March 28, 1939 E. W PHILLIPS 2,152,566

VENTILATING STORM WINDOW

Filed July 16, 1938 2 Sheets-Sheet 1

Fig. 1.

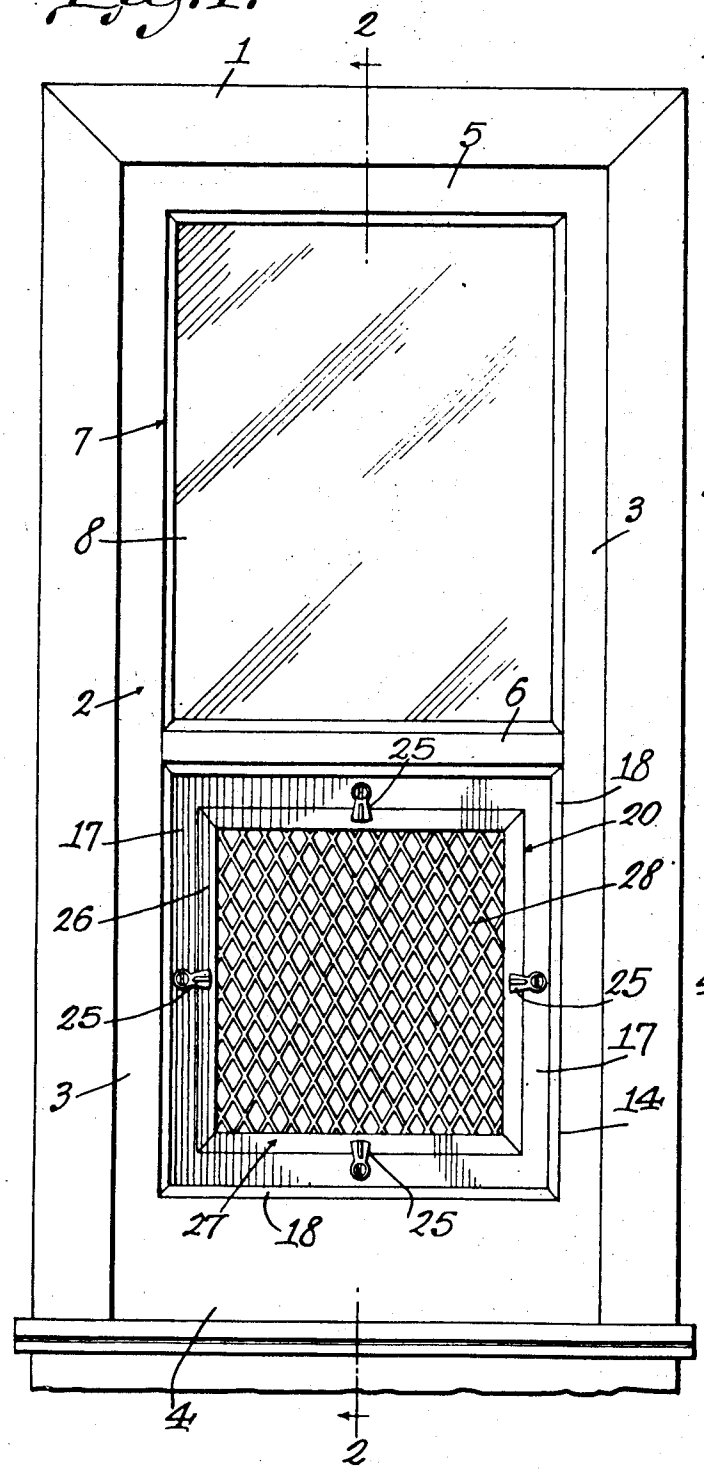
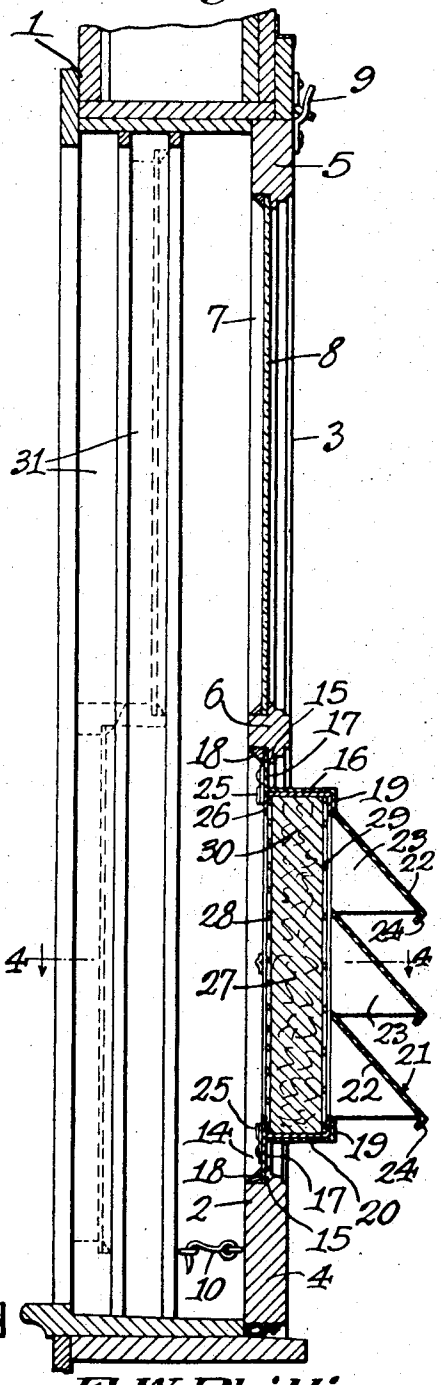



