Feb. 19, 1963 K. S. JENSON 3,077,825

VENTILATING HOOD

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Fig. 1

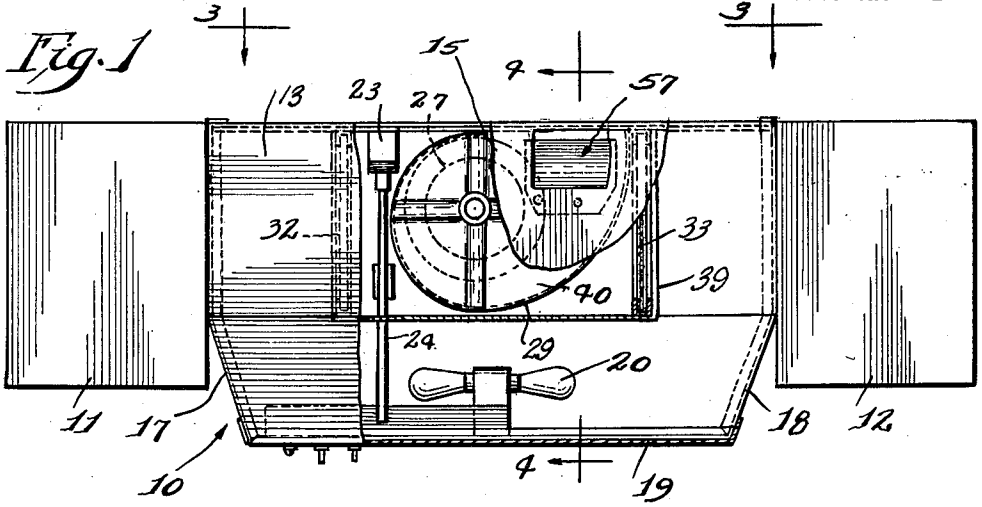

Fig. 2

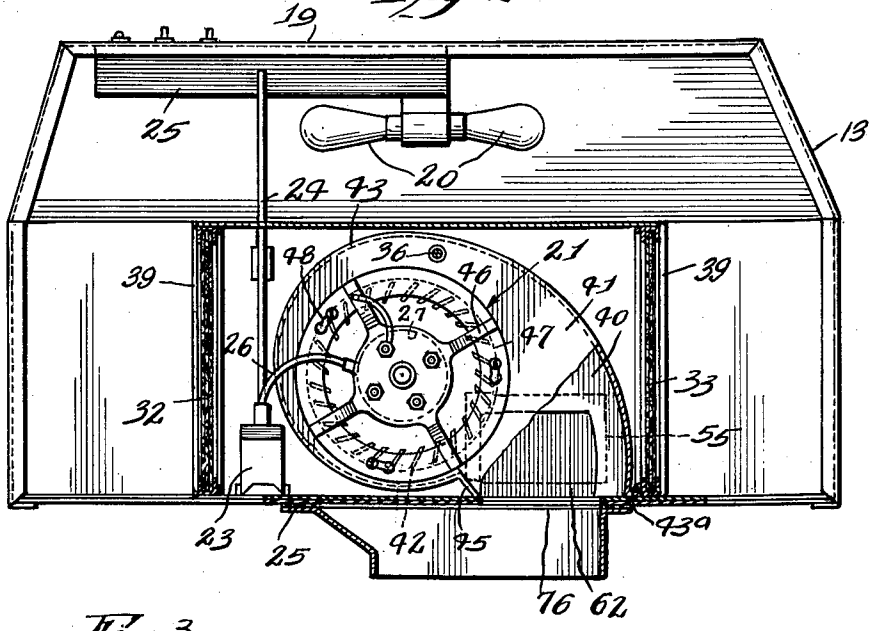

Fig. 3

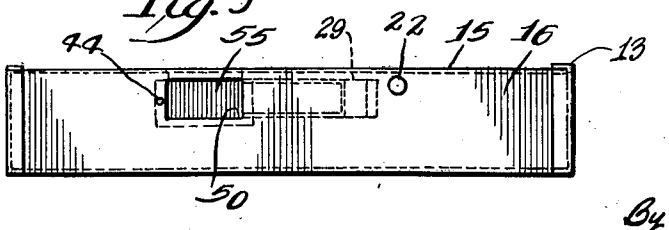

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Fig. 4

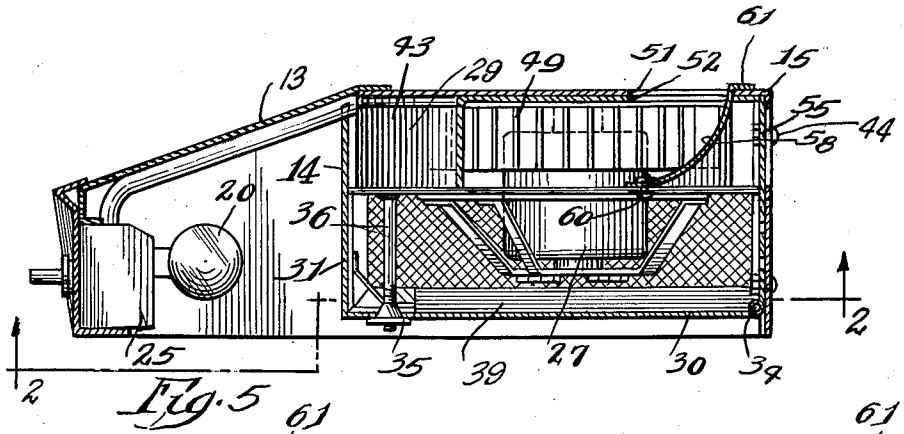


Fig. 5

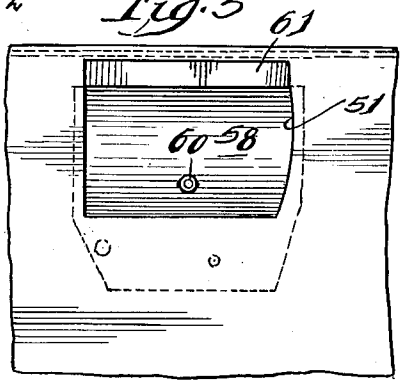


Fig. 7

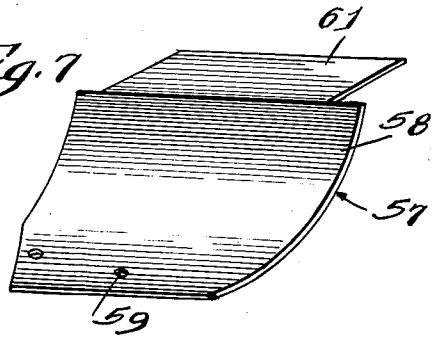


Fig. 6

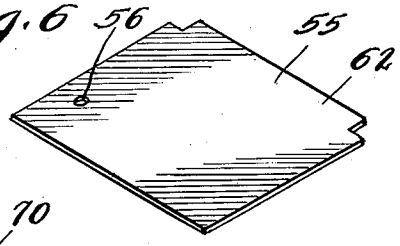
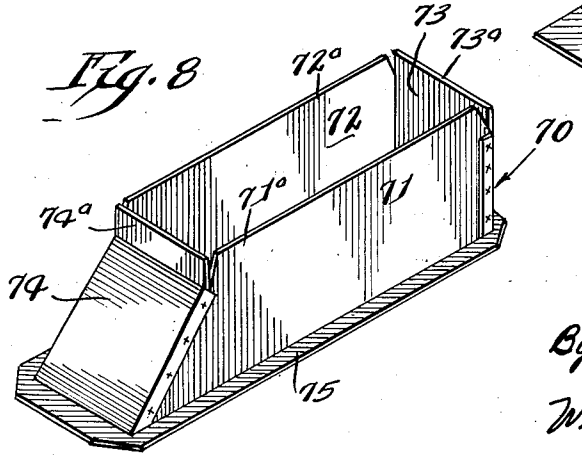


Fig. 8



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VENTILATING HOOD

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6 Claims. (Cl. 98—115)

This invention relates to a ventilating hood and more particularly to a built-in kitchen ventilating hood which has structure facilitating connection of the hood to either roof or wall air venting duct work in a building.

An object of this invention is to provide a new and improved ventilating hood having alternately useable air outlet paths from the hood enabling connection of the hood to either roof or wall air venting duct work.

Another object of the invention is to provide a ventilating hood having a casing with an air outlet opening in the top wall and another air outlet opening in the back wall with a cover plate suitable for closing either one of the openings and a baffle positionable in one of the openings to direct air from a blower housing therethrough.

Another object of the invention is to provide a ventilating hood having a casing with top and back walls, a blower support within the casing and an enclosing housing for said blower including top, bottom and side walls forming an open ended passage leading to the back wall of the casing, means defining a common opening in the housing and casing top walls adjacent the rear of the hood, means defining an opening in the casing back wall coextensive with the open ended passage of said housing, a removable cover for selectively closing one of the other of said openings, and a baffle positionable in said common opening to span said passage and direct blown air through said common opening with the cover in place over the back wall opening.

