

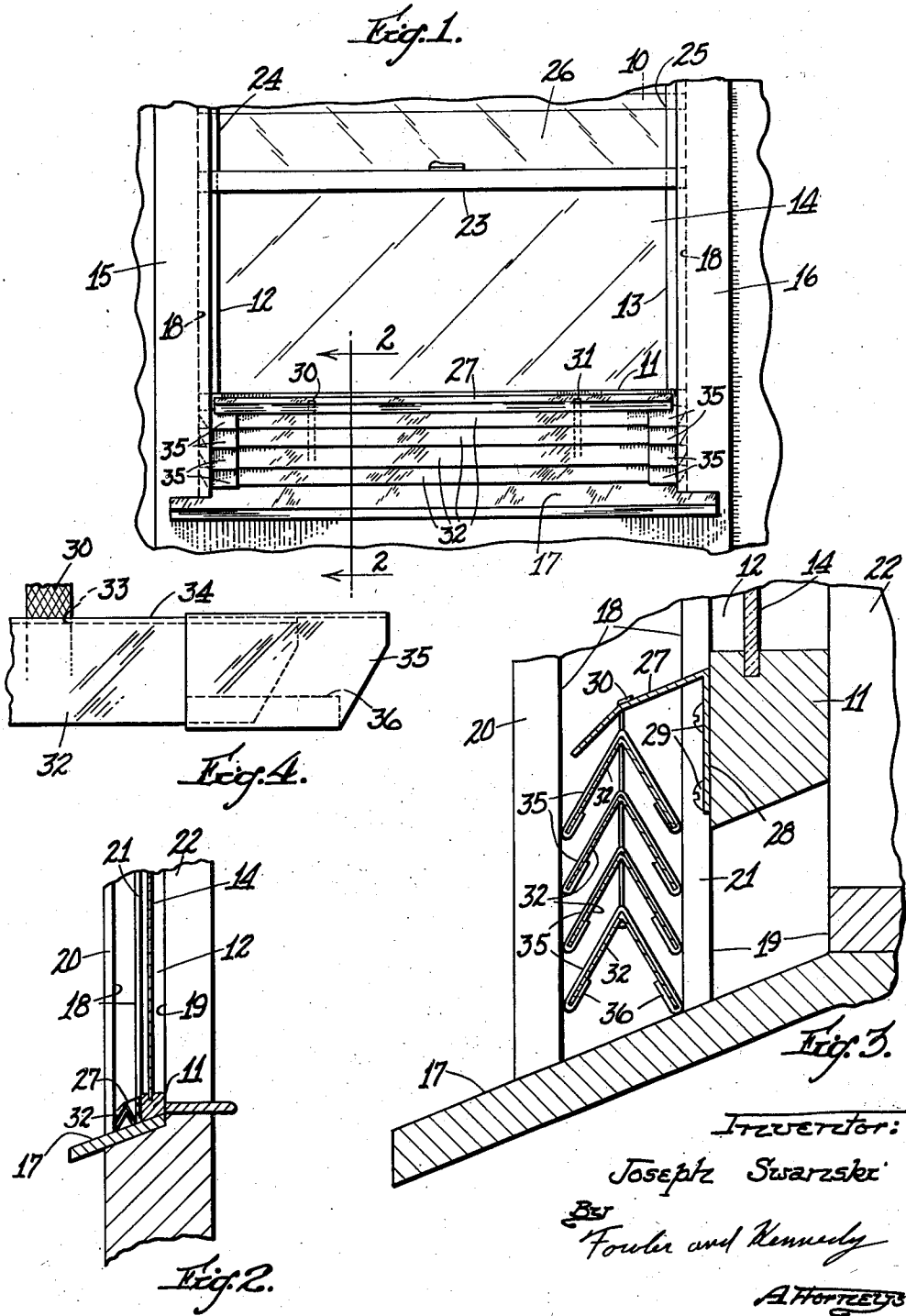
May 10, 1949.

