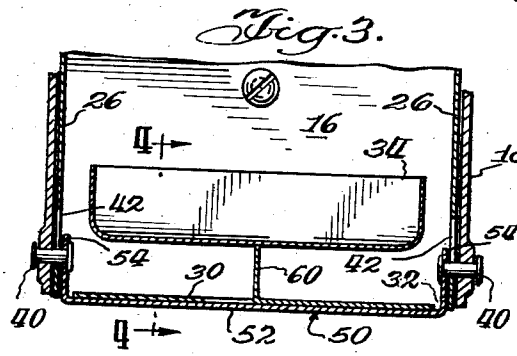
March 17, 1964 A. KAGAN 3,125,407

DEODORIZING APPARATUS

Filed Sept. 22, 1961

Fig. 3.



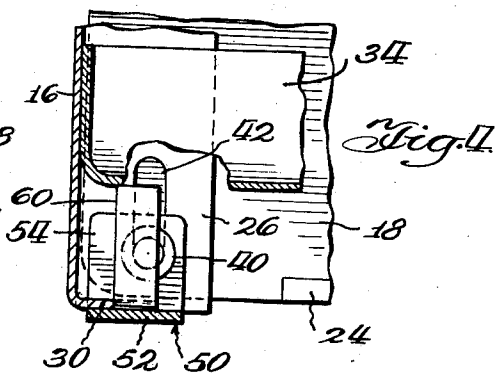
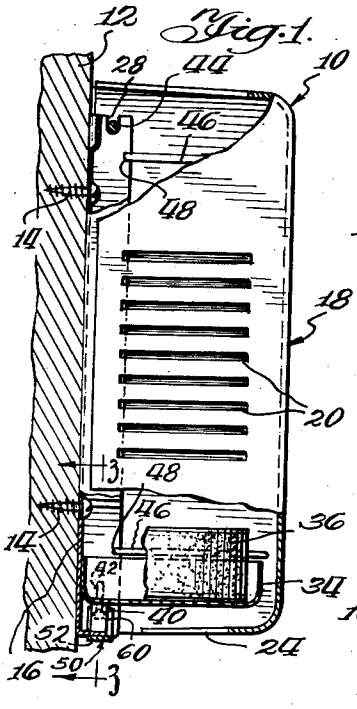


Fig. 4.

Fig. 1.



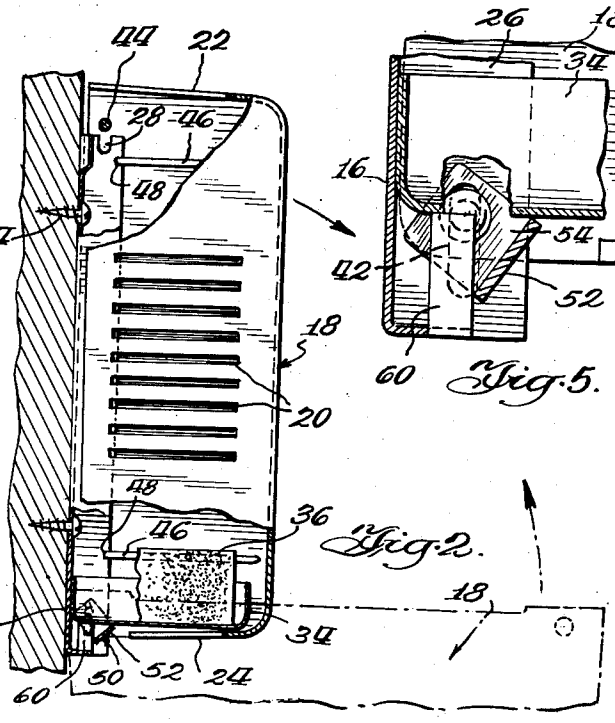


Fig. 2.

Fig. 5.

