

March 26, 1963

I. NEVIN ETAL

3,082,680

SMOKE HOOD

Filed Feb. 6, 1961

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FIG. 1

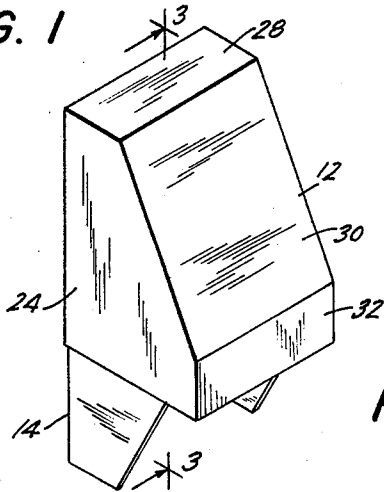


FIG. 2

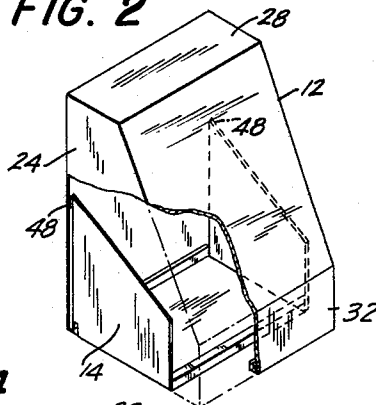


FIG. 4

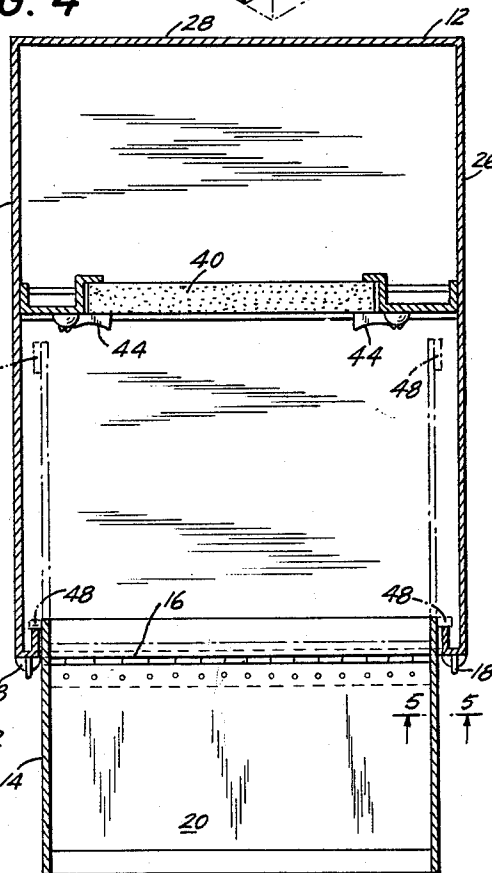


FIG. 3

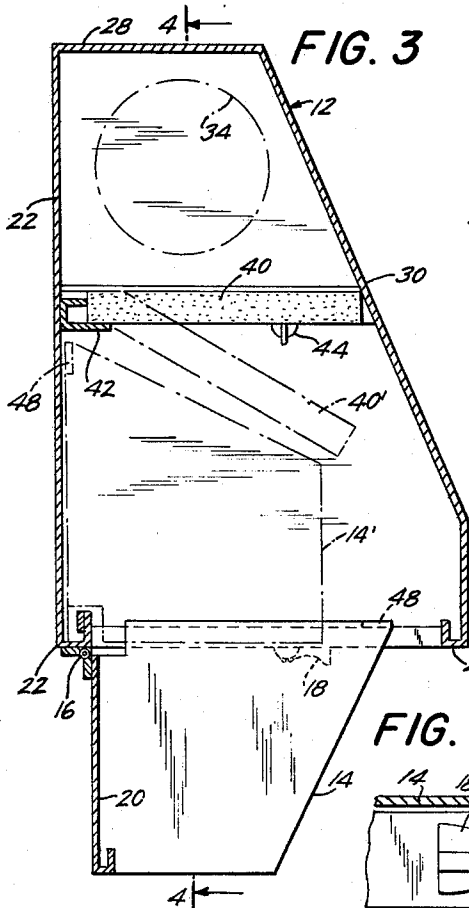
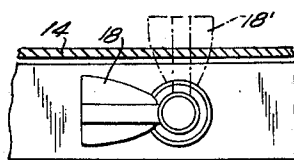


