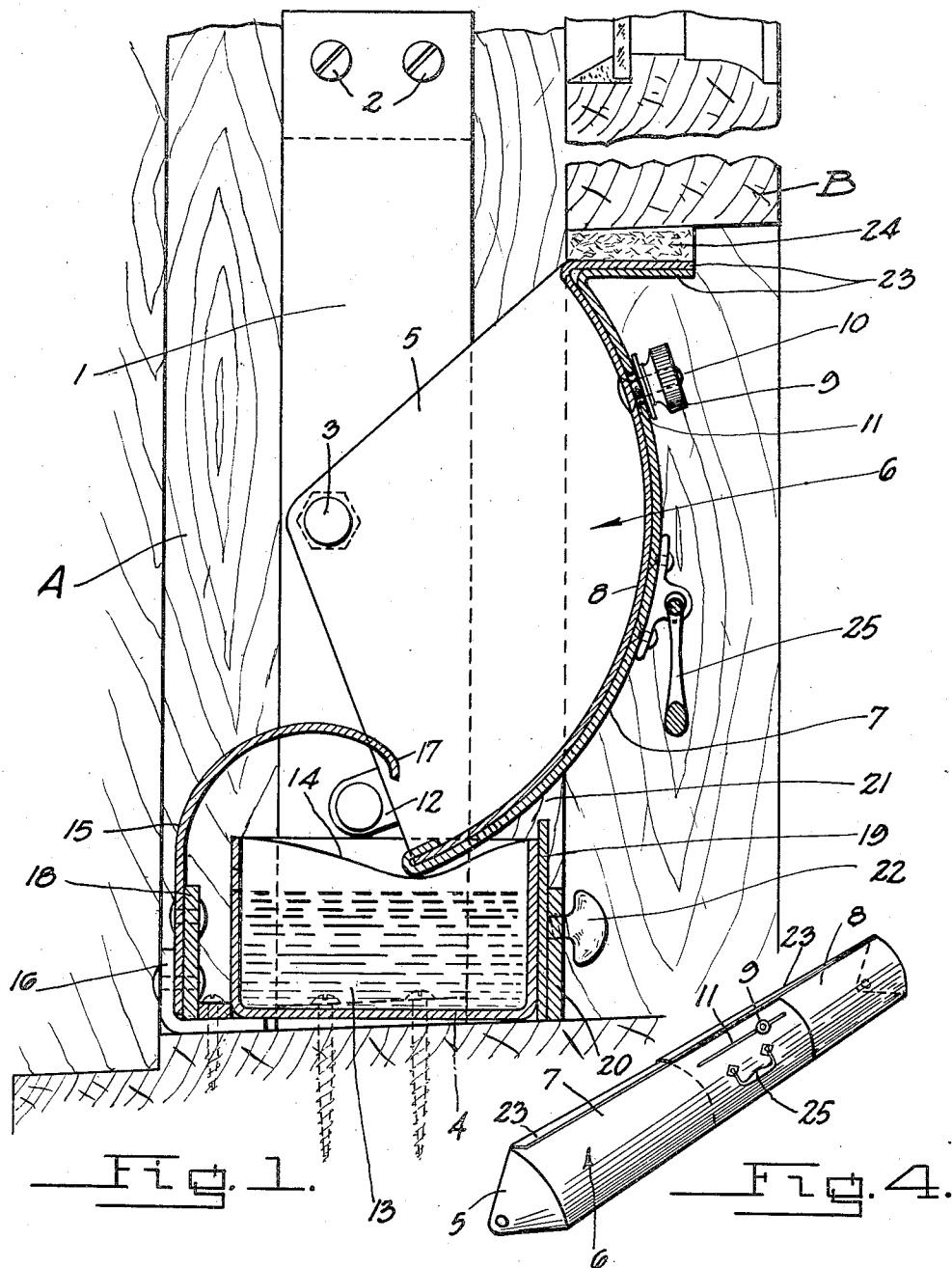


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APPLICATION FILED MAR. 5, 1919.

Patented June 24, 1919.
2 SHEETS—SHEET 1.

