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(54) **GARBAGE RECEPTACLE THAT CONCEALS LINERS AND METHODS OF CONCEALING LINERS**

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(57) **ABSTRACT**

The present invention relates generally to garbage receptacles and the like and more particularly to a garbage receptacle which utilize an inner bag or liner. The receptacle is provided with an internal lip or flange and, preferably, a removable ring to secure a liner within the receptacle's interior to provide a visually appealing arrangement.

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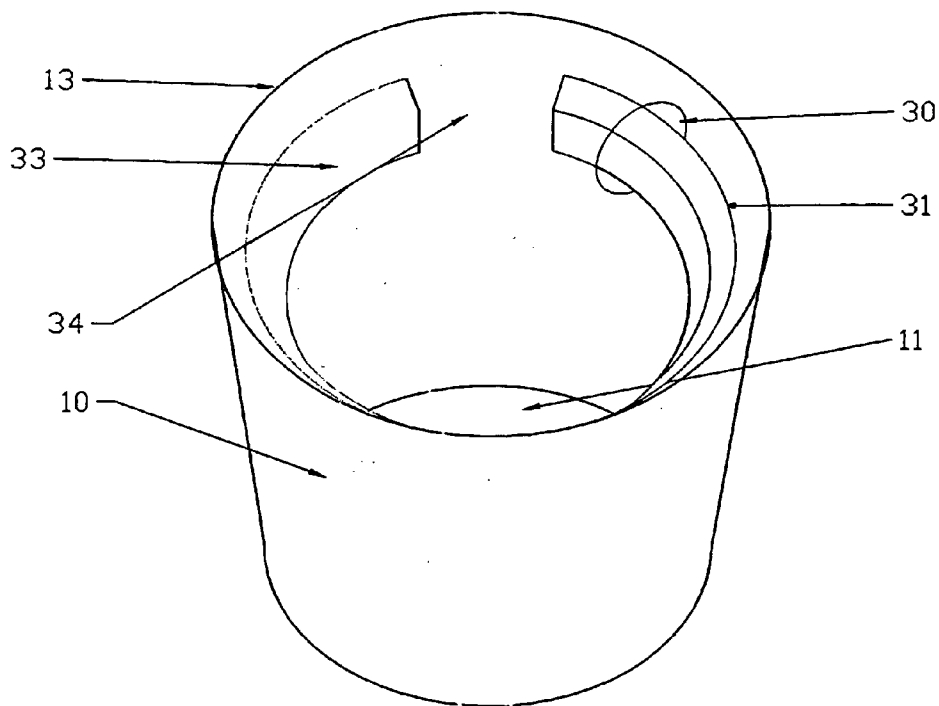
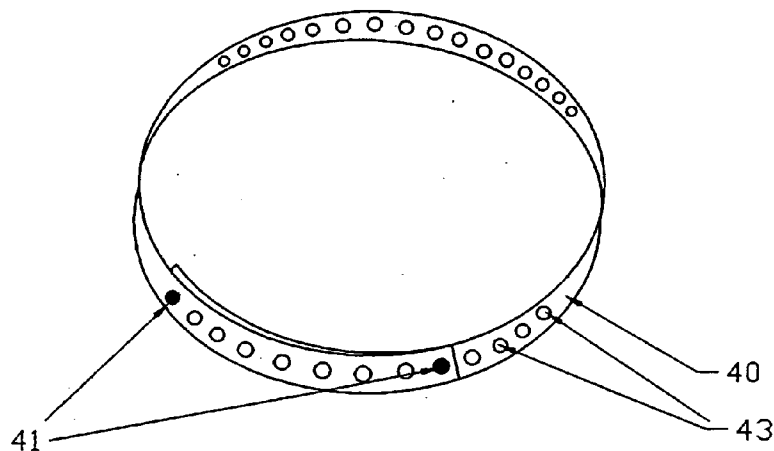


