M. J. MEYER.

VENTILATOR.

APPLICATION FILED APR. 4, 1908.

903,217. Patented Nov. 10, 1908.

3 SHEETS—SHEET 1.

Fig. 1.

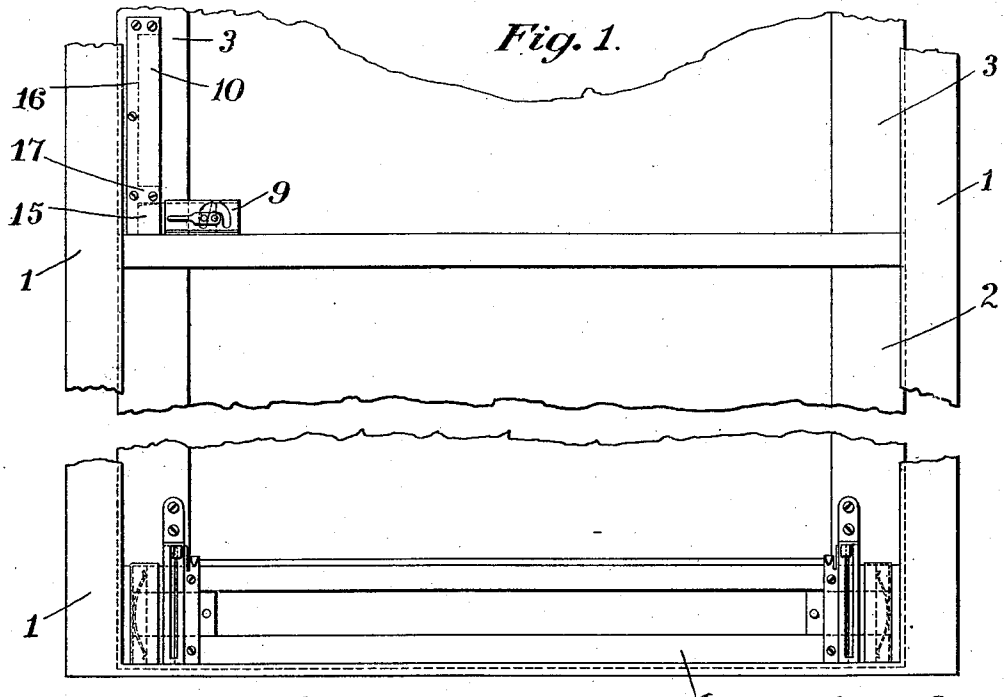
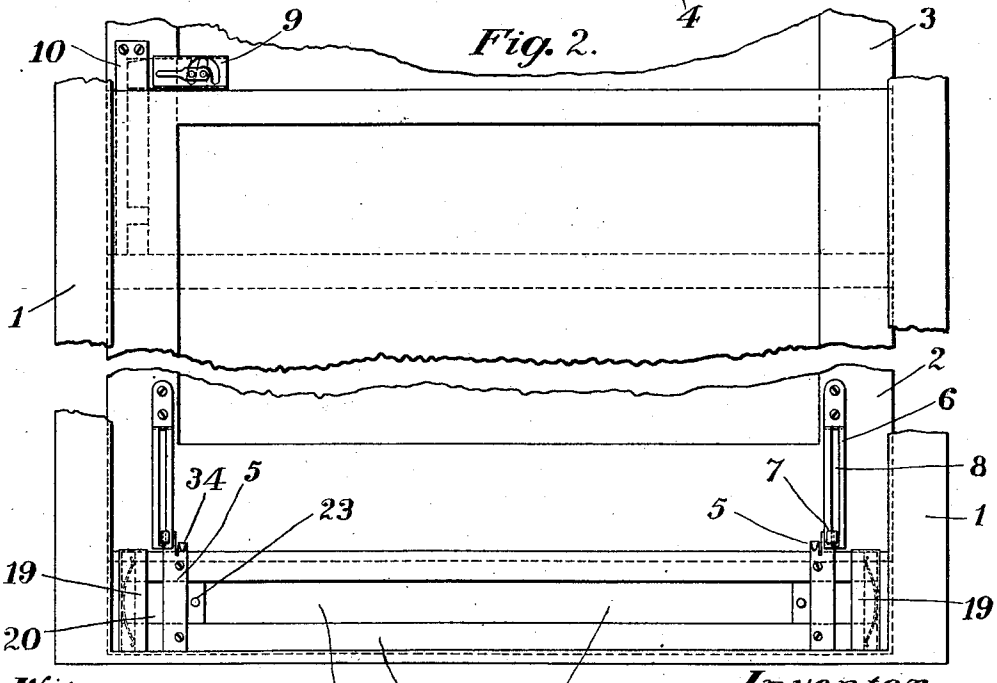


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 5.