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2,469,903

COLLAPSIBLE WINDOW VENTILATOR

Filed Feb. 13, 1947



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UNITED STATES PATENT OFFICE

2,469,903

COLLAPSIBLE WINDOW VENTILATOR

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Application February 13, 1947, Serial No. 728,221

2 Claims. (Cl. 160—102)

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The present invention relates to ventilators, and more particularly to a window ventilator which may be detachably secured to a window sash thereby automatically to provide proper draftless ventilation whenever the window sash is raised, but at the same time to obstruct the passage of rain, snow and other objectionable matter therethrough.

Another object of the present invention is to provide a ventilator which may be secured to the lower rail of a window sash thereby to be drawn over the opening formed whenever said sash is raised, and to be telescoped together whenever said sash is lowered.

With the above and other objects in view, as will hereinafter appear, the invention comprises the devices, combinations and arrangements of parts hereinafter set forth and illustrated in the accompanying drawings of a preferred embodiment of the invention from which the several features of the invention and the advantages attained thereby will be readily understood by those skilled in the art.

Fig. 1 represents, in front elevation, a window frame having a window sash to which the present invention is applied.

Fig. 2 represents a sectional view taken substantially along line 2—2 of Fig. 1 and showing the disposition of the present invention whenever the window sash is in its closed position.

Fig. 3 represents, in an enlarged scale, a sectional view taken substantially along line 2—2 and showing the disposition of the present invention whenever the window sash is raised.

Fig. 4 represents, in an enlarged scale, a fragmentary end portion of one of the slat elements of the present invention.

Referring to the accompanying drawings, the present invention is particularly adapted to be used in conjunction with the usual type of window sash which comprises upper and lower horizontally disposed rail members 10 and 11 which are secured at their respective end portions to the usual vertically disposed side members 12 and 13. These elements 10, 11, 12, and 13 form the usual lower sash frame in which is mounted a window pane 14. This window sash is slidably mounted within the usual window frame which comprises the side frame members 15 and 16 and the usual window sill 17. Formed in each of the frame members 15 and 16 are a pair of parallel and vertically disposed window sash guiding channels 18, and 19. These channels 18 and 19 are defined by means of the parallel strips 20, 21, and 22 which may be secured directly to

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the inner portion of each of the window frame members 15 and 16 or they may be formed integrally therewith.

As is well known by those skilled in the art, the lower window sash frame is adapted to be slidably mounted within the oppositely disposed inner guide channels 19, 19 and an upper window sash frame is adapted to be similarly mounted within the outer guide channels 18, 18. Referring particularly to Fig. 1, there is disclosed a portion of an upper window sash comprising a lower sash rail 23, side frame members 24 and 25 and an upper window pane 26.

As hereinabove noted, the present invention contemplates the provision of a ventilator device which may be detachably secured to the lower rail of a window sash. This ventilator device comprises an inverted substantially trough-shaped support member 27 having one marginal edge portion 28 thereof adapted to be detachably secured to the sash rail 11 by means of a plurality of screws 29, 29. Referring particularly to Fig. 1, it is to be understood that the over-all length of the member 27 is substantially less than the width of the sash rail 11 so that when it is applied to the rail it will not interfere with the usual movements of the window sash.

Suitably secured to the member 27 are a pair of flexible cloth tapes 30 and 31 each of which depends downwardly from the member 27 thereby to support a plurality of parallel slat members 32, 32. Each of the slat members 32, 32 is formed as an inverted trough-shaped member which is provided with a pair of slots 33, 33 disposed in spaced relation along the apex portion 34 thereof. Each of the tapes 30 and 31 is adapted to pass through a respective one of the slots 33, 33 and as the material about each of the slots 33, 33 is clamped together about the tapes 30 and 31, it is to be understood that the tapes will function to suspend the slats 32, 32 in spaced relation with each other from the support member 27.

Referring particularly to Fig. 3, it will be apparent that whenever the lower sash rail 11 is raised a substantial distance above the window sill 17 an opening will be formed over which the ventilator slats 32, 32 will be automatically extended thereby to prevent the passage of any foreign matter or direct air currents through said opening. It will be clear that since the apex portion 34 of each of the slats 32, 32 is disposed within the confines of its adjacent slat member that it will be almost impossible for any foreign matter to be blown directly through the ventilator device and into the window opening.