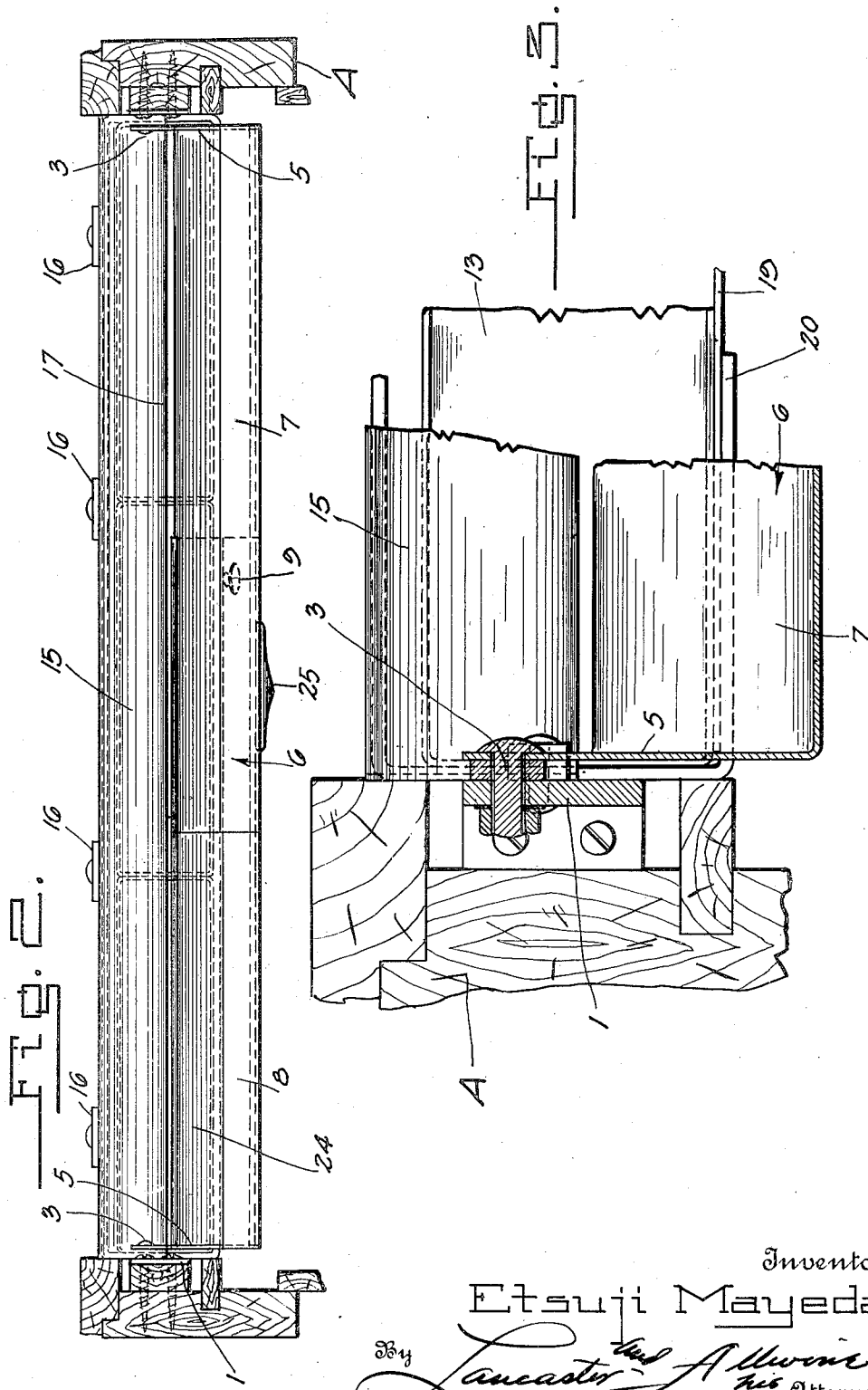


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UNITED STATES PATENT OFFICE.

ETSUJI MAYEDA, OF NEW YORK, N. Y.

VENTILATOR.

1,307,449.

Specification of Letters Patent.

Patented June 24, 1919.

Application filed March 5, 1919. Serial No. 280,800.

To all whom it may concern:

Be it known that I, ETSUJI MAYEDA, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Ventilators, of which the following is a specification.

This invention relates to window ventilators and an object of the invention is to provide a ventilator adapted for use in connection with any ordinary window of the sliding type to permit the passage of fresh air into a room, without creating a draft, and further, to construct a ventilator structure in such manner that the air will be filtered or washed prior to its admittance into the room.