FIG. 5



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FIG. 6

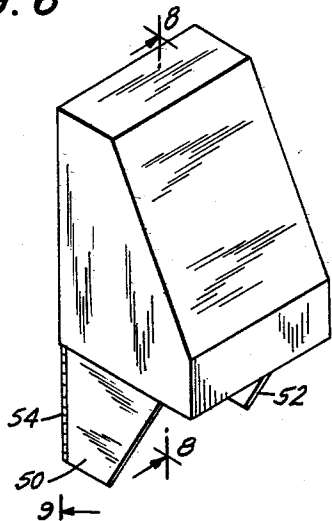


FIG. 7

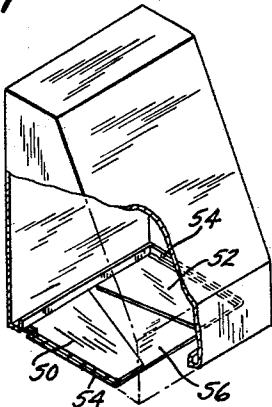


FIG. 9

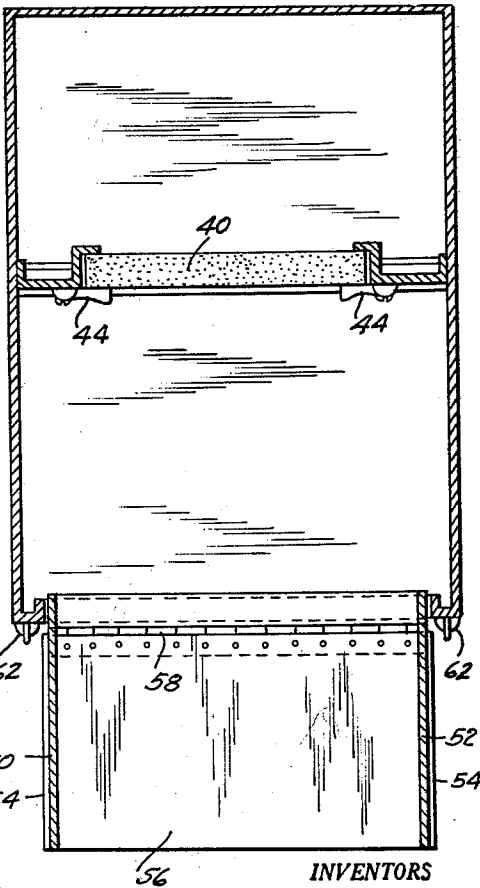


FIG. 8

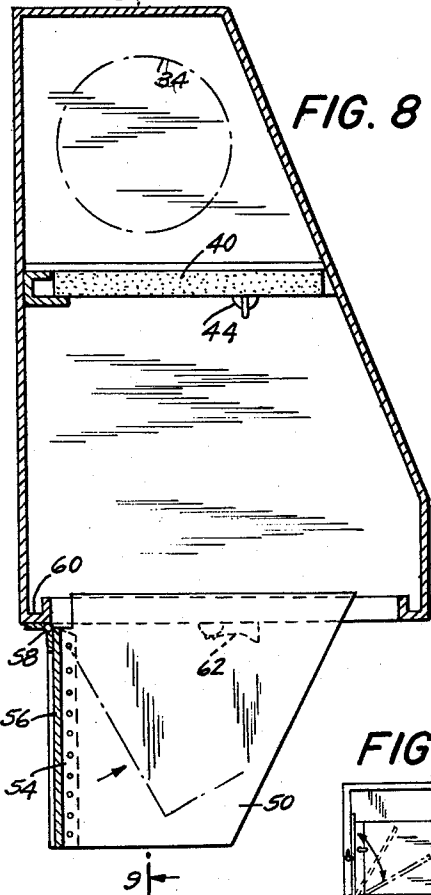
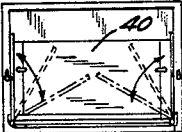


