

Sept. 1, 1931.

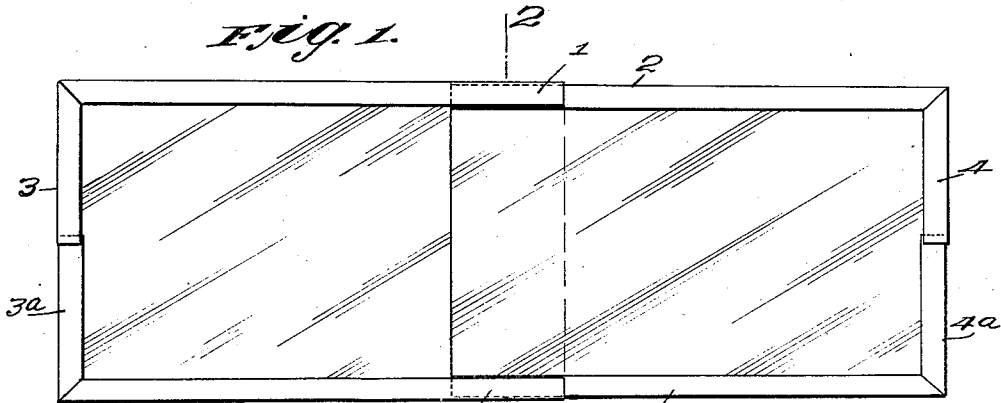
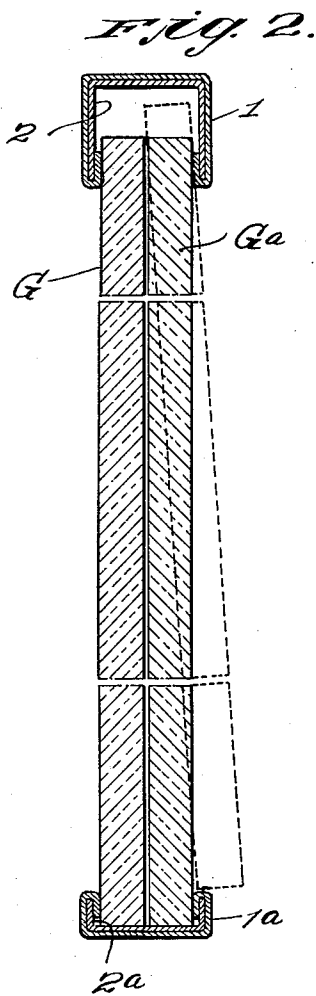
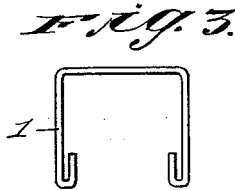
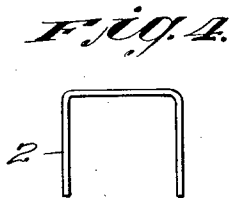
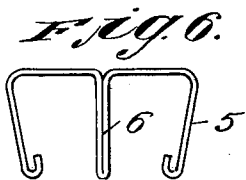
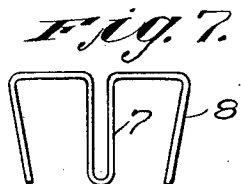
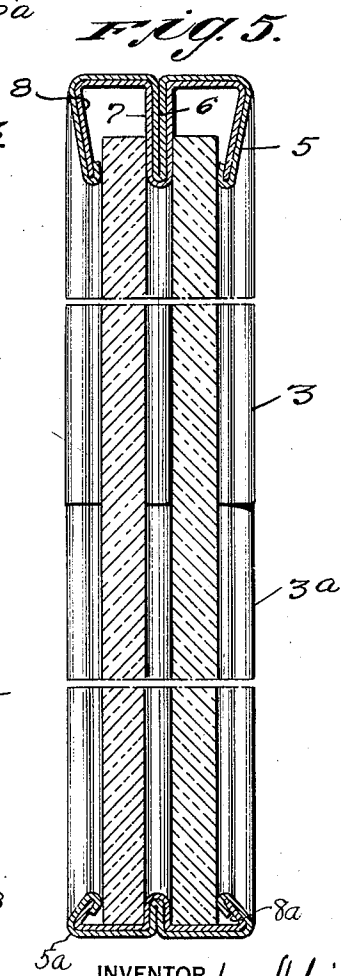
H. SHAPIRO

