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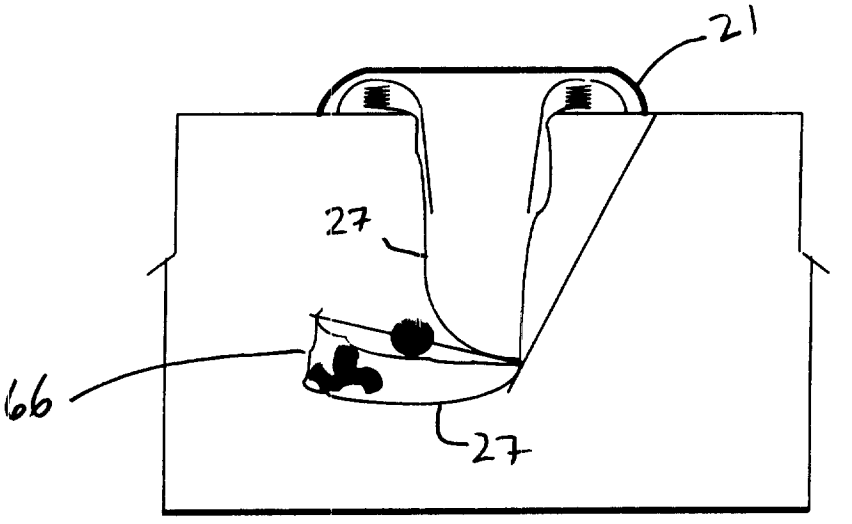
(54) **DISPOSITIF DE COLLECTE DE DECHETS**
(54) **WASTE COLLECTION DEVICE**



(57) L'invention porte sur un dispositif de collecte de déchets servant de préférence à recueillir des déchets dégageant des odeurs désagréables comme des excréments d'animaux d'accompagnement. Le dispositif comprend un sac flexible comportant un compartiment de stockage des déchets pour y recueillir et stocker les déchets, un rabat pour fermer le compartiment de stockage; le compartiment ainsi fermé se trouve scellé afin de minimiser les fuites d'odeurs ou la perte de déchets; le dispositif comprend en outre une tige rotative afin d'ouvrir le compartiment de stockage pour y avoir accès et un corps pour supporter et ranger le sac afin de faciliter l'accès au dispositif de collecte de déchets.

(57) A waste collection device preferably for use for the the collection of waste having unpleasant odours such as pet feaces, said waste collection device comprising a flexible bag having a waste storage compartment for collecting and storing waste therein, a flap for closing said waste storage compartment to a closed position, wherein in said closed position the waste storage compartment is sealed off thereby minimizing escape of waste and odours from said waste storage compartment, a rotatable shaft for opening said waste storage compartment to an open position, the open position providing access to said waste storage compartment, and a body for supporting and storing said bag to facilitate ease of use of the waste collection device.

ABSTRACT

A waste collection device preferably for use for the the collection of waste having unpleasant odours such as pet feaces, said waste collection device comprising a flexible bag having a waste storage compartment for collecting and storing waste therein, a flap for closing said waste storage compartment to a closed position, wherein in said closed position the waste storage compartment is sealed off thereby minimizing escape of waste and odours from said waste storage compartment, a rotatable shaft for opening said waste storage compartment to an open position, the open position providing access to said waste storage compartment, and a body for supporting and storing said bag to facilitate ease of use of the waste collection device.

Title: WASTE COLLECTION DEVICE

Field of the Invention

This invention is related to the care and maintenance of indoor domestic animals and in particular to a waste collection system which operates as a means of holding animal wastes in a clean and odour free manner, for convenient future disposal.

Background of the Invention

This device is for disposing of malodorous cat waste from either a litter box or any other area so that exposure to unpleasant odours is minimized. Whereas a cat will consistently use a litter box, the cat owner must consistently clean the waste material from the litter box in order for the cat to continue to use the box. This is typically done daily by moving the waste with a scoop or other tool, to a household garbage bag which often is already partly full and containing its own unpleasant contents. The need to keep a garbage bag handy for cleaning the litter box also clutters up space around the litter box and can cause unpleasant odours in the locale of the partly used garbage bag. Another alternative would be to store the cat faeces in a collection of numerous plastic bags from say, a grocery store; itself an inconvenience to a pet owner. As cat waste has a very strong odour, the odour will often leak from a loosely closed bag. This device allows for daily (or as frequently as convenient) removal of wastes from the litter box (the important removal being

that of the malodorous feline faeces) to storage in a clean, sanitary device capable of minimizing local odours, storing waste for up to a week and subsequently sanitary, odour free disposal.

The device is designed to hold in excess of a week's worth of waste from one cat, this being a convenient time scale for use by house or condominium dwellers who, as such, will have their garbage picked up by their local government once per week or make weekly trips to their local garbage dump.

The device will be especially useful to apartment dwellers or cat owners with limited living space as they can dispose of the device's contents when the containment is full or partly used without the unpleasantness of living in a small area with a highly malodorous, partly used garbage bag or litter box.

The device will preferably have the following innovative features:

(a) Is a pleasing, non-obtrusive appearance, (in colours which can match the litter box), can be located next to the existing litter box(es).

(b) Is compact and will not take up much room in the locale of the litter box.

(c) Will remove from view any materials removed from the litter box and effectively preventing odours from escaping into the surrounding locale.

(d) Will hold in excess of one week's waste allowing pet owners to remove the containment only once per week, probably on the day their household garbage is removed.

(e) The device requires no power and is easily manually operated.

Other devices associated with pet litter boxes and disposal of waste do not attempt to alleviate the pet owner of daily waste disposal and with the associated secondary unpleasant odour of reopening an already used garbage bag, or requiring the use of a new disposal bag every day, which requires attention to bag storage. Also, other waste disposal systems do not attempt to provide a timed weekly disposal of waste with the other household garbage.

Summary of the invention

The present invention a waste collection device preferably for use for the collection of waste having unpleasant odours such as pet faeces, said waste collection device comprises a flexible bag having a waste storage compartment for collecting and storing waste therein; a means for closing said waste storage compartment to a closed position, wherein in said closed position the waste storage compartment is sealed off thereby minimizing escape of waste and odours from said waste storage compartment; a means for opening said waste storage compartment to an open position, the open position providing access to said waste storage compartment; and a means for supporting and storing said bag to facilitate ease

of use of the waste collection device.

Preferably said means for closing said bag is normally in said closed position sealing off said waste storage compartment.

Preferably said closing means divides said bag into two compartments: an upper compartment and a lower waste compartment, wherein said upper compartment forms a waste chute for directing waste into said lower waste compartment when said opening means is in said open position.

Preferably said closing means includes a flap connected to said supporting means and normally resiliently biased in said closed position, said flap collapsing said bag upon itself sealing off said bag thereby forming said waste storage compartment, wherein said opening means urges said flap from said closed position to an open position.

Preferably said opening means includes a shaft rotatably mounted to said supporting means, wherein one end of said flap is rigidly longitudinally mounted onto said shaft and depends therefrom, said shaft further includes a means for rotating said shaft with said attached flap from said closed position to said open position.

Preferably said supporting means includes a hollow body wherein said bag lines an interior

surface of said body, such that said bag protects an interior surface of said body from contamination with waste.

Preferably said body has an upper compartment and a lower waste compartment corresponding with said bag compartments.

Preferably said bag is removably attachable to said upper compartment of said body.

Preferably said body forms a substantially air tight enclosure around said bag thereby preventing escape of unpleasant odours from said waste collection device.

Preferably said body has an openable lid, such that opening the lid provides access to said upper compartment and said waste chute, and closing said lid provides a substantially air tight seal.

