

May 18, 1937.

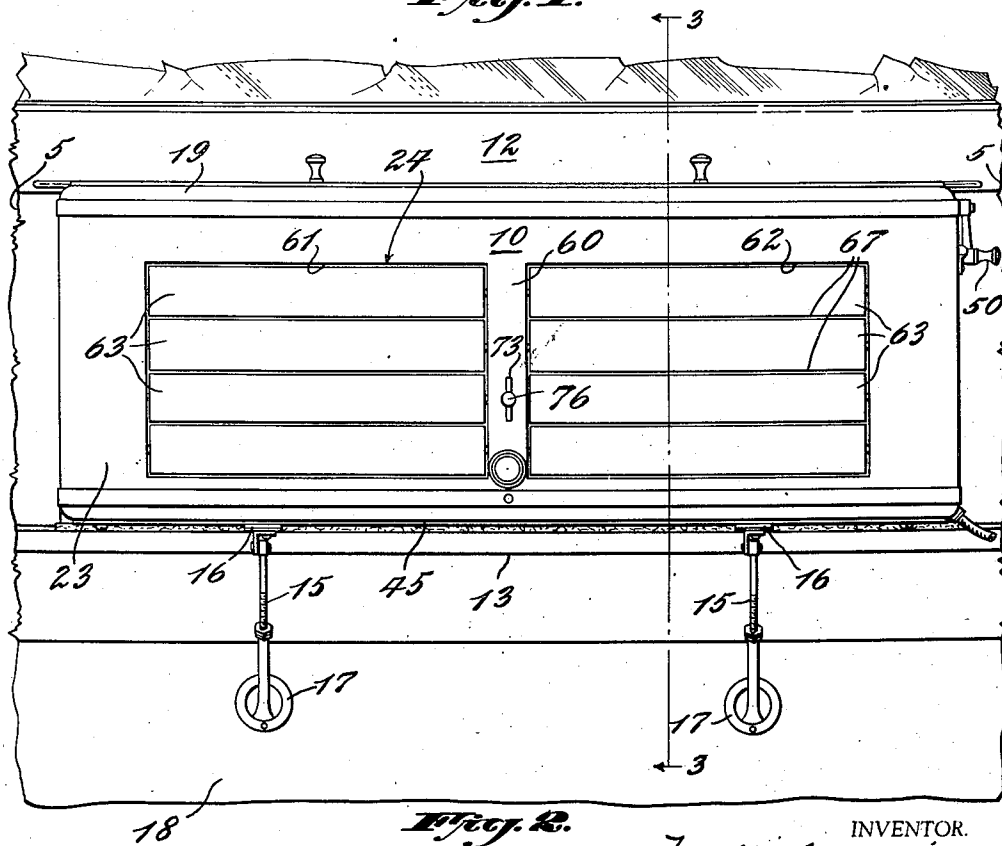
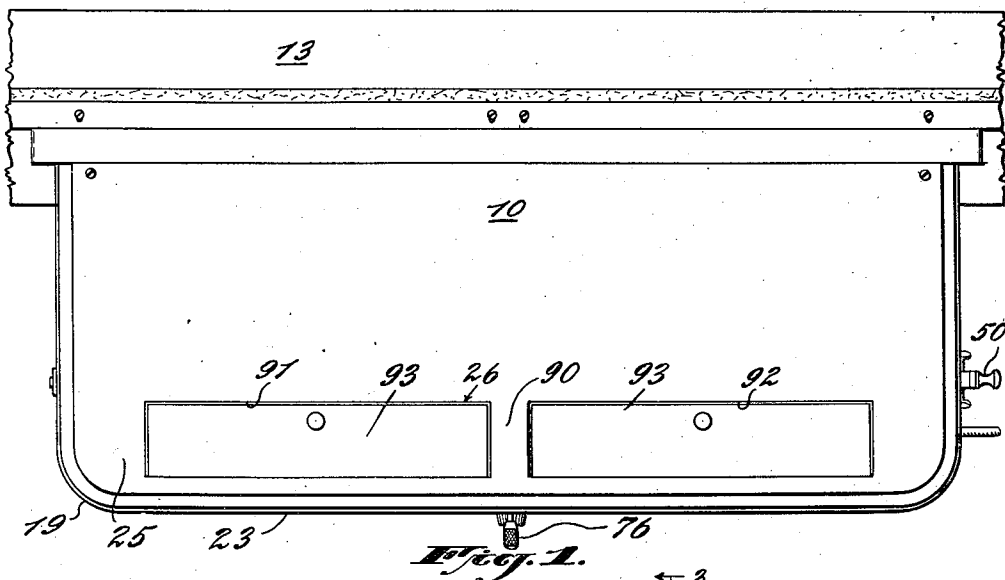
F. MANNING

2,081,104

AIR CIRCULATING APPARATUS

Filed July 16, 1935

5 Sheets-Sheet 1



INVENTOR.
Fowler Manning
BY *C. H. Keyman*
his ATTORNEY.

May 18, 1937.