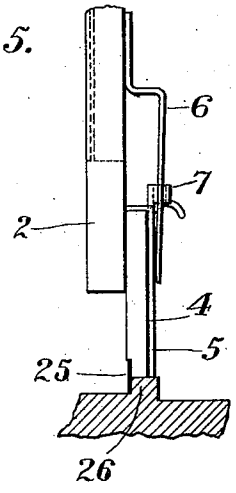


Fig. 3.

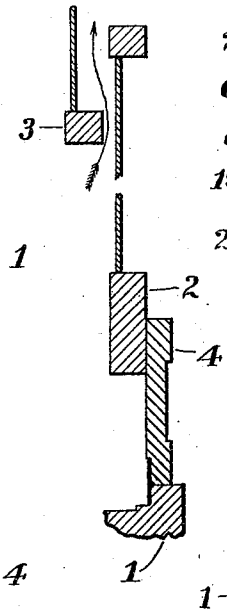


Fig. 4.

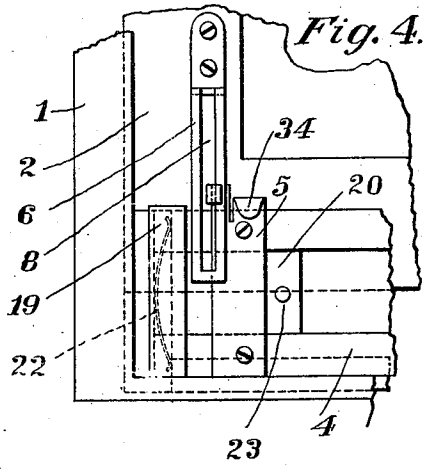


Fig. 6.

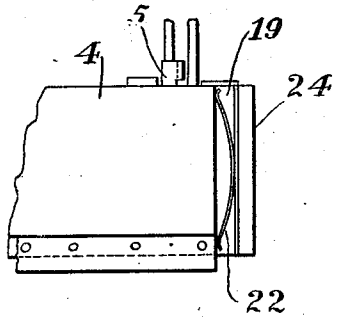


Fig. 11.

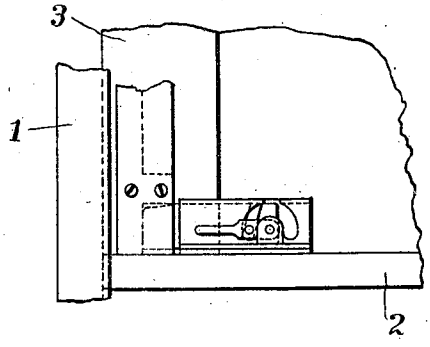


Fig. 13.

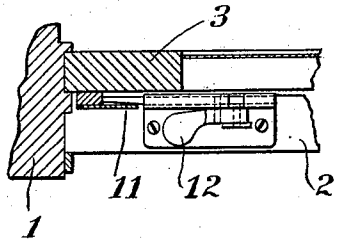
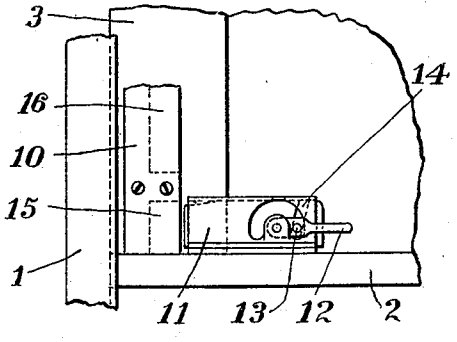


Fig. 12.



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3 SHEETS—SHEET 3.

Fig. 7.

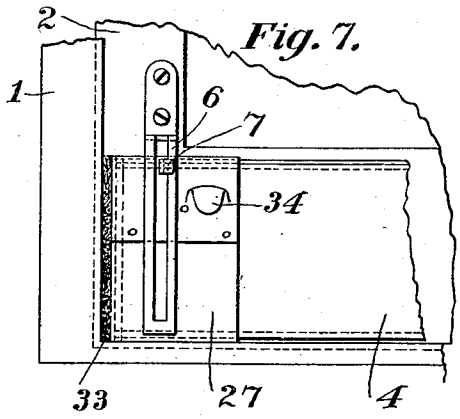


Fig. 8.