More specifically, the invention comprehends the provision of a ventilator structure comprising a support which is attached in any suitable manner to the window frame, preferably outwardly of the lower sash, and which support carries an arcuate guard member curving upwardly and inwardly to guide the air thereover and into a pivotally mounted arcuate member which in turn guides the air downwardly for passage over water or any suitable detergent in pans removably supported by the main supporting structure, from which the air passes upwardly about the outer surface of a portion of the pivoted sectional drum for passage into the room.

A further object of the invention is to provide a stop or butt upon the pivoted sectional drum, which may be of felt or any suitable material, against which the window sash engages to prevent the passage of air into the room without passing through the ventilator structure, and also to provide a slidable plate by means of which a quantity of air passing into the room from the detergent pans may be regulated.

Other objects of the invention will appear in the following detailed description, taken in connection with the accompanying drawings, forming a part of this specification and in which drawings:

Figure 1 is a section through the improved ventilator showing the same applied.

Fig. 2 is a plan view of the ventilator showing it applied to a window casing.

Fig. 3 is an enlarged fragmentary section through the ventilator illustrating the manner of pivotally mounting the section drum, and

Fig. 4 is a detail perspective view of the sectional drum of a ventilator structure.

Referring more particularly to the drawings, A indicates the window frame, in which the usual type of sashes are mounted for sliding movement, the lower slidable sash being indicated by the letter B.

The ventilator structure comprises supporting members 1 which are attached in any suitable manner, such as by screws 2, to the window frame and they have pivotally connected thereto bolts 3. The bolts 3 extend through the upright portion of the support 1 and through the arm or end portion 5 of the segmental drum 6.

As shown in Fig. 4 of the drawings, the segmental drum 6 is formed of a pair of telescopically connected sections 7 and 8, which are held in adjusted telescope or longitudinal position with respect to each other by a thumb nut 9. The thumb nut 9 is mounted upon a screw 10 which is carried by the section 8 and rides in an elongated slot 11 formed in the outer section 7, and by tightening the thumb nut 9 upon the bolt 10, the sections 7 and 8 may be held in adjusted positions, to regulate the length of the segmental drum 6 in accordance with the width of the window to which the ventilator is attached.

The downward pivotal movement of the segmental drum 6 is limited by stops 12 which are attached to the supporting members 1 in any suitable manner. The lower edge of the segmental drum 6 extends into the detergent containing pans 13. A plurality of these pans are provided for convenience in placing them in the window frame and removing them and the inner ends of these pans have their upper edges cut away as shown at 14 to accommodate the lower edge of the segmental drum 6. The detergent containing pans 13 may be filled to any desired height with water or any other suitable liquid for cleansing or purifying the air and the air entering the ventilator is guided into the interior of the segmental drum 6 by a suitable guiding member 15 which is attached to an angled bracket 16 and curved upwardly and inwardly having its inner downcurved edge 17 positioned within the segmental drum as clearly shown in Fig. 1 of the drawings, so that the air being guided inwardly over the convex surface of the guide 15 will strike the inner concaved surface of the segmental

drum 6 and be guided beneath the guides 15, causing an eddy of the air therein over the liquid in the pans 13, at which time the air will be cleansed, any dust or other foreign material being collected by the liquid in the pan. The air passes outwardly, beneath the lower edge of the segmental drum 6 and along the outer surface of the same, above the inner edges of the pan 13 and into the room, in the window of which the ventilator is positioned. The outer edges of the pans 13 rest upon the angle brackets 16, to level the pan and suitable bracing plates 18 may be provided for bracing the vertical portions of the guide 15.

An adjustable regulating plate 19 is provided which engages the inner sides of the pan 13 and the upper edge of which projects above the upper edge of the pan. This plate 19 is slidably supported by a suitable supporting plate 20 to permit regulating of the sides of the opening 21 through which the air passes into the room. Any suitable type of handle or button 22 may be carried by the plate 19 for facilitating its vertical adjustment.

The drum sections 7 and 8 which are formed of any suitable type of sheet metal have tangentially extending flat portions 23 formed upon their upper edges which supports a pad 24 of felt, rubber, or any suitable yieldable material. The lower edge of the sash B is adapted to rest upon the pad 24, for preventing the passage of air into the room between the segmental drum and the window sash B.

A handle 25 of any desired or approved construction is attached to the section 7 of the segmental drum to facilitate the rocking of the drum upon its pivot 3 and to permit the drum to be swung outwardly, upon its pivot to permit the window sash B to be completely lowered. The button 22 is preferably detachably connected to the plate 19, so that it may be removed, when it is desired to lower the window sash B.