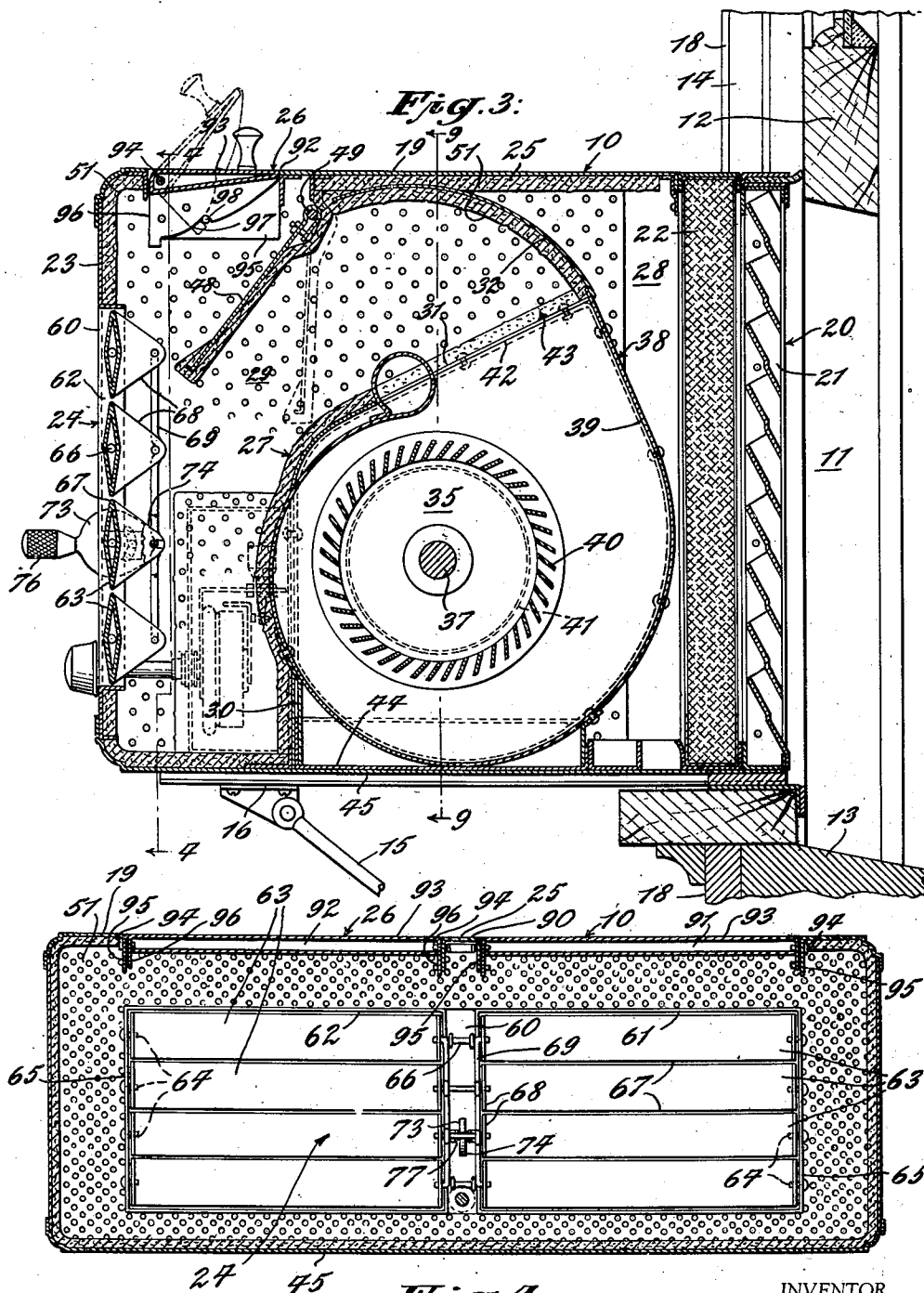
F. MANNING

2,081,104

AIR CIRCULATING APPARATUS

Filed July 16, 1935

5 Sheets-Sheet 2



May 18, 1937.

F. MANNING

2,081,104

AIR CIRCULATING APPARATUS

Filed July 16, 1935

5 Sheets-Sheet 3

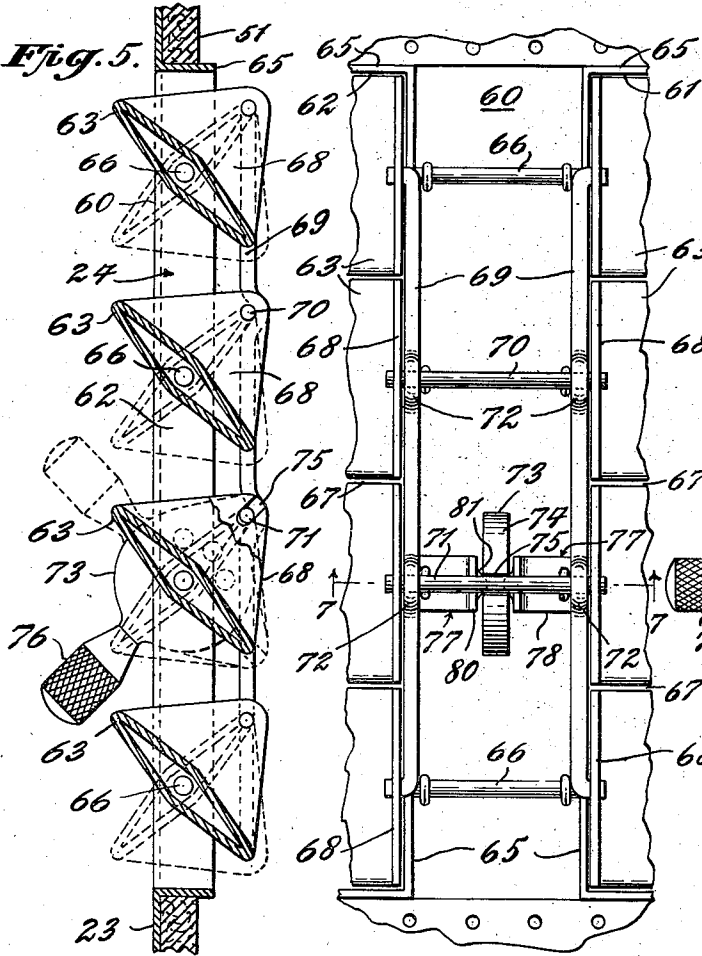


Fig. 5.