Preferably said closing means includes a flap mounted to said body and normally resiliently biased in said closed position, said flap collapsing said bag upon itself and against the body thereby sealing off said bag and forming said waste storage compartment wherein said opening means urges said flap from said closed position to said open position.

Preferably said opening means includes a shaft rotatably mounted to said body, wherein one

end of said flap is rigidly longitudinally mounted onto said shaft and depends therefrom, said shaft includes a means for rotating said shaft with said attached flap from said closed position to said open position.

Preferably said rotating means includes a knob rigidly mounted on one end of said shaft which is projecting from exterior of said body for manually turning said shaft which in turn urges said attached flap against said resilient bias and thereby moving said flap to said open position.

The present invention a waste collection device preferably for use for the collection of waste having unpleasant odours such as pet faeces, said waste collection device comprises a flexible bag in the form of a collapsed tube which selectively unravels to form an endless hollow tube providing a waste compartment for collecting and storing waste therein; a means for coiling said endless hollow tube with said waste deposited in said waste compartment onto a rotatable vane for sealing off a section of said bag and said waste compartment thereby minimizing escape of waste and odours from said waste compartment; a means for opening said collapsed tube to form said hollow tube and said waste compartment to an open tube position, the open tube position providing access to said waste storage compartment; and a means for supporting and storing said bag to facilitate ease of use of the waste collection device.

Brief Description of the Drawings

The invention will now be described by way of example only, with references to the following drawings in which:

Figure 1 is a side elevation of the complete device with a child resistant cover fitted.

Figure 2 is an end elevation of the device with the child resistant cover removed.

Figure 3 is a top view of the device with the child resistant cover fitted.

Figure 4 is a top view of the device without the child resistant cover in place.

Figure 5 and 6 is a cross-section showing the device ready for use.

Figure 7 and 8 is a cross-section showing the device after its first use, but not with the waste sealed off.

Figure 9 and 10 is a cross-section after the first use with the waste sealed off, ready for re-use and with the child resistant cover in place.

Figure 11 is a schematic cross-sectional view of the presently preferred embodiment after the first use with the waste sealed off, ready for re-use.

Figure 12 is a schematic top view of the device.

Figure 13 is a schematic cross sectional view taken through A-A of Figure 12.

Figure 14 is a partial cutaway perspective view of the presently preferred embodiment.

Detailed Description of the preferred Embodiment

The device is a container made mainly of plastic, containing a tubular waste collection bag (27), being split approximately halfway up its height in a horizontal direction, having a removable access opening with a raised annulus (24) protruding down through the top surface, itself fitted with a child resistant circular cover (21) for disposal of wastes (31) into the tubular plastic bag (27) loosely held to the outside of the neck of the annulus (24), on the underside of the annulus (24) opening, above the top surface of the device. The top half (22) of the device is supported by the bottom half (23). The plastic bag (27) is approximately 4" in diameter and of sufficient length, and hence, volume, to collect wastes in excess of one week for one cat. The bag (27) (which may be biodegradable) is disposed of when full and replaced by a new bag which is purchased, "concertinaed" along its length into an approximate 4" diameter ring to form a circular "doughnut" shape in which form it is sold to the user.

The "doughnut" rests on the top surface of the device, held in place by the outside of the neck of the annulus (24), which protrudes down through the top surface of the device with a sufficiently small clearance between itself and the top surface of the device to hold the concertinaed bag (27) above the top surface but also to allow the bag (27) to be used by its being pulled downwards into the device through the clearance, becoming elongated into its natural shape as this occurs.

If the bag (27) is already installed then its end will be attached to the vane (29). To

install a new bag, the top half (22) of the device is removed from the bottom half (23), the top annulus (24) is removed from the top half (22) of the device and the bag "doughnut" is placed over the lower neck of the annulus (24), this assembly then being replaced into the top half (22) and the end of the bag (27) pulled through the top surface and closed with a tie-wrap. The closed end of the bag, along the tie-wrap, is pushed into a slot in the end of the vane (29). The top half (22) of the device is then replaced onto the bottom half (23). A hand gripped knob (25) on the outside of the device is attached to the centre of the rotatable vane (29) by a shaft (28) passing through the side of the device's lower half (23) and connecting the vane (29) and the knob (25).

At this point, a deposition of the litter waste (31) is dropped into the bag (27) through the top annulus (24). After deposition, the operator clasps the knob (25) and turns it in a clockwise direction, pulling more bag (27) through the clearance around the top annulus (24) by rotation of the vane (29). The opposite end of the vane (29) comes around the forces itself against the side of the bag (27) freshly pulled through the top of the device, effecting a seal. This seal is maintained by the pressure of the vane (29) against the tension in the bag caused by its being pulled through the top clearance and also of the vane (29) against the spring loaded sealing flap (30) inside the device, attached to the inside of the top half (22) of the device. This closure prevents the odours from escaping after use enabling storage of wastes (31). The child resistant cover (21) is then replaced by the operator, further helping containment of odours.

Upon the next cleaning of the litter box, the operator removes the child resistant cover (21), deposits the waste (31) through the annulus (24) into the bag (27), rotates the knob (25) to affect sealing the bag (27) and then replaces the child resistant cover (21). This rotation of the knob (25) has pulled more bag (27) through the device's top surface from outside of the annulus (24) leaving an empty length of bag (27) between the end of the annulus (24) and the end of the vane (29), available for the next use.

Eventually, bag (27) will become used up, which will be obvious to the operator as the end of the bag (27) will fall off the end of the annulus (24) and there will be no tension on the knob (25) and the end of the bag (27) will be visible through the annulus (24). At this point, the top half (22) of the device is removed and the tail end of the bag (27), now easily accessible, sealed off with a tie wrap and the whole length of the filled bag removed by pulling the bag (27) from the vane (29) which counter-rotates until the other end of the bag (27) is visible whereupon it can be removed from the end of the vane (29) and the disposed of, closed, without exposure of its contents. A new bag is then installed as above. The spring loaded sealing flap (30) is attached to the device's top half (22), and being removed with that half does not hinder the removal of the bag or the unwrapping of the vane (29).

Figures 1 through 4 schematically depicts the exterior of the waste collection device shown generally as 20. Waste collection device 20 has a top half 22, bottom half 23, raised annulus 24, rotatable knob 25, child resistant cover 21 and a waste chute 32.

Referring also to Figures 5 and 6 which schematically depicts the interior 40 of waste collection device 20. Top half 22 and bottom half 23 have planar sides creating a hollow box-like structure. Top half 22 contacts and rests upon bottom half 23 at parting line 34. Preferably the contact at parting line 34 is substantially air tight thereby preventing escape of odours through parting line 34. To half 22 is preferably lockable releasably fastened to bottom half 23. Top half 22 also has a top aperture 36 defined in top side 38 which provides access into the interior 40 of waste collection device. Annulus inner lip 42 of annulus 24 fits concentrically within top aperture 36 providing enough space between inner lip 42 and top aperture 36 for annulus bag 27 to pass through.

Annulus 24 creates a raised pocket 44 between top side 38 and annulus 24 for housing therein a tightly layered mass of bag 27 which is essentially a long tightly collapsed tube 46.

Inner lip 42 of annulus 24 defines waste chute 32 which is a passageway entering the interior 40 of waste collection device 20.

Preferably annulus 24 is removably fastened to top side 38 of waste collection device 20, for replacement of collapsed tube 46. Additionally a child resistant cover 21 can be removably fastened to top side 38 of waste collection device 20, in order to prevent access to waste chute 32 and also prevent escape of odours from the interior 40 of waste collection device 20.