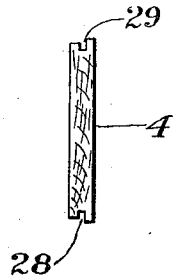


Fig. 9.

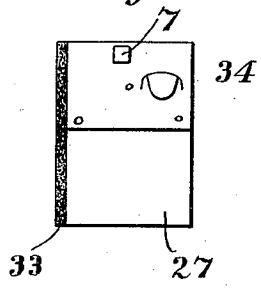
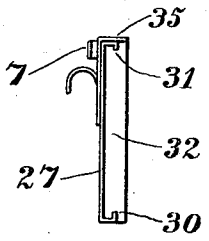


Fig. 10.



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UNITED STATES PATENT OFFICE.

MABEL J. MEYER, OF SUMMIT, NEW JERSEY.

VENTILATOR.

No. 903,217. Specification of Letters Patent. Patented Nov. 10, 1908.

Application filed April 4, 1908. Serial No. 425,084.

To all whom it may concern:

Be it known that I, MABEL J. MEYER, a citizen of the United States, residing at Summit, in the county of Union and State of New Jersey, have invented new and useful Improvements in Ventilators, of which the following is a specification.

The invention relates to ventilating structures, and more particularly to ventilating structures including sliding window sashes, and to ventilating devices applicable to such windows, although in some of its features the invention may be applicable to other kinds of ventilating structures and devices.

Objects of the invention are to provide for the admission to an apartment of sufficient air for ventilation, while preventing direct drafts and while maintaining the apartment secure from entrance from without; to provide for opening a window for ventilation while securing it from further opening by persons on the outside; to provide simple, durable and inexpensive devices for these purposes, which are not obtrusive or unsightly in a well furnished apartment, and to provide devices which may be readily attached to existing window structures. These and other objects of invention will in part be obvious and will in part be set forth herein.

The invention consists in the novel parts, combinations, arrangements and improvements herein shown and described.

The accompanying drawings referred to herein and forming a part hereof, illustrate one embodiment of the invention, the same serving in connection with the description herein to explain the principles of the invention.

Of the drawings: Figure 1 is a front elevation of a window ventilator structure constructed in accordance with the principles of the invention; Fig. 2 is a view corresponding to Fig. 1 with the parts in a different position; Fig. 3 is a vertical section corresponding to Fig. 2; Figs. 4, 5 and 6 are detail views of parts of the ventilating devices; Figs. 7 to 10, inclusive, are detail views of another form of such devices; and Figs. 11, 12 and 13 are detail views showing devices for controlling the movement of the window sash.

In the embodiment of the invention illustrated, by way of example, in the accompanying drawings, the window frame is indicated generally by the reference numeral 1. The said window frame shown in the drawings is constructed and arranged to carry two sliding sashes, indicated respectively by the reference numerals 2 and 3.

The window ventilator structure contemplated by the invention comprises further a shield member extending across one of the window sashes at one end thereof, being also in contact with the window frame, and contemplates further providing connections between one of the sashes and the shield member for permitting partial opening of the window while leaving the shield in contact with the frame and sash. Thus, as will be clearly understood, the shield member serves to close the direct opening into the apartment caused by opening the sash to an extent less than the width of the shield member, while at the same time an opening is created for the passage of air between the sashes 2 and 3, as will be seen from Fig. 3 of the drawings. It will also be seen that this movement of the sash can be effected without disturbing the shield member in its relation to the window frame.

The invention, according to certain of its features, contemplates further providing automatically acting means for holding the shield member in close contact with the window frame and with the sash in order to prevent air currents at this part of the window, and to prevent unauthorized entrance to the apartment.

In the form of the foregoing means provided in the present embodiment, the shield member 4 is shown extending across the sash 2 at its lower end and in contact with the frame 1 at three of its edges and also in contact on its outward face with the sash 2.

There are also shown in the present embodiment connections between the sash 2 and the shield member 4 for permitting the partial opening of the window while leaving the shield in contact with the frame 1 and the sash 2, as just set forth. The particular form of such means shown herein comprises coöperating sliding members mounted respectively upon the member 4 and upon the sash 2. The member 5, attached to the shield 4, is shown carrying an engaging portion 7 projecting through a slot 8 in the member 6, which is fastened to the sash. These connections are shown mounted at each end of the sliding member 4 and correspondingly attached to each side of the sash 2.

