

Aug. 13, 1957

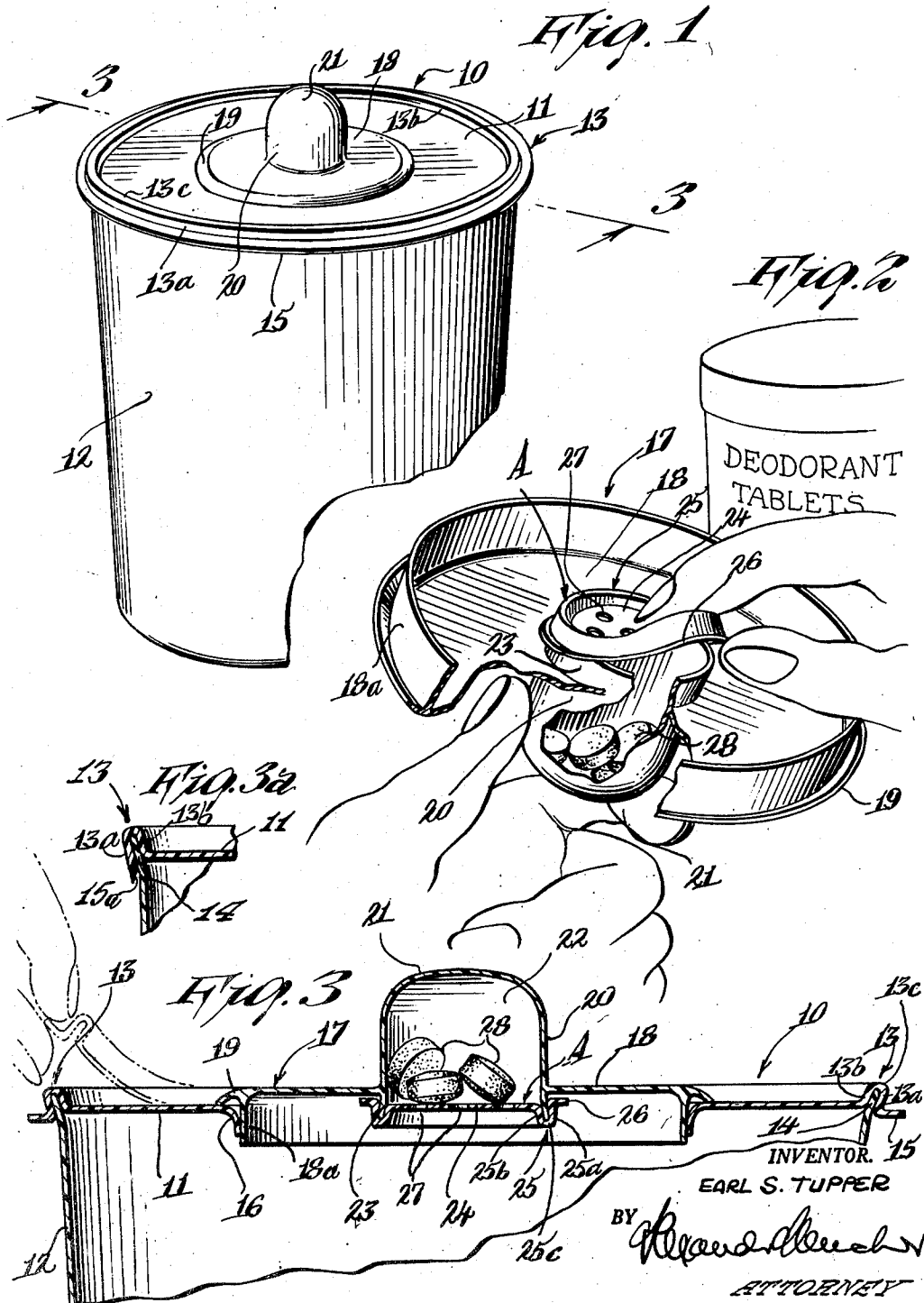
E. S. TUPPER

2,802,590

WASTE CAN COMPOUND COVER AND PARTS

Filed Nov. 29, 1954