Further objects and advantages will become apparent from the following detailed description taken in connection with the accompanying drawings in which:

FIG. 1 is a plan view of the ventilating hood shown in association with a pair of cabinets one at each side thereof with the top wall of the hood partially broken away to show structure therebeneath;

FIG. 2 is a bottom view of the hood shown in FIG. 1 on an enlarged scale and showing the use of an alternate air passage from the hood;

FIG. 3 is a rear elevational view of the hood and showing the use of the same air passage as is shown in FIG. 1;

FIG. 4 is a vertical section again on an enlarged scale taken generally along the line 4—4 in FIG. 1;

FIG. 5 is a fragmentary plan view on an enlarged scale showing the baffle in association with the casing top wall opening;

FIG. 6 is a detail perspective view of the cover plate;

FIG. 7 is a perspective elevational view of the baffle; and

FIG. 8 is a perspective view of a boot useable with a hood to enable exact alignment of an air opening with building duct work.

While this invention is susceptible of embodiments in many different forms, there is shown in the drawings and will herein be described in detail an embodiment of the invention with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the invention to the embodiment illustrated. The scope of the invention will be pointed out in the appended claims.

As shown in the drawings, a ventilating hood, indicated generally at 10, is mounted between a pair of wall

cabinets 11 and 12 and is also located beneath an additional wall cabinet (not shown). The hood is designed to overlie a cooking unit in a kitchen and draw air into the hood to thus carry grease, smoke and heat away from the cooking area. The hood has a casing 13 with a top wall 15 and a back wall 16 as well as side walls 17 and 18 and a front panel 19. The front panel 19 has suitable controls for operating the lights 20 as well as a blower indicated generally at 21. Electrical power is supplied to the hood through an aperture 22 in the casing back wall 16 whereby wiring may extend into a junction box 23 with a line 24 leading to a control box 25 on the front panel 19 and an auxiliary line 26 running to the blower motor 27.

Hood casing 13 has no bottom and thus air may be drawn into a box-like enclosure 14 having a bottom plate 30 and a front plate 31 by the blower 21 through a pair of filter screens 32 and 33 mounted on enclosure 14. Narrow, elongate plates 39 are carried by screens 32 and 33 to facilitate their mounting on enclosure 14. Enclosure 14 is mounted for downward pivotal movement by a pivot indicated at 34 and is held in a fixed position, as shown in FIG. 4, by a bevelled nut 35 threaded on a shaft 36 carried by the housing for the blower 21. This permits free access to the blower and the removal of the filter screens.

As seen in FIGS. 1 and 2, the blower 21 has a housing or scroll 29 with a generally annular section and which terminates in an open ended passage. Blower housing 29 has a top wall 40 and a bottom wall 41 with the bottom wall having a circular air inlet port or opening 42 for the entry of air into housing 29. An external side wall 43 of housing 29 spans the top and bottom walls to enclose the perimeter of housing 29 with the wall terminating at 43*a* and being attached to the casing back wall 16 by a bolt 44 as shown in FIG. 3. An additional side wall 45 completes the open ended passage of blower housing 29.

The blower motor 27 is carried on a frame having a plurality of arms 46 which at their outer ends are secured to a ring 47 which is attached to the bottom housing wall 41 by a series of key hole slot connections 48. The blower motor 27 has a fan blade structure 49 carried on the motor shaft.

The hood 10 may exhaust air through wall venting duct work by utilization of a generally rectangular opening 50 in the casing back wall 16 or alternatively air be exhausted from the top of the hood to duct work leading to the roof of the building through a rectangular opening 51 in the casing top wall 15 and a correspondingly shaped opening 52 in the blower housing top wall 40. The construction enables the selection and use of either opening before the hood is installed with minor relocation of parts which are designed to facilitate the changeover.

As shown in FIGS 1, 3, 4 and 5 when air is to be exhausted through the common opening 51—52, a cover plate 55 is placed across the casing back wall opening 50 and is held in position by the attaching bolt 44 previously referred to also passing through an opening 56 in the cover plate. The cover plate 55 is positioned between the casing back wall 16 and the end 43*a* of the blower housing side wall. To increase the efficiency of the air venting action, a baffle 57 is located to have the body 58 thereof span the exhaust air passage and due to the curvature in the body 58 smoothly change the path of air travel upwardly out through the common opening 51—52. The baffle 57 has an opening 59 at the lower part of the body 58 adapted to receive a nut and bolt attaching device 60 to hold the baffle in position. A baffle flange 61 angularly related to the body 58 extends be-

yond the common opening 51—52 and lies flush with the casing top wall 15 to aid in securely seating the baffle.

If the exhaust of air is to be through the building wall, the cover plate 55 is then positioned to close off the common opening 51—52 as shown in FIG. 2 after removal of the baffle 57. The cover plate has a tab end 62 which fits within the common opening 51—52 with the remainder of the cover plate resting upon the top of the casing top wall 15 whereby placement of the hood beneath a kitchen wall cabinet will firmly hold the cover plate in position.

To facilitate removal of the baffle 57 after release of the nut and bolt device 60 the blower may be removed by unlocking rotation of the ring 47 to provide sufficient space for movement of the baffle to a position whereby it can be removed through the opening.