In operation, the air will be guided over the convex surface of the guiding plate 15 until it strikes the inner concaved surface of the segmental drum 6, which will return the air into and beneath the under or concave surface of the guide 15, resulting in a slight eddying of the air, particularly when there is a relatively strong draft into the ventilator. From this point, the air will pass over the detergent liquid in the pans 13 and through the openings 21, into the room, in the window of which the ventilator structure is mounted. By adjusting the plate 19 the quantity of air admitted to the room may be regulated as desired.

From the foregoing description, taken in connection with the accompanying drawings, it will be apparent that a ventilator has been provided which is comparatively

simple in construction, will lend itself to ready attachment to any and all windows, using the sliding sash type, and one which will clean and purify the air, prior to its entrance into the room, as well as preventing a strong draft of air entering the room.

Changes in details may be made without departing from the spirit of this invention, but;

I claim:

1. A window ventilator comprising a pivotally mounted segmental drum, an arcuate guide plate to guide air against the concave surface of said drum, the lower edge of said drum positioned to deflect air beneath said arcuate guide for guiding about a portion of the convex surface of the lower portion of the drum.

2. A window ventilator comprising a pivotally mounted segmental drum, an arcuate guide plate to guide air against the concave surface of said drum, the lower edge of said drum positioned to deflect air beneath said arcuate guide for guiding about a portion of the convex surface of the lower portion of the drum, and detergent containing pans positioned beneath the drum and the arcuate guiding surface of said arcuate guides.

3. A window ventilator comprising a pivotally mounted segmental drum, an arcuate guide plate to guide air against the concave surface of said drum, the lower edge of said drum positioned to deflect air beneath said arcuate guide for guiding about a portion of the convex surface of the lower portion of the drum, and detergent containing pans positioned beneath the drum and the arcuate guiding surface of said arcuate guides, and an adjustable plate to regulate the quantity of air passing over the convex surface of the drum.

4. A window ventilator comprising a pivotally mounted segmental drum having a convex surface facing into a room to be ventilated, an arcuate guide plate to guide air against the concaved surface of said drum, the lower edge of said drum positioned to deflect air beneath said arcuate guide for guiding about a portion of the convex surface of the drum into a room, a plate adjustably supported for movement toward or from the drum to regulate the quantity of air passing into the room.

5. A window ventilator comprising a pivotally mounted segmental drum having a convex surface facing into a room to be ventilated, an arcuate guide plate to guide air against the concaved surface of said drum, the lower edge of said drum positioned to deflect air beneath said arcuate guide for guiding about a portion of the convex surface of the drum into a room, a plate adjustably supported for movement toward or from the drum to regulate the quantity of air passing into the room, and detergent con-

taining pans positioned between said drums and the arcuate air guiding surface of said guide.

6. A window ventilator comprising a pivotally mounted segmental drum having a convex surface facing into a room to be ventilated, an arcuate guide plate to guide air against the concaved surface of said drum, the lower edge of said drum positioned to deflect air beneath said arcuate guide for guiding about a portion of the convex surface of the drum into a room, a plate adjustably supported for movement toward or from the drum to regulate the quantity of air passing into the room, and detergent containing pans positioned between said drums and the arcuate air guiding surface of said guide, tangential flanges formed along the upper edge of said drum, and a yieldable pad carried by said flanges and adapted to be engaged by a window sash.

7. A window ventilator comprising a pivotally mounted segmental drum, an arcuate guide plate to guide air against the concaved surface of said drum, the lower edge

of said drum positioned to deflect air beneath said arcuate guide for guiding about a portion of the convexed surface of the drum, and a yieldable pad carried by the upper edge of said drum and adapted to be engaged by a window sash.

8. A window ventilator comprising a pivotally mounted segmental drum having its convexed surface facing into a room to be ventilated, an arcuate guide plate to guide air against the concave surface of the drum, the lower edge of said drum positioned to deflect air beneath said arcuate guide for guiding about a portion of the convexed surface of the drum for passage into the room, a plate adjustably supported for movement toward or from the convex surface of said drum to regulate the quantity of air passing into the room, and horizontally positioned flanges formed upon the upper edge of said drum, a pad mounted upon said flanges and adapted to be engaged by a window sash.

ETSUJI MAYEDA.