

J. E. STALKER

VENTED KITCHEN HOOD

FIG. 1

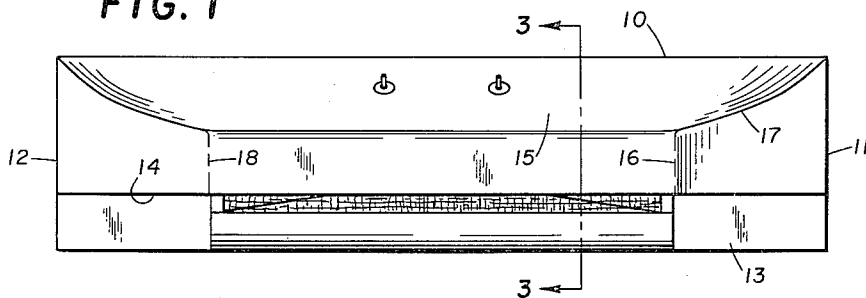


FIG. 2

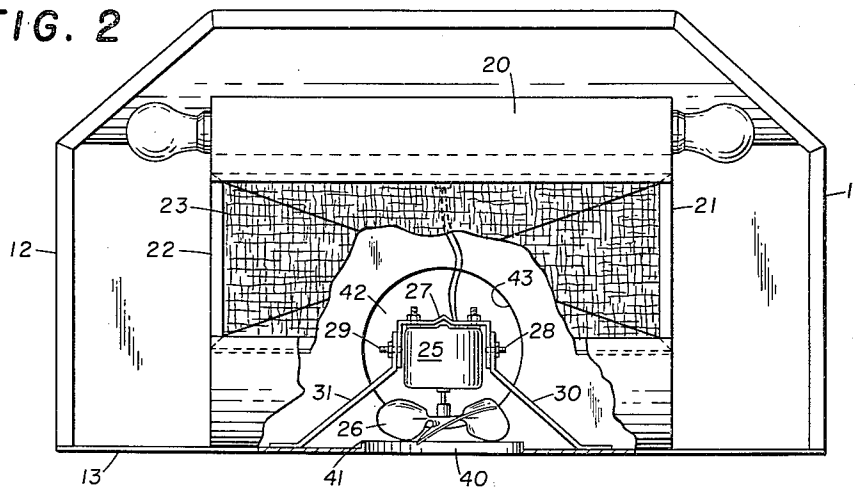


FIG. 4

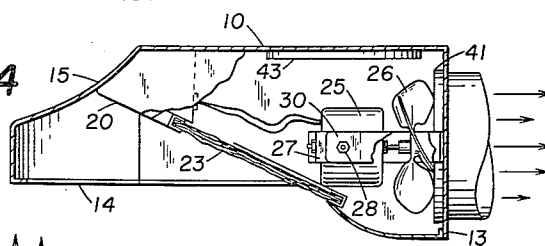
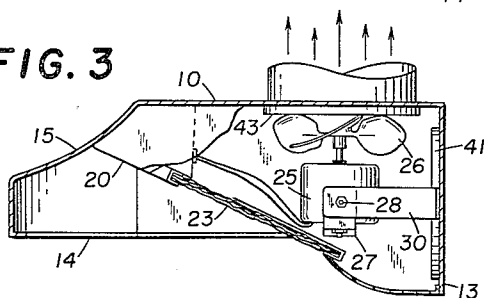


FIG. 3



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VENTED KITCHEN HOOD

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This invention relates to ventilating equipment and, more particularly, to an improved ventilating hood for cooking areas to remove smoke and cooking odors.

Ventilating hoods have been made available for kitchen use in order to treat or to remove the fumes from a cooking area.

It is an object of the invention to provide an improved kitchen hood which is provided with an inner enclosure for an angular face sloping downward from the top wall to the back wall to a point below the edge of the side walls to house a fan directed toward flow channels for expelling the air. It is a further object of the invention to provide a hood whose top and back walls both have exhaust openings therein, the axes of which intersect at a point inside the hood and inside the enclosure. More particularly, in accordance with the present invention a relatively shallow hood structure is provided with an interior enclosure extending downward from the top of the hood below the plane of the front and sides thereof. Said enclosure has a filtered inlet and exhaust port means. In a preferred embodiment, such exhaust port means comprises a pair of openings, one in the top and one in the back of said hood whose axes intersect at a point which is equidistant from the top wall and the back wall. A fan unit in said enclosure is pivotally mounted for rotation about an axis perpendicular to the axes of the exhaust openings. By this means the fan unit may be operatively associated with either of the openings to exhaust air either through the top wall or the back wall and thereby facilitate the installation of the unit either under cabinet work located over the cooking area or on a wall independent of such cabinet work.

Thus there is provided a kitchen ventilator having a shallow hood with top and back walls which is adapted to overlie a cooking area and which includes a fan whose driving motor is supported by bracket means for rotation about an axis parallel to and substantially equidistant from said top and back walls and secured on said bracket means facing an exhaust port in a selected one of the walls.

For further objects and advantages of the invention, reference may now be had to the following description taken in conjunction with the accompanying drawings in which:

FIG. 1 is a front view of the invention;

FIG. 2 is a bottom view of the invention;

FIG. 3 is a sectional view taken along the lines 3-3 of FIG. 1; and

FIG. 4 is a modification of FIG. 3.

Referring now to the drawings, there is illustrated a kitchen ventilating hood having a rectangular top 10, FIG. 1, with downwardly depending sides 11 and 12. A back wall 13 also is provided to extend downwardly from the plane of the top 10 to a point somewhat below the lower edge 14 of the front and the sides 11 and 12. The top 10 of the hood is broken downwardly toward the front to form a gently sloping canopy 15. The sides slope inwardly from a point coinciding with the juncture between top 10 and front 15 with the corners 16, 17, and 18 smoothly rounded to enhance the appearance of the unit.