With the cover plate 55 positioned covering the common opening 51—52 open ended passage of the blower housing 29 then directly communicates with the back wall opening 50 whereby air may be exhausted through building duct work.

In order to facilitate alignment of either of the air exhaust openings of the ventilating hood 10 with building duct work either passing through a building wall or upwardly to a roof a boot 70 is provided having side walls 71 and 72 and end walls 73 and 74 forming a generally rectangular channel. The outlet end of the boot is constructed with flaps 71*a*, 72*a*, 73*a*, and 74*a* that can be bent for attachment to building duct work. The opposite inlet end of the boot has an enlarged opening due to outward inclination of the lower part of wall 74 whereby the boot may have a variety of positions enclosing either the back wall 50 or the common opening 51—52 and still line up with building duct work. The boot at its inlet end has a continuous flange 75 which engages against a gasket 76 to seal the boot against the casing as shown in FIG. 2 where the boot is associated with the back wall opening 50. The boot does not directly connect to the casing but is supported thereagainst by its connection to the building duct work. This boot is equally useable with the common opening 51—52.

I claim:

1. A ventilating hood comprising a casing having top and back walls and an open bottom, a blower supported within said casing for drawing air to the hood and discharging air therefrom, an enclosing housing within the casing for said blower having an air inlet and including top, bottom and side walls forming an open-ended air exhaust passage leading toward the back wall of the casing with the housing top wall immediately beneath the casing top wall, means defining a common opening in said two top walls adjacent the rear of the hood, means defining an opening in the casing back wall coextensive with the open-ended passage of said blower housing, a removable cover for selectively closing one or the other of said openings, and a baffle positionable in said common opening and spanning said passage to direct blown air through said common opening with the cover in place over the back wall opening.

2. A ventilating hood as defined in claim 1 in which a hollow boot is placed adjacent to one of said openings for air communicating connection of the adjacent opening with building duct work, said boot shaped at an outlet end to connect with said duct work and rectangularly shaped at the inlet end with an area substantially greater than that of the adjacent opening whereby the boot may have many different positions in the selective covering relation with said openings while still permitting exact alignment of the boot with the duct work.

3. A ventilating hood having a blower for drawing air into the hood and discharging the air therefrom through building duct work comprising, a casing having a top wall and a back wall, a blower housing fastened to the casing having an air inlet port and top, bottom and side walls defining an open ended air exhaust passage terminating at said housing back wall, and opening in said back wall in alignment with said exhaust passage, and opening in said casing top wall in alignment with an opening in the housing top wall, and a removable baffle located across said exhaust passage prior to termination thereof to direct air through said top wall opening, said baffle having a curved body spanning said air passage with a flange at an angle to the body resting upon the casing top wall, means releasably fastening the baffle body to the blower housing, a cover over the casing back wall opening, and securing means releasably attaching the cover and lower housing to the casing back wall, said cover having a tongue at one end to fit within said top wall opening when the baffle is removed and the last mentioned opening is to be closed.

4. A ventilating hood having a blower for drawing air into the hood and discharging the air therefrom through either roof or wall duct work comprising a casing having a top wall and a back wall with an air exhaust opening in each wall, a blower housing fastened to the casing having an air inlet port and walls defining an open-ended air exhaust passage leading toward a first of said casing wall openings, a removable baffle positionable across said exhaust passage to direct air through the second of said casing wall openings and cover means adapted to be secured over said openings, said cover means being secured over the first of said openings when the baffle is positioned across the exhaust passage and being secured over the second of said openings when the baffle is removed.

5. A ventilating hood as defined in claim 4 in which said baffle has a curved body spanning said air passage with a flange at an angle to the body resting upon the top casing wall, and means releasably holding the baffle body in said position.

6. A ventilating hood adapted for association with wall or overhead exhaust duct work, said hood having a casing with a back wall and a top wall, a first air exhaust opening in said back wall and a second air exhaust opening in said top wall registering respectively with said wall and overhead exhaust duct work, a blower housing including a blower supported within said casing for directing air into the hood, said housing having an air inlet and walls defining an open ended air exhaust passage leading toward said exhaust openings, a baffle adapted to be removably secured across said exhaust passage in position directing air through said second exhaust opening, a cover adapted to be secured over either of said exhaust openings, said cover being secured over said first exhaust opening when the baffle is secured across the exhaust passage and being secured over said second exhaust opening when the baffle is removed, whereby the removing and securing of said baffle across said exhaust passage results in directing air drawn into the hood through said inlet and through said exhaust passage by said blower to an uncovered one of said exhaust openings preselected for association with overhead or wall exhaust duct work, said cover being secured over the top casing wall opening and said baffle being removed for association of said hood with wall exhaust duct work, and said cover being secured over the back casing wall opening and said baffle being secured across said exhaust passage for association of said hood with overhead exhaust duct work.

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