5 Sheets-Sheet 1



Aug. 13, 1957

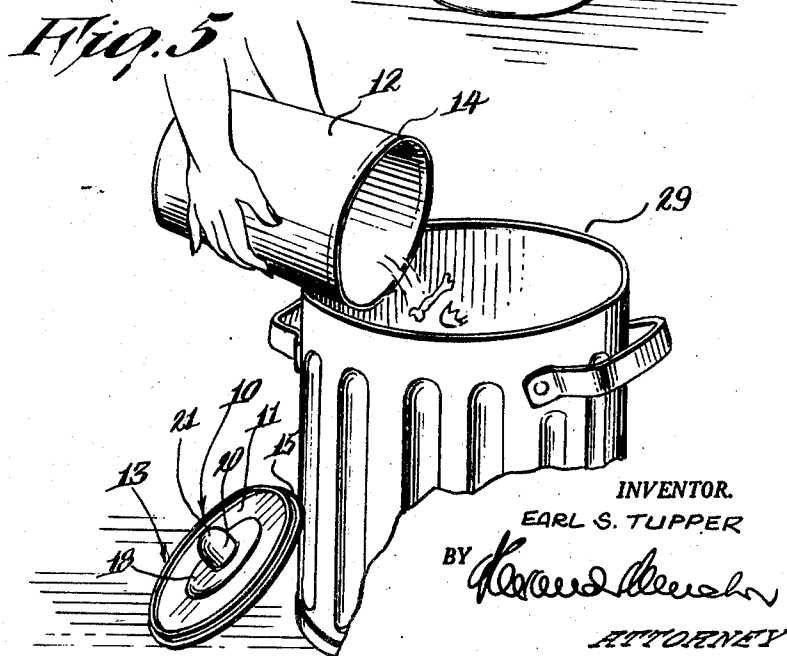
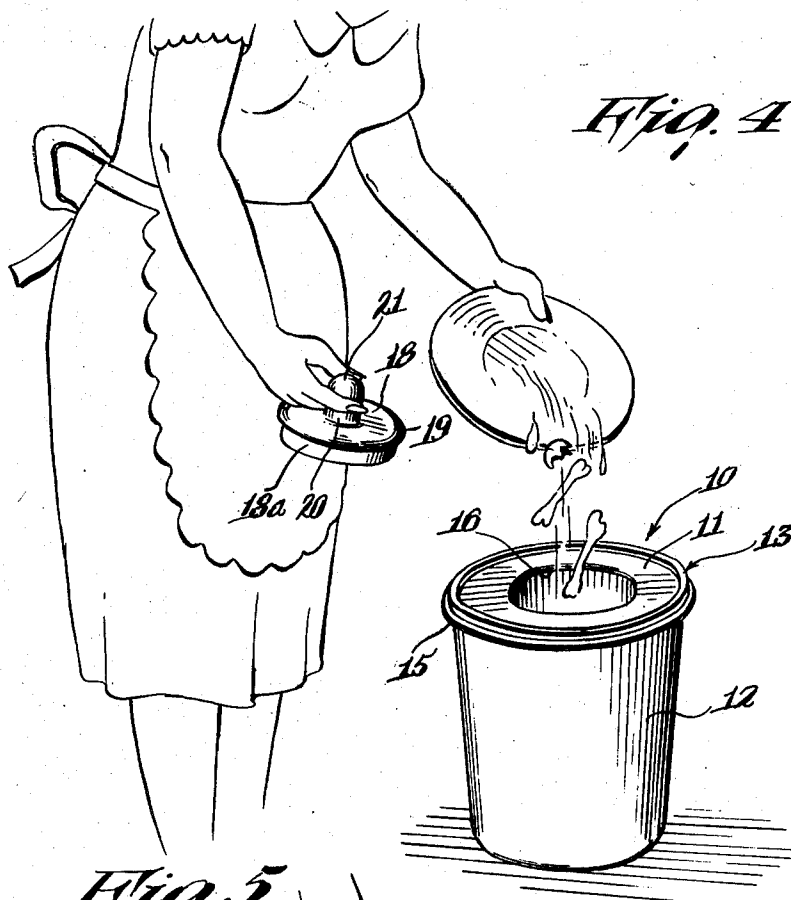
E. S. TUPPER

