

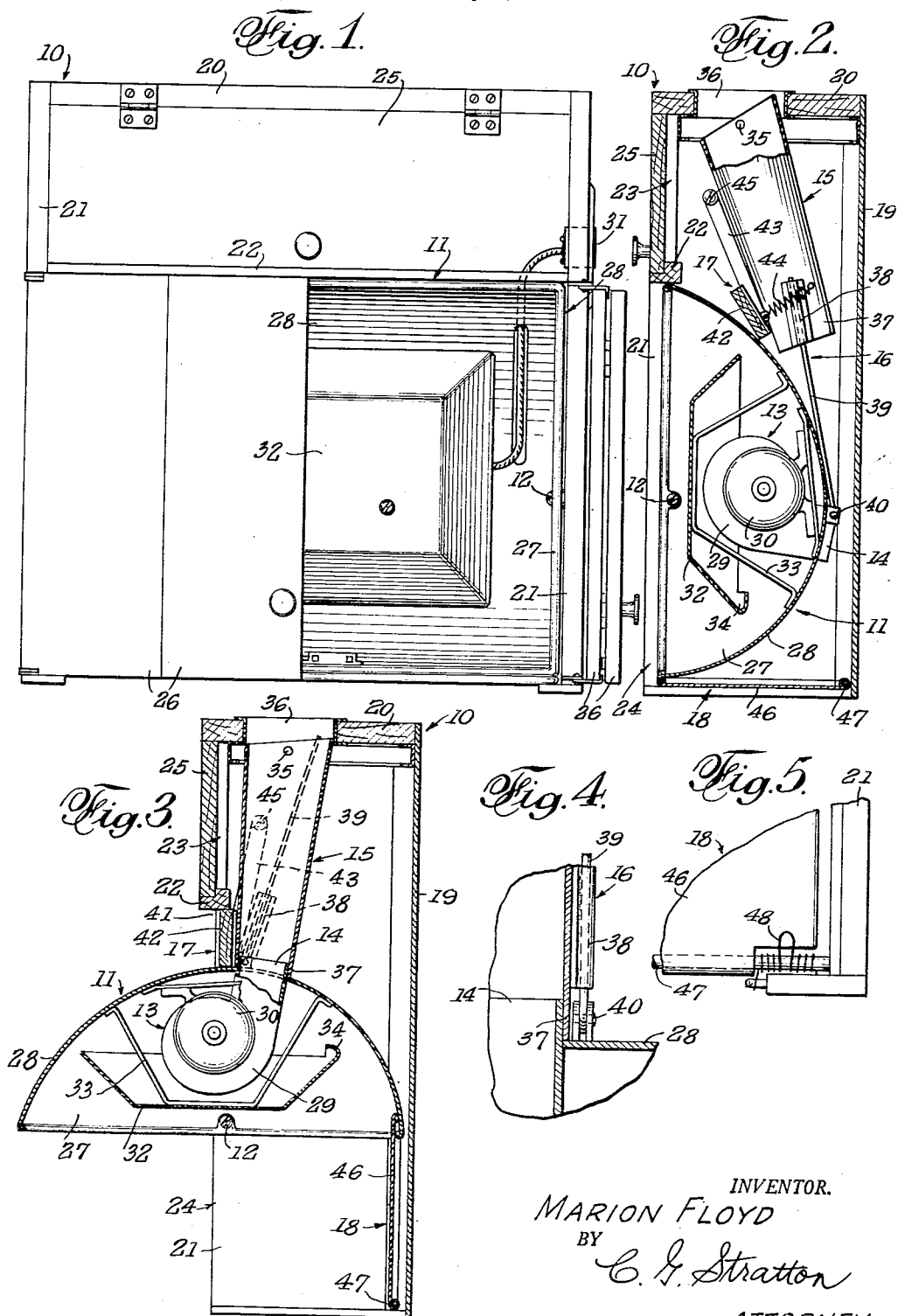
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RETRACTABLE STOVE HOOD

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1

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RETRACTABLE STOVE HOOD

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This invention relates to a ventilator that is more particularly adapted to be positioned above a stove or a range, as in a kitchen, to clear the atmosphere in the vicinity of said stove or range and for the general purposes served by ventilators.

A general object of the invention is to provide a ventilator that is retractable between an in-use position to carry out its ventilating function, and an inoperative position completely housed to have a neat and attractive appearance in keeping with surrounding furnishings.

Another object of the invention is to provide an overhead ventilator that embodies a novel construction housed in a cabinet that serves to conceal the operating elements of the construction when out of use.

