

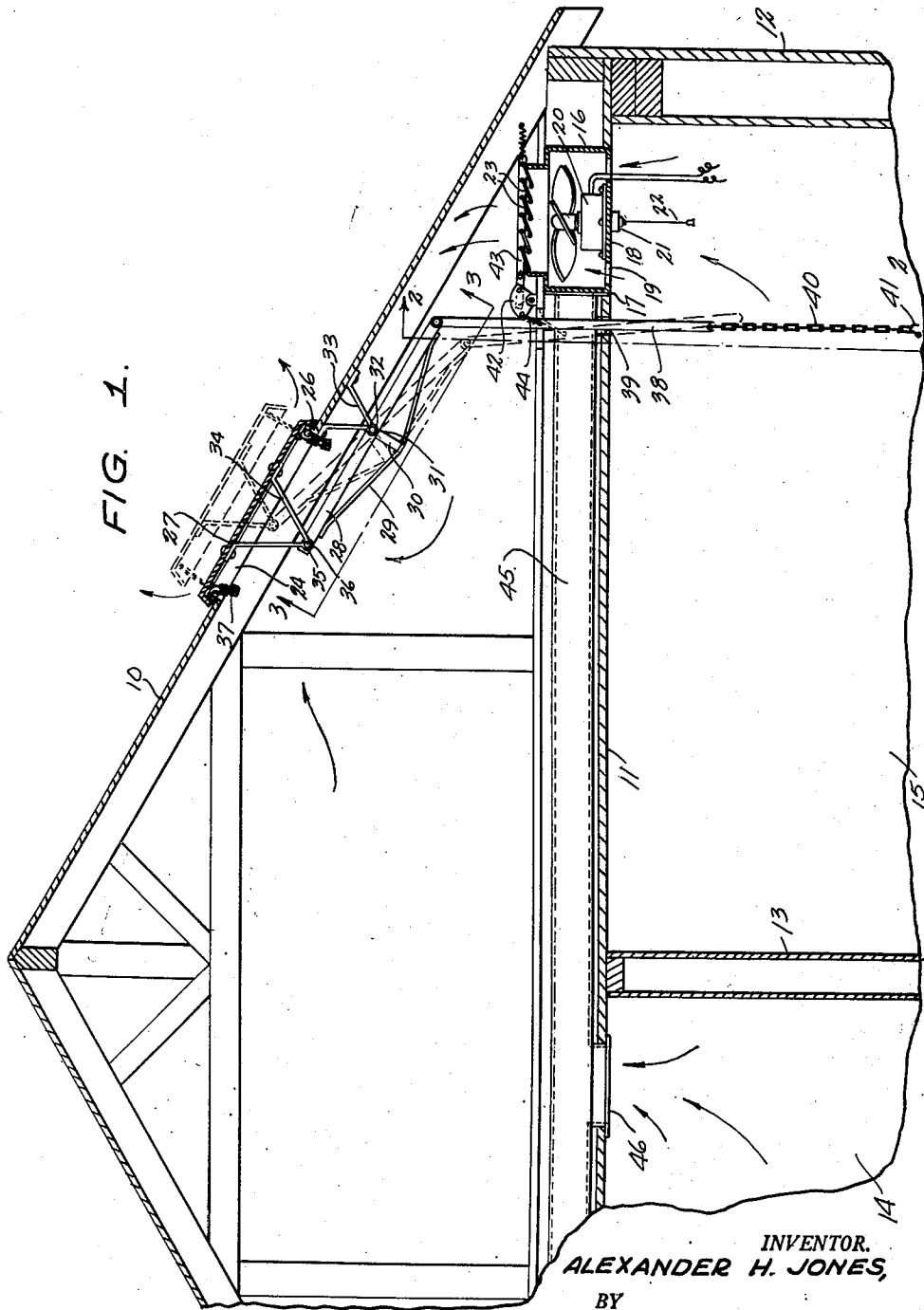
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A. H. JONES
BUILDING VENTILATOR

2,665,626

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2 Sheets-Sheet 1



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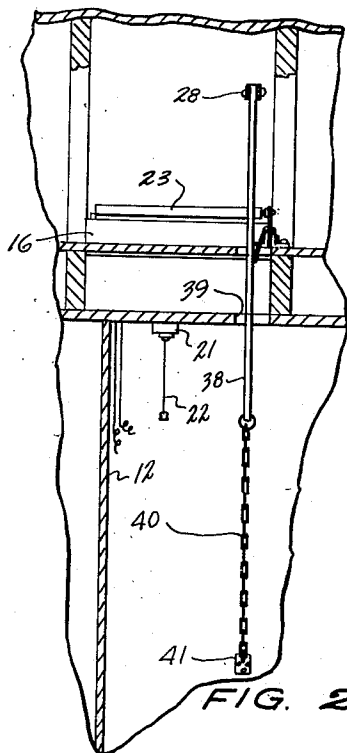


FIG. 2.