FIG. 10



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FIG. 11

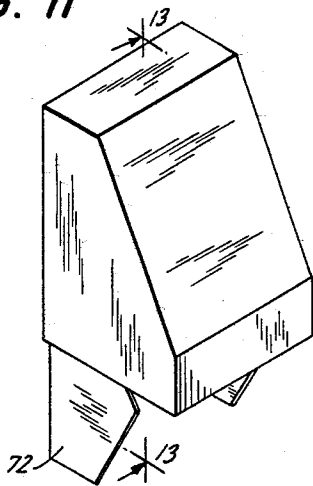


FIG. 12

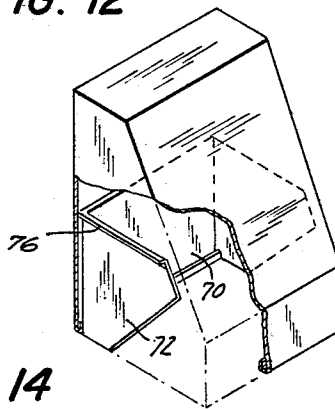


FIG. 14

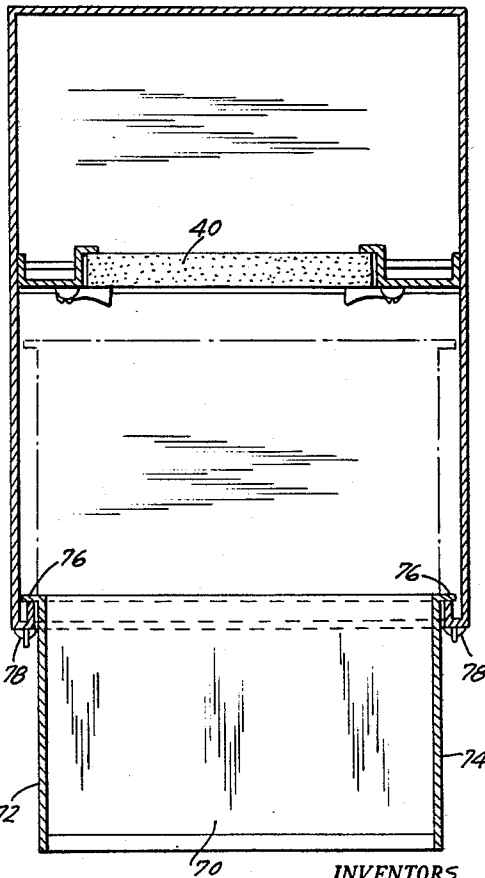
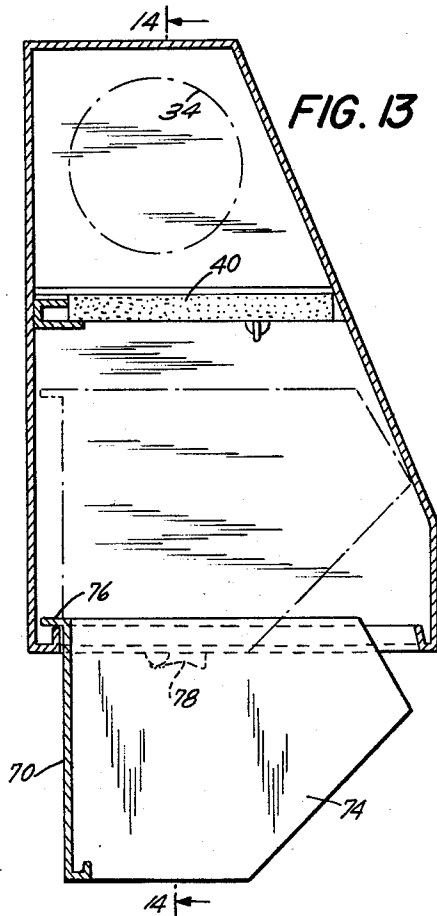


FIG. 13



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SMOKE HOOD

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10 Claims. (Cl. 98-115)

This invention relates to smoke hoods, and more particularly to an extensible hood.

It is common to provide a hood over a broiler or stove, the said hood usually leading through an exhaust duct to the outside of the building. The bottom of the hood is elevated some distance above the broiler or stove, with consequent escape of soil and fumes. The primary object of the present invention is to generally improve such hoods, and to overcome the foregoing difficulty.

A more particular object is to provide a hood having an extension which reaches down from the hood, and which provides back and side walls, the front of the extension remaining open. Such a barrier or baffle may be somewhat unsightly, and even if not when new, will soon become so because of grease and soot. In accordance with a further feature and object of the present invention, the extension is so mounted that it may be folded up into the hood for concealment when not in use.

To accomplish the foregoing general objects, and other objects which will hereinafter appear, our invention resides in the extensible hood elements and their relation one to another, as are hereinafter more particularly described in the following specification. The specification is accompanied by drawing in which:

FIG. 1 is a perspective view of an extensible hood embodying features of our invention;

FIG. 2 is a perspective view with the extension raised up into the hood;

FIG. 3 is a vertical section taken approximately in the plane of the line 3-3 of FIG. 1, and drawn to larger scale;

FIG. 4 is a vertical section taken approximately in the plane of the line 4-4 of FIG. 3;

FIG. 5 is a fragmentary section looking in the direction of the arrows 5-5 of FIG. 4;

FIG. 6 is a perspective view like FIG. 1, but showing another form of the invention;

FIG. 7 is like FIG. 6, but shows the extension folded up into the hood;

FIG. 8 is a vertical section taken approximately in the plane of the line 8-8 of FIG. 6 and drawn to larger scale;

FIG. 9 is a vertical section taken approximately in the plane of the line 9-9 of FIG. 8;

FIG. 10 is a bottom view, with the extension in down position, and drawn to reduced scale;

FIG. 11 is a perspective view showing still another form of the invention;

FIG. 12 is a similar view, but with the extension raised into and concealed by the hood;

FIG. 13 is a vertical section taken in the plane of the line 13-13 of FIG. 11; and

FIG. 14 is a vertical section taken approximately in the plane of the line 14-14 of FIG. 13.