Referring to Figures 5 and 6 a shaft 28 is pivotally mounted to first side 48 and second side 50 of bottom half 23 of waste collection device 20. Knob 25 is rigidly connected to shaft 28, wherein rotating knob 25 rotates shaft 28. Vane 29 projects radially from shaft 28 and is preferably square or rectangular in shape as depicted in Figure 3. Vane 29 is dimensions to be slightly smaller then width 52 and is adapted to freely rotate within the interior 40 of waste collection device 20. Preferably there are mounted two identical vanes horizontally opposed as shown in Figure 5, however, the device may work with fewer or more vanes 29. The bag end 54 is fastened proximate to the outer perimeter of a vane 29 and preferably centrally across the width 52 of vane 29.

Bag end 54 is preferably releasably fastened to vanes 29 in such a way as to provide a substantially air tight seal thereby preventing release of any odours from bag 27 through bag end 54.

Bag 27 fastened to vane 29 at bag end 54 forms a waste compartment 56 having a bottom 58. A flap 30 is resiliently biased against vane 29 with a compression spring 60 ensuring positive contact with either vane 29 or bag 27. It will be apparent to those skilled in the art any suitable means for raising flags 30 against vane 29 or bag 27 can be utilized.

In use, waste collection device 20 is assembled as follows:

Firstly, collapsed tube 46 which is donut like shaped is placed on top side 38 and positioned concentrically with top aperture 36. Bag end 54 is unravelled and pulled down through top aperture 36. Now raised annulus 24 can be releasably attached to top side 38 thereby forming pocket 44 which houses collapsed tube 46. Collapsed tube 46 is dispensed by urging bag end 54 or bag 27 downwards thereby unravelling collapsed tube 46.

Bag end 54 is releasably fastened to vane 29 thereby closing off bag end 54 and forming waste compartment 56. Top half 22 can now be releasably attached to bottom half 23 along party line 34 providing a substantially air tight seal.

Cat litter or other types of waste 31 are placed into waste chute 32 which is formed by raised annulus 24 and inner lip 42. As shown in Figure 7, waste 31 passes down waste chute 32 and enters waste compartment 56 formed by bag 27.

Figure 7, 8, 9 and 10 depict the sequence in which waste 31 is substantially encapsulated by bag 27. Knob 25 is rotated which rotates shaft 28 which in turn rotates vane 29. Waste 31 rests inside waste compartment 56. Turning vane 29 coils or wraps bag 27 onto vane 29 as shown in Figure 9 and 10. Continuing to rotate vane 29 causes vane end 62 to make contact with bag 27 thereby collapsing bag 27 onto itself and onto vane end 62, effectively sealing off and encapsulation waste 31 within a portion of bag 27. Vane end 62 not only collapses bag 27, but also brings bag 27 into contact with flags 30 creating a

substantially air tight seal at seal area 64.

A new waste compartment 56 is created ready to receive new waste and rotating knob 25 repeats the encapsulation of the waste and coiling of bag 27 onto vane 29.

It is apparent that repeating the above sequence over and over again will encapsulate waste in bag 27 and coil it onto vane 29 until collapsed tube 46 is exhausted and/or vane 29 has become so full it can no longer rotate. Once collapsed tube 46 is exhausted, top half 22 is removed, the full end (not shown) of collapsed tube 46 is tied off and coiled bag 66 can be removed from vane 29 by uncoiling or by possibly removing coiled bag 66 in its entirety. It may be necessary to provide for a mechanism to collapse vane 29 in order to facilitate removal of coiled bag 66 from vane 29.

Cover 21 is used to close off waste chute 32 when waste collection device is not in use. Cover 21 is preferably releasably attached to top side 38 in such a manner as to be child resistant and provide substantial air tight seal to prevent escape of unwanted odours.

A presently preferred embodiment of the present invention a Waste Collection Device shown generally as 100 includes a body 102, a bag 104, a flap 106, and a spring 108. Body 102 has a front side 110, a back side 112, a bottom side 114 top side 116, and an interior surface 103. Removable bag 104 lines the interior surface 103 of body 102, thereby

protecting interior surface 103 of body 102 from contamination with waste 150. Body 102 also has a lid 118 located near top 120 and is detachable from body 102. Lid 118 may in fact hinge on back side 112 and pivotally be raised and lowered so as to expose waste chute 122. Lid 118 on the other hand may be entirely removable from body 102 thereby allowing access to waste chute 122 within top 120 of body 102. Lid 118 and body 102 make contact at parting line 124 and preferably the seal between lid 118 and body 102 is air tight or nearly air tight in order to prevent noxious odours and fumes escaping from body 102. Body 102 is generally subdivided into two sections, firstly upper compartment 126 and secondly lower waste compartment 128 wherein flap 106 defines the boundary between upper compartment 126 and lower waste compartment 128. Bag 104 lines upper compartment 126 and lower waste compartment 128 and forms a waste storage compartment 129 within lower waste compartment 128.

Body 102 is preferably rectangular in shape as shown in the attached figures, however, may be any other shape that proves to be practical. By way of example, the shape of body 102 maybe, but is not limited to round, hexagonal, square, cylindrical and/or any other shape which will accommodate the function of the waste collection device 100.

In this case, body 102 of waste collection device 100 is rectangular in order to accommodate standard sized garbage bags which is available from supermarket stores or other sources. As mentioned above, the shape of body 102 can be varied in order to accommodate any bag, size

or shape, and the shape chosen of this preferred embodiment is for example purposes only, and to accommodate standard bag sizes.

Bag 104 is fitted within hollow body 102 by attaching the bag top end 127 onto bag clip 130. Bag clip 130 may be any design known in the arts of attaching the end of a bag such that it is held in place until a predetermined amount of force is applied to the bag in order to release it from bag clip 130. From Figure 11 it is apparent that the upper portion of bag 104 defines a waste chute 122 which allows a user to place garbage or faeces therein. Flap 106 is attached to shaft 136 and is pivotally mounted onto body ends 138 of body 102. One end of shaft 136 has rigidly mounted thereon a knob 140 for rotating shaft 136.

Flap 106 is normally biased by spring 108 against the back side 112 of body 102, thereby bringing into contact bag back side 132 with bag front side 134 and sealing off the waste chute 122 portion of bag 104 from the lower waste compartment portion 128 of bag 104.

Spring 108 may in fact be any device which can resiliently bias flap 106 against back side 112. Any method of resiliently biasing flap 106 against back side 102 which is known in the arts may be suitable for this application.

Back clip 130 as shown is simply an inverted L shape flange attached to the inner side

of body 102 near the top 120 in order that bag top ends 127 of bag 104 are manually slipped into the L shape flanges which comprise bag clips 130.

In use waste collection device 100 is assembled as shown in figures 11 through 14. Lid 118 is removed from body 102 either entirely or hinges open remaining attached to body 102, permitting access to waste chute 122 of bag 104. Flap 106 is normally urged against back side 112 (closed position) by spring 108 thereby sealing off bag 104 by bringing into contact bag back side 132 with back front side 134 and creating a lower waste compartment 138 which is substantially sealed off from the rest of bag 104.

Waste such as cat faeces or any other pet faeces and/or other odorous waste placed into waste chute 122 wherein is captured in upper waste compartment 142. Next the user of waste collection device 100 would rotate knob 140 against the biasing of spring 108 in order to urge flap 106 away from back side 112 of body 102 thereby allowing communication between upper waste compartment 142 and lower waste compartment 128 (open position). When Flap 106 has opened sufficiently waste accumulated in upper waste compartment 142 will fall under gravity into lower waste compartment 128 where it is collected.