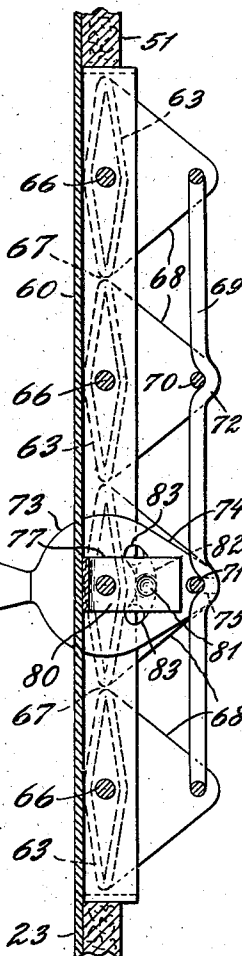


Fig. 6.

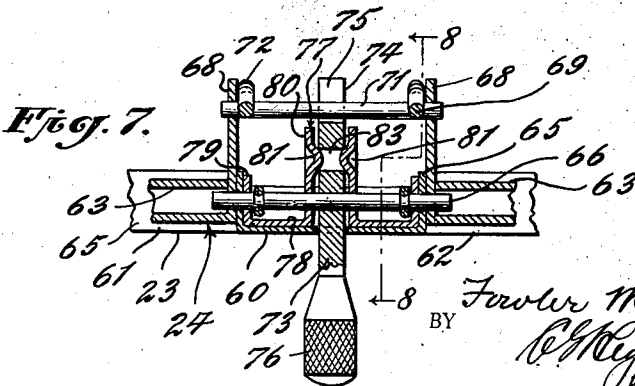


Fig. 7.

INVENTOR..

Fowler Manning
BY *R. H. Munn*
ATTORNEY.

May 18, 1937.

F. MANNING

2,081,104

AIR CIRCULATING APPARATUS

Filed July 16, 1935

5 Sheets-Sheet 4

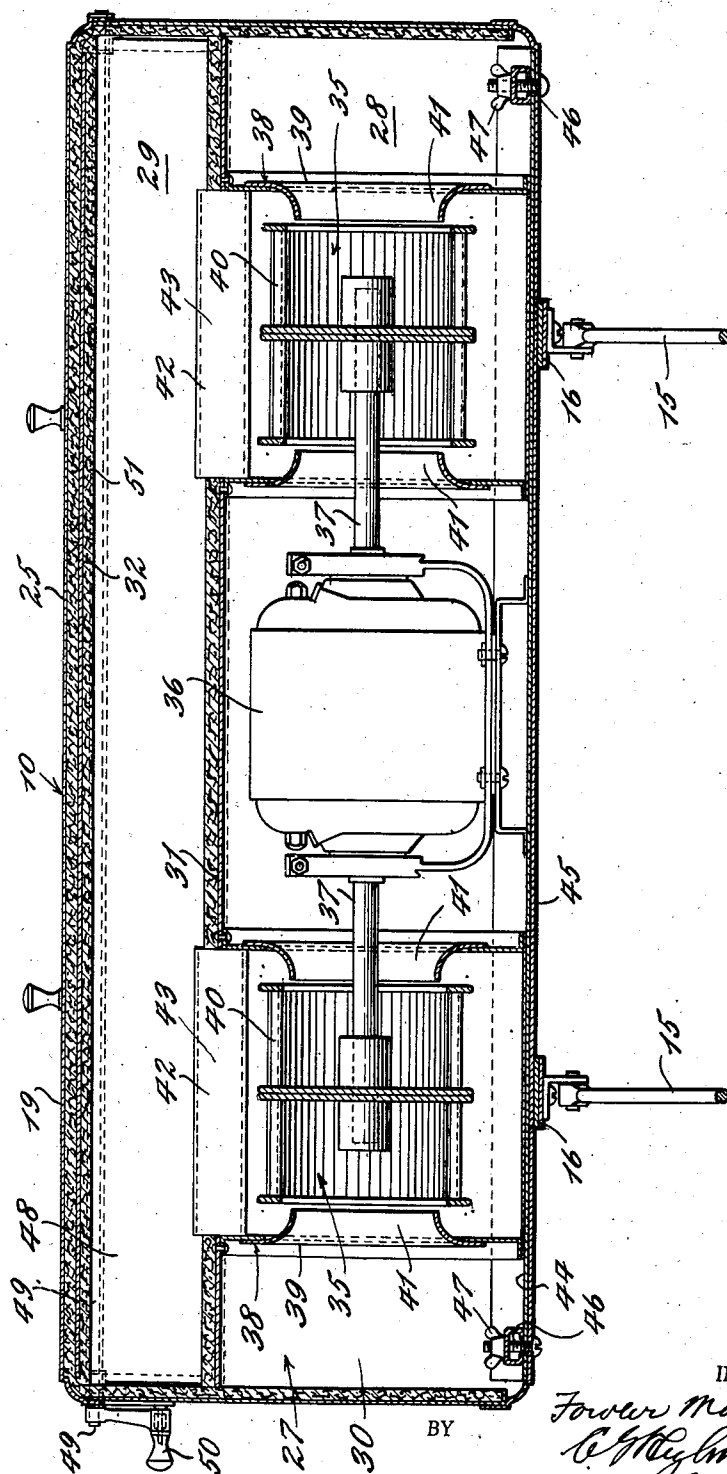


Fig. 9.

INVENTOR.

Forster Manning
C. H. Munn
his ATTORNEY.

