Feb. 13, 1951 A. F. FUKAL 2,541,233

PANEL FOR WINDOW VENTILATORS

Filed Dec. 17, 1947 3 Sheets-Sheet 1

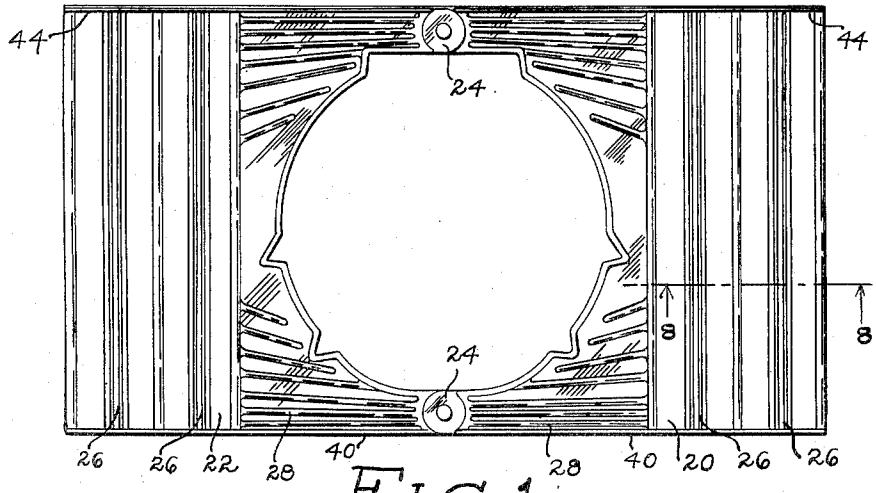


FIG. 1

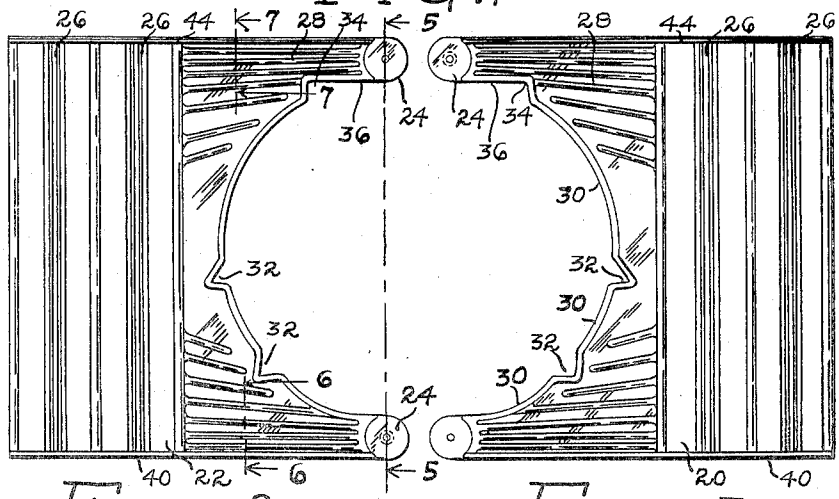


FIG. 2

FIG. 3

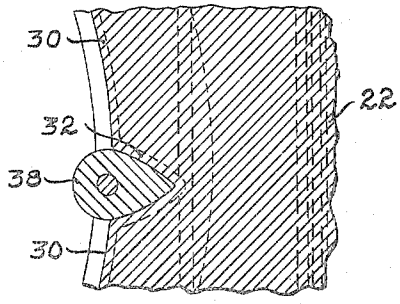


FIG. 9

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PANEL FOR WINDOW VENTILATORS

