Nov. 26, 1940. C. HAMMESFAHR 2,222,838

VENTILATOR

Filed April 6, 1939

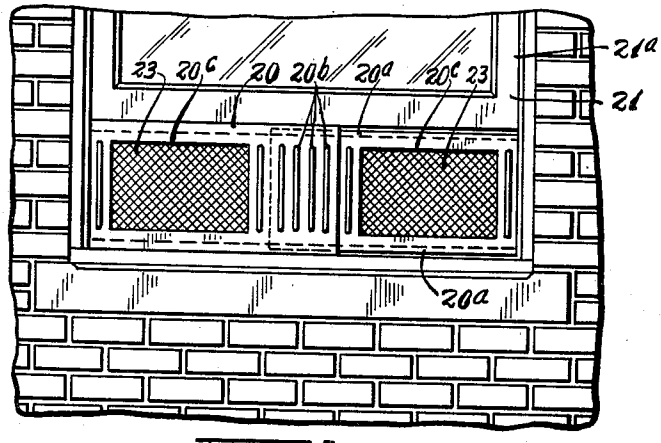


Fig. 1.

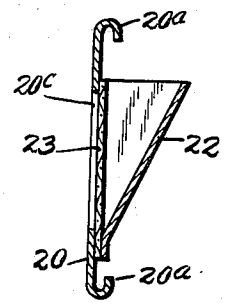


Fig. 3.

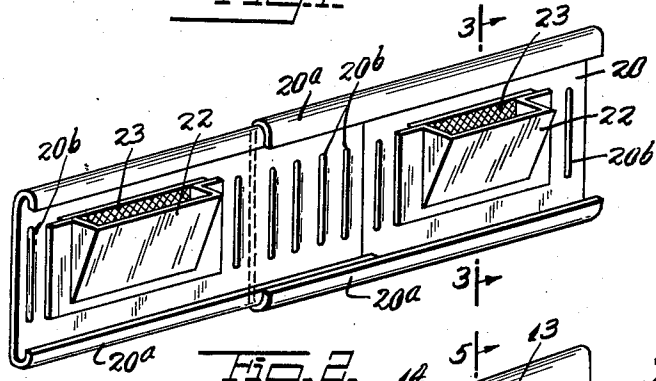


Fig. 2.

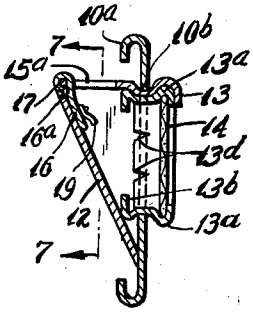


Fig. 5.

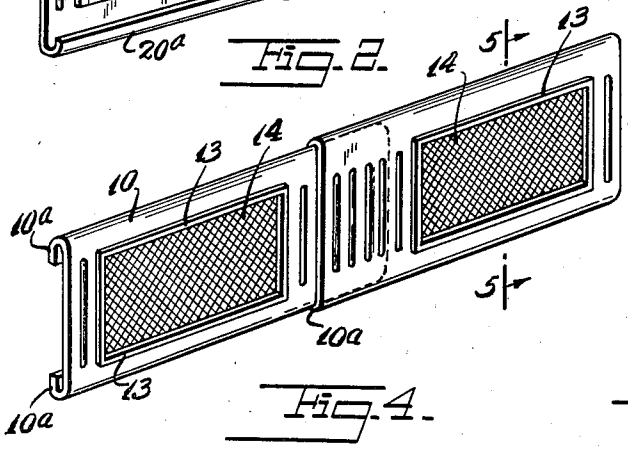


Fig. 4.

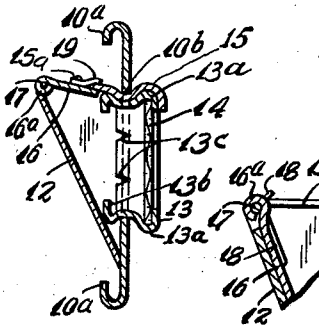


Fig. 6.

Fig. 8.

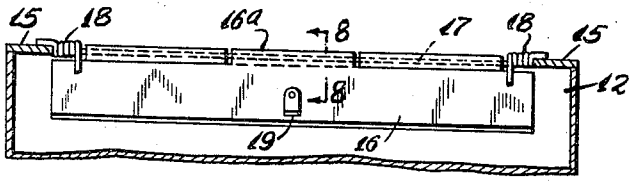


Fig. 7.

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UNITED STATES PATENT OFFICE

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VENTILATOR

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Application April 6, 1939, Serial No. 266,378

6 Claims. (Cl. 98—99)

This invention relates to new and useful improvements in a ventilator.