1,821,674

VENTILATOR

Filed June 14, 1929

2 Sheets-Sheet 1



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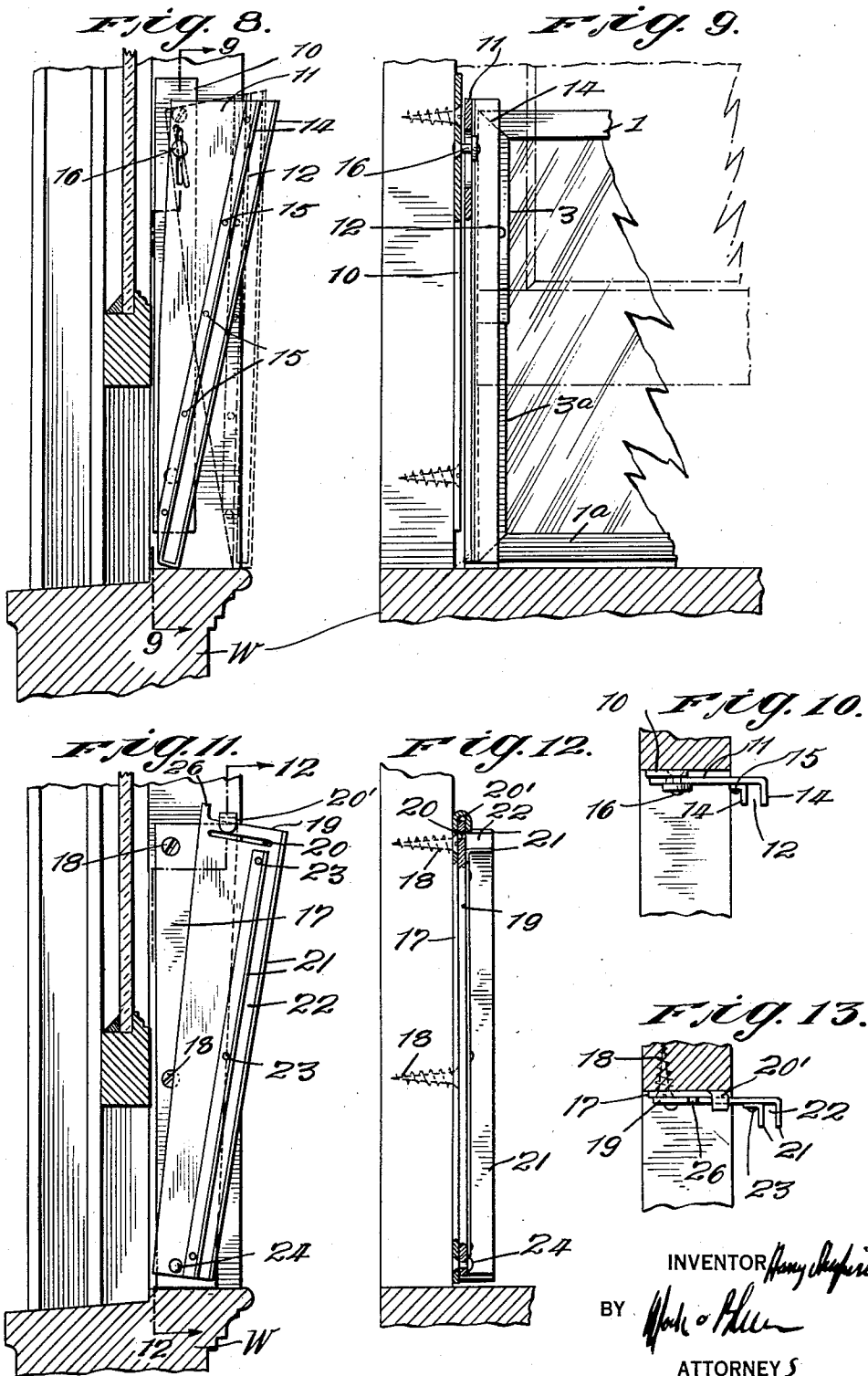
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2 Sheets-Sheet 2



UNITED STATES PATENT OFFICE

HARRY SHAPIRO, OF NEW YORK, N. Y.

VENTILATOR

Application filed June 14, 1929. Serial No. 371,022.

My invention relates to a new and improved ventilator.

One of the objects of my invention is to provide an improved ventilator of the type which is connected to the bottom portion of the frame of a window, so that when the window is opened at the bottom thereof, the current of air will be upwardly deflected.

Another object of my invention is to provide an improved ventilator which can be readily adjusted so that it can be installed in windows of varying width, without the use of skilled labor.