2,802,590

WASTE CAN COMPOUND COVER AND PARTS

Filed Nov. 29, 1954

5 Sheets-Sheet 2



Aug. 13, 1957

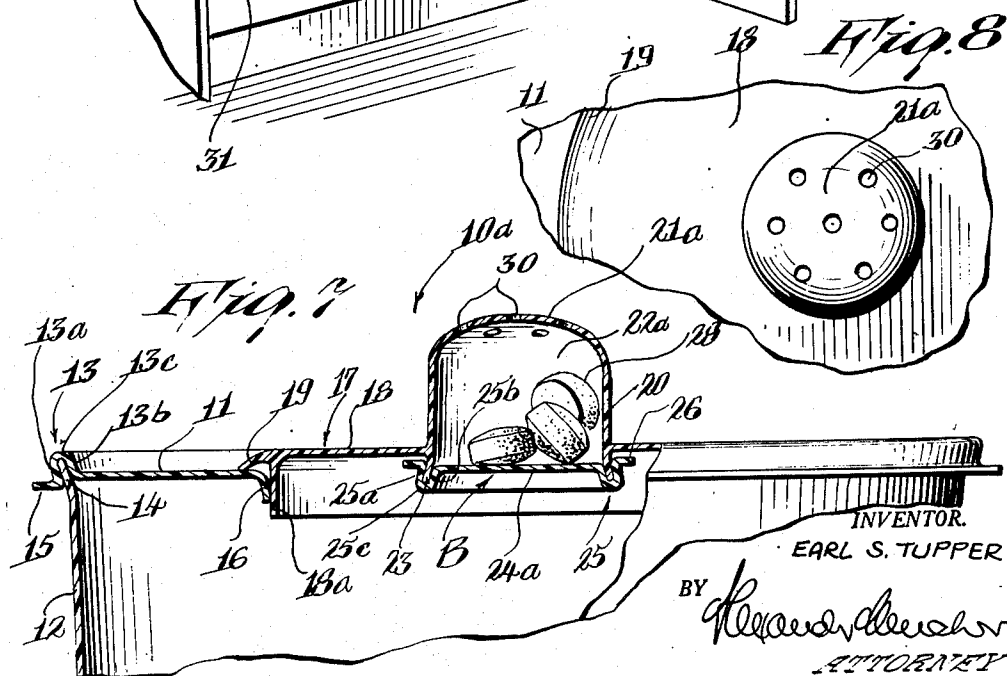
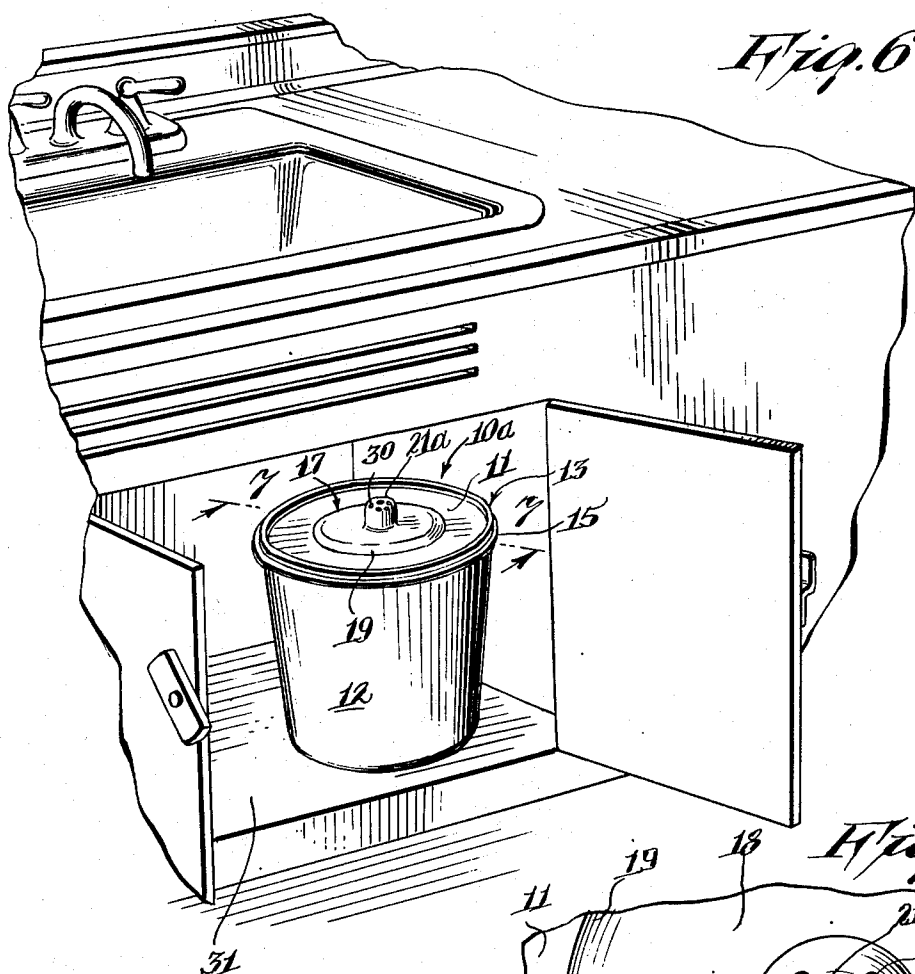
E. S. TUPPER

2,802,590

WASTE CAN COMPOUND COVER AND PARTS

Filed Nov. 29, 1954

5 Sheets-Sheet 3



INVENTOR.