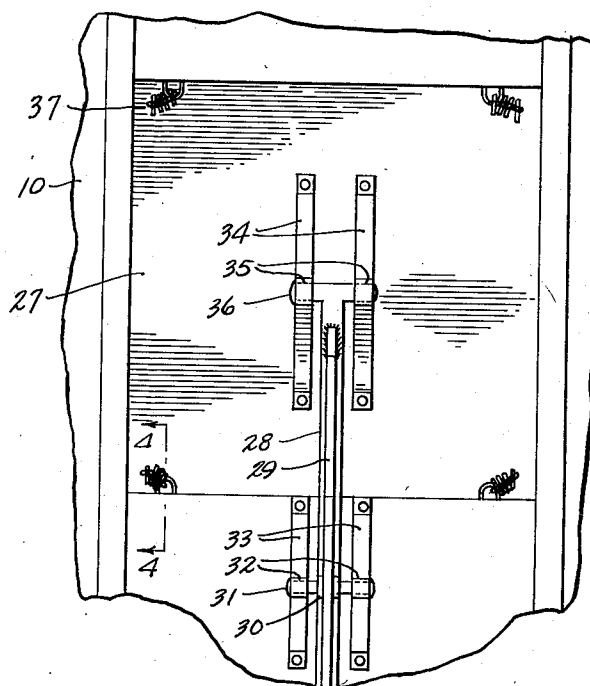


FIG. 3.

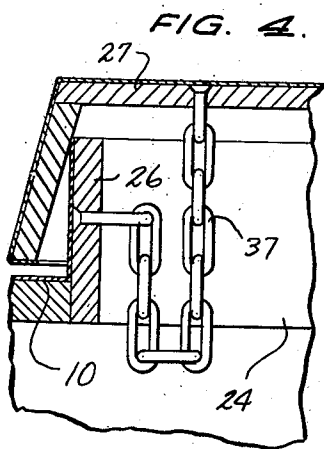


FIG. 4.

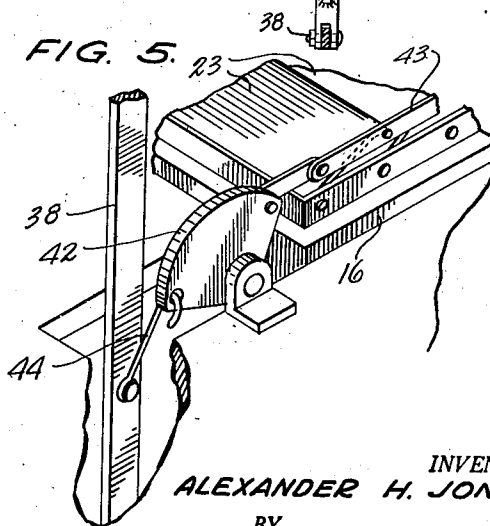


FIG. 5.

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BUILDING VENTILATOR

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2 Claims. (Cl. 98—43)

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This invention relates to building ventilating apparatus and more particularly to apparatus for ventilating a small building, such as a dwelling house, through the building roof.

It is among the objects of the invention to provide improved building ventilating apparatus including means providing a ventilating passageway through the building ceiling and roof and manually operated means operative to simultaneously open and close the passageway at the ceiling and the roof, which includes a power operated blower for moving air from the space below the ceiling of the building through openings in the building ceiling and roof and means for closing the openings to preclude the return flow of air and entry of precipitation when operation of the power operated blower is discontinued, and which is simple and durable in construction, economical to manufacture, and easy to install.

Other objects and advantages will become apparent from a consideration of the following description and the appended claims in conjunction with the accompanying drawings wherein:

Figure 1 is a transverse cross sectional view through a fragmentary portion of a building showing the installation of ventilating apparatus illustrative of the invention in the building;

Figure 2 is a cross sectional view on the line 2—2 of Figure 1;

Figure 3 is a bottom plan view of a portion of the ventilating apparatus looking from the line 3—3 of Figure 1;

Figure 4 is a cross sectional view on an enlarged scale on the line 4—4 of Figure 3; and

Figure 5 is a perspective view of a fragmentary portion of the ventilating apparatus showing structural details thereof.

With continued reference to the drawings, the building fragmentarily illustrated in Figure 1 has a roof 10 of any usual or desired construction, a ceiling 11, walls 12 and partitions 13 dividing the space below the ceiling into rooms, as indicated at 14 and 15.

The ceiling 11 is provided with a ventilating opening therethrough, the opening in the arrangement illustrated being located in the room 15 and adjacent the building wall 12 near the eaves of the roof 10. An open ended housing or box 16 is supported by the ceiling and disposed in the ventilating opening 17 and this housing has an open upper end and a lower end wall 18 provided with air passage openings 19. A power operated blower 20 is mounted in the housing 16 and controlled through a switch 21 by a drop cord 22 and a series of vanes or louvers 23 is disposed

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in the upper open end of the housing. The vanes 23 are substantially parallel to each other and are pivotally mounted each at one edge in the housing 16 so that the vanes can be moved between a position in which the corresponding end of the housing is substantially open and an overlapping position in which they close this end of the housing, and preclude the passage of air through the ceiling opening.