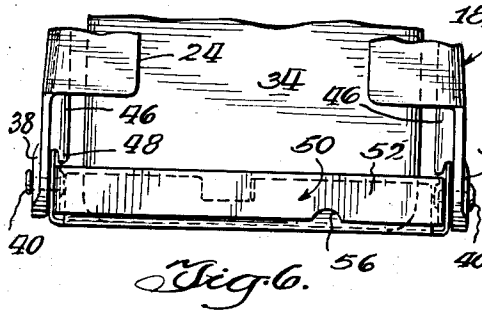


Fig. 6.

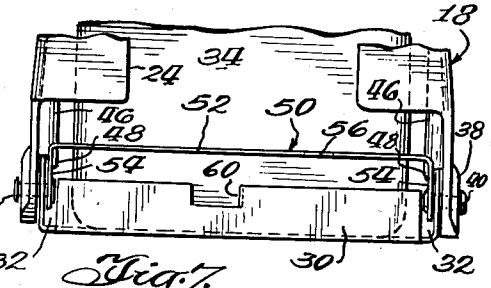


Fig. 7.

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DEODORIZING APPARATUS

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6 Claims. (Cl. 21—122)

This invention relates to deodorizing apparatus and more particularly is concerned with the type of apparatus in which a deodorizing cake or plurality of cakes may be supported within a housing and adapted to be replaced from time to time as the deodorizing material is used up.

The particular structure with which the invention is concerned is primarily utilized in locations where the device is secured to the wall of a room, for example, and the deodorizing material is a form of a chemical which sublimes or evaporates. Such a housing has louvres or vents so that the deodorizing gases may escape from the housing and permeate the room.

The problem with which the invention is concerned is the necessity for periodically opening the container either to remove the vestiges of a deodorizing cake or, in the case the cake is all completely evaporated, to install an additional cake.

In order to avoid pilferage, it has in the past been deemed necessary to lock the housing in a closed position. Such a structure usually consisted of a base plate which is secured to the wall and a cover member usually secured to the base plate and provided with any suitable key-operated means for locking the same closed.

The primary object of the invention is to provide a housing for a deodorizing cake in which a movable manual locking device is used which is readily manipulated without a key or other tools in order to enable the cover member of the housing to be swung to a position to permit a deodorizing cake to be installed within the housing.

A further object of the invention is to provide a deodorizing apparatus in which there is a base plate hingedly mounting the cover member thereon, the said base plate being so constructed and arranged with cooperating structure provided such that in order to rotate the cover member with respect to the base plate, it is necessary first to move the cover member parallel with the base plate after which the swinging downward of the cover may be accomplished, exposing a platform for supporting the deodorizing cake.

A further object of the invention is to provide novel locking means which is concealed from the observer and which, when known, readily can be manipulated in order to permit parallel movement of the base plate and cover member one relative to the other whereby to effect the swinging movement.

Other objects and advantages will occur to those skilled in the art to which the invention appertains, as a description of the preferred embodiment is set forth in detail hereinafter, in connection with which the drawing illustrates the same and the specific features thereof.

In the drawing:

FIG. 1 is a side elevational view of the deodorizing apparatus constructed in accordance with the invention, the same being shown in its locked condition and portions thereof being shown in section in order to illustrate details.

FIG. 2 is a view similar to that of FIG. 1, but illustrating the deodorizing apparatus in an unlocked condition, with the cover member having been moved upwardly parallel relative to the base plate.

FIG. 3 is a fragmentary sectional view of the apparatus taken generally along the line 3—3 of FIG. 1 and in the direction indicated.

FIG. 4 is a fragmentary sectional view taken generally along the line 4—4 of FIG. 3 and in the direction indicated with the apparatus in the condition as shown in FIG. 1.

FIG. 5 is a fragmentary sectional view similar to that of FIG. 4 but with the apparatus in the condition illustrated in FIG. 2.

FIG. 6 is a fragmentary bottom plan view of the apparatus with the same being shown in the condition of FIG. 1, and

FIG. 7 is a view similar to that of FIG. 6 but illustrating the apparatus while in the condition as shown in FIG. 2.