Figure 1

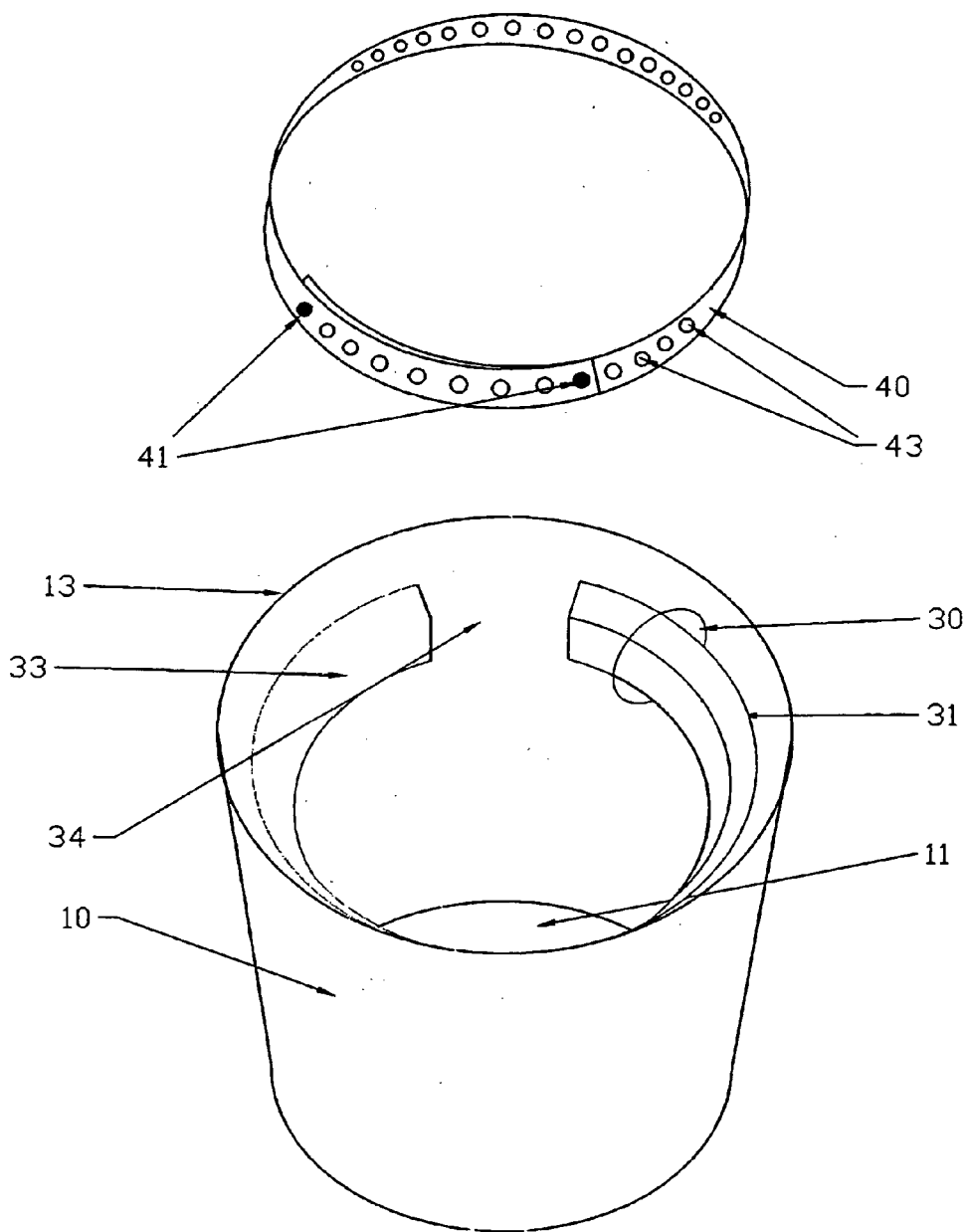


Figure 2