EARL S. TUPPER

BY

ATTORNEY

Aug. 13, 1957

E. S. TUPPER

2,802,590

WASTE CAN COMPOUND COVER AND PARTS

Filed Nov. 29, 1954

5 Sheets-Sheet 4

Fig. 9

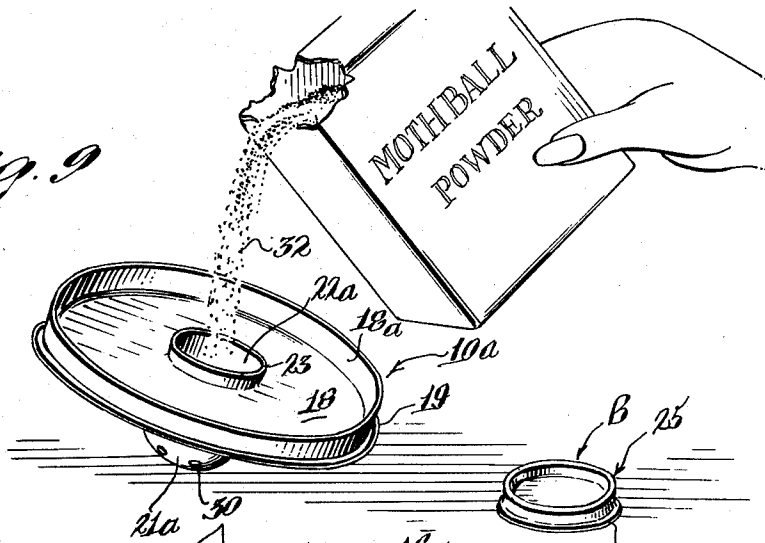


Fig. 10

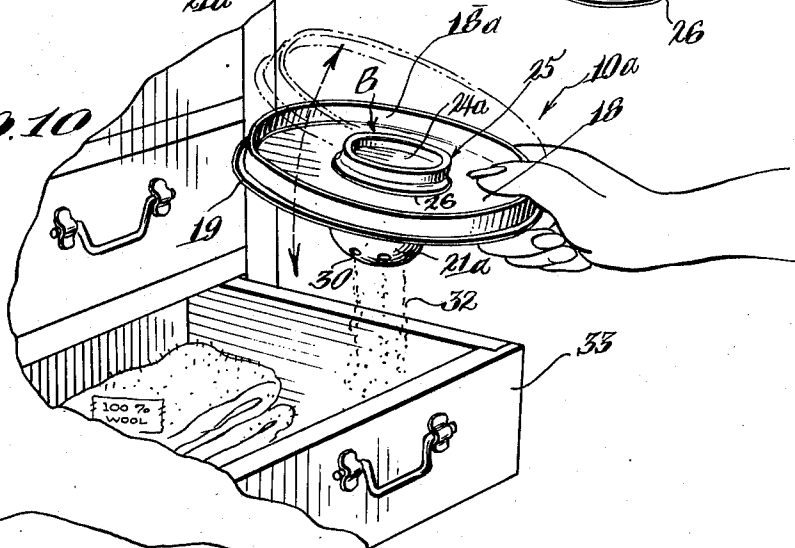
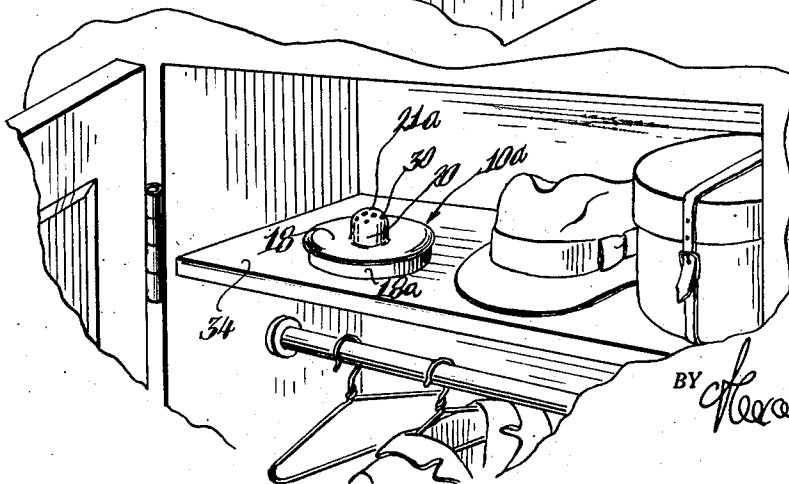


Fig. 11



EARL S. TUPPER
INVENTOR.

