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3,226,015

WASTE RECEPTACLE

Filed July 9, 1964

2 Sheets-Sheet 1

FIG. 1

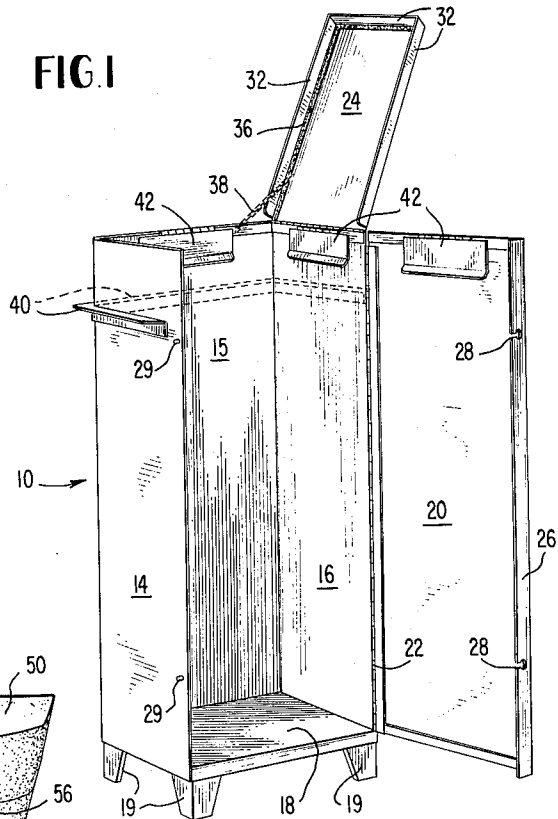
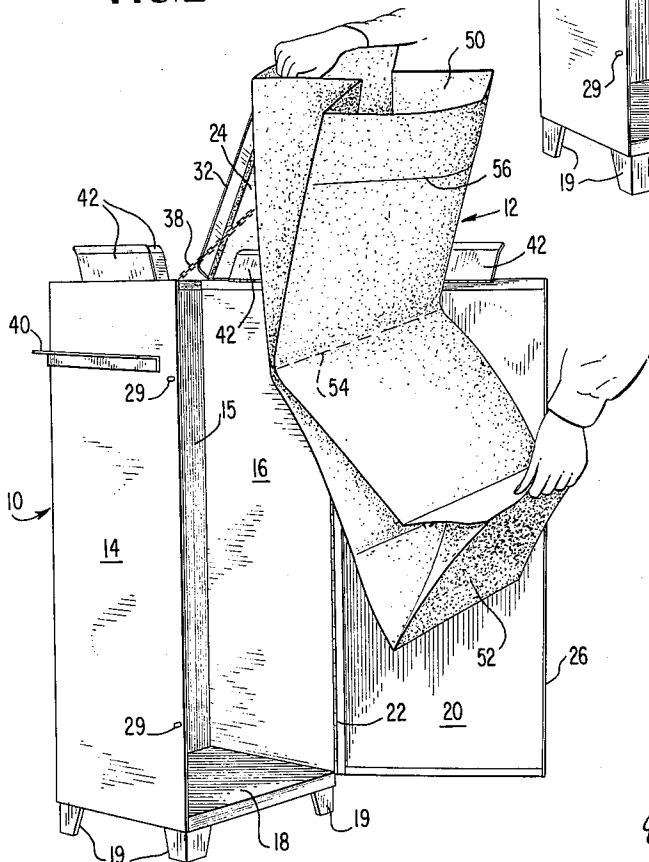