The roof opening 24 is provided with a marginal flange 26 projecting to the outer side of the roof and a marginally flanged cover 27 receives the flange 26 to close the roof opening.

A lever 28 reinforced by a tension member 29 and bridge 30 is pivotally mounted intermediate its length on a pivot pin 31 the ends of which are rotatably received in sockets 32 provided on the ends of V shaped brackets 33 secured to the roof 10 and depending from the under side of the roof at the edge of the roof opening nearest the building wall 12. V shaped brackets 34 are secured to the cover and depend therefrom and these brackets are provided at their ends remote from the cover with sockets 35 which receive a pivot pin 36 which pivotally connects the corresponding end of the lever 28 to the brackets 34. By pulling the other end of the lever 28 downwardly the cover 27 will be raised above the roof, to the dotted line position illustrated in Figure 1, and when the pull on the other end of the lever is released the cover will move into engagement with the roof flange 26 and close the opening.

Movement of the cover away from the roof is limited by suitable means, such as the chains 37 each of which is connected at one end to the under side of the cover and at its other end to the roof within the opening 24.

An elongated bar or link 38 extends slidably through an opening 39 in the ceiling and is pivotally connected at its upper end to the end of the lever 28 remote from the brackets 34. A flexible strand, such as the chain 40, is secured at one end to the lower end of the link 38 and depends from the latter so that the link can be manually pulled downward to rock the lever 28 in a direction to lift the cover 27 from the roof. This chain is adjustably engageable with a suitable hook 41 to hold the cover in raised position.

A rocker 42 is pivotally mounted on the housing 16 adjacent the link 38 and is connected through a bar 43 with the free edges of all of the vanes 23. A link 44 pivotally connects the bar 38 to the rocker 42 so that when the bar is pulled downwardly by the chain 40 the rocker is moved in a direction to move the vanes 23 to

their open position. Thus, downward movement of the bar or link 38 simultaneously opens the ceiling opening and the roof opening of the building, and release of the chain simultaneously closes both of these openings.

When the ceiling and roof openings are both open, the power operated blower 20 may be put into operation to force air from the room 15 through the ceiling opening 17 into the attic space between the ceiling and the roof and through the roof opening to discharge the air to the exterior of the building. When operation of the blower 20 is discontinued, the chain 40 may be released to close both of the openings and thereby prevent return flow of air or prevent precipitation from entering the roof opening.

Other rooms, such as the room 14, may be connected into the ventilating system by ducts, as indicated at 45, and registers, as indicated at 46, opening into the ducts. The register 46 in the arrangement illustrated opens from the room 14 into the duct 45 which in turn communicates with the interior of the housing 16.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is, therefore, to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are, therefore, intended to be embraced therein.

What is claimed is:

1. Ventilating apparatus for a building having a ceiling provided with a ventilating opening therein and a roof provided with a ventilating opening therein spaced from said ceiling opening comprising a housing mounted on said ceiling and disposed within said ceiling opening, damper means movably mounted in said housing to open and close said ceiling opening, a power operated blower in said housing for forcing air through said ceiling opening, a cover for the opening in said roof, a bracket secured to said roof adjacent the opening therein, a lever pivotally mounted intermediate its length on said bracket, means pivotally connecting one end of said lever to said cover, flexible means connected between said cover and said roof maintaining the cover substantially parallel to the roof and over the roof opening when the cover is raised, a bar pivotally connected at one end to said lever at the end of said lever remote from said cover, a rocker pivot-

ally mounted on said ceiling adjacent the ceiling opening, means connecting said rocker to said damper, means pivotally connecting said bar to said rocker to enable said bar to move said lever and said rocker simultaneously, and a flexible strand connected at one end to said bar at the end of said bar remote from said lever and depending from said bar below said ceiling to provide means for manually moving said bar.

2. In combination with a building having a ceiling provided with an opening, a roof spaced from said ceiling and provided with an opening, a cover for said roof opening, a housing mounted on said ceiling and disposed within the ceiling opening, a power operated blower in said housing, a damper secured in said housing at one side of said blower, and manually operated means connected to said cover and said damper for simultaneously moving said damper and said cover to open and close the corresponding roof and ceiling openings comprising a bracket attached to said roof at the under side thereof adjacent said roof opening, a lever pivotally connected intermediate its length to said bracket, means pivotally connecting said lever at one end thereof to said roof opening cover, an elongated bar connected at one end to said lever at the end of said lever remote from said cover and depending from said lever, a rocker mounted on said ceiling adjacent the opening in said ceiling and pivotally connected to said damper, means pivotally connecting said bar to said rocker to enable said bar to move said lever and said rocker simultaneously, and a flexible strand connected at one end to said bar at the end of said bar remote from said lever and depending from said bar to provide means for manually moving said bar, said damper and said cover simultaneously.

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