Another object of my invention is to provide a ventilator of this type comprising panes of glass which can be readily removed when it is desired to clean them or to replace them.

Another object of my invention is to provide a ventilator of this type whose angle with respect to the window frame can be readily adjusted.

Other objects of my invention will be set forth in the following description and drawings which illustrate a preferred embodiment thereof, it being understood that the above general statement of the objects of my invention is intended to generally explain the same and not to limit it in any manner.

Fig. 1 is a front elevation of the first embodiment of my invention.

Fig. 2 is a sectional view on the line 2—2 of Fig. 1.

Fig. 3 is an end elevation of the outer telescopic member.

Fig. 4 is an end elevation of the inner telescopic member.

Fig. 5 is a sectional view of a modification.

Fig. 6 is an end elevation of the outer telescopic member used in this modification.

Fig. 7 is an end elevation of the inner telescopic member used in said modification.

Fig. 8 is a side elevation, partially in section, showing the bracket of the device applied to the window.

Fig. 9 is a sectional view on the line 9—9 of Fig. 8.

Fig. 10 is a top detail view of the bracket.

Fig. 11 is a side view partially in section showing a modified form of bracket.

Fig. 12 is a sectional view on the line 12—12 of Fig. 11.

Fig. 13 is a top view of the bracket shown in Figs. 11 and 12.

The device shown in Figs. 1-4 comprises a top outer telescopic member 1 and a top inner telescopic member 2, which slide one within the other. It also comprises a bottom outer telescopic member 1a similar to 1 and a bottom inner telescopic member 2a similar to 2. The members 1a and 2a are not as high as 1 and 2.

The height of the members 1 and 2 is sufficient to enable either one of sheets of glass G and Ga to be raised and then tilted forwardly, as shown in dotted lines in Fig. 2, to enable either sheet of glass to be readily removed. This is particularly desirable when it is desired to clean or to replace one or both of said sheets of glass.

The member 1 is provided with a depending end flange 3 and the member 1a is provided with an upwardly extending end flange 3a and the flanges 3 and 3a telescope one within the other. Likewise, the member 2 is provided with a depending end flange 4 and the member 2a is provided with an upwardly directed end flange 4a.

In the modified form of device shown in Figs. 5-7, the outer lower telescopic member 5 is provided with an intermediate integral rib 6 which slides within the rib 7 of the inner upper telescopic member 8.

Likewise, in the form of device shown in Figs. 5-7, the outer upper telescopic member 5a and the inner lower telescopic member 8a have ribs of the type shown in Figs. 6 and 7. In the device shown in Figs. 5-7 inclusive, the ribs of the inner telescopic members serve as spacing ribs to prevent any contact between the sheets of glass G and Ga. However, either one of the sheets G or Ga can be raised and then forwardly tilted to remove it from the device, as indicated in dotted lines in Fig. 2.

In the device shown in Figs. 1-4 inclusive, two sheets of glass G and Ga are slidably mounted between the inturned portions of the outer telescopic members 1 and 1a.

The sheets of glass G and Ga are of suffi-

cient length to permit them to overlap at their adjacent ends. The sheets of glass G and Ga slidably contact with each other in the device shown in Figs. 1-4, as this device has no spacing ribs. Hence, the free ends of the members 1, 2, 1a, and 2a are pinched inwardly at the outer ends of the sheets of glass G and Ga so as to minimize the possible tilting of the sheets of glass. That is, the members engage the sheets of glass at the non-overlapping portions thereof, so that the sheets of glass cannot rattle, and an air-tight device is provided.

In Fig. 8 the bracket for holding the frame is shown as applied to the window construction W. The bracket consists of a metal strip 10 which is secured to the side wall of the window frame in any suitable manner. A second bracket member 11 is adjustably secured to the first bracket member 10 and the second bracket member is provided with a recess 12 formed between two projecting ribs 14.

As shown in Fig. 8 for example, the inner rib 14 consists of an angle piece which is connected by means of rivets 15 to the member 11.

The member 11 is provided with a slot which cooperates with a headed pin 16 so that the member 11 can be adjusted with respect to the fixed strip 10. The member 11 can be turned upon the headed pin 16 and it can also be moved up and down so that the bottom of the member 11 can always rest upon the window sill. The bottom of the member 11 can also rest on the window sill underneath the lower sash, to prevent rain or wind from entering. For example, two positions of the movable bracket member 11 are indicated in full lines and in dotted lines in Fig. 8. Hence, the inclination of the movable bracket member 11 can be readily adjusted throughout a large range. The outer ends of the flanges 3, 4, and 3a and 4a enter the recesses 12 and the frictional fit between the members 1 and 2, and between members 1a and 2a, is tight enough since said members are made of resilient metal, to keep the parts in adjusted position.