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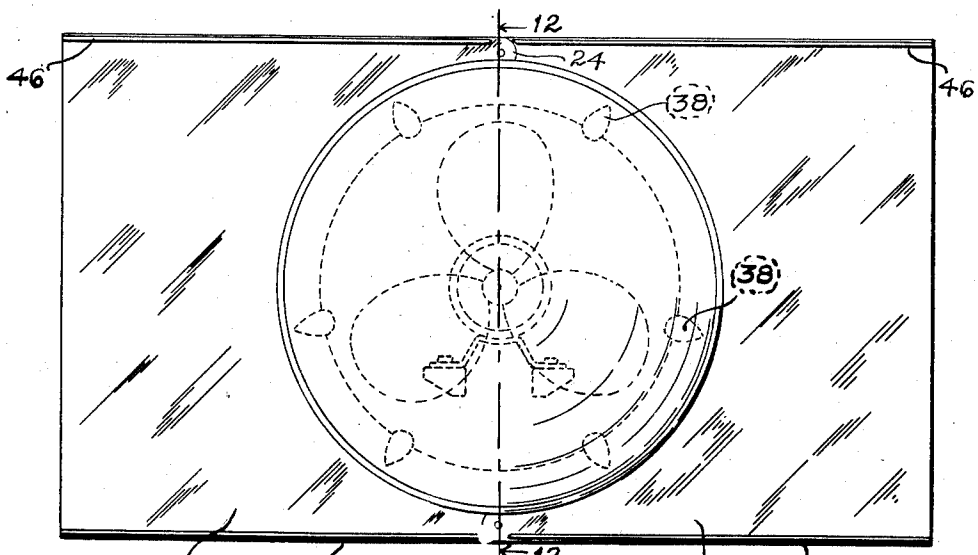


FIG. 4

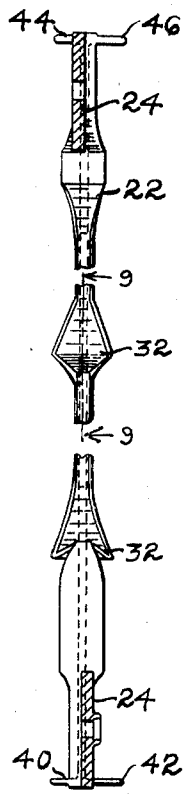


FIG. 5

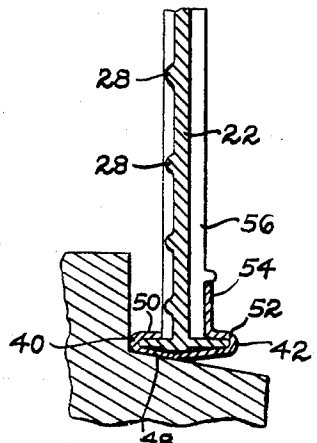


FIG. 6

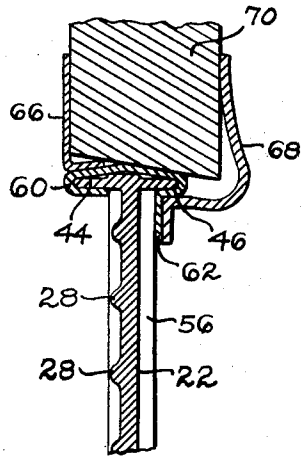


FIG. 7

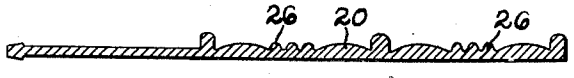


FIG. 8

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PANEL FOR WINDOW VENTILATORS

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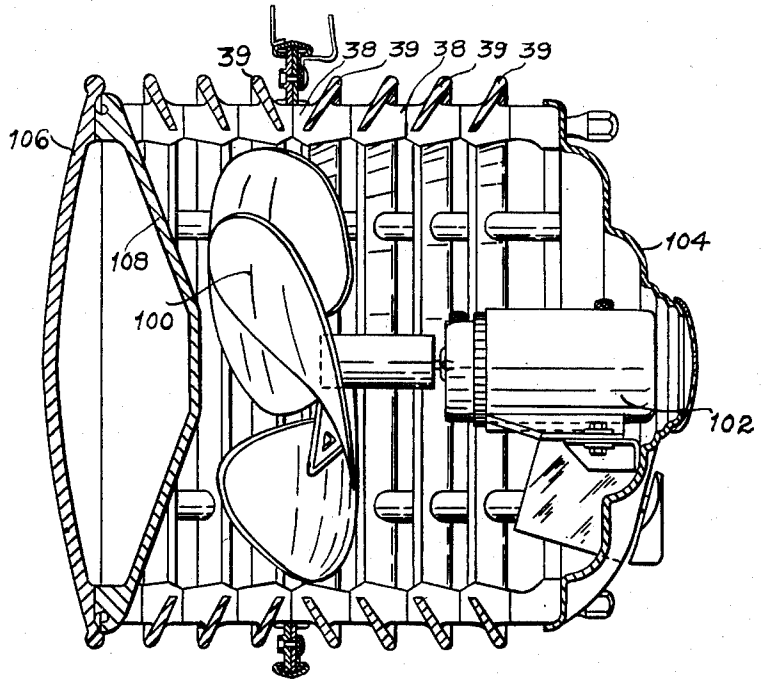