Referring to the drawing, and more particularly to FIGS. 1 and 2, the extensible hood comprises a stationary upper portion 12 which is open at the bottom, and a movable lower portion 14. There is a means, in this case a hinge 16, to support the lower portion in a position depending from the upper portion. The lower portion 14 is so dimensioned and mounted that it may be moved up into the upper portion 12 when not in use, as shown in FIG. 2. There is also a releasable means (18 in FIGS. 3-5) to hold the lower portion in its raised position. In

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preferred form the upper portion 12 has four sides and is open at the bottom, while the lower portion 14 has a back and two sides, it being open at the front.

In the species of the invention shown in FIGS. 1-5, the upper edge of the back 20 of the lower portion is hinged at 16 to the rear lower edge 22 of the upper portion. The lower portion is turned bodily upward on the hinge 16, which may be a piano-type hinge extending all the way from one side of the hood to the other, as is shown in FIG. 4.

Considering the arrangement in greater detail, the hood 12 has a back 22, sides 24 and 26, a top 28, and a front wall 30 which may slope rearwardly, except at the bottom 32 where it is vertical. The hood is usually connected to the outside of the building by a suitable duct, which may connect to the top, or the back, or either side of the hood, depending upon the particular installation. This duct is usually rectangular in cross section, but in FIG. 3 (and FIGS. 8 and 13) a broken line circle 34 is intended merely to schematically suggest the existence of some form of duct.

A grease filter 40 may be mounted part way up the hood. This is supported at the back on a suitable ledge 42, and is further held in position at the sides by releasable butterfly clamps 44, which are pivoted so that they can be turned aside to release the grease filter for removal and replacement by a new one. When turned to the position shown in FIGS. 3 and 4 they support the filter in horizontal position. When the clamps are released the filter may be turned downward, as shown in broken lines at 40' in FIG. 3.

The bottom edge of the upper portion 12 of the hood preferably is bent inward and upward, as shown at 46 in FIG. 3. The piano hinge 16 is secured to the resulting back edge, and the butterfly clamps 18 are pivoted on the intumed side edges. The clamps are shown in their released position in FIGS. 3 and 4, the extension 14 being down. However, it will be understood that when the extension 14 is turned up to the broken line position 14' (FIG. 3), the clamps 18 are turned inward, as shown by the change from 18 to 18' in FIG. 5, thereby underlying the then raised extension. In some cases the extension, when lowered, will reach the stove. In other cases it may be spaced somewhat from the stove, and in such case it is desirable to provide motion limiting stops, such as the outturned ears indicated at 48 in FIGS. 2, 3 and 4. These rest on the reversely folded edge of the upper portion of the hood, as indicated in broken lines at 48 in FIG. 4.

Another species of the invention is shown in FIGS. 6-10 of the drawing. In this form the walls of the lower portion are each so separately hinged that all of said walls may be turned to a generally horizontal position extending across the open bottom of the upper portion. As here illustrated, the rear edges of the side walls 50 and 52 are hinged at 54 to the side edges of the rear wall 56. The top edge of the rear wall 56 is hinged at 58 to the lower rear edge 60 of the upper portion. To raise the extension, the side walls 50 and 52 are turned toward one another on their hinges 54, following which the rear wall 56 bearing the side walls 50 and 52, is turned upward to horizontal position. It is there held by turning the butterfly clamps 62 inward from the released position shown in FIGS. 8 and 9 to a transverse position such that they underlie the wall 56. If desired, stops like 48 in FIG. 3 may be provided on the sides 50 and 52.

We have designed a similar but slightly variant form in which all three piano hinges are disposed horizontally at the top edges of the sides and back of the lower hood portion. In such case the sides 50 and 52 are preliminarily turned upward on their individual horizontal piano hinges, to a generally horizontal position, following which the rear wall is turned upward on its piano hinge to

underlie the upturned side walls, whereupon the butterfly clamps may be turned inward to support the raised walls.