FIG. 2



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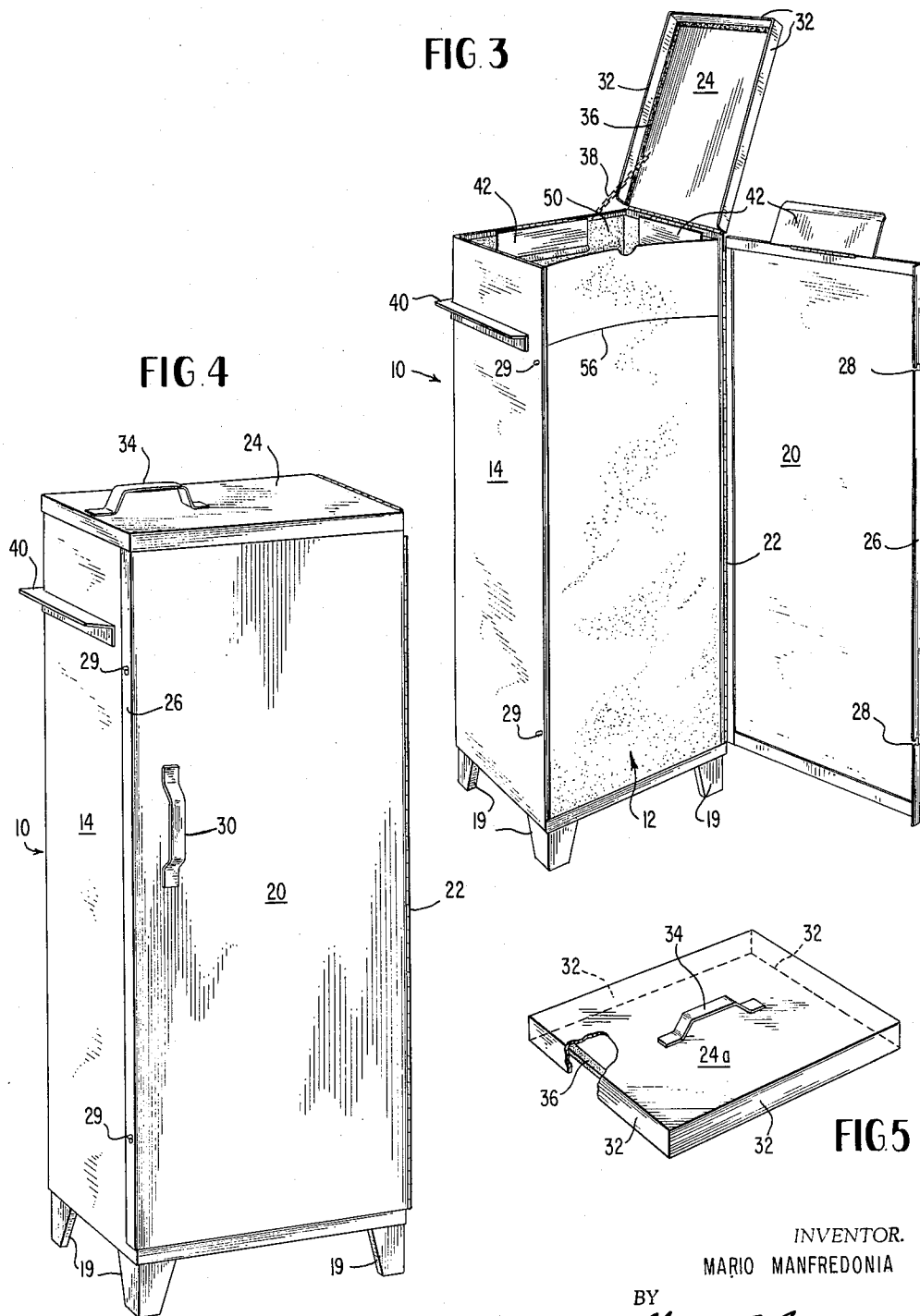
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WASTE RECEPTACLE

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6 Claims. (Cl. 232—43.2)

This invention relates to waste containers and specifically to waste containers having a disposable inner liner.

Waste containers having disposable inner liners have been generally known in the art. They offer numerous advantages and benefits over the conventional garbage can, and their use around homes, factories, restaurants and other areas where waste handling involves esthetic, cost, and time considerations is rapidly increasing.