Fig. 2.




E. W. Phillips
INVENTOR.

BY C. A. Snow & Co.

ATTORNEYS.

March 28, 1939. E. W. PHILLIPS 2,152,566

VENTILATING STORM WINDOW

Filed July 16, 1938 2 Sheets-Sheet 2

Fig. 3.

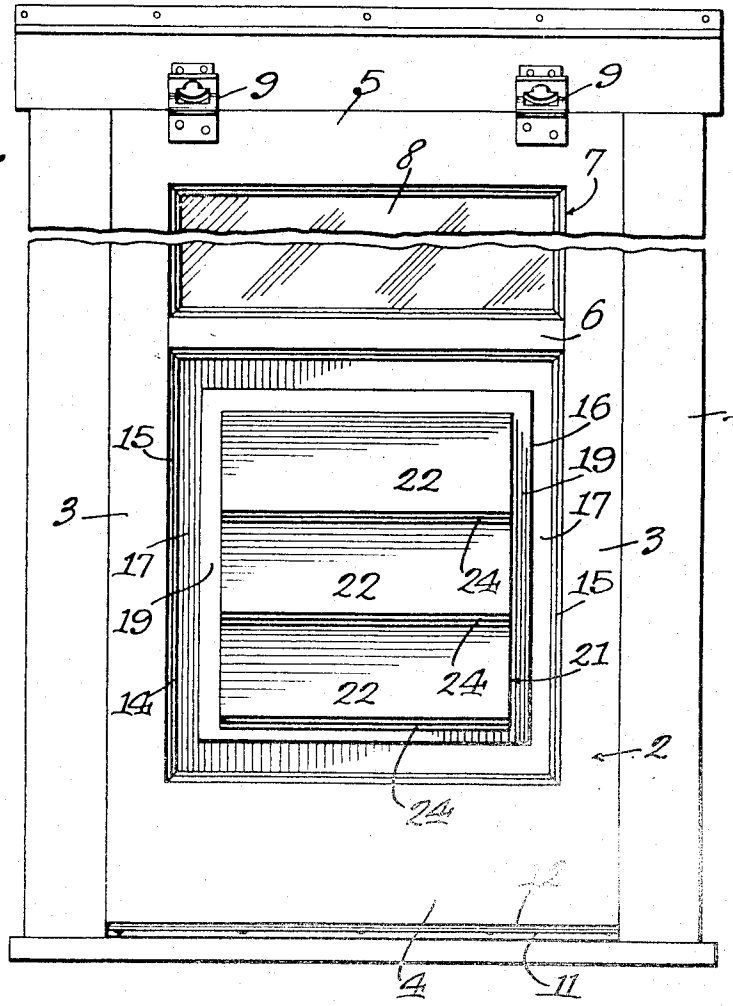
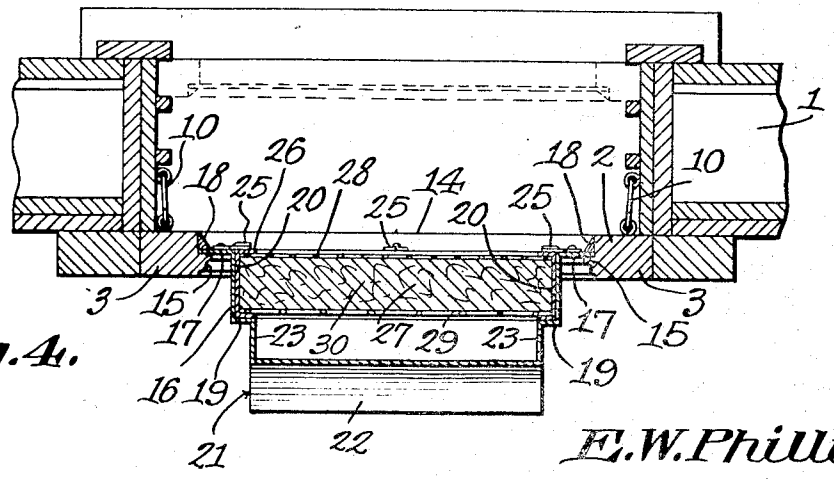