There are also provided means for limiting the opening movement of the window to

prevent carrying the shield member out of contact with either the frame or the sash, and for convenience said means are shown in the present embodiment in connection with means for preventing any opening movement of the sash. The said means are shown settable so as to prevent opening of the sash or to limit the opening movement in the manner just described. The illustrated form of such means comprises a bolt mechanism 9 shown mounted upon the sash 2 and in operative relation therewith a shield 10 shown mounted upon the sash 3. The mechanism 9 comprises a slidable bolt 11 connected to a pivoted handle 12. Said connection is shown herein as comprising a pin 13 attached to the handle 12 and working in a slot 14 in the bolt 11. The shield 10 is shown divided into two parts 15 and 16 by means of a transverse piece 17. This piece is so located that when the sashes are in the closed position the recess 15 is in register with the bolt 11. The bolt 11 is shown beveled upon its top surface so as to give a clamping action, acting to force each sash firmly into place. The recess 16 as shown is so positioned and proportioned that when the bolt 11 is at the upper end thereof the sash 2 is still somewhat within the upper edge of the shield member 4.

Means are contemplated by the invention for clamping the two sashes together whether the sashes are in the closed or partly open position, so as to prevent rattling or other annoyances. In the present embodiment, the said means is incorporated in the same device with the means just described. For this purpose the bolt 11 is shown beveled also upon its front face, as will be seen from Fig. 9 of the drawings, and thus as the bolt is shot it will tend to draw the sashes 2 and 3 toward each other. This action will occur whether the bolt is in the recess 15 or in the recess 16. Suitable means are provided for causing the bolt 11 to remain in any engaging position to which moved, in order to render it secure and also to make the clamping action effective. In the present embodiment this is effected by making the slot 14 in the bolt 11 oblique to the direction of movement of the bolt.

With this construction a sufficient component of any force not acting through the handle 12 but tending to slide the bolt in its sheath would pass through the pivot of the handle 12 and through the pin 13 so as to prevent such sliding movement. It will be understood that the bolt 13 may be thrown or set to engage in recess 15 to lock the sash in the closed position, or it may be thrown or set to engage the recess 16 permitting the sash 2 to be raised until the bolt is at the limit of the recess 16, when the edge of the sash 2 will be near the upper edge of the shield 4. It will be understood further that the two sashes may be clamped together in either position by the action of one of the beveled faces of the bolt 11, as previously described.

The invention, in certain of its aspects contemplates providing automatically acting means for holding the shield member 4 in close contact with the frame and with the sash. In the illustrated embodiment of such means the shield member 4 is shown provided with a flat body portion 18 and members attached thereto for pressing in close contact with the window frame. One particular form thereof illustrated herewith (see Figs. 4 and 6) comprises slidable spring-pressed parts 19 located at each end of said body portion 18. The said parts 19 are shown with a tongue 20 working in a groove 21 in the body portion 18 of the shield member 4 and beneath the member 5. In the present embodiment furthermore the slidable parts 19 are shown as being urged outwardly by a spring 22. A stop 23 for limiting its movement by contacting with the member 5 may be provided if desired. The said slidable part is further shown as carrying a layer 24 of any suitable yielding or resilient material, as for instance felt, on its outer face for the purpose of making more perfect contact with the window frame. The weather strip 25 may also be provided, if desired, for more completely closing the joint between the shield 4 and the beading 26 of the frame 1.

Another form of such devices is shown herein (see especially Figs. 4 to 10) as comprising a member 27 fitting slidably over the end of the shield member 4. The member 4 is shown provided with grooves 28 and 29 in its edges, a member 27 being shown provided with corresponding tongues or flanges 30 and 31 for fitting into said grooves and being slidable therein. The end 32 of the member 27 may, if desired, be provided with a layer 33 of resilient material for the purpose of abutting against the frame 1 to make an air tight joint therewith. The engaging part 7, in this embodiment, is shown carried upon said member 27. If desired, the member 6 will be utilized to put sufficient pressure upon the member 27 to hold it to the frame 1. The member 6 may be of such shape and material that this pressure may be a spring pressure and the amount thereof may be determined by the location of the member 6 upon the sash frame 2. In this case the member 6 will act through the engaging member 7 to press the part 27 snug to the window frame.