The present invention provides an attractive, efficient durable waste receptacle comprising a rectangular outer metal cabinet and an inner disposable paper bag liner. The outer cabinet is novel in the waste receptacle art in that it is provided with a full top door and a full front door which, when both are opened, completely exposes the interior of the cabinet. Without projections to interfere, a disposable bag may then be placed inside the metal cabinet and, when filled, removed therefrom with an absolute minimum of effort and technique. No lifting of any kind is actually involved unless the bag is to be carried to a remote location.

The bag itself is preferably a double-layer waterproof paper bag which, when opened, is self-standing. The bag is dimensioned to fit snugly within the metal cabinet, resting on the bottom thereof, with the sides of the bag being buttressed against outward deflection by the sides of the cabinet when its top and front doors are closed. The top of the bag is held open by simple hinged flaps attached to the cabinet walls, which flaps hang down inside the bag opening a short distance.

The opening closed by the full top door or lid of the cabinet is used when filling the receptacle with trash. The full front opening closed by the front door is used when inserting and removing the inside bag liner. A novel feature of the present waste receptacle is the design of the interlocking arrangement of top and front doors of the cabinet whereby the front door cannot be opened before the top door is fully raised. Such an arrangement prevents the front door from accidentally opening and exposing the bag to animals and the weather, and prevents small children from tampering with the contents of the receptacle.

Accordingly, as will be apparent from the broad description given above and the more detailed description provided in the specification below, the object of this invention is to provide an attractive and efficient waste receptacle having an outer cabinet and a disposable inner liner that may be installed and removed with a minimum of technique and effort.

It is still further an object of this invention to provide a waste receptacle of the type using a cabinet and a disposable liner, wherein the cabinet of the receptacle is rectangular in form, and includes a full opening top door and a full opening front door which may both be opened to completely expose the interior volume thereof from the top and front directions.

It is still further an object of this invention to provide a waste receptacle of the type including an outer cabinet and a disposable inner liner, and wherein the liner is self-standing, and is in the form of a paper bag which is dimensioned to fit snugly within the interior of the cabinet of the receptacle.

It is further an object to provide a waste receptacle including an outer cabinet and an inner disposable bag

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wherein the outer cabinet has a full top opening for filling the bag and a full front opening for inserting and removing the bag from the cabinet.

Another object still is to provide a waste receptacle including a full top opening and a full front opening closed by respective hinged door members whereby, when both doors are closed, the top door must first be opened before the front door may be opened.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises a product possessing the features, properties, and the relation of components which will be exemplified in the product hereinafter described and the scope of the invention which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawing, in which:

FIG. 1 is an elevation perspective view of the cabinet only of the waste receptacle embodied by the invention, with the full top and front doors open;

FIG. 2 is an elevation perspective view of the bag liner of the receptacle being opened prior to installation in the cabinet;

FIG. 3 is an elevation perspective view of the waste receptacle with the disposable bag installed, and with the top and front doors of the cabinet open;

FIG. 4 is an elevation perspective view of the waste receptacle with the top and front doors closed; and

FIG. 5 is an elevation perspective view of a separate cover to replace the hinged top door.

Referring now to FIGS. 1, 2 and 3 of the drawing, the waste receptacle of the present invention includes an outer cabinet 10 and an inner disposable bag-type liner 12.

As shown in FIG. 1, the cabinet 10, preferably formed of sturdy steel sheet metal stock, has walls comprising planar side panels 14 and 16 and a back panel 15, all these being rigidly secured to each other and to a bottom panel 18 which is supported on four legs 19. The front panel 20 is in the form of a full door hinged along its one side edge at 22 to the adjoining free front edge of said panel 16. The top of the cabinet is in the form of another full door member 24 hinged along a side edge to the adjoining free top edge of panel 16.

The free side edge of the front door member 20 is provided with a turned flange section 26 having latch openings 28 thereon for cooperating with latch pins 29 provided adjacent the free front edge of panel 14 when the door is closed (see FIG. 4). A handle 30, as shown in FIG. 4, enables the door 20 to be manipulated to the open and shut positions, as shown in FIGS. 1 and 4, respectively, and enables the door 20 to be raised slightly to enable the latch opening 28 to clear the latch pins 29. The sides of the cabinet are deformed slightly when door 20 is raised by manipulation during the unlatching and latching operation but the natural tendency is for the latch pins 29 to be secured in openings 28 when the door is not being urged upwardly.