BY *Harold Fleischer*
ATTORNEY

Aug. 13, 1957

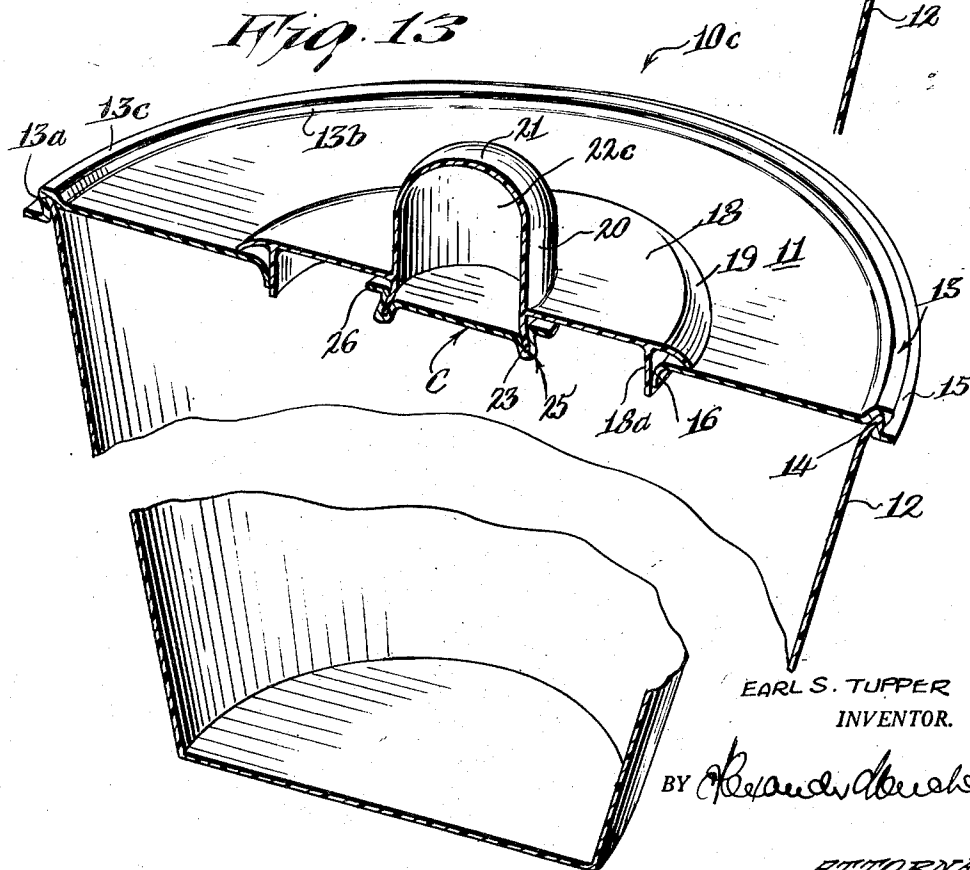
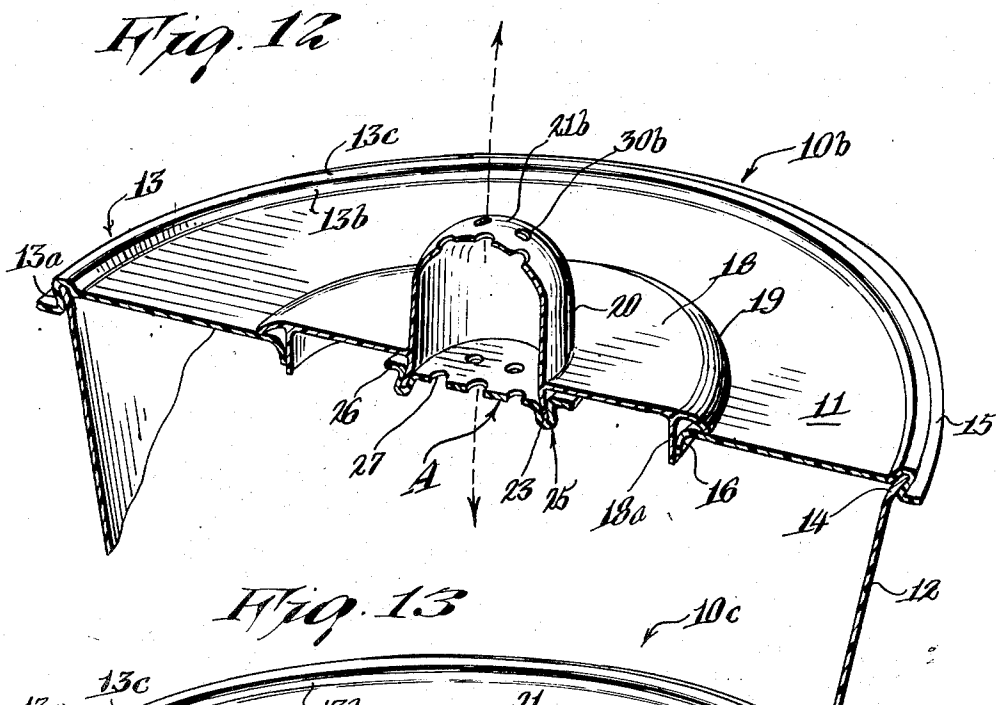
E. S. TUPPER

2,802,590

WASTE CAN COMPOUND COVER AND PARTS

Filed Nov. 29, 1954.

5 Sheets-Sheet 5



EARL S. TUPPER
INVENTOR.

BY *Richard D. Busher*

ATTORNEY

1

2,802,590

WASTE CAN COMPOUND COVER AND PARTS

Earl S. Tupper, Upton, Mass.

Application November 29, 1954, Serial No. 471,553

1 Claim. (Cl. 220—23)

This invention relates generally to covers for containers, but more specifically to a compound cover for a container having a removable adapter plate in sealable engagement with the container rim, the said adapter plate having a central and concentric aperture to removably and sealably receive a chambered type of plug capable of being loaded with and to disseminate a volatile substance.

This type of cover among other applications is especially applicable to indoor receptacles such as garbage cans or other containers requiring scent or deodorizing operation and further requiring the filling and removal of can contents periodically.

An adapter plate per se, an element of the compound cover, forms the subject matter of a separate application for patent under the title of Adapter Cover, and was executed by the applicant herein preliminary to filing in the United States Patent Office on November 15, 1954.

An object of the invention resides in the provision of a compound container cover for neutralizing, masking, and overcoming obnoxious odors or scenting a container, the several parts of the cover being in removable and in seal-tight engagement for functioning of the cover parts, and wherein said parts are formed of a locally deformable material such as polyethylene, the vinyls or other materials having similar physical characteristics such as local deformability for rendering the parts efficient both for assembly, operation and effecting hermetical sealing between the parts. Other required characteristics of the compound cover material reside in being odorless, resistant to acids, alkalis, solvents and other chemicals at ordinary temperatures, being resistant to mildews, microorganisms and insects, non-absorptive, not readily wetted by water, being sterile, easily cleanable and sanitary in use.

A further feature of the invention resides in the provision of a container and compound cover wherein the cover is formed with an adapter plate element to reduce the mouth opening when the container is opened to receive waste, to facilitate the removal of the compound cover when the can contents are dumped, and to receive a chambered type of plug for selectively storing or dispensing volatile materials for deodorizing operation on the container contents. The chamber of the said plug is provided with a removable and sealable cover for loading and other purposes and when the plug itself is used on a container as a cover and without the adapter plate, the chamber serves as a handle and also as the means for removal of the cover from the container; and when the plug is used with the adapter plate, the chamber serves as a handle for removal of the plug from said plate.