FIG. 12

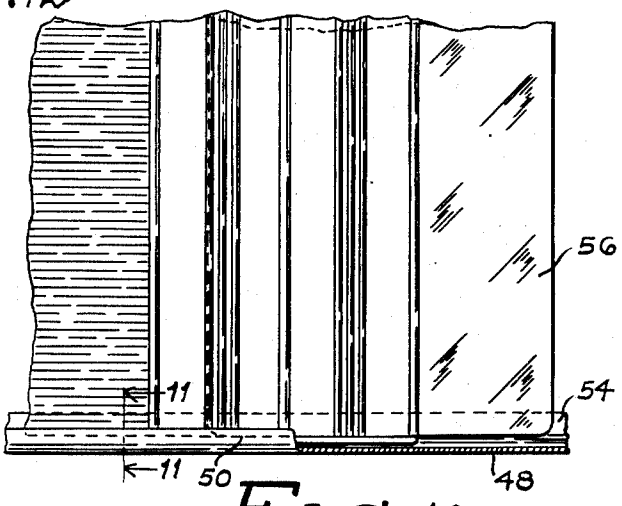


FIG. 10

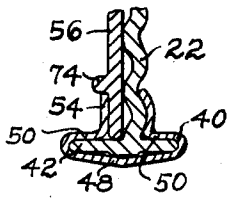


FIG. 11

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UNITED STATES PATENT OFFICE

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PANEL FOR WINDOW VENTILATORS

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Application December 17, 1947, Serial No. 792,261

8 Claims. (Cl. 98—94)

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This invention relates to a bracket and panel assembly for use in mounting a ventilator in an opening in a wall or elsewhere, as for example, a ventilator adapted to be mounted in a window opening.

An object of this invention is to provide a bracket adapted to support a window ventilator by interlocking parts of the window ventilator in such a manner that the window ventilator may be easily mounted in a window, as for example in a window of the double hung sash type, without the use of any other fastening device.

Another object of this invention is to provide a pair of brackets simulating decorative window pane sections, cooperating with adjustable panel members also simulating decorative window pane sections, the panel members being adjustable with respect to the brackets, so as to accommodate windows of various widths, the panels being selected from a plurality of sizes of panels to properly accommodate the window opening.

Other objects and advantages reside in the construction of parts, the combination thereof and the mode of operation, as will become more apparent from the following description.

Referring to the drawings, Figure 1 is an inside view of the brackets used in supporting the ventilator, shown without the ventilator.

Figures 2 and 3 disclose the left and right brackets shown in Figure 1 as they appear when separated.

Figure 4 is an outside view of the bracket having the ventilator mounted in position.

Figure 5 is a cross sectional view taken substantially on the line 5—5 of Figure 2 and drawn to a larger scale, with parts broken away.

Figure 6 is an enlarged cross sectional view taken substantially on the line 6—6 of Figure 2, showing a part of the sill of the window opening.

Figure 7 is an enlarged cross sectional view taken substantially 7—7 of Figure 2, showing a part of the lower frame of the sash.

Figure 8 is a cross sectional view, taken substantially on the line 8—8 of Figure 1.

Figure 9 is a cross sectional view, taken substantially on the line 9—9 of Figure 5, having added thereto a portion of the fan assembly.

Figure 10 is a fragmentary view showing one of the end panels used in association with the bracket.