Still another form of the invention is shown in FIGS. 11-14 of the drawing. In this form the lower hood portion is bodily slidable upward into the upper portion. Referring to the drawing, the lower portion comprises a rear wall 70, and side walls 72 and 74 which are immovably related to the rear wall 70. All three walls may be bent outward at their upper edge, as shown at 76, to limit the downward movement of the hood extension. When the extension is slid upward it may be held in raised position by turning the butterfly clamps 78 inward from the released position shown in FIGS. 13 and 14, to a transverse position in which they underlie the bottom edge of the extension.

We have designed a variant of this hood which combines the vertical piano hinges of FIG. 8 with the sliding action here shown. More specifically, the sides are hinged on vertical piano hinges to the back, so that they may be turned against the back. The flat assembly of three sides then may be slid upward adjacent the back of the hood, and finally held in raised position in any desired fashion, most simply by turning butterfly clamps from released to holding position beneath the bottom of the raised extension. In such case the butterfly clamps are located immediately adjacent the back of the hood, instead of being relatively far forward, as here illustrated.

It is believed that the construction and method of use of our improved extensible hood, as well as the advantages thereof, will be apparent from the foregoing detailed description. In that description the term "stove" is not intended to exclude broilers, with which the extensible hood is particularly useful, and for which it was especially designed, because broilers give off a great deal of smoke. It will also be apparent that while we have shown and described our invention in several preferred forms, changes may be made in the structures shown, without departing from the scope of the invention as sought to be defined in the following claims.

We claim:

1. An extensible smoke hood, said hood comprising a stationary upper portion which is closed on four sides and open at the bottom, and a movable lower portion comprising an upright back and two upright sides, the front of said lower portion being open, the bottom peripheral edge of the upper portion being turned inward, means including said inwardly turned edge of said upper portion and means on said lower portion cooperating with said inwardly turned edge of said upper portion to support the lower portion in a position depending from the upper portion, said lower portion being so dimensioned and mounted that it may be moved up into the upper portion when not in use, and releasable means to hold the lower portion in said upper position.

2. An extensible smoke hood, said hood comprising a stationary upper portion having four sides and which is open at the bottom, and a movable lower portion comprising an upright back and two upright sides, the front of said lower portion being open, the bottom peripheral edge of the upper portion being turned inward, means including said inwardly turned edge of said upper portion and outwardly projecting stops on said lower portion bearing downward against said inwardly turned edge of said upper portion to support the lower portion in a position depending from the upper portion, said lower portion

being so dimensioned and mounted that it may be moved up into the upper portion when not in use, and releasable means in the upper portion to hold the lower portion in said upper position.

3. An extensible hood as defined in claim 1 in which the upper edge of the back of the lower portion is hinged to the rear lower edge of the upper portion, whereby said hood may be turned bodily upward on said hinge into the upper portion, said hinge helping support the lower portion on the upper portion.

4. An extensible hood as defined in claim 2 in which the sides of the lower portion extend forward from and are immovable relative to the back of the lower portion, and in which the upper edge of said back is hinged to the rear lower edge of the upper portion, whereby said hood may be turned bodily upward on said hinge into the upper portion, said hinge helping support the lower portion on the upper portion.

5. An extensible hood as defined in claim 1 in which the walls of the lower portion are each so separately hinged that all of said walls may be turned to a generally horizontal position extending across the open bottom of the upper portion, at least one of said hinges being secured to the upper portion, and helping support the lower portion on the upper portion.

6. An extensible hood as defined in claim 2 in which the sides and the back of the lower portion are each so separately hinged that all three of said walls may be turned to a generally horizontal position extending across the open bottom of the upper portion, at least one of said hinges being secured to the upper portion, and helping support the lower portion on the upper portion.

7. An extensible hood as defined in claim 2 in which the sides and the back of the lower portion are each so separately hinged that all three of said walls may be turned to a generally horizontal position extending across the open bottom of the upper portion, the rear edges of the side walls being hinged to the side edges of the rear wall of the lower portion, and the top edge of the rear wall of the lower portion being hinged to the lower rear edge of the upper portion, said latter hinge helping support the lower portion on the upper portion.

8. An extensible hood as defined in claim 1 in which the lower portion fits slidably within the inturned edge of the upper portion, whereby the lower portion is bodily slidable upward into the upper portion.

9. An extensible hood as defined in claim 2 in which the lower portion fits slidably within the inturned edge of the upper portion, whereby the lower portion is bodily slidable upward into the upper portion.

10. An extensible hood as defined in claim 2 in which the side walls of the lower portion extend forward from and are immovably related to the rear wall of the lower portion, and in which the lower portion fits slidably within the inturned edge of the upper portion, whereby the lower portion is bodily slidable upward into the upper portion.

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