More specifically, the invention proposes the construction of a ventilator characterized by a pair of vertical sheet members having curled top and bottom edges slidably connecting them together in a manner to be expanded and contracted horizontally for engagement into the open portion of a window.

Still further it is proposed to provide each of the vertical sheet metal members with a plurality of window openings having vent housings extended thereover on the inside surface thereof in a manner to prevent rain from passing therethrough.

Still further it is proposed to provide a frame for each of the window openings and which has a screen extended thereacross in a manner to prevent insects from passing through the window openings.

Still further it is proposed to provide a means for closing the open top edge of the vent housing when so desired to prevent the passage of air therethrough.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure—

Fig. 1 is an elevational view of a portion of a window having a ventilator constructed according to this invention.

Fig. 2 is a perspective view of the inside face of the ventilator.

Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 2.

Fig. 4 is a perspective view of the outside face of a ventilator constructed according to a modification of the invention.

Fig. 5 is a sectional view on the line 5—5 of Fig. 4.

Fig. 6 is a view similar to Fig. 5 but illustrating a different position of the parts.

Fig. 7 is a sectional view on the line 7—7 of Fig. 5.

Fig. 8 is a sectional view on the line 8—8 of Fig. 7.

The ventilator, according to this invention, includes a pair of vertical sheet metal members 20 each having curled top and bottom edges 20a. The curled edges 20a of one of the vertical sheet metal members 20 is adapted to engage over the curled edges 20a of the other sheet metal member 20 for slidably connecting these members together so that they may be extended or contracted horizontally for permitting them to be conveniently engaged into the open portion of a window 21, as shown in Fig. 1. The bottom edge of the ventilator is adapted to rest on the sill while the bottom end of the sash 21a is adapted to rest upon the top edge of the ventilator.

Each of the sheet metal members 20 is formed with a plurality of vertically extending ribs 20b which add to the stiffness thereof and prevent the members from collapsing under the weight of the sash 21a resting thereupon. The ribs 20b formed on the overlapping portions of the vertical sheet metal members 20 are adapted to engage each other for holding the sheet metal members in their extended positions unless pressure is applied thereto for extending or contracting them.

Each of the sheet metal members 20 is provided with a window opening 20c through which air is adapted to pass into the interior of the room. The inside face of each of the metal sheet members 20 is provided with a vent housing 22. This vent housing 22 has its bottom edge attached to the sheet metal member below the window opening 20c and its sides attached along the sides of the window opening. The top edge of the vent housing 22 is spaced from the adjacent top edge of the window opening 20c for providing a clearance through which the air normally passes.

A screen 23 is extended across the window opening 20c and has its edges engaged between the adjacent face of the edges of the sheet metal member 20 and the vent housing 22. The vent housing 22 and the screen 23 are soldered, welded or brazed in position upon the face of the sheet metal member 20. The screen 23 acts to prevent flies and other insects from passing through the window opening 20c to the interior of the building having the ventilator in its windows.

According to the modification of the invention shown in Figs. 4 to 8 the ventilator includes a pair of vertical sheet metal members 10 each having curled top and bottom edges 10a. The curled edges 10a of one of the vertical sheet metal members 10 is adapted to engage over the curled edges 10a of the other sheet metal member 10 for slidably connecting these members together so that they may be expanded or contracted horizontally for permitting them to be conveniently engaged into the open portion of a window. The bottom edge of the ventilator is adapted to rest upon the

sill while the bottom end of the sash is adapted to rest upon the top edge of the ventilator.

Each of the vertical sheet metal members 10 is provided with a window opening 10b through which air is adapted to pass into the interior of the room. The inside face of each sheet metal member is provided with a vent housing 12 for the window opening 10b. This vent housing 12 has its bottom edge attached to the sheet metal member below the window opening 10b and along the sides of the window opening 10b. The top edge of the vent housing 12 is spaced from the adjacent top edge of the window opening 10b for providing a clearance through which the air normally passes.

The window opening 10b is further provided with a means for screening the same to prevent flies and other insects from passing therethrough. This means comprises a sheet metal frame 13 for the window opening. The sheet metal frame 13 is provided with a screen 14. This screen has its ends clamped in position by means of turned over edges 13a formed on the frame 13. The top and bottom edges of the frames 13 opposed to the turned over edges 13a are bent into the form of spring clips 13b which are adapted to be engaged through the window opening 10b to engage the outer face thereof and hold the frame in position.

