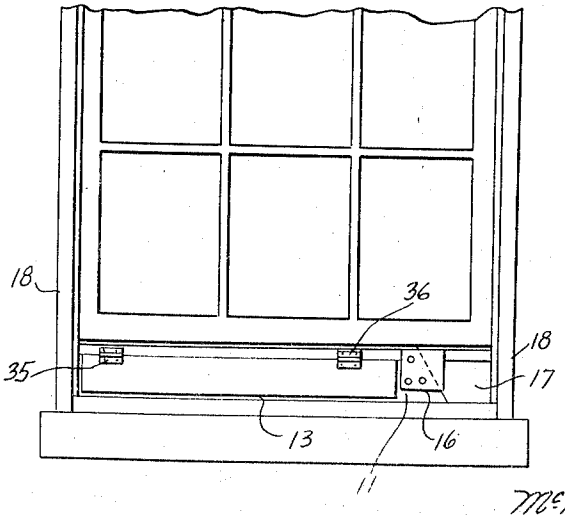


FIG. 4.

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THERMOSTATIC WINDOW VENTILATOR

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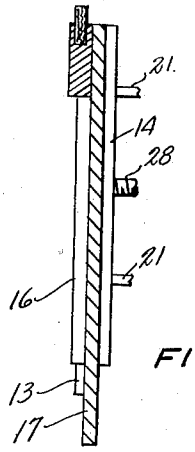


FIG. 5.

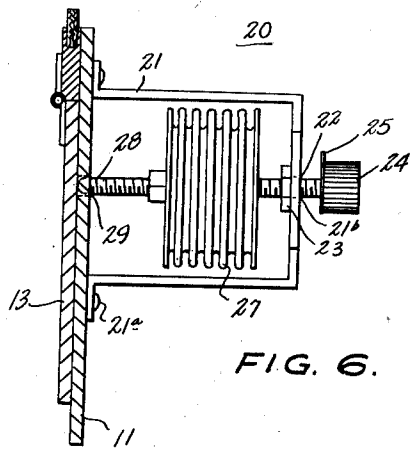


FIG. 6.

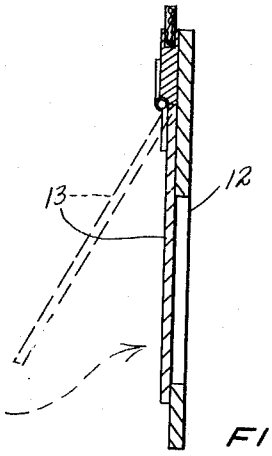


FIG. 7.

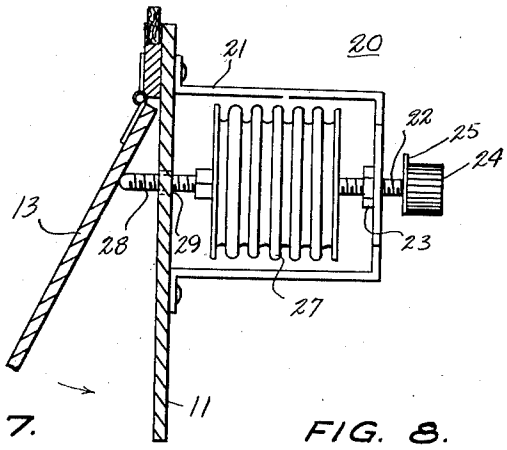


FIG. 8.

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THERMOSTATIC WINDOW VENTILATOR

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Application July 23, 1948, Serial No. 40,289

3 Claims. (Cl. 236—49)

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This invention relates generally to window ventilators and specifically to window ventilators controlled by thermostatic elements.

An object of this invention is to provide an inexpensively constructed window ventilator, the operation of which is responsive to the temperature within the room which it ventilates.

Another object of the invention is to provide a window ventilator which is easily installed between protruding sash guides of a window casement without removing the guides or without defacement of the casement.

A further object of the invention is to provide a window ventilator having a temperature responsive element positioned out of the way of drafts through the ventilator, and one being more responsive to the temperature of the room.

Further objects and advantages of this invention as well as its construction, arrangement, and operation, will be apparent from the following description and claims when taken in connection with the accompanying drawing, in which:

Figure 1 is a view in elevation of the room side of the ventilator.

Figure 2 is a view in elevation of the ventilator with the positioning plate raised to permit placing in a window casement.

Figure 3 is a view in elevation of the ventilator as it appears on the outside of the room.

Figure 4 shows the ventilator in place below a lower sash and between it and a casement.

Figure 5 is a side view in section taken on line 5—5 of Figure 1.

Figure 6 is an end view partly in section taken on line 6—6 of Figure 1.

Figure 7 is a view in section taken on line 7—7 of Figure 1, and

Figure 8 is a view in section and partly in elevation of the thermostatic element in expanded condition raising the ventilator plate.

Referring in more detail to the drawings, in Figures 1 to 3 ventilator frame 11 has circular openings or apertures 12 through it and has hinged plate or cover 13 positioned to close the apertures when in a lowered position, the plate 13 being mounted on a pair of hinges 35, 36 for pivotal movement about an axis extending longitudinally of the frame 11.