Basically, the invention comprises a novel manual locking device which is relatively foolproof and substantially concealed so that only the servicing employee may operate the same in order to open the deodorizing apparatus for the installation of a new cake. The structure comprises a base plate which has the cover member hingedly connected thereto at the lower end of the base plate, but confining the upper end of the housing in suitable slots formed in the base plate, it being necessary to move the cover member vertically relative to the base plate in order to carry a pin or rod out of the slot whereby to enable the housing to be rotated downwardly and forwardly. The hinged connection between the cover member and the base plate at the bottom of the base plate is therefore slotted to permit such movement. A rotatable stop member is secured in hinged relation to the bottom of the cover member and must be rotated in relation to a projection or flange formed at the base plate in order to enable movement of the cover member. Means are provided to limit the rotational movement of the stop member in both directions.

Referring now to the details, in FIG. 1 there is illustrated a side elevational view of the deodorizing apparatus with portions shown in section. The apparatus itself is designated generally by reference character 10 and the same is shown secured to a vertical wall by means of screws 14 which pass through suitable slots or holes punched in the base plate at 16. The base plate mounts a box-like housing or cover member 18 thereon, the member 18 having louvres 20 on the several faces thereof. Bottom and top of the cover member 20 may be partially open as shown at 22 and 24.

The base plate 16 has right and left right-angle bent flanges 26 to render the same rigid. The upper end of the base plate is unobstructed and the side flanges 26 are provided with central vertical slots 28 opening to the upper ends of the said side flanges 26.

The bottom end of the base plate 16 is provided with a right angle bent flange 30 which is best shown in FIG. 7, this flange being of narrower width than the side flanges 26 and being shorter in length than the transverse dimension of the base plate in order to provide the spaces 32, the purpose of which is to enable locking of the apparatus in a closed condition as will be described.

Adjacent the bottom of the base plate 16, a dish-like tray 34 is fixedly secured by means of welding or the like, this dish-like tray 34 serving to hold a cake or cakes of deodorizing material such as shown in 36 in FIGS. 1 and 2. It is intended that the cover member 18 will be hingedly swung down as shown in the broken lines in FIG. 2 in order to gain access to the dish-like tray 34.

At its lower end, the cover member 18 is provided with a thickened portion as at 38 on opposite sides thereof and a pivot member or pin in the form of a rivet or eyelet 40 provide a hinged connection between the lower end of the cover member 18 and the lower ends of the side flanges 26. The side flanges 26 are provided at this particular location with slots 42 and the pivot members 40 are disposed to pass through the said slots 42, respectively, thereby enabling parallel movement of the cover member 18 upward as viewed in FIGS. 1 and 2 while at the same

time enabling pivoting movement of the cover member 18, providing the upper end of the cover member is not prevented from being so rotated.

At its upper end, the cover member 18 is provided with an elongate pin or rod 44 which is secured between the sides of the cover member, this rod 44 normally being engaged within slots 28 thereby preventing rotational movement forward of the top end of the cover member 18. If, however, the cover member is first raised a small amount so that the rod 44 clears the slot 28 as shown in FIG. 2, the rotational movement forwardly and downwardly may be effected. Excessive swinging movement will of course be prevented by the bottom of the cover member bearing against the surface of the wall. Instead of a transverse rod 44, short stub pins may be used, but the rod holds the cover member rigid.

The cover member 18 preferably is formed of some plastic material and conveniently ribs 46 may be molded in the inner side walls, the ribs being slotted at 48 to engage edges of the side flanges 26 to prevent the flexible plastic cover from being spread in order to gain access to the interior of the apparatus 10.

The locking means of the apparatus comprise structure to prevent the cover member 18 from being moved upward from the position shown in FIG. 1 to that shown in FIG. 2. An elongate U-shaped member 50 is likewise pivotally mounted on the grommet or rivet 40 inside of the side flanges 26. With the U-shaped member 50 arranged as shown in FIG. 4, it will be seen that the transverse portion thereof which is designated 52 is engaged beneath the bottom flange 30 while the end ears 54 extend through the spaces 32. Since the U-shaped member 50 is mounted to the cover member 18 through the pins or rivets 40, any attempt to slide the cover member 18 upward parallel to the base plate 16 will be resisted because of the engagement of the transverse portion 52 with the bottom of the flange 30. From the front view of the apparatus 10 the observer who is not familiar with the construction would not understand how this is accomplished since the locking arrangement is substantially concealed.