Figure 11 is a fragmentary cross sectional view, taken substantially on the line 11—11 of Figure 10.

Figure 12 is a cross sectional view of the fan assembly taken substantially on the line 12—12 of Figure 4.

In the drawings, the reference characters 20 and 22 are used to designate the two opposed plate members or panel brackets. Each of these brackets is provided with apertured ears 24

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adapted to overlap corresponding ears of the adjacent bracket and adapted to receive bolts for holding the brackets together, as shown in Figure 4. Each of the brackets is provided with vertically disposed ribs 26, simulating moldings. The brackets are also provided with horizontally disposed ribs 28, used in reenforcing the brackets and for presenting an ornamental appearance. Each bracket is provided with arcuate indentations forming opposed surfaces 30 and notches 32 and 34. The notch 34 in each bracket is subtended by a horizontal portion 36, used in facilitating the insertion of the brackets upon the spacers 38 of the ventilating unit. The walls of the notches 32 form dihedral angles and are flared outwardly, as best shown in Figure 5, so as to be fixedly seated upon the extensions or projections 38 located between the adjacent hoops 39 of the fan assembly shown in Figure 5. The hoops 39 cooperate to form a housing for the fan 100 driven by a motor 102 mounted upon the end member 104 forming the inner end of the fan assembly. A capping member 106 juxtaposed adjacent the margin of the deflecting member 108 closes the opposite end of the fan assembly. The fan assembly is more fully disclosed in the Welch application for United States Letters Patent Serial No. 516,858, filed January 3, 1944, for Plastic Ventilator Fan, now Patent 2,441,737. The notches 32 and 34 cooperate with the extensions 38 to rigidly hold the fan assembly in position on a window, as shown in Figure 4, the entire fan assembly being carried by the brackets 20 and 22.

As best seen in Figures 5 and 6, the brackets 20 and 22 are provided along the lower edge with flanges 40 and 42, the flange 40 being smaller than the flange 42. Likewise, the brackets are provided along the upper edge with flanges 44 and 46, the flange 44 being smaller than the flange 46.

A channel-like sheet metal member 48 terminates in a reentrant flange 50 overlapping the flange 40 and a second reentrant flange 52 overlapping the flange 42 and terminating in an upwardly directed flange 54. This flange extends in parallel relation to the outer surface of the brackets 20 and 22 and cooperates therewith to form channel seats or recesses adapted to receive panels 56. These panels 56 extend beyond the brackets 20 and 22, so as to close the opening of the window beyond the brackets. These panels 56 are selected from a plurality of panels of various dimensions, the selected panels having the desired width to close the openings on the sides of the brackets 20 and 22.

As best seen in Figure 7, a channel-like sheet metal member 60, having substantially a shape identical to member 48, is positioned over the flanges 44 and 46 and terminates in a downwardly directed flange 62 arranged in spaced re-

lation from the outer side of the brackets 20 and 22 and cooperating therewith to form a channel for the upper edge of the panel 56. An L-shaped bracket or clip 66 cooperates with a resilient clip 68 to engage the sides of the lower sash member 70. The L-shaped bracket 66 and the spring clip 68 are welded or otherwise secured to member 60, so as to provide a rigid support for the upper edge of the brackets 20 and 22 and the panels 56. The panel members 56 are provided with outwardly directed ribs 74 overhanging the flange 54, so as to prevent water and other precipitation from entering the channel portion formed between the flange 54 and the corresponding bracket 20 or 22.

Although the preferred embodiment of the device has been described, it will be understood that within the purview of this invention various changes may be made in the form, details, proportion and arrangement of parts, the combination thereof and mode of operation, which generally stated consist in a device capable of carrying out the objects set forth, as disclosed and defined in the appended claims.

Having thus described my invention, I claim:

1. A supporting assembly for supporting an electric fan mounted in a housing having a plurality of hoops arranged in spaced relation by projections, said supporting assembly including a pair of opposed plate members, each provided with arcuate indentations forming opposed surfaces coextensive with the hoops and each provided with notches forming seats for the projections between an adjacent pair of hoops for fixedly supporting the fan and its housing, and means for fixedly securing the opposed plate members together.