At one end of the frame 11 is a spacing plate 14 secured by screws or other means not illustrated and on the opposite side a similar plate 16 is likewise attached. These plates 14 and 16 cover the diagonally shaped end 15 of the frame, and serve as guides to hold the extension plate 17 which also has a diagonally shaped end to match

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the end 15. This permits the ventilator frame to be positioned within a window casement 18 as shown in Figure 4 without the necessity of cutting any of the casement side strips or guide channels. Diagonally shaped extension plate 17 may be cut at its other end in order to fit a window casement.

In Figures 1, 2, 6 and 8, the thermostatic element shown generally as 20 is composed of bracket 21 secured by rivets 21a or other conventional means to frame 11. Bracket 21 is U-shaped and has a hole 21b through which is positioned bolt 22 threadably engaged with nut 23 soldered or otherwise secured to the bracket 21. Knurled knob 24 has a pointer 25 secured thereto which in conjunction with a dial 26 shows the relative setting of the thermostatic element.

Attached to bolt 22 is bellows 27 being filled with a vapor or liquid which is responsive to temperature changes to expand or contract the length of the bellows. At the other end of bellows 27 bolt 28 is free to pass through hole 29 in the ventilator frame 11 and bears against the inside of the cover 13. In an expanded condition, bellows 27 pushes the cover 13 outwardly as shown in Figure 8.

In operation, the frame 11 is positioned in the casement between one of the sashes and the casement, and the extension plate 17 is cut to fit the remaining space and is slipped into place. The adjusting of the thermostatic element 20 is accomplished by turning knurled knob 24 in order to admit colder air to the enclosed room.

It is to be understood that various modifications and changes may be made in this invention without departing from the spirit and scope thereof, as set forth in the appended claims.

What is claimed is:

1. In a window ventilator, an upstanding frame adapted to be positioned between a sash and a casement with one face exposed, means engaging one end of said frame adapting the latter for securement between opposed guide channels of said casement, said means comprising an extension disposed in end to end abutting relation with respect to said one end of said frame, and opposed guide plates secured to said one end of said frame and extending beyond the latter for the engagement therebetween of the adjacent end of said extension, there being a plurality of apertures in said frame for the admission of air therethrough, a plate positioned in face to face relation with respect to the other face of said frame and having its upper edge mounted on said frame for swinging movement into and out of abutting re-

lation with respect to said other face of said frame, and temperature responsive means carried on the exposed face of said frame and engageable with said plate for positioning the latter in select positions of its movement toward and away from said other face of said plate in response to temperature changes.

2. In a window ventilator, an upstanding frame adapted to be positioned between a sash and a casement with one face exposed, means engaging one end of said frame adapting the latter for securement between opposed guide channels of said casement, there being a plurality of apertures in said frame for the admission of air therethrough, a plate positioned in face to face relation with respect to the other face of said frame and having its upper edge mounted on said frame for swinging movement into and out of abutting relation with respect to said other face of said frame, and temperature responsive means carried on the exposed face of said frame and engageable with said plate for positioning the latter in select positions of its movement toward and away from said other face of said plate in response to temperature changes, said last named means comprising a U-shaped bracket having its legs arranged adjacent the other face of said frame and fixedly secured to the latter, a temperature responsive bellows positioned intermediate the bight of said bracket and said frame and mounted on said bracket and said frame for expansion and contraction, means carried by the end of said bellows adjacent said frame and operatively engaging said plate for moving the latter toward and away from said frame in response to the contractions and expansions of said bellows, and hand actuable means carried by said bracket and operatively engaging the other end of said bellows for adjustably positioning said bellows within said bracket.

3. In a window ventilator, an upstanding frame adapted to be positioned between a sash and a casement with one face exposed, means engaging one end of said frame adapting the latter for securement between opposed guide channels of said casement, there being a plurality of apertures in said frame for the admission of air therethrough, a plate positioned in face to face relation with respect to the other face of said frame and having its upper edge mounted on said frame for swinging movement into and out of abutting relation with respect to said other face of said frame, and temperature responsive means carried on the exposed face of said frame and engageable with said plate for positioning the latter in select positions of its movement toward and away from the other face of said plate in response to temperature changes, said last named means comprising a U-shaped bracket having its legs arranged adjacent the other face of the said frame and fixedly secured to the latter, a temperature responsive bellows positioned intermediate the bight of said bracket and said frame and mounted on said bracket and said frame for expansion and contraction, means carried by the end of said bellows adjacent said frame and operatively engaging said plate for moving the latter toward and away from said frame in response to the contractions and expansions of said bellows, and hand actuable means carried by said bracket and operatively engaging the other end of said bellows for adjustably positioning said bellows within said bracket, said last named means comprising a bolt rotatably supported intermediate its ends in the bight of said bracket and mounted on the latter for movement toward and away from said other end of said bellows, and means arranged exteriorly of said bracket and fixedly secured to said bolt for effecting the movement of said bolt.

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