When it is desired to open the apparatus 10, however, the operator reaches underneath and grasps the rear edge of the transverse member 52, there being a finger engaging notch 56 provided along the rear edge of the member 50 for this purpose. The operator then pulls the member 50 forward from the position as shown in FIGS. 1, 4 and 6, rotating the U-shaped member 50 about the pivot elements 40. The maximum movement of which the member 50 is capable occurs when the forward edge of the transverse strip 52 engages the bottom of the dish-like tray 34. At this point, the member 50 has moved out of the path of the bottom flange 30 thereby enabling the cover member 18 to be translated upward, which the operator may do by grasping the same in the hand and executing the movement. The member 50 at the uppermost extent of the movement of the cover member 18 will assume the position shown in FIG. 2 since the bottom of the dish-like tray 34 moves downward relative to the said member 52. A lug 60 struck upward out of the bottom flange 30 serves as a stop member to prevent the return rotation of the member 50 past the forward edge of the bottom flange 30 so that in returning the cover member to its initial position, the same will be free to slide downward without interference.

It is believed that the invention has been sufficiently described so as to enable those skilled in the art to understand and appreciate and practice the same. It is desired to point out that variations from the structure illustrated as to the details thereof are capable of being made without departing from the spirit or scope of the invention as defined in the appended claims.

What it is desired to secure by Letters Patent of the United States is:

1. In a deodorizing apparatus in which there is a base plate adapted to be secured to a wall and an open face box-like housing adapted to be mounted to the base plate with its open face engaging against the base plate to close the housing, and there is a pivotal connection at one end of each of the base plate and housing to enable the housing to be swung away from the base plate to gain access to the interior of the housing and the face of the base plate; means for locking the housing to the base plate against swinging movement which comprises: structure providing a sliding connection between the base plate and housing in addition to the pivotal connection, means at the second end of each of the base plate and housing providing for separation of the base plate and housing at said second ends only under a particular condition of disposition of the base plate and housing and the sliding connection enabling manual movement of said base plate and housing relative to one another to said condition of disposition, and selective stop means at the first ends of said base plate and housing for preventing the said manual sliding movement, said stop means comprising a swinging latch on one of said housing and base plate and a latch engaging part on the other.

2. A deodorizing apparatus which comprises, a base plate having a bottom projection normal thereto, a vertical flange at its upper end and having an upwardly opening slot in the flange, a perforated box-like open face housing adapted to be mounted on the base plate with the face closed off but adapted to be swung away from the base plate from the top end thereof to give access to the interior of the apparatus, vertically arranged slot means adjacent the bottom end of the base plate above the projection, hinge means on the bottom end of the housing engaging in said slot means whereby to enable pivoting and sliding movement of the housing and base plate relative one another, pin means secured to the upper end of the housing engaged with the slot in said vertical flange, the housing being slidable upward relative to the base plate while the pin means is engaged in said flange and being thereafter capable of swinging movement of the upper end of said housing away from said base plate, and means movable with said housing engageable with said bottom projection to prevent upward sliding movement.

3. Apparatus as claimed in claim 2 in which said last mentioned means comprises a swinging member pivotally mounted on said hinge means and having a part adapted to move to a position below the bottom projection so that as one attempts to slide the housing upward carrying the swinging member upward also, the said part engages against the bottom projection and prevents such movement.

4. Apparatus as claimed in claim 3 in which the bottom projection is a horizontal right angle flange, the swinging member is a U-shaped structure having the arms pivotally mounted on the hinge means and the cross-bar engageable beneath the right angle flange.

5. Apparatus as claimed in claim 4 in which the right angle flange is shorter in length than the distance between the arms of the U-shaped structure to provide openings for entry of the said arms when the cross bar is moved beneath the right angle flange.

6. Apparatus as claimed in claim 4 in which stop means are provided above the right angle flange to prevent the U-shaped member from moving toward the base plate after the housing has been slid upward.

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