May 18, 1937.

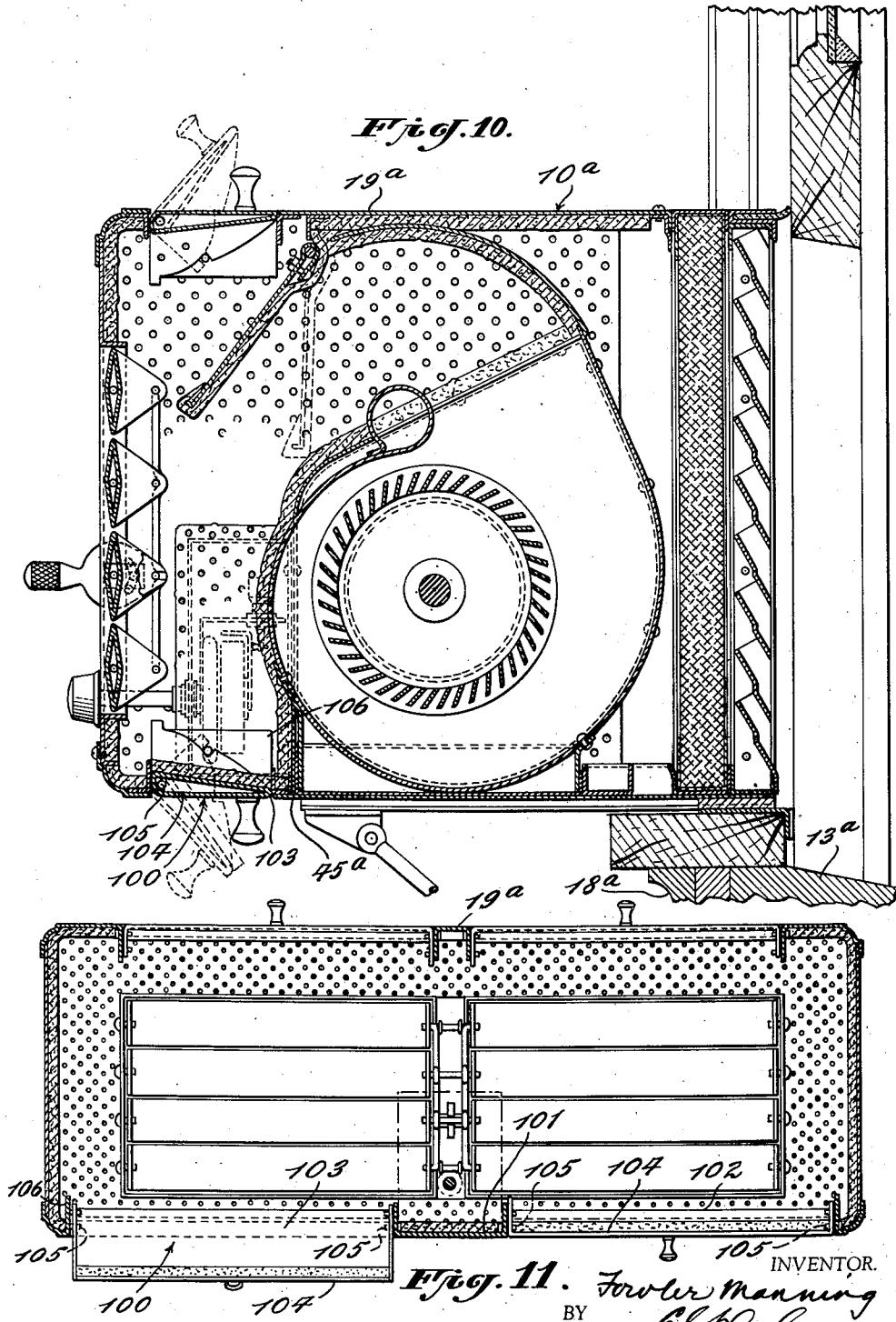
F. MANNING

2,081,104

AIR CIRCULATING APPARATUS

Filed July 16, 1935

5 Sheets-Sheet 5



UNITED STATES PATENT OFFICE

2,081,104

AIR CIRCULATING APPARATUS

Fowler Manning, Bronxville, N. Y., assignor to
American Radiator Company, New York, N. Y.,
a corporation of New Jersey

Application July 16, 1935, Serial No. 31,590

10 Claims. (Cl. 98—94)

This invention relates to air translating apparatus and more particularly to devices for circulating air in rooms of buildings and the like.

In the accompanying drawings, I have chosen to show the invention as embodied in a window ventilator of the type adapted to be arranged adjacent an opening defined by a partially raised window sash and the window sill, and operable to admit clean and fresh, outside air into a room and to move the air about the room and mix the fresh air with room air, thereby producing comfortable living conditions. It is to be understood, however, that my invention in all of its aspects is not to be considered as limited to window ventilators, for in so far as certain of its broader aspects are concerned, it may be embodied in other types of devices used for circulating air in rooms and the like.

One object of my invention is to provide an improved form of air circulating device wherein air may be directed at will to different desired portions of a room.

Another object is to provide an air circulating device of the character referred to, having an improved form and arrangement of louvers and also an improved operating means therefor, whereby the air may be simply and easily directed to desired portions of a room.

The invention consists in the novel construction and combination of parts, to be more fully described hereinafter, and the novelty of which will be particularly pointed out and distinctly claimed.