Thereafter, knob 140 is released and returns to the normally closed position shown in Figure 11 due to the force of spring 108 urging flap 106 against back side 112 of body

102. Thereafter, lid 118 is placed back upon body 102 making a seal with body 102 at parting line 124.

The above process is repeated when additional waste is to be added to bag 104 until lower waste compartment 128 of bag 104 has been completely filled. At that point bag 104 is removed from bag clips 130 and tied off at bag top ends 127 and thereafter disposing of bag 104 with waste 150 contained therein.

This provides for the efficient removal of waste 150 in a manner which minimizes the emission of noxious odours and handling of other waste which may give off unpleasant odours or fumes.

Any suitable materials may be used to make body 102, shaft 136, flap 106, spring 108, clips 130 and lid 118. Which ever materials make for the best efficiency in regard to manufacturing of the unit would preferably be used as for example but not limited to plastic wood, metal and/or other materials which may prove to be suitable. The drawings show that shaft 136 passes entirely through body ends 138. This may in fact not be the most desirable way of building waste collection device 100 and in fact shaft 136 may not pass through body end 138 at shaft end 152. As well knob end 154 where shaft 136 passes through body end 138 it is preferable at this point that shaft 136 which is pivotally attached to body end 138 be as hermetically sealed as possible limiting the amount of fumes and odours that are able

to pass through.

It should be apparent to persons skilled in the arts that various modifications and adaptation of this structure described above are possible without departure from the spirit of the invention the scope of which defined in the appended claim.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A waste collection device preferably for use for the collection of waste having unpleasant odours such as pet feaces, said waste collection device comprising:

a) a flexible bag having a waste storage compartment for collecting and storing waste therein;

b) a means for closing said waste storage compartment to a closed position, wherein in said closed position the waste storage compartment is sealed off thereby minimizing escape of waste and odours from said waste storage compartment;

c) a means for opening said waste storage compartment to an open position, the open position providing access to said waste storage compartment; and

d) a means for supporting and storing said bag to facilitate ease of use of the waste collection device.

2. The Waste Collection Device claimed in claim 1 wherein said means for closing said

bag is normally in said closed position sealing off said waste storage compartment.

3. The Waste Collection Device in claim 2 wherein said closing means divides said bag into two compartments: an upper compartment and a lower waste compartment, wherein said upper compartment forms a waste chute for directing waste into said lower waste compartment when said opening means is in said open position.

4. The Waste Collection Device in claim 3, wherein said closing means includes a flap connected to said supporting means and normally resiliently biased in said closed position, said flap collapsing said bag upon itself sealing off said bag thereby forming said waste storage compartment, wherein said opening means urges said flap from said closed position to an open position.

5. The Waste Collection Device in claim 4 wherein said opening means includes a shaft rotatably mounted to said supporting means, wherein one end of said flap is rigidly longitudinally mounted onto said shaft and depends therefrom, said shaft further includes a means for rotating said shaft with said attached flap from said closed position to said open position.

6. The Waste Collection Device in claim 1 wherein said supporting means includes a hollow body wherein said bag lines an interior surface of said body, such that said

bag protects an interior surface of said body from contamination with waste.

7. The Waste Collection Device in claim 6 wherein said body has an upper compartment and a lower waste compartment corresponding with said bag compartments.

8. The Waste Collection Device in claim 7 wherein said bag is removably attachable to said upper compartment of said body.

9. The Waste Collection Device in claim 7 wherein said body forms a substantially air tight enclosure around said bag thereby preventing escape of unpleasant odours from said waste collection device.

10. The Waste Collection Device in claim 9 wherein said body has an openable lid, such that opening the lid provides access to said upper compartment and said waste chute, and closing said lid provides a substantially air tight seal.

11. The Waste Collection Device in claim 10 wherein said lid forms a substantially air tight seal when closed thereby preventing escape of unpleasant odours from said waste collection device.

12. The Waste Collection Device in claim 11, wherein said closing means includes a flap

mounted to said body and normally resiliently biased in said closed position, said flap collapsing said bag upon itself and against the body thereby sealing off said bag and forming said waste storage compartment wherein said opening means urges said flap from said closed position to said open position.

13. The Waste Collection Device in claim 12 wherein said opening means includes a shaft rotatably mounted to said body, wherein one end of said flap is rigidly longitudinally mounted onto said shaft and depends therefrom, said shaft includes a means for rotating said shaft with said attached flap from said closed position to said open position.

14. The Waste Collection Device in claim 13 wherein said rotating means includes a knob rigidly mounted on one end of said shaft which is projecting from exterior of said body for manually turning said shaft which in turn urges said attached flap against said resilient bias and thereby moving said flap to said open position.

15. The Waste Collection Device in claim 12, wherein said resilient bias is a compression coil spring.

16. The Waste Collection Device in claim 12, wherein said resilient bias is a resilient rubber or foam rubber.

17. A waste collection device preferably for use for the collection of waste having unpleasant odours such as pet feaces, said waste collection device comprising:

a) a flexible bag having a waste storage compartment for collecting and storing waste therein; wherein said bag is removably attachable to an upper compartment of a body,

b) a means for closing said waste storage compartment to a closed position, wherein in said closed position the waste storage compartment is sealed off thereby minimizing escape of waste and odours from said waste storage compartment; wherein said means for closing said bag is normally in said closed position sealing off said waste storage compartment and said closing means divides said bag into two compartments: an upper compartment and a lower waste compartment, wherein said upper compartment forms a waste chute for directing waste into said lower waste compartment when said opening means is in said open position, furthermore wherein said closing means includes a flap mounted to said body and normally resiliently biased in said closed position, said flap collapsing said bag upon itself and against the

body thereby sealing off said bag and forming said waste storage compartment wherein said opening means urges said flap from said closed position to said open position,

c) a means for opening said waste storage compartment to an open position, the open position providing access to said waste storage compartment, and said opening means includes a shaft rotatably mounted to said body, wherein one end of said flap is rigidly longitudinally mounted onto said shaft and depends therefrom, and further said shaft includes a means for rotating said shaft with said attached flap from said closed position to said open position, wherein said rotating means includes a knob rigidly mounted on one end of said shaft which is projecting from the exterior of said body for manually turning said shaft which in turn urges said attached flap against said resilient bias; and

d) a means for supporting and storing said bag to facilitate ease of use of the waste collection device, wherein said supporting means includes ahollow body wherein said bag lines an interior surface of said body, such that said bag protects an interior surface of said body from contamination wherein said body has an upper compartment and a lower waste compartment corresponding with said bag wherein said body forms a substantially air tight enclosure around

said bag thereby preventing escape of unpleasant odours from said waste collection device wherein said body has an openable lid, such that opening the lid provides access to said upper compartment and said waste chute, and closing said lid provides a substantially air tight seal.

18. A waste collection device preferably for use for the the collection of waste having unpleasant odours such as pet feaces, said waste collection device comprising:

a) a flexible bag in the form of a collapsed tube which selectively unravels to form an endless hollow tube providing a waste compartment for collecting and storing waste therein;

b) a means for coiling said endless hollow tube with said waste deposited in said waste compartment onto a rotatable vane for sealing off a section of said bag and said waste compartment thereby minimizing escape of waste and odours from said waste compartment;

c) a means for opening said collapsed tube to form said hollow tube and said waste compartment to an open tube position, the open tube position providing access to said waste storage compartment; and

d) a means for supporting and storing said bag to facilitate ease of use of the waste collection device.