The top door or lid 24 is provided along its free edges with three downturned flange sections 32 which overlap the top edges of the cabinet back and side panels 14, 15 and 16 and the top edge of the front door member 20 when the top door is in closed position (see FIG. 4). A handle 34 enables the top door 24 to be manipulated to open or closed position. As will be apparent from looking at FIG. 4, when both top and front doors 24 and 20 are closed, the top door 24 must first be raised to open position before front door 20 can be swung open due to the overlapping relationship between the flange

32 of door 24 and the top edge of door 20. As stated at the outset of the specification, this design minimizes the changes of front door 20 accidentally being opened when the receptacle is unattended. The interior surface of the top door 24 includes a resilient gasket 36 (see FIG. 1) which helps to seal odors within the receptacle and minimizes noise incident to closing the door. A stop chain 38 limits the movement of top door 24 in its raised position. As shown in FIG. 5 a separate cover 24a may be substituted for the hinged cover 24. Such cover 24a is provided with four downturned flange sections 32 which overlap all four top edges of the cabinet when the front door member 20 is closed. This cover 24a is also provided with a handle 34 and the gasket 36.

A handle-bumper element 40 (see FIG. 1) extends along the side and back panels 14, 15 and 16 parallel to the bottom panel 18, and provides means for lifting the receptacle, stiffens the cabinet against distortion and prevents the cabinet from resting against an obstacle in such a manner that opening of the top door 24 would be impeded. Such element can also be provided with holes to serve as clamping means for a tray or other accessory.

Four flap members 42 (three are shown in FIGS. 1 and 3) are hingedly connected to the free top edges of side and back panels 14, 15 and 16 and the free top edge of front door 20. These flaps hang downwardly due to their own weight (although a spring device could be used to bias them downwardly) and are used to hold the mouth of the bag liner open in a manner that will become clearer as the description of the invention proceeds.

Referring now to FIGS. 2 and 3, the liner 12 of the waste receptacle is in the form of an automatic or self-opening square (SOS) bag having a top mouth, or opening, 50 and a substantially flat bottom portion 52. Like the typical grocery bag, the liner 12 is stored in flat condition prior to use, and may be folded along line 54 to still further form a compact unit when stored. Unfolding the bag is a simple maneuver, as illustrated in FIG. 2, when the diagonally opposite top and bottom edges of the bag are grasped and pulled apart. When opened, the bag 12 is simply installed in the cabinet 10 as illustrated in FIG. 3. When so installed, the bag fits snugly along the side and back panels of the cabinet and along the front door 20 when it is closed. It will be noted that the sides and bottom of the liner 12 conform as closely as possible to the side, back, front and bottom panels of the cabinet, and this is important. The close fit between the liner and cabinet enables the line walls to be buttressed by the cabinet walls when trash is being compacted within the liner.

The liner 12 is provided with a fill marker 56 imprinted thereon. The receptacle user is advised not to fill the liner bag 12 above this mark to enable the top of the bag to be closed and folded over the trash when the bag is to be disposed of. The bag 12 is formed of two plies of heavy duty kraft paper of the wetproof type, and, due to its relative rigidity, is free standing in the open position.

The flaps 42 are lifted up and then dropped over the top edges of the liner 12, as shown in FIGS. 2 and 3, to hold the mouth 50 of liner 12 open when installed in the cabinet 10. When removing the liner, the flaps are simple raised to release the bag edges.

Since the fill line 56 will normally be covered by the front door 20 during use, or, if it is desired not to print a fill line on the liner, the handle-bumper member 40 is positioned on the cabinet 10 at the normal fill line level, as shown in FIG. 3, whereby an external indication is provided of the location of the desired fill level of the liner 12.