In the accompanying drawings, to be taken as a part of this specification, I have fully and clearly illustrated a preferred embodiment of my invention, in which drawings:

Fig. 1 is a plan view illustrating a window ventilator constructed in accordance with the present invention and showing the ventilator as mounted in position adjacent an opening provided by a partially raised window sash and the window sill of a window;

Fig. 2 is a front elevation of the construction shown in Fig. 1;

Fig. 3 is a transverse vertical section taken on the line 3—3 of the Fig. 2;

Fig. 4 is a longitudinal vertical section taken on the line 4—4 of Fig. 3;

Fig. 5 is an enlarged fragmentary vertical section taken on the same plane as Fig. 3 and illustrating the various positions of the louvers which control the air outlet in the front wall of the ventilator;

Fig. 6 is an enlarged fragmentary vertical sec-

tion taken on the same plane as Fig. 4 and illustrating more clearly the detailed construction of the front wall louvers and their operating means;

Fig. 7 is an enlarged fragmentary horizontal sectional view taken on the line 7—7 of Fig. 6 and illustrating the louver operating lever and the connections between the lever and the louvers;

Fig. 8 is an enlarged fragmentary sectional view similar to Fig. 5 and taken on the line 8—8 of Fig. 7;

Fig. 9 is a longitudinal vertical sectional view taken on the line 9—9 of Fig. 3;

Fig. 10 is an enlarged vertical sectional view similar to Fig. 3 and showing a modified form of my invention;

Fig. 11 is a longitudinal vertical sectional view similar to Fig. 4 and illustrating the modified form shown in Fig. 10.

Referring now in detail to the accompanying drawings and to the modification shown in Figs. 1 to 9, inclusive, it will be observed that I have shown my invention in one form as embodied in a window ventilator which is indicated generally by the reference numeral 10. The ventilator is shown as being removably positioned with its rear side adjacent an opening 11 which is defined by a lower sash rail 12 of a window, a window sill 13 and the sides 14 of the window casing (see Fig. 3). The ventilator rests at its rear on the window sill 13 and is suitably supported at its front by a pair of diagonal brackets 15, the latter being secured respectively at their upper ends to supporting strips 16 extending transversely beneath the ventilator and being secured at their lower ends to socket members 17 carried by that portion of a wall 18 of the room which is beneath the window sill 13. Suitable blocks 5 serve to close the spaces between the sides of the ventilator and the sides 14 of the window casing.

The ventilator 10 includes an enclosing casing structure 19 which is rectangular in shape, as shown, and extends longitudinally of the window opening 11. The casing includes a rear wall 20 which is provided with an inlet opening 21 extending for the full length and height of the ventilator. A removable filter 22 is vertically arranged in the casing immediately adjacent the inlet opening 21 and also extends for the full length and height of the ventilator so as to assure that only clean and fresh outside air will be admitted to the interior of the ventilator.

The casing 19 also includes a vertical front wall 23 having an air outlet 24 extending for substantially the full length thereof, and also includes a horizontal top wall 25 having an outlet opening

26 extending for substantially the full length thereof.

A partition 27 divides the interior of the ventilator longitudinally into a rear inlet chamber 28 communicating through the filter 22 and the inlet 21 with the outside atmosphere, and into an outlet chamber 29 communicating through a front wall outlet 24 and a top wall outlet 26 with the room (see Fig. 3). The partition 27 in transverse vertical section resembles a question mark (?), and comprises a vertical lower portion 30 arranged in spaced parallel relation with the front wall 23 of the casing, an intermediate diagonal portion 31 extending upwardly and rearwardly from the top of the lower portion 30, and an upper deflecting portion 32 curved upwardly and forwardly from the top of the diagonal portion 31 to the top wall 25 of the casing and to a point above the lower end of the diagonal portion.

Removably mounted within the casing, is a mechanism which provides for the flow of clean fresh outside air through the ventilator and the outlet openings 24 and 26 into the room. This mechanism is shown to be in the form of a motor-driven blower unit indicated in general by the reference character 35 and including a motor 36 arranged centrally of the casing 19 and having a shaft 37 extending out both ends of the motor and longitudinally of the casing. The unit 35 also includes a pair of blowers 38 arranged respectively at each side of the motor and comprising housings 39 and centrifugal blower elements 40 arranged respectively in the housings and fixed to the ends of the motor shaft 37. The housings 35 are provided with inlets 41 communicating with the inlet chamber 28 and outlets 42 communicating through symmetrically arranged openings 43 in the diagonal portion 31 of the partition 27 with the outlet chamber 29.

The motor driven blower unit 35 and partition 27 may be rigidly secured together and removed as a unit from the ventilator casing. These elements are supported by a channel-shaped supporting member 44 extending longitudinally of and supported by a horizontal bottom wall 45 of the ventilator casing. The member 44 is detachably secured to the bottom wall by bolts 46 and wing nuts 47.

The upper deflecting portion 32 of the partition defines, in conjunction with the diagonal portion 31, a part of a tortuous passage for the air through the ventilator. Other portions of this passage are defined by the rear surface of a longitudinally extending damper 48 when the latter is in open position, which is the position shown in full lines in Fig. 3. The damper is secured at its upper end to a shaft 49 extending longitudinally of the ventilator. An operating lever 50 for the damper is secured to an end of the shaft 49 exteriorly of the casing. The closed position of the damper 48 is indicated in dotted lines and, when in this position, flow of air through the casing is prevented. The interior surfaces of the outlet chamber 29 are lined with a suitable sound deadening or absorbing material indicated at 51.

The details of construction and the arrangement of the motor-driven blower unit 35, the partition 27 and the damper 48 form no part of the present invention, they having been disclosed and claimed in the copending application for United States Letters Patent of Henry S. Woodruff and Paul T. Engelskirchen, Jr., Serial No. 31,584, filed July 16, 1935.

