

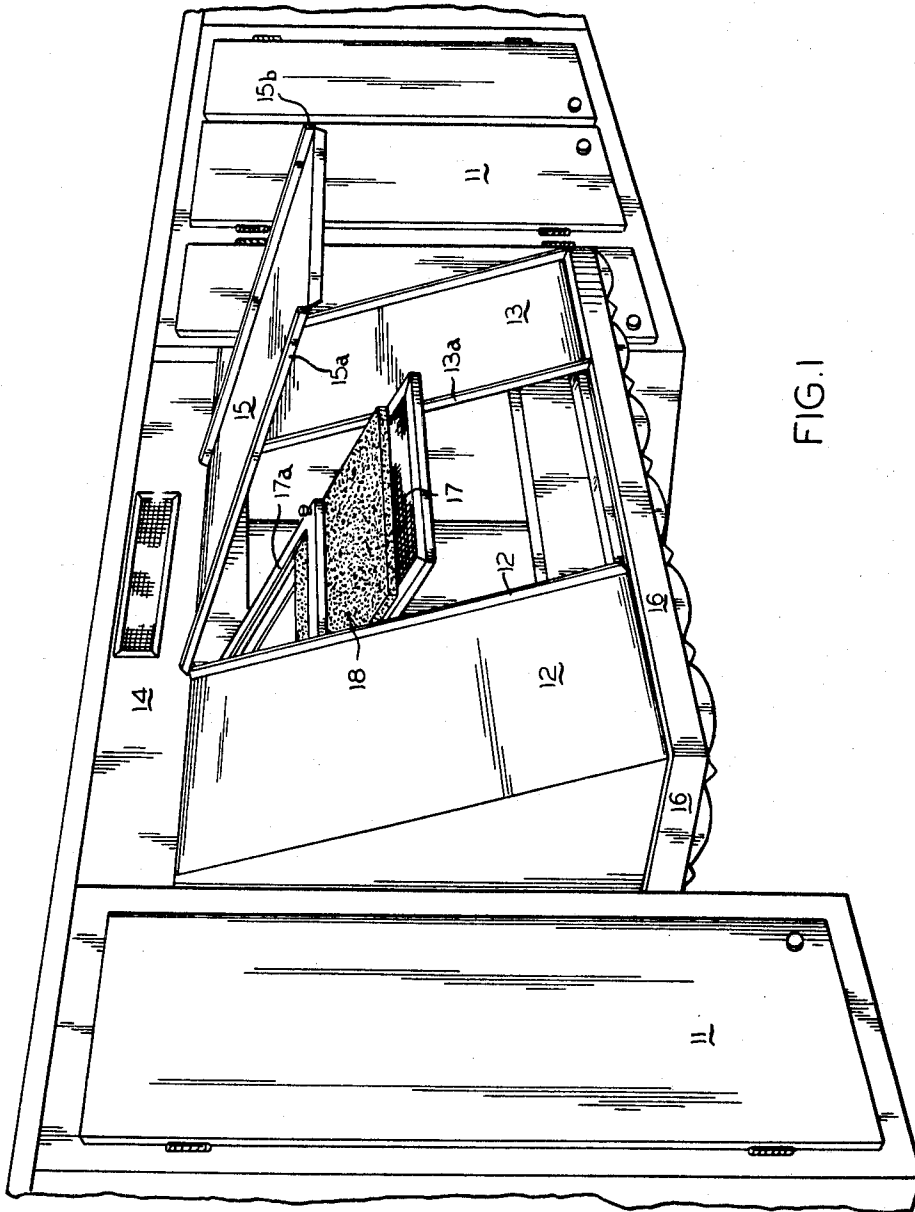
March 17, 1970

D. M. AUBREY
VENTILATING HOOD

3,500,740

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2 Sheets-Sheet 1



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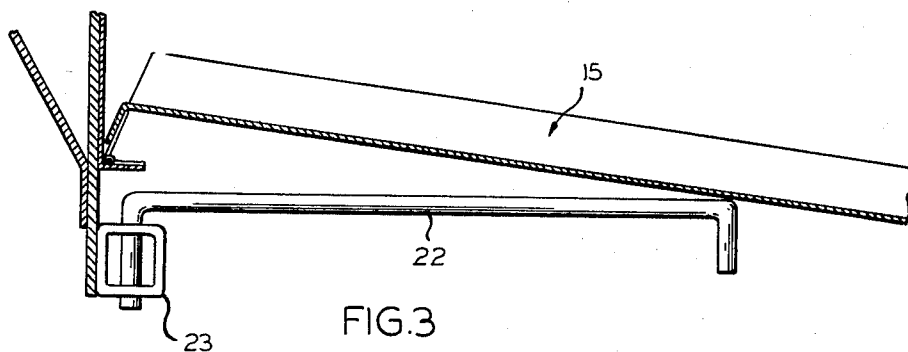