As is clearly evident in FIGS. 1 and 3, the front door 20 is hinged at its extreme side edge, to a side panel, whereby when the door 20 is opened, no obstruction

whatsoever is presented to impede the installation or removal of the liner 12 in a forward and backward direction. By the same token, installation and removal of the liner is further facilitated by the configuration and hinged connection of top door 24 which enables complete exposure of the interior of the cabinet from the top when it is placed in open position. When both doors 20 and 24 are opened, an extremely accessible cabinet is provided whereby placement and removal of the liner is the simplest of tasks. Since the filled liner may be slid out forwardly through the full front opening provided by the opened door 20, no lifting of the bag or other component of the receptacle is necessary to empty the receptacle of trash.

It is to be understood that the details of construction shown and described are exemplary only. The door latch details, the specific top door lid form and other features of the waste receptacle can be modified without departing from the scope of the invention which is set forth in the following claims.

Since certain changes may be made in the above article and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A cabinet for enclosing a disposable liner in a waste receptacle, said cabinet being generally rectangular in form and having panels forming the front, sides and back of said cabinet, said panels having free top edges; a bottom panel; and a top panel; the panel forming the front of said cabinet being longitudinally hinged along a side edge thereof to the edge of an adjoining side panel to provide a full front door for the waste receptacle; said top panel being hingedly connected along one of its edges to the free top edge of one of said panels forming the sides and back of said cabinet to thereby provide a lid means for the waste receptacle; said top panel further including a flange member along its front edge extending normal to the plane of the top panel, said flange member overlapping the adjoining free top edge of said panel forming the front door of said cabinet when the top and front panels are in closed position; individual flap means hingedly secured to said top edges of each of the front, side and back panels of said cabinet, said flap means being secured to hang vertically downward parallel to and closely adjacent said front, back and side panels of said cabinet; and a handle-bumper member extending substantially parallel to said bottom panel of said cabinet, said handle-bumper including a rigid outwardly extending portion for enabling the cabinet to be grasped and lifted and for preventing the cabinet side and back panels from lying against a fixed flat surface at the location of said handle-bumper member.

2. A waste receptacle comprising an outer, generally rectangular, upstanding cabinet, and a disposable, bag-like liner fitting closely within said cabinet and conforming substantially to the interior configuration of said cabinet, the walls of said cabinet comprising a pair of side panels connected to a single back panel and a bottom panel along their back and bottom edges, respectively, said side panels having free top and front edges, and said back panel having a free top edge, a top panel having a front edge and hingedly secured to the free top edge of one of said side panels, said top panel forming a lid for the waste receptacle, and a single, full front panel hingedly secured along one of its side edges to the free front edge of one of said panels and forming a full

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front door for said waste receptacle, means for latching said door in a closed position, said top panel including a flange member along its front edge, said flange member extending downwardly when said panel is in closed position and overlapping the upper edge of said front door when both the top panel and front door of said cabinet are closed, a handle-bumper member extending substantially parallel to said bottom panel of said cabinet, said handle-bumper including a rigid outwardly extending portion for enabling the cabinet to be grasped and lifted and for preventing the cabinet side and back panels from lying against a fixed flat surface at the location of said handle-bumper member, said bag-like liner having an open mouth area disposed near the top of said cabinet, and means associated with the top areas of the cabinet walls for normally holding the mouth of said liner in open position.

3. The waste receptacle of claim 2 wherein said front door latching means comprises latch pin members disposed on a side panel, and latch pin openings provided in said front door for engaging said latch pins when said door is in closed position, the side panel including the latch pins being that side panel opposite to the side panel to which the front door is hingedly secured.

4. The waste receptacle of claim 2 wherein said means for holding the mouth of said liner open com-

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prises individual flap elements hingedly secured to the free top edges of said side and back panels and the upper edge of said front door of said cabinet, said flaps normally hanging downwardly along the inner surfaces of said liner in the area of said liner mouth.

5. The waste receptacle of claim 2 wherein said liner is a free standing bag when empty and in open position.

6. The waste receptacle of claim 2 wherein said top lid and said front door are both hingedly secured at their edges to the top and front edge, respectively, of the same side panel of said cabinet.

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