FIGURE 1

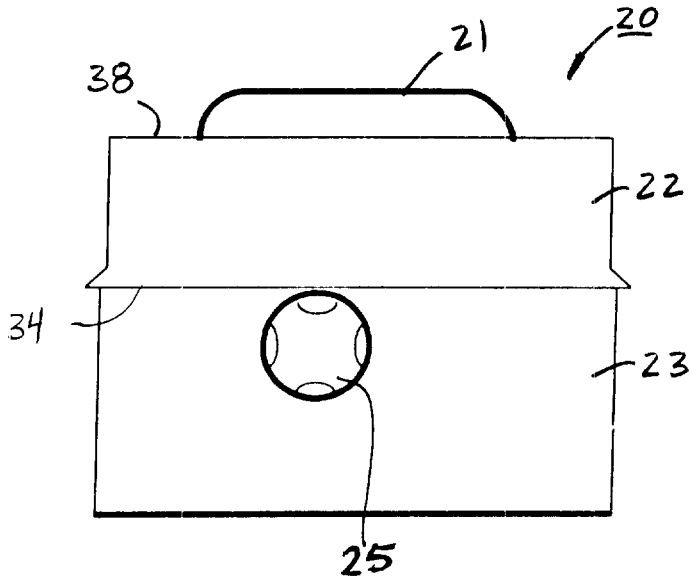
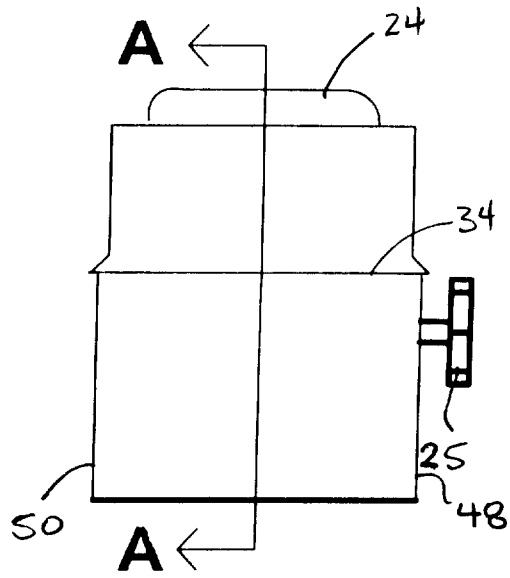


FIGURE 2



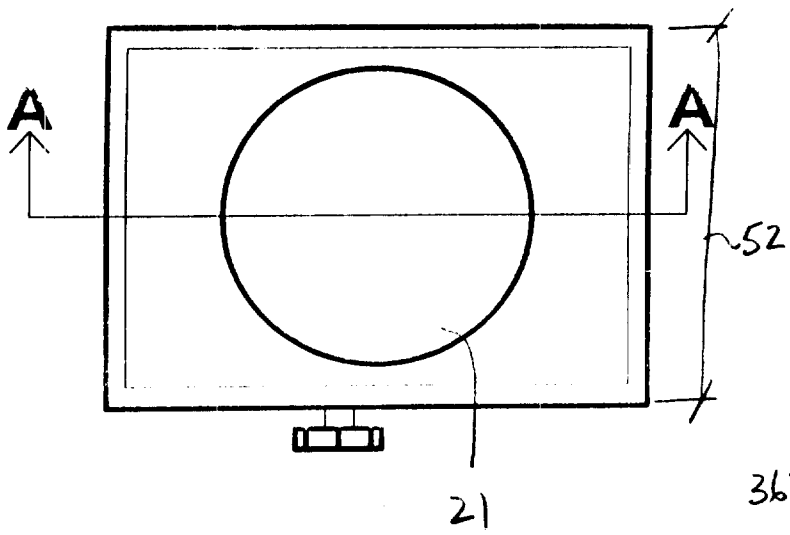


FIGURE 3

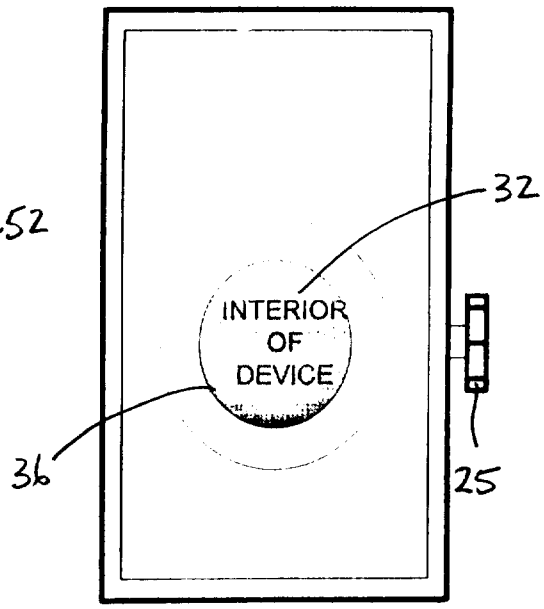
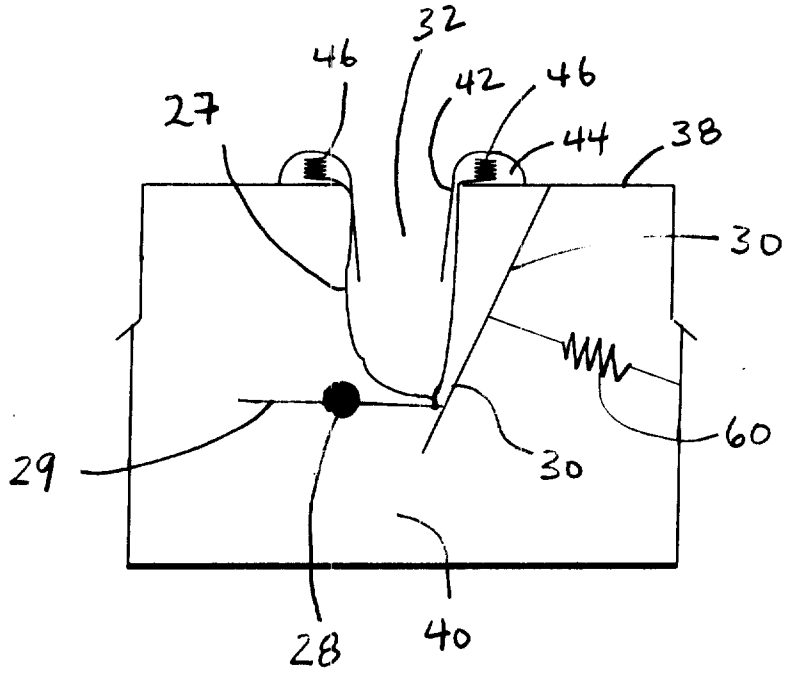