According to the present invention I provide an improved form of louver means in the front wall

outlet 24 which may be adjusted when in one extreme position to direct the air upwardly and forwardly of the ventilator, to direct the air downwardly and forwardly of the ventilator when in another extreme position, and to close the outlet when in a mid-position. I also provide an adjustable louver means in the top wall outlet opening 26 which is operable to direct the air upwardly and rearwardly toward the window sash and wall of the room when in one extreme position and to close the outlet opening, when in the other extreme position.

This arrangement of louver means is of particular advantage in an air circulating device where it is desired to direct the air to different portions of the room for producing proper circulation conditions therein and when it is desired to prevent the creation of objectionable drafts. For example, when the air entering a window ventilator such as I have disclosed, is substantially below the temperature of the air in the room and the introduction of such fresh air into the room through the outlet opening 24 in either of the directions provided for may be objectionable to the occupants of the room, the adjustable louver means in the outlet 24 may be closed and the adjustable louver means in the top wall outlet 26 opened. With such an adjustment, fresh air will then be directed upwardly and rearwardly and toward the window sash and wall of the room and be diffused upwardly and forwardly into the room, thereby effecting adequate circulation of fresh air and room air without creating objectionable drafts.

As stated previously, the outlet 24 in the front wall 23 extends for substantially the full length of the casing. The outlet 24 is divided in the middle by a narrow vertical strip 60 into a pair of rectangular shaped openings 61 and 62. Arranged within each of these openings is a set of louver plates 63, each plate extending longitudinally across the opening and being arranged in spaced parallel relation with respect to the other plates in its respective opening and being arranged in alignment with a corresponding plate in the other opening.

Each of the plates 63 is shown as being pivotally mounted at its end opposite the strip 60 by means of rivet pin 64 extending through aligned openings in an end wall of the louver plate and in an inwardly directed flange 65 which defines the openings 61 and 62. Each of the louver plates is pivotally mounted at its end adjacent the strip 60 by means of a pin 66 extending through aligned openings in an end wall of the louver plate and in the flange 65. The pins 66 are relatively long and extend longitudinally behind the strip 60 and serve as pivotal supports for the adjacent ends of corresponding louvers in the openings 61 and 62. The rivet pin 64 and pin 66 of each louver plate 63 are in alignment, thereby providing for pivotal movement of the louver plate about axes which are shown as being substantially coincident with the respective longitudinal center line of the plates.

The arrangement of plates and pivotal mountings therefore, just described, is such that the plates move about axes which are in spaced parallel relation to one another and which lie in the plane of their respective opening. Also, the pivotal axis of each plate 63 in one of the openings 61 or 62 is coincident with the pivotal axis of the corresponding plate in the other opening. As will be observed from an examination of Figs. 3, 6 and 8, the plates and their pivotal mountings are ar-

ranged in their respective openings so that when in closed position, a slight clearance 67 is provided between adjacent longitudinal edges of plates, thereby providing for pivotal movement of the plates in either direction from their closed position. One extreme open position of the plates is shown in full lines in Fig. 5 and the other extreme open position of the plates is shown in dotted lines in Fig. 5. Figures 3 and 8 indicate the closed position of the louver plates.

I also provide for the operation of the plates 63 in unison. To this end, the end of each plate which is adjacent the vertical dividing strip 60 is provided with an inwardly extending flange 63 which serves as an operating element for the plate. A link 69 connects the flanges 63 of each set of plates 63 for operation in unison. Pins 70 and 71 extending through aligned openings in the corresponding two middle louver plates 63 of each opening 81 and 82 serve to connect the two sets of plates for operation in unison. As will be observed from Fig. 8, the pins 70 and 71 also serve as a portion of the connection between the links 69 and their respective flanges 63, each of the links 69 being provided with bent portions 72 engaging and rigidly secured to the pins 70 and 71 respectively by any suitable means such, for example, as by spot welding. Therefore, through pins 70 and 71, the links 69 are operatively connected to the flanges 63 of the two middle plates 63 of each set of plates.

In order to provide for manual operation of the louver plates in unison from the exterior of the ventilator, I provide an operating device preferably in the form of a lever 73 which is fulcrumed on one of the pivotal pins 66, the latter also extending through an opening provided in the lever 73. The lever 73 is provided with an interiorly extending portion 74 which is in turn provided on its extreme inner end with a slot 75. The connecting cross pin 71 fits within the slot 75. The outer end of the lever extends exteriorly of the casing and is provided with a knurled portion 76 so that it may be grasped by the hand and moved up or down to operate the louver plates 63 in unison.

In order to prevent the louver plates from being moved accidentally or due to the force of the air and in order to hold the plates in certain selected positions, I provide at each side of the lever a spring pressed braking device 77 which engages the sides of the lever 73 (see Fig. 7). Each device 77 is provided with a base portion 78 arranged parallel to the rear side of the strip 60, a flange 79 engaging the inner side of the flange 65, and a flexible or resilient flange 80 arranged parallel to the side of the lever and provided with a pressed out knob-like projection 81 engaging a relatively shallow arcuate shaped groove 82 in the side of the lever. The flanges 79 and 80 are provided with aligned openings, which receive the pin 66 forming the fulcrum for the lever 73. The lever 73 is provided with openings 83 there-through, at the ends and at the middle of the grooves 82 which receive the projections 81, which openings serve to hold the lever and louvers in either of the two extreme positions and in the middle closed position. The resilience of the flanges 80 results in the projections 81 being held tight against the lever in the grooves 82 at each side thereof and in preventing accidental movement of the lever between openings 83 and in holding the lever more positively in its extreme and middle positions.