FIG. 3

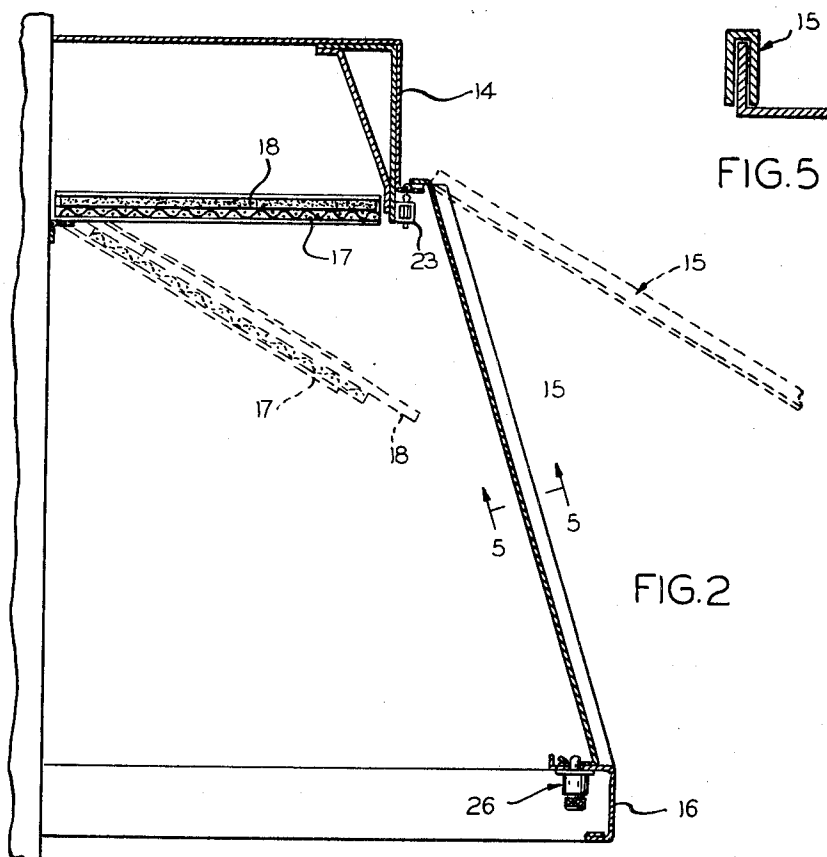


FIG. 2

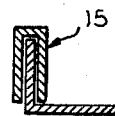


FIG. 5

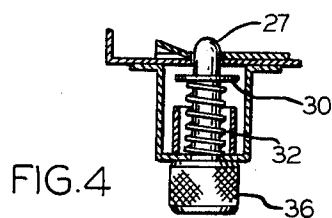


FIG. 4

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VENTILATING HOOD

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7 Claims

ABSTRACT OF THE DISCLOSURE

The ventilating hood includes means such as an access door for replacing the filter means thereof.

This invention relates to a new and improved ventilating hood and more particularly to a new and improved ventilating hood intended for use over a heating range or the like as is customarily used in a kitchen.

In addition to the problem of providing a ventilating hood which is decorative and pleasing to the eye, inventors of ventilating hoods have always been confronted with the problem of providing a means for obviating the necessity of removing and replacing the filter means therefor by gaining access to the filter from the bottom or normally open portion of the hood. In recent years due to design, the ventilating hoods have been taller and therefore to place the filters which are customarily located at the top of the ventilating hood is very difficult.

Lowering the filters so that access to them can be gained easily from the bottom has been one attempted solution to accessibility. However, the full length of the ventilating hood is not utilized and therefore efficiency is curtailed. Other solutions to the problem of accessibility have been attempted but in attempting to solve the problem of accessibility to the filter means, curtailing the efficiency of the ventilating hood has occurred or the design appearance has been mutilated.

It has been found that the aforesaid problems with ventilating hoods are best solved by means of my invention wherein a ventilating hood having an access door thereon is provided in combination with a filter carrier which can be movable from its operative position to a position where ready access thereto can be gained by opening of the access door and moving the filter carrier with the filter to be replaced to a position where replacement can be accomplished.