FIGURE 4

FIGURE 5



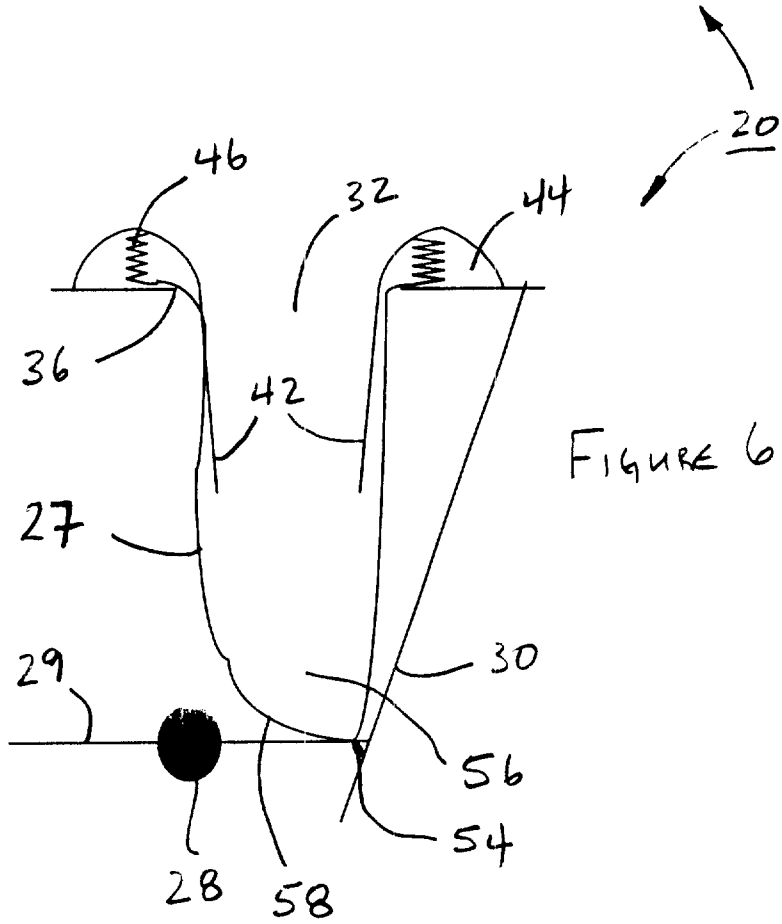
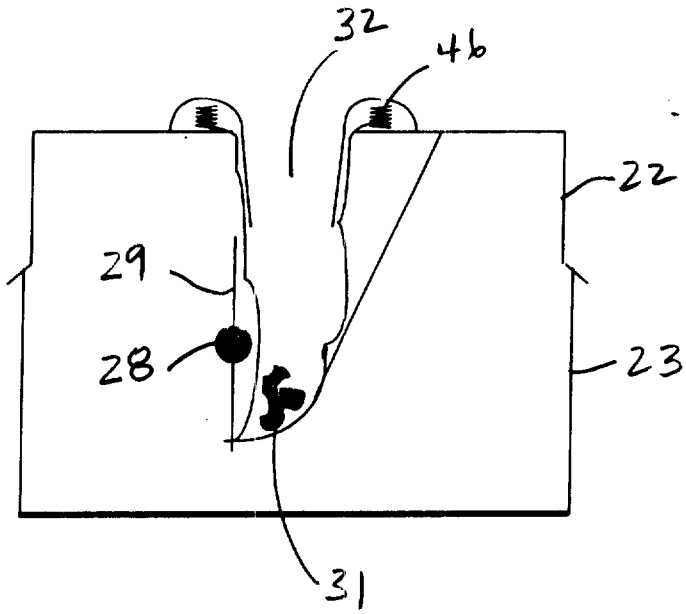


FIGURE 6

FIGURE 7



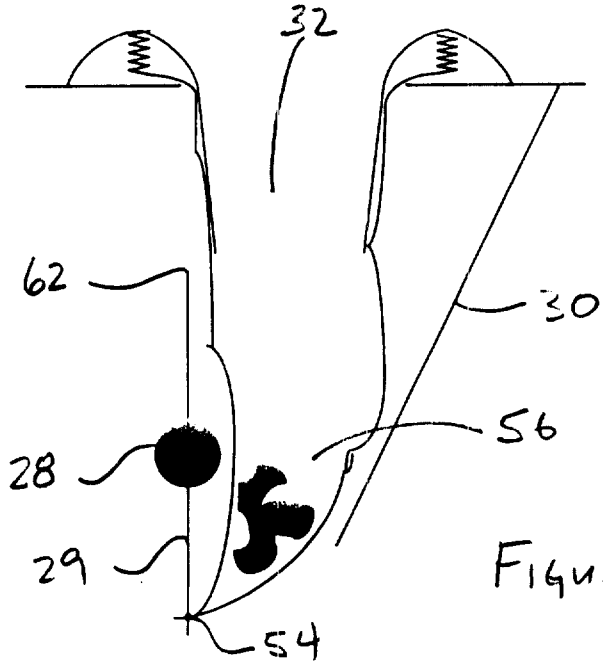
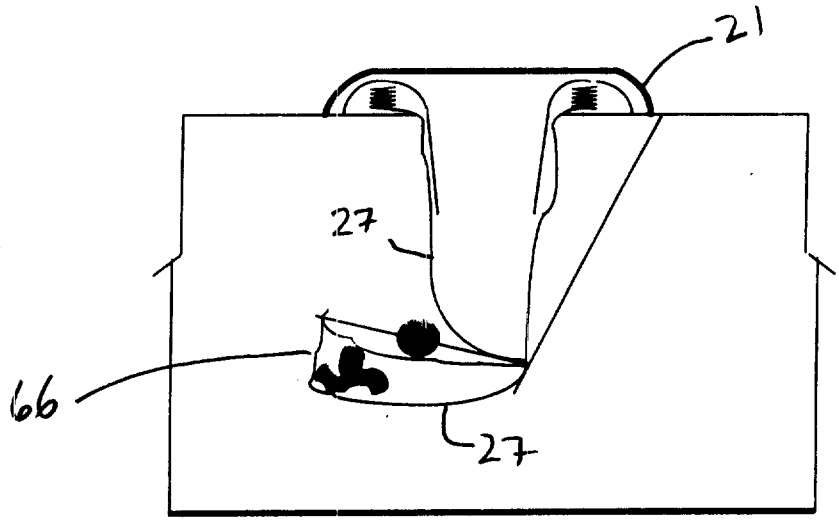