Fig. 4.




E. W. Phillips
INVENTOR.

BY C. A. Snow & Co.

ATTORNEYS.

Patented Mar. 28, 1939 2,152,566

# UNITED STATES PATENT OFFICE

2,152,566

## VENTILATING STORM WINDOW

Edward W. Phillips, Flint, Mich.

Application July 16, 1938, Serial No. 219,648

5 Claims. (Cl. 98—88)

This invention aims to provide a storm window, so constructed that air may pass through it, for purposes of ventilation, the air being adequately filtered, to prevent the entrance of pollen or the like, which is discomforting to those subject to asthma, hay fever, sinus disorder and the like, the construction being such that insects cannot enter, and the device being so made that rain or snow cannot find its way through the window. A further object of the invention is to supply novel means whereby the filter can be taken out readily for inspection, cleaning and repair. Another object of the invention is to supply a storm window which, although affording ventilation, will not promote the cracking of a house by burglars or others inclined to enter it unlawfully.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:

Fig. 1 shows, in rear elevation, a device constructed in accordance with the invention, mounted in a window frame;

Fig. 2 is a vertical section on the line 2—2 of Fig. 1;

Fig. 3 is a front elevation, wherein parts are broken away;

Fig. 4 is a transverse section.

In the accompanying drawings, the numeral 1 marks a window casing, within which is fitted a sash frame 2, constructed in accordance with the invention. The sash frame 2 embodies stiles 3, a bottom rail 4, a top rail 5, and a midrail 6. The bottom rail 4, the stiles 3 and the midrail 6 define an upper opening 7, which is closed by a pane of glass 8, although any material other than glass may be employed as a closure for the upper opening 7. Separable suspension devices 9 connect the top rail 5 of the sash frame 2 with the lintel of the window casing 1, the sash frame 2 being mounted for in and out swinging movement. The frame 2 is held in closed position by any suitable means, such as hook and eye structures 10, forming a releasable connection between the bottom rail 4 of the frame 2 and the uprights of the window casing 1, as indicated in Fig. 2. A resilient packing 11, preferably of hollow rubber, is secured to the bottom rail 4 of the frame 2. The packing rail 11 is adapted to enter and fit tightly in the space 12 that exists between the water table of the window casing 1 and the bottom rail 4 of the frame 2, and, thus, an air-proof and weatherproof joint is effected at the place stated.

The bottom rail 4, the midrail 6 and the stiles 3 define a lower opening 14 in the frame 2, and about the opening 14 there is a shoulder 15, which faces inwardly. A box-like receptacle 16 is located in the opening 14 of the frame 2, the receptacle being somewhat smaller than the opening, and the receptacle projecting forwardly with respect to the frame 2. The receptacle 16 is provided at its inner end with a marginal flange 17 which abuts against the shoulder 15 of the frame 2, the flange 17 being held in place by putty shown at 18, or by any other equivalent means known to the glazier's and builder's art.