The invention also has for its objects to provide such means that are positive in operation, convenient in use, easily installed in a working position and easily disconnected therefrom, economical of manufacture, relatively simple, and of general superiority and serviceability.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description. However, the drawing merely shows and the following description merely describes, one embodiment of the present invention, which is given by way of illustration or example only.

In the drawing, like reference characters designate similar parts in the several views.

Fig. 1 is a front elevational view of a retractable ventilator according to the present invention, the cabinet housing the mechanism being shown partly open and said mechanism being in an inoperative condition.

Fig. 2 is a vertical sectional view of said ventilator as in Fig. 1.

Fig. 3 is a sectional view, in the plane of Fig. 2, showing the cabinet open and the ventilating mechanism non-retracted to operative or in-use position.

Fig. 4 is a fragmentary sectional and enlarged view showing a detail of the construction.

Fig. 5 is a fragmentary and enlarged front elevational view of the lower right hand corner of the ventilator showing another detail of construction.

The retractable ventilator that is illustrated comprises, generally, a housing cabinet 10, and retractable ventilating mechanism within said cabinet and comprising a hood 11, pivots 12 mounting said hood for movement between an inoperative position entirely within the cabinet and an operative position partly extending forwardly of the cabinet, blower cabinet 10, means 13 carried by the hood and terminating in an outlet 14, a duct 15 pivotally carried by the means 16 interconnecting the hood and duct to move the latter from an inoperative position disconnected from the outlet 14 to an operative position connected to said outlet, a filler piece 17 to fill in between the hood when in operative position and the cabinet, and a bottom closure 18 that automatically closes the bottom of said cabinet when the hood is moved to inoperative position.

2

The cabinet 10 is preferably of rectangular shape and would ordinarily be so shaped as to fit the corner between the wall, adjacent which a stove or range is positioned, and the ceiling thereabove. Said cabinet may be provided with a back 19 adapted to be placed against such wall and a top 20 adapted to be placed against the ceiling. As shown, said cabinet includes sides 21 and a fixed transverse strip 22 at the front defining an upper opening 23 and a lower opening 24. These fixed components of the cabinet may be made of wood or metal, as desired.

A door 25, hinged at the top, may close opening 23 and, when open, affords access, through said opening, to the upper inner portion of the cabinet. The lower opening may be closed by doors 26 that are hinged at the sides 21 and are adapted, when open, to fold against said sides. The doors 26 that are shown each comprises sections that are foldable so that, when they are folded, each will lie doubly parallel to one of the relatively shallow sides 21, as suggested at the right of Fig. 1.

The hood 11 is semi-cylindrical and, as indicated in Fig. 1, has diametrical and length dimensions that approximate the size of lower opening 24. Consequently, said hood, when turned inwardly, to an inoperative position, occupies said opening. The hood is formed to have end or side walls 27 and a curved hood wall 28 of a convexity to substantially fill the lower portion of the cabinet. In its inoperative position, as in Fig. 2, the interior of the hood faces outward.

The pivots 12 that connect the hood sides 27 and the cabinet sides 21 adjacent the front of the cabinet and are located substantially midway between the upper and lower edges of the hood when turned inwardly, as in Fig. 2. Said hood may be swung on its axis provided by the pivots 12 to move the same to the position of Fig. 3 in which the hood interior faces downwardly and as one edge extending forward of the front of the cabinet. The hood 11 will remain in this position because of the weight of the means 13 which, as shown in Fig. 2, is mounted within the hood and located slightly off center in respect to the imaginary plane running through the pivots 12 at a right angle to the rectangular opening of said hood.

The blower means 13 is shown as a blower or fan 29 that is disposed within said interior of the hood 11 and has its inlet laterally directed in said hood interior and its outlet 14 extending through the curved hood wall 28. An electric motor 30 is mounted within the hood to drive said fan 29 and the same may be connected by suitable conductors to an electric plug, suggested by its escutcheon plate 31, mounted on one side 21 of the cabinet. Current may be brought to said plug in the usual manner. A deflector shield 32, by means of strap brackets 33, may be mounted in the hood interior to conceal said fan and motor, said shield being spaced from the hood to allow ready flow of air, as drawn by fan 29, through outlet 14. Since the air may contain a substantial amount of moisture which may condense on the interior surfaces of the hood and collect within the hollow of said shield, the latter is provided with a lip 34 along what becomes the lower edge of the shield, when in the inoperative position, to collect such condensate. The same either eventually evaporates or may be cleaned out from time to time. Thus, condensate dripping is, in a large measure, obviated. Also, oil seepage from motor 30 is thus prevented from dripping downward.