From an examination of Fig. 5, it will be observed that when the knurled end 76 of the lever

73 is moved downward, the louver plates 63 are moved in unison in a counter-clockwise direction and provide for directing the air forwardly and upwardly into the room, and when the knurled end 76 is moved upward the louver plates are moved in a clockwise direction and serve to direct the air forwardly and downwardly into the room, the middle position of the lever being the closed position of the louvers.

The top wall outlet 26 also extends for substantially the full length of the ventilator casing and is divided at its middle by a relatively narrow horizontal strip 90, into elongated rectangular openings 91 and 92. Arranged within each of the openings is a single louver plate 93 which is pivotally mounted to move about an axis extending longitudinally of the respective opening at the forward longitudinal edge thereof. The pivotal axes are provided by rivet pins 94 extending through aligned openings in each end wall of the louver plates and in transverse flanges 95 depending from the top wall 25 at the end of the respective openings 91 and 92.

I also provide a stop means for preventing movement of the louver plates 93 beyond their full open and full closed positions. This stop means is here shown as being in the form of a flange 96 depending from each end of each louver plate 93 and provided with an arcuate slot 97 which receives a pin 98 extending from the adjacent flange 95 carried by the top wall 25. When the pin 98 engages either end of the arcuate slot 97, the louver plate 93 is prevented from further movement. The full open position of the plates 93 is indicated in dotted lines in Fig. 3 and the closed position in full lines.

In Figs. 10 and 11 of the drawings, I have disclosed a ventilator 10a which is constructed and operates in substantially the same manner as the one of the previously described modification, with the exception that in Figs. 10 and 11, I also provide an outlet 100 in the horizontal bottom wall 45a of the ventilator extending for substantially the full length thereof. The outlet 100 is divided in its middle by a strip 101 into a pair of elongated openings 102 and 103 which are rectangular in shape and extent longitudinally of the casing 19a. Arranged within each of the openings 102 and 103 is a louver plate 104 which is pivotally mounted to move about an axis arranged at and parallel to the forward longitudinal edge of its respective opening. The pivotal mounting is provided by rivet pins 105 extending through aligned openings in the end walls of the louver plates and in flanges 106 extending upwardly from the bottom 45a at the ends of the openings 102 and 103. The full open positions of the louver plates are indicated in dotted lines in Fig. 10 and in full lines at the left of Fig. 11.

The outlet 100 in the bottom wall and the adjustable louver means in the form of the pivoted plates 104 serve as a means for directing the air from the casing downwardly and rearwardly and toward that portion of the rear wall 13a of the room which is beneath the window sill 13a, thereby providing for directing the air into the room, in an additional direction which will be useful under certain conditions in providing comfortable living conditions in the room.

What I claim and desire to secure by Letters Patent of the United States is:—

1. An air circulating device comprising a casing structure adapted to be arranged adjacent an upright wall of a room and having a pair of air outlets, one air outlet being in the portion of the

casing remote from said wall of the room and the other air outlet being in the top portion of the casing; means providing for the flow of air through the casing and through the outlets; adjustable louver means in said one air outlet and operable in one position to direct the air to a desired portion of the room away from the wall thereof and operable in another position to close said one air outlet; and adjustable louver means in the outlet in the top portion of the casing and operable in one position to direct the air from said casing upwardly and toward the wall of the room and in another position to close said last-named outlet.

2. An air circulating device comprising a casing structure adapted to be arranged adjacent an upright wall of a room and having an air outlet in the portion thereof remote from said wall, having a second air outlet in the top portion thereof, and having a third outlet in the bottom portion thereof; means providing for the flow of air through the casing and through the outlets; adjustable louver means in the first-named air outlet operable in one position to direct the air to a desired portion of the room away from the wall thereof and operable in another position to close said outlet; adjustable louver means in the second-named outlet and operable in one position to direct the air upwardly and rearwardly of the casing and toward the wall of the room and operable in another position to close the second-named outlet; and adjustable louver means in the third-named outlet and operable in one position to direct the air generally downwardly and operable in another position to close the third-named outlet.

3. An air circulating device comprising a casing structure adapted to be arranged adjacent an upright wall of a room and having an air outlet in the portion thereof remote from said wall, and having a second air outlet in the bottom portion thereof; means providing for the flow of air through the casing and through the outlets into the room; adjustable louver means in the first-named air outlet and operable in one position to direct the air to a desired portion of the room and away from the wall thereof; and adjustable louver means in said second air outlet and operable to direct the air downwardly and rearwardly toward said wall.

4. A window ventilator comprising a casing structure adapted to be arranged adjacent a window opening of a room and having an inlet for receiving outside air through said opening; the casing structure including a front wall having an outlet and a top wall having an outlet; means providing for the flow of outside air through the casing and into the room through said outlets; adjustable louver means in the front wall outlet and operable in one position to direct the air into the room in a desired direction and operable in another position to close said front wall outlet; and adjustable louver means in the top wall outlet and operable in one position to direct the air upwardly and rearwardly toward a sash of said window and operable in another position to close the top wall outlet.

5. A window ventilator comprising a casing structure adapted to be arranged adjacent a window opening of a room and having an inlet for receiving outside air through said opening; the casing structure including a front wall having an outlet and a top wall having an outlet; means providing for the flow of outside air through the

casing and into the room through said outlets; adjustable louver means in the front wall outlet and operable in one position to direct the air upwardly and outwardly from the front wall of the casing, operable in a second position to direct the air downwardly and outwardly from the front wall, and operable in a third position to close the front wall outlet; and adjustable louver means in the top wall outlet and operable in one position to direct the air upwardly and rearwardly toward a sash of said window and operable in a second position to close the top wall outlet.