The side walls of the frame 13 are provided with several gusset cutouts 13c which add to the resiliency thereof and which permit the clip portions 13b to move towards each other when the frame is being engaged into the window opening 10b. The window opening 10b is further provided with a means for closing the space between the top edge of the window opening 10b and the vent housing when so desired. This means comprises a strip of material 15 disposed between the top edge of the opening 10b and the top of the frame 13 and which extends across the said top opening. This strip of material 15 is provided with an opening 15a and a shutter 16 is provided for closing the opening 15a. The top edge portion of the shutter 16 is provided with a curled portion 16a and a pin 17 extends between the ends of the strip of material 15 and through the curled portion 16a for pivotally supporting the shutter 15. A means is provided for urging the shutter 16 into the open position shown in full lines in Fig. 5. This means comprises springs 18 which are coaxially mounted on the pins 17 adjacent the ends of the shutter 16. Each of these springs has one of its ends abutting the top face of the shutter 16 and the other of its ends engaged beneath the strip of material 15 for urging the shutter into its open position.

A further means is provided for holding the shutter 16 in its closed position as shown in Fig. 6. This means comprises a pivotally mounted latch 19 mounted on the top face of the shutter 16 and which is engageable upon the adjacent portion of the strip of material 15 for holding the shutter closed against the action of the springs 18.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by United States Letters Patent is:

1. A ventilator, comprising vertical sheet metal members having curled top and bottom edges slidably connecting them together to be expanded or contracted horizontally, and said members having window openings, a vent housing for each window opening mounted on the inner faces of said members and covering said window openings and having top openings, a frame with a screen for each window opening adapted to be snapped in position on the window openings, a strip of material mounted on the top of each frame and extending across said top openings and each having a passage for the air, and a shutter for each of said air passages.

2. A ventilator, comprising vertical sheet metal members having curled top and bottom edges slidably connecting them together to be expanded or contracted horizontally, and said members having window openings, a vent housing for each window opening mounted on the inner faces of said members and covering said window openings and having top openings, a frame with a screen for each window opening adapted to be snapped in position on the window openings, a strip of material mounted on the top of each frame and extending across said top openings and each having a passage for the air, and a shutter for each of said air passages, each of said vent housings being constructed of sheet metal and having its bottom and side edges attached to the material of said sheet metal members below and at the sides of said window openings.

3. A ventilator, comprising vertical sheet metal members having curled top and bottom edges slidably connecting them together to be expanded or contracted horizontally, and said members having window openings, a vent housing for each window opening mounted on the inner faces of said members and covering said window openings and having top openings, a frame with a screen for each window opening adapted to be snapped in position on the window openings, a strip of material mounted on the top of each frame and extending across said top openings and each having a passage for the air, and a shutter for each of said air passages, said frame being constructed of sheet metal and having turned over edges holding said screen and clip portions formed thereon and engageable through said window opening for holding said frame in position.

4. A ventilator, comprising vertical sheet metal members having curled top and bottom edges slidably connecting them together to be expanded or contracted horizontally, and said members having window openings, a vent housing for each window opening mounted on the inner faces of said members and covering said window openings and having top openings, a frame with a screen for each window opening adapted to be snapped in position on the window openings, a strip of material mounted on the top of each frame and extending across said top openings and each having a passage for the air, and a shutter for each of said air passages, said shutter haing one of its edges pivotally supported on the inner edge of said strip of material, means for urging said shutter into an open position, and means for holding said shutter closed against the action of said first mentioned means.

5. A ventilator, comprising vertical sheet metal members having curled top and bottom edges slidably connecting them together to be expanded or contracted horizontally, and said members having window openings, a vent housing for each window opening mounted on the

inner faces of said members and covering said window openings and having top openings, a frame with a screen for each window opening adapted to be snapped in position on the window openings, a strip of material mounted on the top of each frame and extending across said top openings and each having a passage for the air, and a shutter for each of said air passages, said shutter having one of its edges pivotally supported on the inner edge of said strip of material, means for urging said shutter into an open position, and means for holding said shutter closed against the action of said first mentioned means, said first mentioned means comprising springs coaxially mounted on the pivot of said shutter and having one of their ends engaging said shutter and the other of their ends engaging said strip of material.

6. A ventilator, comprising vertical sheet metal members having curled top and bottom edges slidably connecting them together to be expanded or contracted horizontally, and said members having window openings, a vent housing for each window opening mounted on the inner faces of said members and covering said window openings and having top openings, a frame with a screen for each window opening adapted to be snapped in position on the window openings, a strip of material mounted on the top of each frame and extending across said top openings and each having a passage for the air, and a shutter for each of said air passages, said shutter having one of its edges pivotally supported on the inner edge of said strip of material, means for urging said shutter into an open position, and means for holding said shutter closed against the action of said first mentioned means, said latter mentioned means comprising a pivotally mounted latch mounted upon the top face of said shutter and engageable upon a portion of said strip of material.

CHARLES HAMMESFAHR.