It is therefore a primary object of this invention to provide a new and improved ventilating hood.

It is further an object of this invention to provide a new and improved ventilating hood where the filter thereof can be replaced easily.

It is still further an object of this invention to provide a new and improved ventilating hood where a filter thereof can be replaced without having to go through the bottom opening of the hood to gain access thereto.

It is still even further an object of this invention to provide a new and improved ventilating hood wherein access to the ventilating hood is provided for purposes of replacing the filter therein without altering the esthetic design effect of the ventilating hood.

Other and further objects of this invention will become more readily apparent when reading the description in connection with the accompanying drawings wherein:

FIG. 1 is an isometric view of the ventilating hood of my invention shown installed among kitchen cabinets with the access door thereof opened;

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FIG. 2 is a sectional view of my ventilating hood taken on a plane passing through the middle thereof;

FIG. 3 is an enlarged fragmentary sectional view of my invention illustrating the access door thereof in its open position with a supporting rod associated therewith;

FIG. 4 is an enlarged sectional view of a releasable lock mechanism used in connection with the access door of my invention;

FIG. 5 is a sectional view taken along a plane passing through the line 5-5 in FIG. 2 and looking in the direction of the arrows to illustrate how the edges of the access door of my invention are esthetically correlated with the rest of the ventilating hood.

Referring to the drawings wherein like characters of reference indicate corresponding parts throughout, the ventilating hood incorporating my invention, as illustrated in FIG. 1, can be installed in an array of built-in cabinets 11 with a soffit 14 preferably disposed thereover.

The ventilating hood 10 has a plurality of walls that define the interior thereof. There is an inclined wall which includes the spaced apart front plates 12, 13 and the side walls 19 which define the sides of the ventilating hood 10. The spaced apart plates 12, 13 define the sides of an access opening 15 which is formed therebetween. An access door 15 is preferably rotatably mounted in said access opening between the front plates 12, 13 along an axis which is substantially coincident with the top of the access opening as appears in FIG. 1. The lower part of the hood has the depending portion 16 extending therefrom and can have a trim 16a for esthetic purposes.

As will be seen from FIGURES 2 and 5, the access door 15 has the flanges 15a, 15b extending from the edges thereof for purposes of sealing the access opening when the access door 15 is closed. The flanges 15a, 15b have cavities formed therein that receive the projecting portions 12a, 13a which extend from the front plates 12, 13 when the access door is in its closed position so that not only is there a seal created between the access opening and access door 15, but also the projecting portions 12a, 13a and flanges 15a, 15b give rib effect on the ventilating hood which is pleasing to the eye from a design standpoint. The bottom portion of the access door 15 is bent and makes contact with the depending portion 16 when the door is closed.

As will be seen from FIG. 2, a locking mechanism 26 is attached to the depending portion 16 and is associated with the access door 15 to releasably hold the same in position as illustrated in FIG. 2. The locking mechanism 26 is preferably shown as having a spring biased finger 27 which protrudes through an aperture 28 in the bottom 15c of the access door 15 as illustrated in FIG. 4. A collar 30 is attached to the finger 27 and has a spring means 32 interposed between it and a knurled knob 36 attached to the end of the finger 27. Thus when the knurled knob 36 is depressed the finger 27 is withdrawn from the aperture 28 and the bottom 15c of the access door 15 is released so that it can be moved to its open position as illustrated in FIGS. 1, 2 and 3.

A filter carrier 17 is preferably hingedly associated with the back of the ventilating hood 10 and extends along the top thereof between the walls of the soffit 14 in the interior of the ventilating hood, as illustrated in FIG. 2. The filter carrier 17 is adapted for removably receiving the filter 18 therein on track 17a. The filter carrier 17 is releasably attached to the top of the ventilating hood as is illustrated in FIG. 4 so that when the access door 15

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is open the filter carrier can be released and pivoted to a position where the filters can be replaced.

While any type of supporting means can be used for holding the access door 15 in its open position, I have provided a supporting bracket 23 which is preferably associated with the top portion of the ventilating hood 10 beneath the access door so that a support bar 22 which is pivotally associated therewith in a horizontal plane can be moved from a position beneath the hood to a position illustrated in FIG. 3 where it is supporting the access door 15.

Having thus described my invention and the operation thereof it is seen that the objects of this invention are fulfilled in a simple and expedient fashion. With my device not only can the filter thereof be replaced without disturbing the efficiency of the ventilating hood but also this can be accomplished without mutilating the esthetic effect of the device.