Inside the hood there is provided an enclosure formed by a downwardly sloping face 20, the plane of which

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intersects the back 13 at the bottom thereof slightly below the bottom 14 of the sides. The enclosure is provided with ends 21 and 22. The top and back of the enclosure are formed by the top 10 and back 13 respectively of the hood. A substantial portion of the face 20 is open and is adapted to receive an air filter 23. Preferably, the face 20 and ends 21 and 22 are secured to the top 10 and back 13 of the hood in a substantially airtight relationship so that the only path for air to follow into the enclosure is through the filter 23.

Inside the enclosure there is provided a fan unit including a motor 25 and a fan blade 26 of the propeller type. As illustrated, the fan motor 25 is provided with a bracket 27 which has outwardly extending mounting studs 28 and 29 which lie along a line passing perpendicularly through the axis of the shaft of the motor 25. The motor 25 is supported inside the enclosure on a pair of brackets 30 and 31. The brackets are secured to the motor by suitable nuts threadedly secured onto the studs 28 and 29. The brackets 30 and 31 extend toward the back 13 of the hood at an angle in order to provide clearance for the blade 26. The brackets 30 and 31 are secured to the back 13 preferably by spot welding, but can, of course, be secured by any suitable means. Thus mounted, the motor 25 may be positioned by rotation on studs 28 and 29 to face either the back wall 13 or the top wall 10. In the embodiment illustrated, both the back wall 13 and the top wall 10 are provided with exhaust openings. More particularly, an opening 40 is provided in the back wall 13 with an inwardly depending flange 41. Similarly, the top wall 10 is provided with an exhaust opening 42 having a short inwardly depending flange 43. Openings 40 and 42 are circular and are slightly larger than the diameter of the blade 26. They are positioned such that their axes intersect at a point inside the enclosure of the hood, preferably at a point equidistant from the top and the back walls and, further, at a point through which a line from stud 28 to stud 29 passes.

As shown in FIG. 3, the fan blade 26 may be adapted to register with either opening 40 or 42 by mere rotation about axis of studs 28 and 29. By this means, a relatively shallow hood may be mounted under a cabinet over a cooking area with an exhaust duct extending upwardly through such cabinet, if desired, into an attic area from opening 42. If for any reason it is not desirable to extend the exhaust channel upward and the unit is mounted on an outside wall or is mounted on a wall in which an exhaust channel is provided, the back opening 40 may be employed as shown in FIG. 4. Through the combination of elements provided by the present invention, the unit may be adapted to either such installation by merely loosening the nuts on studs 28 and 29, rotating the motor 25 to the desired position and re-securing the mounting nuts.

In a preferred embodiment of the invention, both the openings 40 and 42 are preformed with inwardly depending flanges 41 and 43 so that all operations as to the hood itself are completed in the course of its fabrication. It will be appreciated, however, that the hood may be completed without actually forming the exhaust ports 40 and 42. Upon installation, one or the other of the openings may be formed in the unit to accommodate the desired type of installation and the motor rotated consistent therewith.

It will further be noted that in the preferred embodiment of the invention, the back 13 extends to a point below the sides 11 and 12. The face 20 of the enclosure is curved slightly as it approaches the back 13 and accommodates by this means a fan of substantial capacity while maintaining the apparent height of the hood to a

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minimum. At the same time, unobstructed work space is maintained at the front of the hood. Since increased depth to accommodate the fan is necessary only at the rear of the hood, maximum utility is maintained along with a most desirable appearance.

Having described the invention in connection with certain specific modifications, it is to be understood that further modifications may now suggest themselves to those skilled in the art and it is intended to cover such modifications as may fall within the scope of the appended claims.

What is claimed is:

1. A kitchen ventilator which comprises:

(a) a hood having top and back walls each of which is provided with an exhaust path therein and adapted to be mounted to overlie a cooking area,

(b) a fan having radial blades,

(c) a motor mounted in a motor housing and supporting said fan on the shaft thereof for rotating said fan with said shaft, and

(d) bracket means extending outwardly from one of said top and back walls of said hood and supporting said motor housing for rotation of said housing about an axis parallel to and substantially equidistant from said top and back walls with said axis being perpendicular to said shaft whereby said housing for said fan may be rotated about said axis to face said top and back walls to facilitate removal of air through the selected one of the exhaust paths.

2. A kitchen ventilator which comprises:

(a) a hood having top and back walls each of which is provided with an exhaust path therein and adapted to be mounted to overlie a cooking area,

(b) a fan having radial blades,

(c) a motor mounted in a motor housing and supporting said fan on the shaft thereof for rotating said fan with said shaft.

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(d) bracket means extending outwardly from one of said top and back walls of said hood and coupled to said motor housing for rotation of said housing about an axis parallel to and substantially equidistant from said top and back walls with said axis being perpendicular to said shaft whereby said housing for said fan may be rotated about said axis to face either of said top and back walls to facilitate removal of air through the selected one of the exhaust paths, and

(e) a structure forming a part of said hood for enclosing said fan within said hood, said structure including an intake path substantially exclusively by way of a filter element mounted to slope downwardly from the top wall toward the back wall and beneath said motor housing.

3. The combination set forth in claim 2 in which said bracket means includes a pair of arms each secured at one end to one of said walls on opposite sides of the exhaust path therein and angularly extend to a connection to the motor housing.

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