For the purpose of lifting the sash 2 finger pieces 34 may be provided. They are shown herein mounted upon the shield member, although so far as concerns many features of the invention they may be mounted directly upon the sash. In Figs. 1, 2 and 4

they are shown carried upon the part 5 and in Figs. 7 and 9 they are shown fixed to the member 27. They are further shown therein as being carried upon a piece 35, attached to the member 27 which is also shown shaped to extend over the upper edge of the member 4.

For the purpose of pressing the shield member 4 into close contact with the sash so as to make a substantial air tight joint between the said member and the sash in the open position, suitable means are provided, and in the present embodiment for this purpose the member 6 is made to have a spring action, and while slidable upon the member 5 it exerts sufficient pressure thereon to keep the shield member in close contact with the sash.

It will be understood that where two forms or embodiments of certain parts are shown and described herein that same is illustrative rather than restrictive.

The operation of the hereinbefore described apparatus is substantially as follows: The members 6 are attached to the sash 2 in proper position and the slidable parts 19 are in close contact with the frame, the weather strip 25 being positioned as shown in Fig. 5. After the bolt 11 is shot it can be unbolted merely by moving the handle 12, the window then raised somewhat and the bolt 11 again shot, this time entering the recess 16. The window may then be raised until the bolt 11 has traveled to the limit of the slot 16, the connections 5 and 6 sliding on each other leaving the shield 4 in place. The lower edge of the sash 2 will then be somewhat within the upper edge of the shield member 4. When the finger pieces 34 are carried upon the shield member, it will be understood that the shield member is raised with the window and then permitted to return to its position at the bottom thereof after the window has been raised. The shield member will be held close to the frame and the sash by the members 19 and the connections 5 and 6 respectively. A passage for the air will be provided between the sashes, as shown in Fig. 3 of the drawings. The sash 2 may be closed without disturbing the ventilator devices and the bolt 11 being thrown back, it may be again shot into the recess thereby locking the window in a closed position.

From all the foregoing it will be understood that a ventilator structure and ventilator devices have been provided realizing the objects of invention and the advantages herein set forth, together with other objects and advantages.

The invention in its broader aspects is not limited to the particular construction shown, nor to any particular constructions by which it has been or may be carried into effect, as changes may be made therein without departing from the principles of the invention and without sacrificing its chief advantages.

What I claim as my invention, and desire to secure by Letters Patent, is:

1. A window ventilator structure including in combination a window frame, a sliding sash carried therein, a shield member extending across said sash at one end thereof and being also in contact with the window frame, connections between said sash and shield member for permitting a partial opening of the window while leaving the shield in contact with the frame and sash, and means acting to arrest such opening movement to prevent carrying the shield member out of contact with the frame.

2. A window ventilator structure including in combination a window frame, a sliding sash carried therein, a shield member extending across said sash at one end thereof and being also in contact with the window frame, connections between said sash and shield member for permitting a partial opening of the window while leaving the shield in contact with the frame and sash, and means which may be set to prevent opening of the sash or to automatically arrest such opening movement to prevent carrying the shield member out of contact with the frame.

3. A window ventilator structure including in combination a window frame, a double sliding sash carried therein, a shield member extending across one of the said sashes at one end thereof and being also in contact with the window frame, connections between said sash and shield member for permitting a partial opening of the window while leaving the shield in contact with the frame and sash, settable means for preventing movement of the window sash from its closed position or for limiting the opening movement of the sash to prevent carrying the shield member out of contact with the frame, and automatically acting means for holding the shield member in close contact with the frame and with the sash.

4. A window ventilator device for closing the space between a window frame and a partly open sash, including in combination a flat body member for closing the central part of the opening, a member at each end of said flat member, movable with reference thereto but continuous therewith, means for pressing said end members against the window frame, and slidable connections between said structure and the sash and means acting to press the said body member closely against the sash.

5. A window ventilator structure including in combination a window frame, a double sliding sash carried therein, a shield member extending across one of said sashes at one end thereof and being also in contact with the window frame, and yielding means

for effecting close contact between said shield member and the frame and between said shield member and the sash.

6. A window ventilator structure including in combination a window frame, a double sliding sash carried therein, a shield member extending across one of said sashes at one end thereof and being also in contact with the window frame, and spring-pressed means for effecting close contact between said shield member and the frame and between said shield member and the sash.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

MABEL J. MEYER.

Witnesses:
AUGUSTUS HECK,
ARTHUR W. HICKS.