Another feature of the invention resides in the provision of a chambered plug element of a compound cover to serve independent use as a storage, dispensing and sprinkling chamber for volatile materials stored therewithin for neutralizing odors, disinfecting or scenting selected areas.

A further object of the invention resides in the provi-

2

sion of an indoor garbage can and a compound cover therefor which incorporates a deodorizing device to permit the interior of the can to be deodorized, and wherein the deodorizing section may easily and readily be removed to permit facilitated introduction of garbage and discarded food into the container without the necessity of removing the main closure or adapter plate thus confining the container mouth opening. In this connection, the deodorizing device may also be used to deodorize the area immediately surrounding the garbage can, for example, the interior of a sink cabinet in which the can is stored.

A further feature of the invention resides in the provision of a compound cover wherein the chambered plug element may be conveniently employed as a handle when removing said element to permit loading thereof, independent use or the deposit of food and garbage into the interior of the container without removing the compound cover as a unit.

A further object of the invention resides in the provision of a compound cover for indoor containers or the like which includes a deodorizing, masking and scenting device normally adapted to deodorize immediate areas within and/or surrounding the garbage can, but which device may be removed and upon replacement with suitable volatile substances or insecticides, moth balls, or disinfecting powders may serve as a convenient shaker for the powder or as a stationary insect or disinfecting device when disposed in closets.

Another object of the invention resides in the provision of a compound cover for containers wherein the cover is provided with an adapter plate to removably and sealably engage a chambered plug member, the latter serving both as a handle for the compound cover and as a sealed storage chamber for storing any materials such as tablets for removal and introduction into the container for neutralization of odors and the like or for other purposes.

A further object of the invention resides in the provision of a compound cover for indoor garbage cans or the like which is sturdy and durable in construction, has individual and combined functions, is reliable and efficient in operation, and is inexpensive to manufacture and assemble.

These objects and other incidental ends and advantages of the invention will hereinafter appear in the progress of the disclosure and as pointed out in the appended claims.

Accompanying this specification are drawings showing several illustrative forms of the invention wherein:

Figure 1 is a perspective view of a preferred embodiment of the invention shown in operative position on an indoor garbage can;

Figure 2 is an enlarged perspective view of the removable deodorizing or chamber plug section shown in inverted position and with the perforated bottom cover thereof in the process of being applied to the plug section, the device being shown partly broken away to illustrate the construction thereof;

Figure 3 is a vertical sectional view taken along the plane 3—3 of Figure 1 and enlarged;

Figure 3a is a fragmentary sectional view of one end of Figure 3 showing a modified form of engaging groove of the adapter plate;

Figure 4 is a perspective view showing the chambered plug section removed from the can to permit the facilitated depositing of food or waste within and without removing the full cover thereby reducing the evaporated area at the mouth; and illustrating further the manner in which the chamber of the plug is employed as a convenient handle for holding the chambered plug section;

Figure 5 is a perspective view showing the dumping of the contents of the indoor garbage can within a

3

conventional outdoor garbage can, and showing the compound cover as an entity removed therefrom;

Figure 6 is a perspective view of a modified form of the invention adapted to deodorize or affect the area immediately surrounding the covered indoor garbage can, and showing the covered can in operative use within a kitchen cabinet;

Figure 7 is an enlarged vertical sectional view partly in elevation and taken along the plane 7-7 of Figure 6;

Figure 8 is an enlarged fragmentary top plan view of the chambered plug section of the compound cover of Figures 6 and 7;

Figure 9 is a perspective view of the removable chambered plug section shown alone, in inverted position and in the process of being loaded with moth balls or powder after removal of the engageable bottom cover therefor;

Figure 10 is a perspective view of the removable chambered plug after replacement of the bottom cover and showing said plug in operative use as a shaker for moth powder;

Figure 11 is a perspective view of the chambered plug shown in operative use as a moth-proofing device within a closet;

Figure 12 is an enlarged view shown partly in section and partly in perspective of a still further modified form of the present invention adapted to deodorize, mask or scent both the interior of the garbage can and the area immediately surrounding the same;

Figure 13 is a view similar to Figure 12 of a still further modified form of the present invention wherein the chambered plug section is adapted to have its chamber serve solely as a hermetically sealed storage compartment and provided with a removable base cover member.

In accordance with the invention and the preferred forms shown in the drawings and particularly with reference to Figures 1-5, numeral 10 indicates generally a compound type of cover for a container, but as shown as specifically applied to an indoor garbage can or the like and embodies the features of the invention herein. The compound cover consists of an adapter plate designated generally by numeral 11 also designating the top wall thereof and is adapted to be positioned at a grooved rim 13 over the can rim 14. Grooved rim 13 is raised above wall 11 and is of the inverted type and has an outer wall 13a, a spaced inner wall 13b and a top wall 13c. It is to be observed that outer groove wall 13a is provided with a horizontally extending flange 15 from the lower end for purposes of finger engagement to remove the adapter plate 11. However, as shown in Figure 3a, flange 15 may be substituted by a flared portion 15a disposed on the lower and inside face of groove wall 13a for finger engagement purposes as will hereinafter appear.