By referring to Fig. 2 of the present drawings it will be understood that upon the closing of the lower window sash the slat members 32, 32 will be automatically telescoped together to the end that they will form no obstruction to the lowering of the sash rail 11. Fig. 2 discloses the window sash in its lowered position with the ventilator slats 32, 32 all nested together beneath the support member 27.

The present invention contemplates a ventilator device having the ventilator slats thereof formed of such a length that they may be readily received within the oppositely disposed outer channel grooves 18, 18 of the window frame. From this it will be understood that the channel grooves 18, 18 will function to guide the ventilator slats whenever the same are raised and lowered and also these channel guides will prevent the ventilator slats from moving sidewise or endwise of each other in response to pressures exerted thereon by the wind.

Realizing that all window frames are not made in standard widths, the present invention also contemplates the use of extendable members 35, 35 which may be telescopically secured over the end portions of the ventilator slats 32, 32. More specifically, each of the members 35, 35 is formed with a cross section substantially like that of each of the slats 32 so that it may be readily mounted in intimate contact with the end portion of each of the slats. Referring particularly to Fig. 3, each lower marginal portion 36, 36 of each of the members 35, 35 is bent about the associated marginal portion of a slat so as to secure each of the members 35, 35 in place. From this it will be understood that each of the members 35 may be shifted back and forth longitudinally of its associated slat member thereby to accommodate the slat to the particular window frame width to which the ventilator unit is to be applied. The present extendable members 35, 35 may be provided at each end of each of the slats 32, 32 or may be applied to one end only of each slat. In either case, the present ventilator unit, equipped with these extendable members can be fitted into any usual type of window frame. Referring particularly to Fig. 1, it is to be understood that when the present ventilator device utilizes the hereinabove described extendable members 35, 35, these latter members will be slidably mounted within the oppositely disposed channel guides 18, 18 thereby to support and guide the ventilator slats in a manner as hereinabove described.

From the above it will be apparent that the present invention comprises a novel and meritorious ventilator device which may be detachably secured to a window sash and which is adapted to be drawn automatically over the opening formed whenever the sash is raised and to be telescoped automatically together whenever the sash is lowered.

I claim:

1. A collapsible ventilator for a window frame

having a vertically disposed window sash slidably mounted within said frame, said ventilator comprising, a pair of guide channels in said frame, said guide channels being vertically disposed at the respective sides of said frame, an elongated member having one marginal edge portion thereof securable to the lower rail of said window sash, a plurality of parallel and vertically stacked nestable slats each having a substantially inverted trough-shaped cross section and having one end portion thereof slidably received within one of said guide channels, a member telescopically secured at the other end portion of each of said slats, each of said telescopic members being slidably received within the other one of said guide channels, and flexible means carried by said elongated member and secured at spaced locations along its length to the apex portion of each of said slats thereby normally to support said slats in spaced relation with each other whenever said window sash is raised a substantial distance off the lower portion of said frame, said slats being adapted to be nested successively together whenever said window sash is moved downwardly toward the lower portion of said frame.

2. The combination with a window frame having a pair of vertically disposed guide channels, each channel being disposed at an opposite side of said frame, and a vertically disposed window sash slidably mounted within said frame, of a collapsible ventilator comprising, an inverted substantially trough-shaped member having one marginal edge portion thereof detachably secured to the lower rail of said window sash, a plurality of parallel and vertically stacked nestable slats each having an inverted substantially trough-shaped cross section and having one end portion thereof slidably received within one of said guide channels, a member telescopically secured at the other end portion of each of said slats, each of said telescopic members being slidably received within the other one of said guide channels thereby to position said slats between said trough-shaped member and the lower portion of said window frame, and flexible means carried by said trough-shaped member and secured at spaced locations along its length to the apex portion of each of said slats thereby to suspend said slats in vertically spaced relation with each other whenever said window sash is raised and to permit said slats to telescope beneath said trough-shaped member whenever said window sash is lowered.

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