The duct 15 is shown as mounted on a pivot 35 adjacent an opening 36 provided in top 20 of the cabinet. Said opening 36, of course, is provided to communicate with a vent in the ceiling against which the present device is placed. The duct that is shown has its lower end 37 of a size to fit over or into fan outlet 14 so that when aligned with said outlet, the fan discharge is con-

ducted through opening 36. In the retracted form of the ventilator mechanism, said duct is in a rearwardly tilted position with its end 37 considerably spaced from fan outlet 14.

The means 16 effects a lost-motion connection between the hood 11 and the duct 15 and is here shown as a pair of guide brackets 38 affixed to the sides of said duct, a pair of rods 39 slidably engaged in said guide brackets, and pivotal connections 40 mounting said rods on the outer or convex side of the hood.

Since both the hood and the duct are pivoted, the above sliding connection 38, 39 causes pivotal movement of the duct when the hood is swung on its pivots 12. Thus, fan outlet 14 and duct end 37, from their separated condition as in Fig. 2, effect connection when the hood is moved to the operative position of Fig. 3.

Since the depth of hood 11 is substantially less than the distance between the hood pivots 12 and the upper edge of the hood, a gap 41 is created between cabinet strip 22 and the hood, when the latter is swung to operative position. The means 17 is provided to close said gap and may be omitted if the mentioned hood depth, but distance are substantially alike.

The means 17 that is shown comprises a panel 42 of a length to fit between cabinet sides 21 and a width to fill said gap 41, a pair of pivotal arms 43 connected to the ends of panel 42 and swingable with said panel from a retracted position within the cabinet to a projected position wherein said panel closes gap 41, and a resilient connection 44 between said means 17 and duct 15 to transmit the pivotal movement of said duct to said means 17 on its own pivot 45.

The bottom closure 18 comprises a panel 46 that is carried on a hinge 47 at the lower rear of the cabinet. As shown best in Fig. 5, a spring 48 is provided to bias said panel 46 to, at all times, seek an erect or vertical position, as in Fig. 3, thereby opening the bottom of the cabinet and clearing the same below hood 11 when said hood is in its operative position. By overlapping the free end of said panel with the hood edge that is lowermost when folded, said panel is moved by the hood to the closed position of Fig. 2 when the hood is swung to inoperative position.

Door 25 gives access to the upper interior of the cabinet for cleaning of the mechanism therein and for other purposes.

While the foregoing has illustrated and described what is now contemplated to be the best mode of carrying out the invention, the construction is, of course, subject to modification without departing from the spirit and scope of the invention. It is, therefore, not desired to restrict the invention to the particular form of construction illustrated and described, but to cover all

modifications that may fall within the scope of the appended claims.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. A ventilator comprising a housing cabinet having a vent therein, a hood rotatably mounted within the cabinet and movable between an inoperative position wholly within the cabinet and an operative position extending partly forward of the cabinet, the interior of the hood facing downward in the latter position air-exhausting means carried by said hood and having an outlet extending through the hood and into the interior of the cabinet, a pivoted duct mounted within the cabinet above the hood and movable between an inoperative position and an operative position, said duct, when in its operative position, connecting the outlet of said hood and said vent, and a lost-motion means connecting said hood and duct.

2. A ventilator according to claim 1: a panel on a hinge carried by the lower portion of the cabinet, and spring means biasing said panel to an upright position in engagement with the hood when the latter is in operative position to, thereby, give said ventilator a finished appearance.

3. In a cabinet-enclosed ventilating structure, a ventilating hood rotatable between an inoperative position in which the interior of the hood faces forwardly and an operative position in which said hood interior faces downwardly, means carried by the hood and having an outlet to exhaust the interior thereof, a duct mounted on a pivot above the hood and having an end spaced from said outlet when the hood is in inoperative position and connected to said outlet when the hood is in operative position, and a lost-motion means connecting the hood and duct to move the latter to said spaced and connected positions upon movement of the hood to its inoperative and operative positions, respectively.

4. In a structure according to claim 3: the lost-motion means comprising members pivoted to said hood, and guide means carried by the duct and slidably engaged with said pivoted members.

5. A ventilator according to claim 1: said air-exhausting means comprising a motor-driven fan, said fan being carried by and within said hood, and a condensate collecting shield carried by and within said hood in spaced relation to said fan.

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