In the embodiment shown in Figs. 11-13, the fixed bracket member 17 is connected to the frame of the window, as for example by screws 18. The adjustable bracket member 19 is provided with a slot 20, and it is provided with ribs 21 to form a recess 22. The inner rib 21 is likewise formed of an angle piece which is connected by rivets 23 or the like, to the movable bracket member 19. The fixed bracket member 17 is provided with a lip 20' which fits frictionally over the bracket member 19 so that the movable bracket member 19 can be adjustably held in any suitable position. The portion of movable bracket member 19, which is above slot 20, is laterally bent to frictionally bear against

the lip 20'. The movable bracket member 19 is connected to the fixed bracket member 17 by means of the pivot pin 24. The movable bracket member 19 is provided with a lip 26 which acts as a stop.

In order to use the device, it is merely necessary to connect the brackets to the sides of the window frame. The brackets can then be adjusted to any desired angle. The frame which is shown in Fig. 1 is then longitudinally and vertically adjusted as desired and the frame is then caused to enter the recesses of the brackets, namely, either the recesses 12 or the recesses 22.

Hence, it is clear that I have provided an adjustable device of great simplicity which can be manufactured at low cost, and which can be readily applied by unskilled labor. It is also clear that the device can be removed from one window and applied to another window of different width, and that the sheets of glass can be readily removed for cleaning them or replacing them.

I have shown the outer telescopic member 1 (in Fig. 3) provided with inturned lips for holding the inner telescopic member 2 in sliding engagement. However, I do not wish to be limited to this detail, because said lips could be eliminated by causing the sidewalls of the telescopic members to converge, or by shaping the bases of said telescopic members so that the inner telescopic members are slidably engaged within the outer member.

I have shown a preferred embodiment of my invention, but it is clear that numerous changes and omissions can be made without departing from the spirit of my invention.

I claim:

1. A ventilator comprising an upper frame and a lower frame adapted to slidably engage the adjacent ends of a sheet of glass between them, the height of said sheet of glass being less than the distance between the said frames so that the said sheet of glass can be removed from the said frame by raising it and tilting it, said frames extending over the top and bottom edges of said sheet of glass.

2. A ventilator having a frame comprising upper telescopic frame members and lower telescopic frame members, a plurality of sheets of glass slidably mounted in said frame between said frame members, the height of each said sheet of glass being less than the height of said frame so that each said sheet of glass can be removed from the frame by a lifting and tilting movement, said frames extending over and slidably engaging the top edges and the bottom edges of said sheets of glass.

3. A ventilator comprising a frame having an upper outer frame member provided with inwardly bent lips and a lower outer frame member also provided with inwardly bent lips, said outer members having corre-

spending inner frame members slidably located therein and held in position by said lips, and a plurality of sheets of glass slidably mounted between said lips, said lips contacting with said sheets of glass to guide their sliding movement, said lips comprising the sole means for guiding said sheets of glass in their sliding movement, said frame members having substantially rectangular cross-sections.

4. A ventilator comprising a frame having an upper outer frame member provided with inwardly bent lips and a lower outer frame member also provided with inwardly bent lips, said outer members having corresponding inner frame members slidably located therein and held in position by said lips, and a plurality of sheets of glass slidably mounted between said lips, said frame members having flanges arranged in telescopic pairs, said lips contacting with said sheets of glass to guide their sliding movement, said lips comprising the sole means for guiding said sheets of glass in their sliding movement, said frame members having substantially rectangular cross-sections.

5. A ventilator comprising a pair of telescopic frame members adapted to hold a pair of sheets of glass in overlapped and directly contacting relationship, said frame members including means adapted to hold the non-overlapping portions of said sheets of glass from rattling, the top and bottom edges of said sheets of glass being held in direct contacting relationship.

6. A ventilator comprising an outer telescopic member and an inner telescopic member provided with sidewalls, said telescopic members having telescopic ribs intermediate said sidewalls, said ribs slidably engaging each other, and a pair of sheets of glass held intermediate said sidewalls and said ribs.

In testimony whereof I affix my signature.

HARRY SHAPIRO.