Having thus described the invention, what I claim is:

1. In a ventilating hood that has walls defining the interior of said hood with an opening at the bottom of said hood and having filter means located at the top thereof in said interior,

the improvement comprising access means formed in one of said walls,

said access means having an open position where access to said filter means is afforded through one of said walls without going through the opening at the bottom and a closed position where access to said filter cannot be obtained by going through any of said walls,

a pair of spaced apart plate sections in one of said walls defining said access opening,

said access means comprising an access door shaped to cover said access opening, and

sealing means for sealing said access door in the closed position whereby fumes, or the like, that are drawn through the bottom opening of said hood cannot escape when said door is in said closed position,

said sealing means comprising flange means having a cavity therein formed in the sides of said access door,

protruding portions on said plate sections, said cavity of said flange means being disposed to receive said protruding portions when said access door is in the closed position.

2. The ventilating hood of claim 1 wherein said access door is pivotally mounted around a horizontal axis substantially coincident with the top of said walls, and wherein there is provided support means for holding said access door in said open position,

said support means comprising a bracket on the upper interior portion of said hood,

a support bar pivotally mounted on said bracket to move in a horizontal plane,

said support bar having a first position where the support bar is disposed in the interior of said hood and a second position where said support bar is moved outward of the interior of said hood to support said access door when the door is in the open position.

3. In a ventilating hood, as defined in claim 2, wherein said hood has a depending portion extending from the bottom thereof,

a portion of said depending portion defining the bottom of said access opening, said access door having a bent portion on the bottom thereof that rests against said depending portion when in its closed position, and

releasable locking means mounted on said depending portion to hold said access door in its closed position, access to said releasable lock means being available through said opening in the bottom of said hood.

4. In a ventilating hood that has walls defining the interior of said hood with an opening at the bottom of

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said hood and having filter means located at the top thereof in said interior,

the improvement comprising access means formed in one of said walls,

said access means having an open position where access to said filter means is afforded through one of said walls without going through the opening at the bottom, and

a closed position where access to said filter cannot be obtained by going through any of said walls,

a pair of spaced apart plate sections in one of said walls defining said access opening,

said access means comprising an access door shaped to cover said access opening,

means for pivotally mounting said access door around a horizontal axis substantially coincident with the top of said walls whereby the force of gravity tends to maintain said access door in said closed position, and

support means for holding said access door in said open position,

said support means comprising a bracket on the upper interior portion of said hood,

a support bar pivotally mounted on said bracket to move in a horizontal plane,

said support bar having a first position where the support bar is disposed in the interior of said hood and a second position where said support bar is moved outward of the interior of said hood to support said door when the door is in the open position.

5. In a ventilating hood, as defined in claim 4, wherein said hood has a depending portion extending from the bottom thereof,

a portion of said depending portion defining the bottom of said access opening,

said access door having a bent portion on the bottom thereof that rests against said depending portion when in its closed position, and

releasable locking means mounted on said depending portion to hold said access door in its closed position, access to said releasable lock means being available through said opening in the bottom of said hood

6. In a ventilating hood that has walls defining the interior of said hood with an opening at the bottom of said hood and having filter means located at the top thereof in said interior,

the improvement comprising access means formed in one of said walls,

said access means having an open position where access to said filter means is afforded through one of said walls without going through the opening in the bottom of said hood and a closed position where access to said filter means cannot be had by going through any of said walls,

said one of said walls being inclined with said filter means disposed rearwardly thereof in said interior, said inclined wall including a pair of spaced apart front plates that define an access opening therebetween, said access means comprising an access door shaped to fit over said access opening,

said access door being pivotally mounted around a horizontal axis substantially coincident with the top of said inclined wall,

said access door including flange means having a cavity therein formed in the sides of said access door,

protruding portions in said front plates,

said cavity of said flange means being disposed to receive said protruding portions when said access door is in the closed position,

support means for holding said access door in the open position,

said support means including a bracket mounted on the upper interior portion of said hood, and

a support bar pivotally mounted on said bracket to move in a horizontal plane,

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said support bar having a first position where it is disposed in the interior of said hood and a second position where it is moved outward of the interior of said hood to support said access door when it is in its open position.

7. In a ventilating hood, as defined in claim 6, wherein said hood has a depending portion extending from the bottom thereof,

a portion of said depending portion defining the bottom of said access opening,

said access door having a bent portion on the bottom thereof that rests against said depending portion when in its closed position and releasable locking means mounted on said depending portion to hold said access door in its closed position,

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access to said releasable lock means being available through said opening in the bottom of said hood.

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