6. An air circulating device for a room comprising walls providing a casing structure; one of said walls having an air outlet opening therein; means providing for the flow of air through said casing structure and the air outlet opening; and adjustable louver means in said opening operable in one position to close the opening and operable in other positions to direct the air to desired portions of the room; said last-named means comprising a plurality of similar louver plates, each plate extending across the opening and being pivotally mounted therein to turn about an axis also extending across the opening and disposed parallel to the axis of the remaining plate or plates and lying in the plane of the opening; the arrangement being such that in closed position, the plates lie in the plane of the opening with a slight clearance between adjacent edges of the plates to provide for pivotal movement in either direction from their closed position, each of the plates including an operating element projecting inwardly of the casing at one of the adjacent ends of the plates, link means connecting the elements of the plates for movement in unison, and a lever having a portion extending exteriorly of the casing for manual operation and a portion extending interiorly of the casing and operatively connected to at least one of said elements and mounted for pivotal movement about an axis substantially parallel to the axis of movement of the plates.

7. An air circulating device for a room comprising walls providing a casing structure; one of said walls having an air outlet divided in the middle by a transversely extending narrow strip into a pair of rectangular shaped openings; blower means within said casing and providing for the flow of air through the casing and the outlet openings; a pair of sets of similar louver plates arranged respectively in the openings; the plates of each set being arranged in spaced parallel relation with each plate extending across its respective opening and aligned with a corresponding plate in the other opening; means for pivotally mounting each plate in its respective opening to turn about an axis which is parallel to and in the same plane as the pivotal axis of the remaining plates of its respective opening and which is coincident with the axis of movement of the corresponding plate in the other opening; the arrangement of louver plates being such that in closed position they lie in the same plane as their respective opening with a slight clearance between adjacent edges of the plates to provide for their pivotal movement in either direction from closed position; each plate including a rearwardly extending operating element; link means connecting the rearwardly extending elements of each set of plates for operation in unison; a pin connecting the element of one plate with the element of the corresponding plate in the other opening; and manually operable means connected to said pin and extending exteriorly of the cas-

ing for moving all of the plates in unison in either direction from closed position.

8. An air circulating device for a room comprising walls providing a casing structure; one of said walls having an air outlet divided in the middle by a transversely extending narrow strip into a pair of rectangular shaped openings; said dividing strip having an opening extending there-through; means providing for the flow of air through the casing and the outlet openings; a pair of sets of similar louver plates arranged respectively in the openings; the plates of each set being arranged in spaced parallel relation with each plate extending across its respective opening and aligned with a corresponding plate in the other opening; means for pivotally mounting each plate in its respective opening to turn about an axis which is parallel to and in the same plane as the pivotal axes of the remaining plates of its respective opening and which is coincident with the axis of movement of the corresponding plate in the other opening; the arrangement of louver plates being such that in closed position they lie in the same plane as their respective openings with a slight clearance between adjacent edges of plates to provide for their pivotal movement in either direction from closed position; each plate including a rearwardly extending operating element; link means connecting the rearwardly extending elements of each set of plates for operation in unison; a pin connecting the element of one plate with the element of the corresponding plate in the other opening; and a lever extending through the opening in said dividing strip and having an interiorly extending portion operatively engaging said pin and an exteriorly extending portion adapted to be grasped by the hand for operation.

9. An air circulating device for a room comprising walls providing a casing structure; one of said walls having an air outlet divided in the middle by a transversely extending narrow strip into a pair of rectangular shaped openings; said dividing strip having an opening extending there-through; means providing for the flow of air through the casing and the outlet openings; a pair of sets of similar louver plates arranged respectively in the openings; the plates of each set being arranged in spaced parallel relation with each plate extending across its respective opening and aligned with a corresponding plate in the other opening; means for pivotally mounting each plate in its respective opening to turn about an axis which is parallel to and in the same plane as the pivotal axes of the remaining plates of its respective opening and which is coincident with the axis of movement of the corresponding plate

in the other opening; the arrangement of louver plates being such that in closed position they lie in the same plane as their respective openings with a slight clearance between adjacent edges of plates to provide for their pivotal movement in either direction from closed position; each plate including a rearwardly extending operating element; link means connecting the rearwardly extending elements of each set of plates for operation in unison; a pin connecting the rearwardly extending element of one plate with the element of the corresponding plate in the other opening; and a lever extending through the opening in said dividing strip and having an interiorly extending portion operatively engaging said pin and an exteriorly extending portion adapted to be grasped by the hand for operation; and spring pressed braking means engaging said lever and offering resistance to the movement of said lever.

10. An air circulating device for a room comprising walls providing a casing structure; one of said walls having an air outlet opening therein; means providing for the flow of air through said casing structure and the air outlet opening; and adjustable louver means in said opening operable in one position to close the opening and operable in other positions to direct the air to desired portions of the room; said last-named means comprising a plurality of similar louver plates, each plate extending across the opening and being pivotally mounted therein to turn about an axis also extending across the opening and disposed parallel to the axis of the remaining plate or plates and lying in the plane of the opening; the arrangement of the plates being such that in closed position the plates lie in the plane of the opening with a slight clearance between adjacent edges of the plates to provide for pivotal movement in either direction from their closed position, each of the plates including an operating element projecting inwardly of the casing at one of the adjacent ends of the plates, link means connecting the elements of the plates for movement in unison, and a lever having a portion extending exteriorly of the casing for manual operation and a portion extending interiorly of the casing and operatively connected to at least one of said elements and mounted for pivotal movement about an axis substantially parallel to the axis of movement of the plates; and spring-pressed braking means engaging the portion of the lever which is interiorly of the casing and offering resistance to the movement of said lever so as to hold the plates in any desired position.

FOWLER MANNING.