FIGURE 8

FIGURE 9



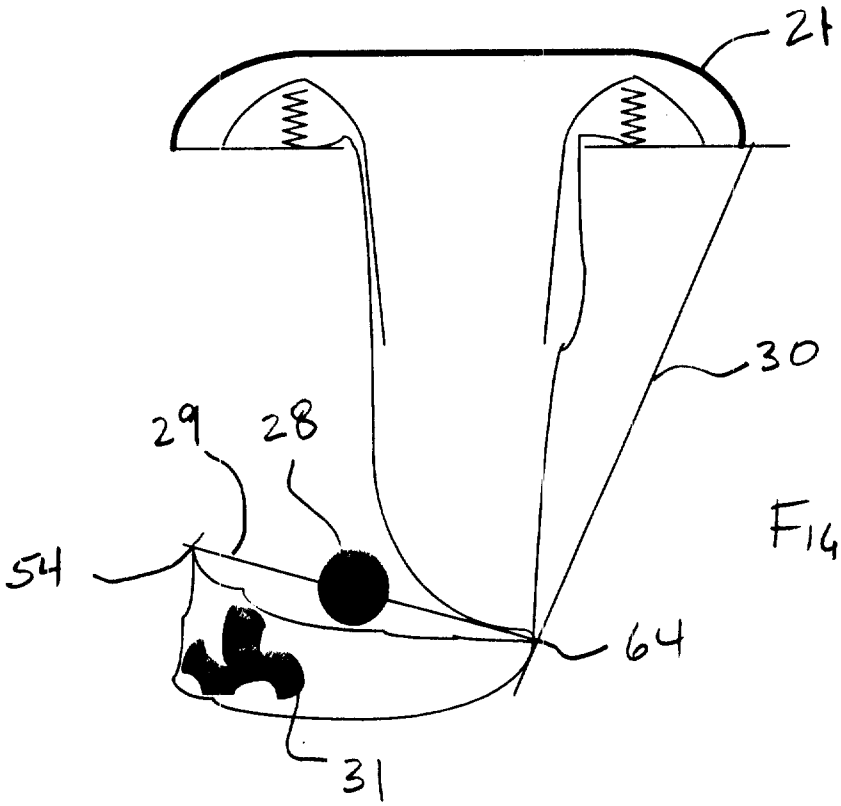


FIGURE 10

FIGURE 11

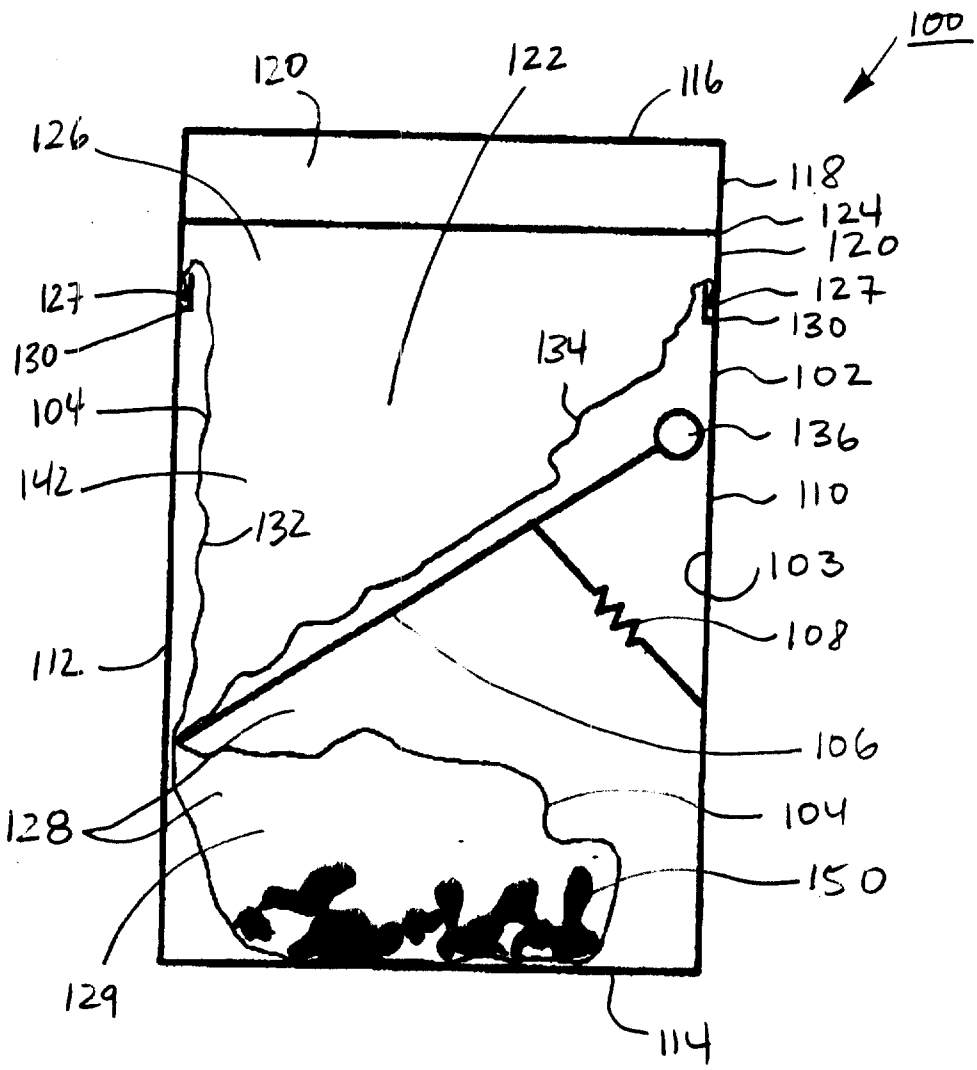

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FIGURE 12