Adapter plate 11 is provided with a concentric and central opening defined by an integrally formed and downwardly extending curved flange 16 (Figure 3), said flange 16 presenting a substantially cylindrical type of engaging wall to receive in removable and seal-tight engagement a chambered and cylindrical type of plug generally indicated by numeral 17. The plug has a circular top wall 18 terminating edgewise in a depending cylindrical side wall 18a, the said top wall 18 proceeding beyond cylindrical wall 18a in an outwardly and downwardly curved peripheral flange 19. The edge of flange 19 is adapted to abut adapter plate 11 whereby to both limit the downward displacement of the chambered plug member 17 therein and to serve as a sealing area therefor in conjunction with the sealability between the outer surface of cylindrical plug wall 18a and the wall portion of flange 16 as best shown in Figure 3.

It is to be noted that the sealability between the plug cylindrical wall 18a and adapter plate flange 16 is enhanced by the use of a locally deformable material such as polyethylene or other material including the vinyls which have the characteristics of polyethylene as here-

4

tofore mentioned. For this purpose, the diameter of the outer face of engaging flange 16 is less than the diameter of the outer face of cylindrical flange 18a so that a live seal results at the engaging points. Moreover, a live seal also exists between the abutting areas of the edge of flange 19 and the adapter plate 11.

As shown in Figure 3, the plug top wall 18 is provided with a chamber formed by a concentric and central opening integrally formed with a hollow and upwardly extending cylindrical casing 20 provided with a hemispherical top wall 21 and resulting in a chamber 22 to contain a disinfectant, a scenting material, or other volatile product for purposes as will be made clear.

As shown in Figure 4, chamber 22, formed of casing 20 and 21, may be conveniently employed as a handle when removing plug 17 from adapter plate 11 to allow depositing of waste food materials or other substance within the garbage can without the necessity of removing adapter plate 11. The confinement of the mouth of container 12 to a smaller opening by use of adapter plate 11 is desirable from the standpoint of preventing too much evaporation and dissemination of the odors from the container, and further is desirable because the waste material is directed into the central part of container by the curved adapter cover flange 16.

The chamber wall 20 extends downwardly beyond the undersurface of top wall 18 of plug 17, and as shown is in the form of an outwardly flared and frusto-conical flange 23 to engage in removable and sealing engagement a cover plate generally indicated by letter A. Plate A is of the same material as the chambered plug and is provided with a central wall 24 and a peripheral and raised inverted groove rim generally indicated by numeral 25 to fit upwardly and engage flange 23 for closing the open bottom of chamber 22. Grooved rim 25 is adapted to be applied to flange 23 in the same manner as the adapter cover groove 13 is applied to container flange 14 (Figure 3). The groove 25 of cover A also consists of an outer wall 25a, a spaced inner wall 25b, a connecting wall 25c and a finger engaging flange 26. Flange 26, of course, may be substituted by a flared portion on the inner side of outer wall 25a in the same manner as flared portion 15a is substituted for the flange 15 in connection with the adapter plate as shown in Figures 3 and 3a. The chamber cover plate A on wall 24 is provided with perforations 27 so that a volatile product such as tablets 28 confined within the chamber 22 may be used for deodorizing, masking, scenting, neutralizing and disinfecting purposes.

As shown in Figure 2, chamber cover A may be removed from plug 17 after the compound cover is removed from can 12. The plug is reversed and then cover A is peeled off to permit the insertion within chamber 22 of tablets 28 whereupon the closure A is returned into sealing engagement with chamber flange 23.

As shown in phantom in Figure 3, the compound cover 10 may be removed from the garbage can 12 by lifting flange 15 upwardly by the thumb and disengaging the groove rim 13 from flange 14. Flared wall portion 15a is also engageable by the thumb for removal purposes (Figure 3a). The physical properties of the adapter cover 10 material permits the necessary flexing thereof so that the compound cover 10 may be peeled off for dumping the can contents into an outdoor garbage receptacle 29 or garbage truck (Figure 5).

The removal of compound cover 10 in a silent and non-snapping manner is accomplished by grasping flange 15 or flared portion 15a by the thumb and depressing adapter plate wall 11. A triple action is involved. First, the groove outer wall 13a is disengaged from can rim 14, then all the groove walls locally yield upwardly thereby becoming locally free of rim 14, such second movement taking place by local flexing of wall 11. Thereafter, the whole compound cover is removed by a peeling-off silent and non-snap type of operation.

5

For best sealing, the outer diameter of rim 14 is greater than the diameter of inner face of groove wall 13a.

For application of the compound cover 10 to rim 14, the plate 11 is placed over the top edge of rim 14 and the top groove defining wall 13c is pressed downwardly by the thumb successively at adjacent points or slidably along the top groove defining wall axis to effect a spreading of the side groove walls 13a and 13b and a compression and expansion of adapter plate wall 11 so that sealing engagement at least between rim 14 at the outer face and the top thereof is effected with the corresponding inner faces of the side and top groove walls 13a and 13c.

Normally, the compound cover 10 will be in position on the can 12 as shown in Figures 1-3 with the deodorizing or other type of fumes from tablets 28 passing downwardly through perforations 27 of cover A into the interior of the can whereby to affect the odor thereof or to disinfect the contents.