At its outer end, the receptacle 16 has a marginal abutment lip 19, overhanging the opening 20 of the receptacle 16. Secured to the abutment lip 19 are any desired number of horizontal louvers 21. The louvers 21 may be formed in various ways, and still carry out the purpose for which they are intended. Preferably, each of the louvers 21 comprises a downwardly and outwardly inclined front wall 22, and end walls 23 of triangular form. At their lower edges, the front walls 22 of the louvers 21 are supplied with short inwardly inclined wings 24. A fastening means, such as pivotally mounted buttons 25, is carried by the flange 17 of the receptacle 16.

In the opening 20 of the receptacle 16 fits, removably, the box-like body 26 of a filter 27. The body 26 of the filter 27 abuts against the lip 19 of the receptacle 16, as shown in Fig. 2. The buttons 25 of Fig. 1 may be turned, to engage behind the filter body 26, the filter body being held detachably in place in the passage 20 of the receptacle 16. The rear wall of the filter body or frame 26 is formed by a grid 28, and the forward or outer wall is formed by a grid 29, the gird 29 preferably being somewhat coarser in mesh than is the grid 28. Within the filter body 26, between the grids 28 and 29, is disposed filtering material 30 which, preferably, is fiber glass.

Air can enter through the filter 27, owing to the nature of the filling material shown at 30. Although adequate ventilation is provided, insects will be kept out and pollen, dust and the like

will be removed by the filter 27. The device, therefore, is of particular use in keeping the air within a room clean and pure, a feature which will appeal to all, and especially to those afflicted with diseases of the nose, throat or lungs. The louvers 21 are so constructed that air can enter readily, and, at the same time, the filter 27 will not become clogged by rain or snow, nor can the elements enter into the room or apartment.

The ordinary window sashes (not shown) may be left open the year round, and there will be no danger that the furnishings of an apartment will be damaged in bad weather. It will be noted that the device, although providing for adequate ventilation and for filtering of the air, in nowise limits the movements of the window sashes in the channels 31 of Fig. 2.

Owing to the provision of turn buttons 25 of Fig. 1, the filter 27 may be removed easily, for cleaning, replacement or repair. If, for any reason, the air filtering feature does not happen to appeal to the user, the filter may be removed: although the filter is considered to be an important feature of the article.

Having thus described the invention, what is claimed is:

1. A storm window sash having an opening, a receptacle secured in the opening, louvers carried by the forward portion of the receptacle, an air filter removably mounted in the receptacle, to the rear of the louvers, and releasable means for holding the air filter in the receptacle.

2. A storm window sash having an opening, a receptacle secured in the opening, louvers carried by the forward portion of the receptacle, an air filter removably mounted in the receptacle, to the rear of the louvers, the air filter comprising a bounding body, forward and rear grids mounted on the body, and air filtering material in the body, between the grids; and releasable means for holding the air filter in the receptacle.

3. A storm window sash having an opening, an air filter, supporting means retaining the air filter on the sash and in the opening, and louvers located in front of the air filter and carried by the supporting means, each louver comprising a downwardly and outwardly inclined front wall and rearwardly extended end walls, the front wall being supplied at its lower edge with an inwardly inclined wing extended downwardly below the ends walls.

4. A storm sash having an opening and provided with a rearwardly facing shoulder disposed about the opening, a receptacle in the opening and having a passage, the receptacle having a forward abutment lip overhanging the passage, the receptacle being provided with an outwardly extended flange engaging the shoulder, means for holding the flange in place with respect to the shoulder, an air filter removably mounted in the passage, and movable means mounted on the flange and engaging the filter to hold the filter releasably in the passage, between said movable means and the lip.

5. An attachment for storm windows, comprising a box-like receptacle provided at its forward end with an inwardly projecting abutment lip, the receptacle being supplied at its rear end with an outwardly extended flange whereby the receptacle may be mounted in the opening of a storm window, an air filter removably mounted in the receptacle and held against forward movement by the lip, movable means on the flange, restraining the air filter against rearward movement, and louvers mounted on the forward end of the receptacle, in front of the air filter, the louvers projecting forwardly beyond the abutment lip.

EDWARD W. PHILLIPS.