2. A supporting assembly for supporting an electric fan mounted in a housing having a plurality of hoops arranged in spaced relation by projections, said supporting assembly including a pair of opposed plate members simulating decorative window panes, each provided with arcuate indentations forming opposed surfaces coextensive with the hoops and each provided with notches, the walls of the notches forming dihedral angles and flared outwardly so as to form seats overlapping the projections between an adjacent pair of hoops for fixedly supporting the fan and its housing, and means for fixedly securing the opposed plate members together.

3. A supporting assembly for supporting an electric fan mounted in a housing having a plurality of hoops arranged in spaced relation by projections, said supporting assembly including a pair of opposed plate members simulating decorative window panes, each provided with arcuate indentations forming opposed surfaces coextensive with the hoops and each provided with notches, the walls of the notches forming dihedral angles and flared outwardly so as to form seats overlapping the projections between an adjacent pair of hoops for fixedly supporting the fan and its housing, the plate members being provided with flanges along the top and the bottom thereof, channel-like members extending over the flanges of the plate members so as to reenforce the same, and means for fixedly securing the plate members together.

4. A supporting assembly for supporting an electric fan mounted in a housing in a window opening having a sash, said supporting assembly including a pair of opposed plate members having arcuate indentations forming opposed surfaces, means on the arcuate indentations for interlocking portions of the housing so as to rigidly support the housing and the fan supported therein, means for fixedly attaching the plate members to each other, each of the plate members being provided with flanges along the top and the bottom thereof, and means engaging the flanges for reenforcing the plate members and for providing seats engaging the sill and the lower sash of the window.

5. A supporting assembly for supporting an electric fan mounted in a housing in a window opening having a sash, said supporting assembly including a pair of opposed plate members having arcuate indentations forming opposed surfaces, means on the opposed surfaces for interlocking portions of the housing so as to rigidly support the housing and the fan supported therein, means for fixedly attaching the plate members to each other, each of the plate members being provided with flanges along the top and the bottom thereof, means engaging the flanges for reenforcing the plate members and for providing seats engaging the sill and the lower sash of the window, and panel members held in position by said last mentioned means for closing the opening of the window on either side of the plate members.

6. A ventilating fan assembly having a fan driven by an electric motor, the combination including a plurality of identical hoops arranged side by side, a baffle having an air circulating opening therein, said baffle including sections, means for holding the sections together, some of the hoops being mounted on one side of the baffle and other hoops on the opposite side of the baffle so that the hoops surround the fan and the motor, the main body of the hoops being inclined in a direction towards the center of the opening in the baffle, the opening through the hoops registering with the opening in the baffle, spacer members positioned between the hoops, said sections being provided with notches in which the spacer members are positioned, means for clamping the hoops and the spacer members into a rigid structure, and means for supporting the motor within the hoops so that the fan circulates air through the opening in the baffle.

7. A ventilating fan assembly having a fan driven by an electric motor, the combination including a plurality of identical hoops arranged side by side, a baffle having an air circulating opening therein, said baffle including sections, means for holding the sections together, spacer members positioned between the hoops, the main body of the hoops having a tear-shaped cross sectional area and being inclined in a direction towards the center of the opening in the baffle, said sections being provided with notches in which the spacer members are positioned, means for clamping the hoops and the spacer members into a rigid structure, the opening through the hoops registering with the opening in the baffle, and means for supporting the motor within the hoops so that the fan circulates air through the opening in the baffle.

8. A ventilating fan assembly having a fan driven by an electric motor, the combination including a vertically disposed baffle having an air circulating opening therein, the periphery of the air circulating opening of the baffle being provided with a plurality of substantially V-shaped recesses, a plurality of identical hoops arranged side by side, the opening through the hoops registering with the opening in the baffle, said hoops surrounding the fan and the motor, and means

for clamping the hoops into a rigid structure, the V-shaped recesses in the baffle engaging portions of at least one hoop for supporting the hoops in a fixed position with respect to the baffle.

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