Referring now in particular to Figures 6-11, a compound cover generally designated by 10a is shown and differs from the first form in that the chamber casing 20 is formed with a hemispherical top wall 21a having perforations 30 while the chamber cover, designated B, for chamber 22a is non-perforated as indicated by the cover wall 24a (Figure 7). Thus, chamber 22a is provided to receive tablets 28 wherein fumes will escape upwardly through perforations 30 to affect the surrounding area instead of escaping downwardly into the interior of said can. As shown in Figure 6, can 12 with the compound cover 10a attached can be stored within the kitchen cabinet 31, the interior of the cabinet being effectively deodorized, scented, and the like during storage of the can therewithin.

As shown in Figures 9, 10 and 11, the chambered plug 10a may be removed from the adapter plate 11, inverted and upon removal of the bottom chamber cover B, chamber 22a may then be filled with moth-proofing powder 32 and the assembly after closing with cover B may then be held in an inverted position to permit the device to be employed as a shaker for depositing powder within a trunk 33 or the like containing woolens. Of course, an insecticide may also be dispensed this way as well as a disinfectant. In addition, and as shown in Figure 11, the device may be held right side up upon a shelf or the like to serve as a convenient stationary moth-proofing or scenting device within a closet or the like.

In other respects, the form of the invention shown in Figures 6-11 is the same as that shown in Figures 1-5, and like reference characters designate corresponding parts throughout the several views.

Referring now to Figure 12, there is shown another modified form of the invention wherein the compound cover is indicated by 10b. The chamber casing 20 is formed with a hemispherical top wall 21b provided with perforations 30b while retaining the bottom closure plate A having perforations 27. Thus, fumes may pass upwardly through perforations 30b to deodorize the area immediately surrounding the can while at the same time fumes may pass downwardly through the perforations 27 of coverplate A simultaneously to deodorize the interior of the can. In this way, the chambered plug provides a double function, namely, deodorization externally and internally of a container member. For example, when can 12 is filled with garbage or other waste, it may be placed within the kitchen cabinet 31 with the compound cover 10b placed thereon to permit the interior of the can to be deodorized or the like but at the same time performing the same operation to the interior of cabinet 31. In other respects, the form of the invention shown in Figure 12 is the same as that shown in Figures 1-5, and like reference numerals identify corresponding parts throughout the several views.

Referring now to Figure 13, there is shown another form of the invention wherein the compound cover is indicated generally as 10c, and differs from the first form of the in-

6

vention in that a non-perforated bottom chamber cover C is provided to completely seal off the interior of chamber 22c without ventilation through either the top or bottom thereof. In this form, casing 20 and 21 will serve no only as a convenient handle as in the other forms for removing the chambered plug portion of the compound cover, but also serves as a hermetically sealed container for storing disinfectants, or other articles requiring proximate use. In other respects the form of the invention shown in Figure 13 is the same as that shown in Figures 1-5 with like reference numerals identifying corresponding parts throughout the several views.

It is to be observed that the invention consists of a compound cover per se, the individual chambered plug portion per se and the combination of the compound cover with a can. As has been mentioned, the adapter plate is covered by a prior executed application by the applicant herein.

The compound cover with all its parts as has been mentioned are formed preferably of polyethylene or other material having similar characteristics and includes the vinyls for better functioning from the standpoint of sealability, sterility and efficiency.

I wish it understood that minor changes and variations in the material, sealing, location, integration, methods of molding, and subcombination of parts may all be resorted to without departing from the spirit of the invention and the scope of the appended claims.

It is to be observed that the chambered plug member 17 may be used without the adapter plate 11 if dimensioned so that the cylindrical wall member hereof telescopically engages the can rim. In this application, the mouth of the container rim is not reduced and the chambered plug member serves as a single cover member provided with a deodorizing chamber.

I claim:

A compound cover for the rim of waste cans comprising an adapted cover formed of resilient and locally distortable polyethylene or like plastic substance having similar properties, said cover having a flat top wall with an inverted raised grooved peripheral rim adapted to sealingly and removably engage the can rim, said cover further having a central, concentric opening with a depending flexible peripheral flange serving to form the wall of the opening, this opening being sufficiently large as to permit the passing of garbage material through the cover and into the waste can, a plug member similarly formed of resilient and locally distortable polyethylene or like plastic substance having a cylindrical side wall sealably and removably engageable with the depending flexible peripheral flange of the cover opening and a flexible outwardly and downwardly curved peripheral flange adapted to overlie the top wall of the cover about the opening, said plug having an integrally formed central hollow upwardly projecting hand engageable chamber portion and open from the underside of the plug member and an outwardly flared and frusto-conical flange concentric with the open underside of the chamber portion and a closure cap formed of resilient and locally distortable polyethylene or like plastic substance, sealably and removably engageable with the frusto-conical flange of the plug member, said closure cap having a depending grooved peripheral rim with a finger engaging peripheral flange extending outwardly from the grooved rim, whereby all elements can be sealably and removably interfitted with one another.

References Cited in the file of this patent

UNITED STATES PATENTS

70	906,236	Jones	Dec. 8, 1908
	1,195,034	Lang	Aug. 15, 1916
	1,794,940	Zimmermann	Mar. 3, 1931
	1,999,554	Zucker	Apr. 30, 1935
	2,487,400	Tupper	Nov. 8, 1949
75	2,514,902	Sabath	July 11, 1950