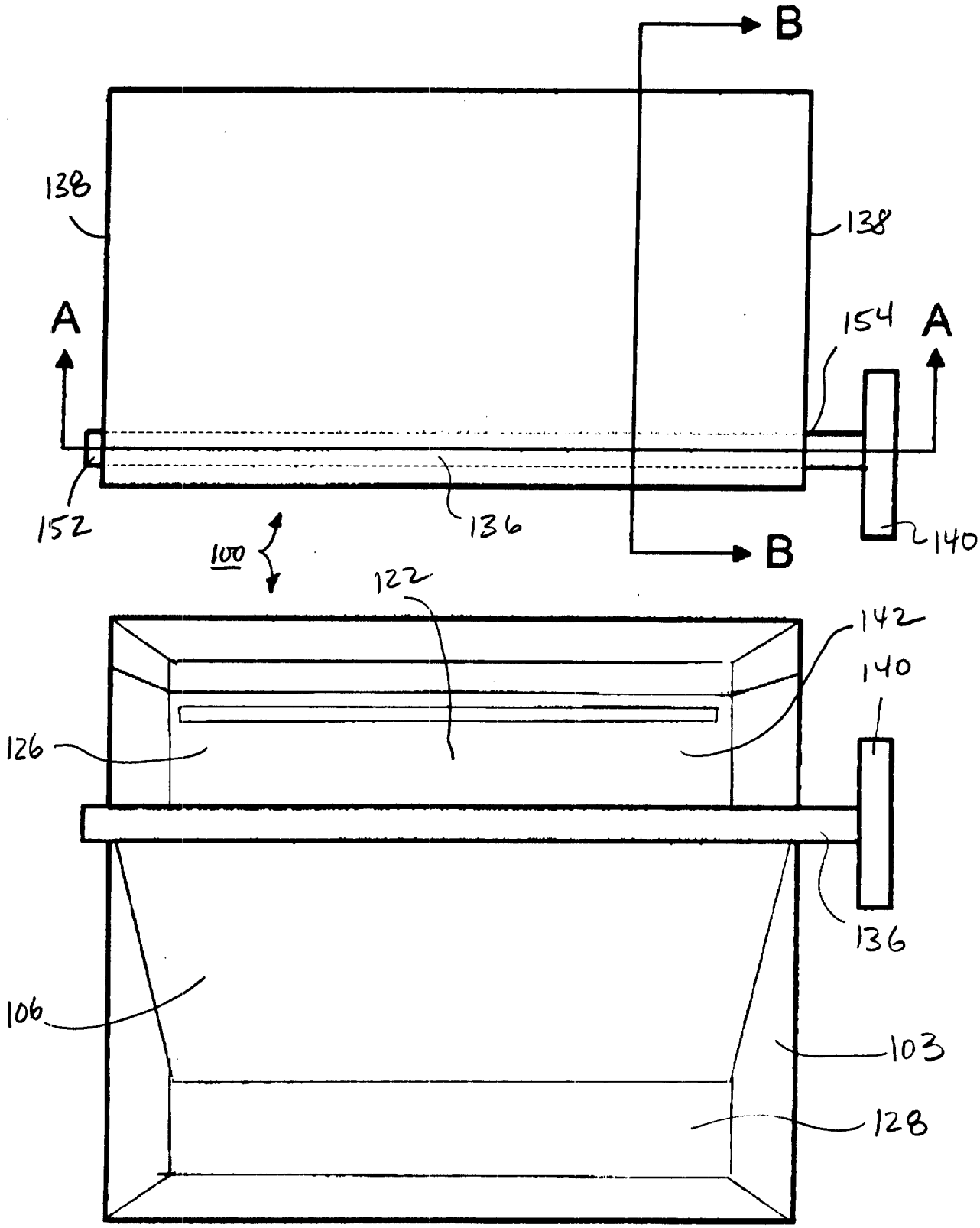


FIGURE 13

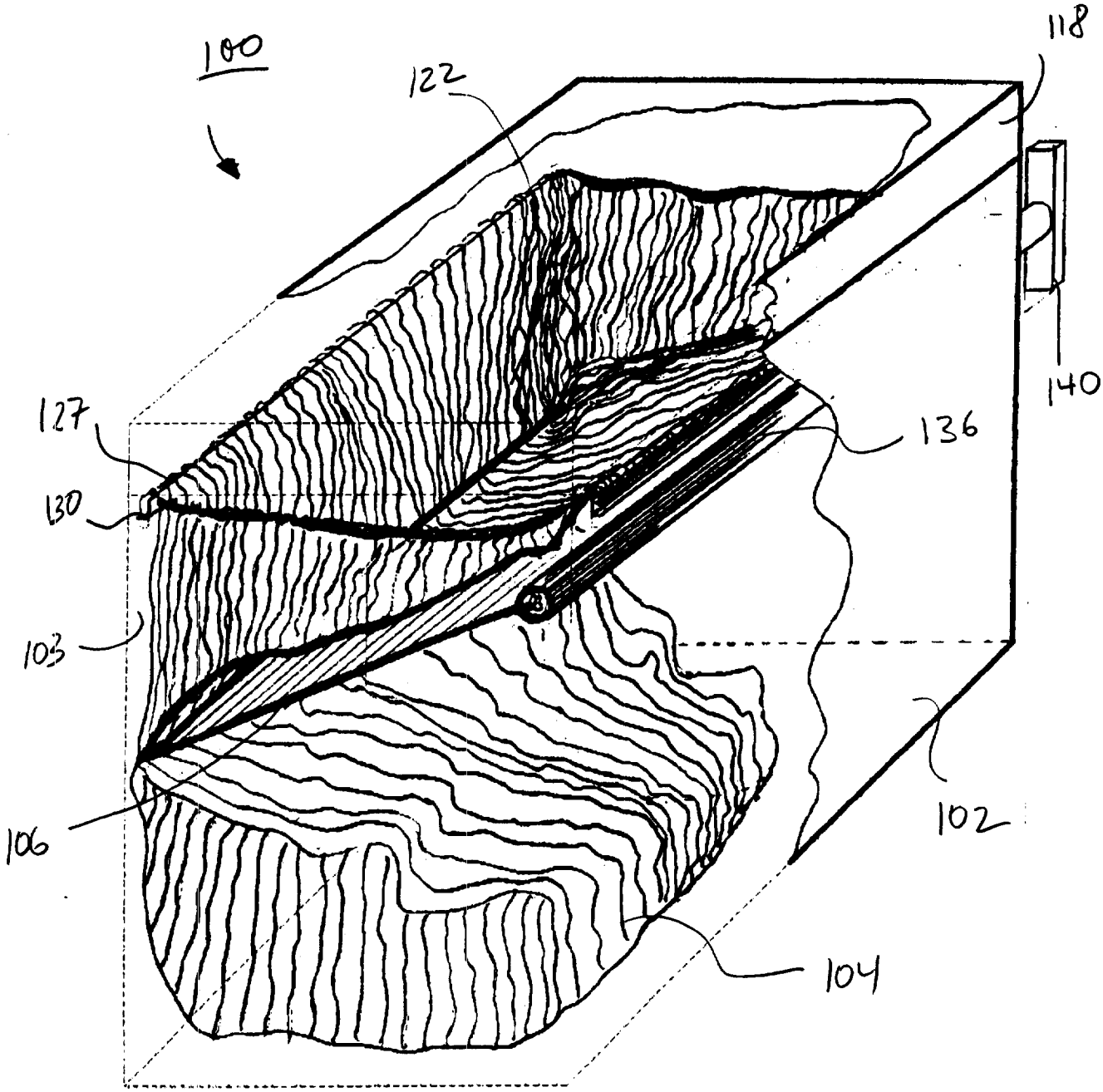
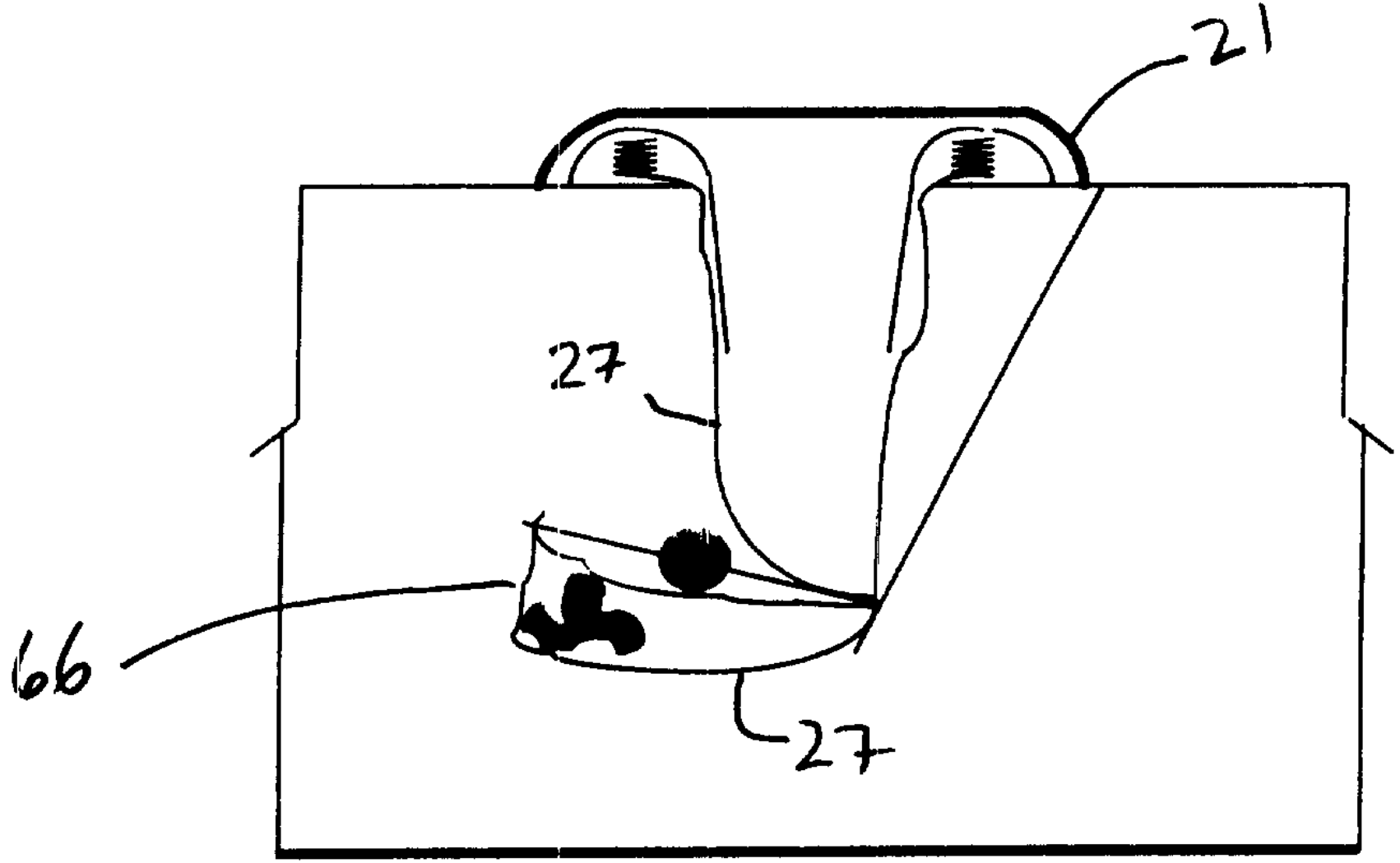


FIGURE 14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