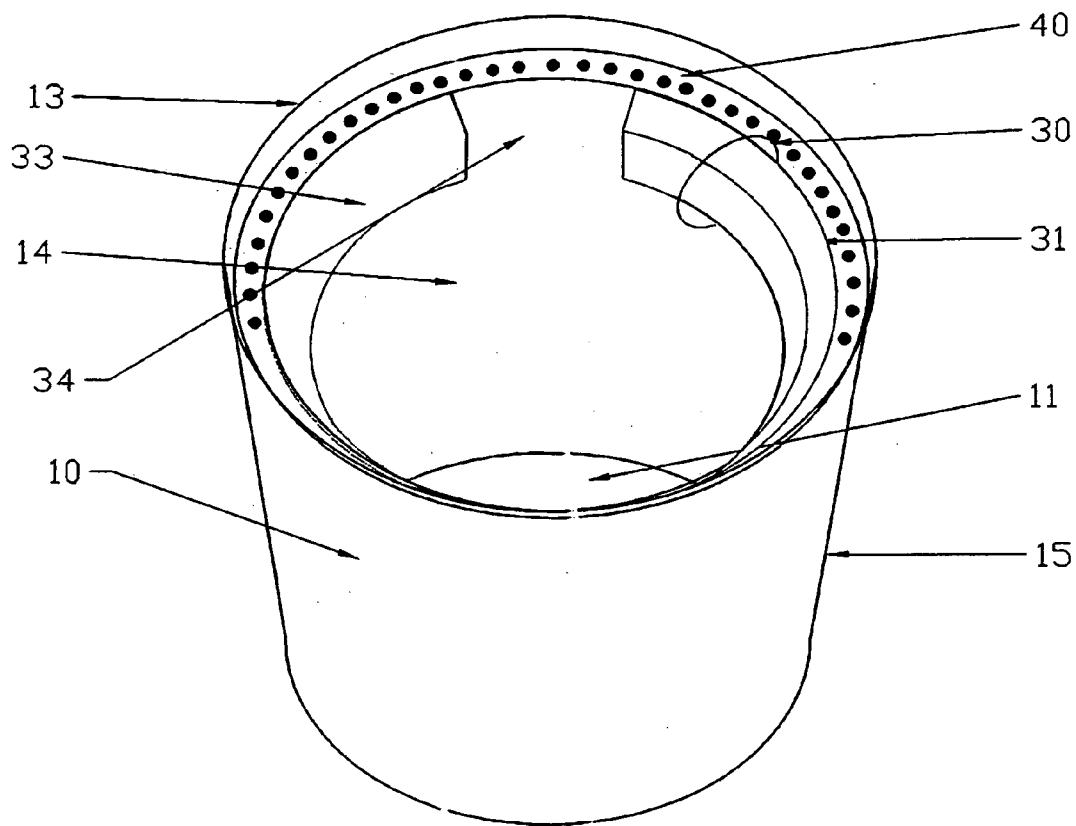


Figure 3

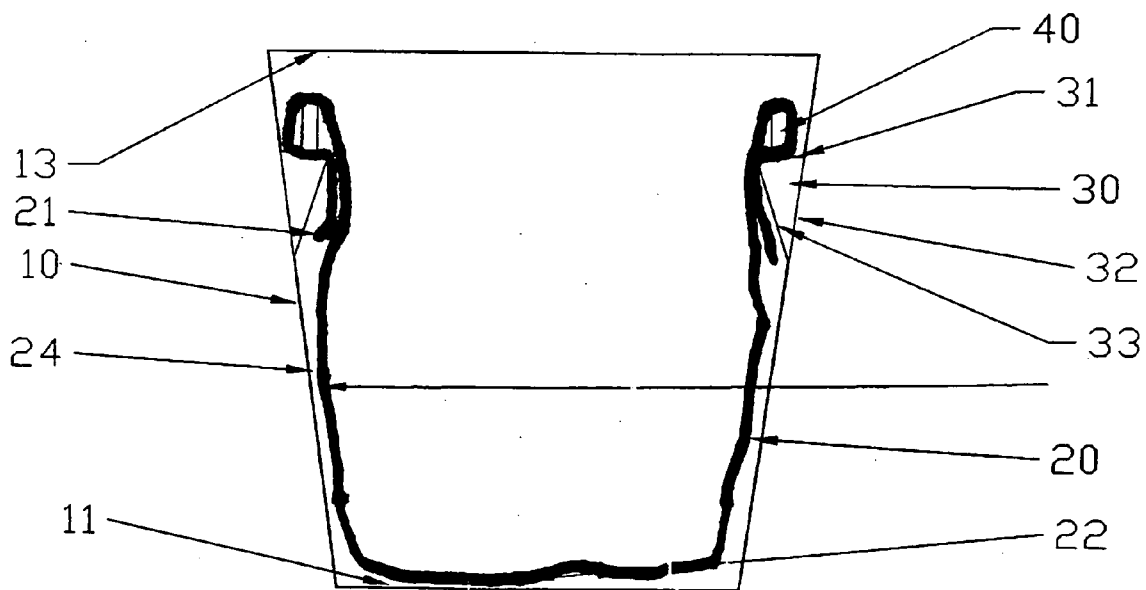
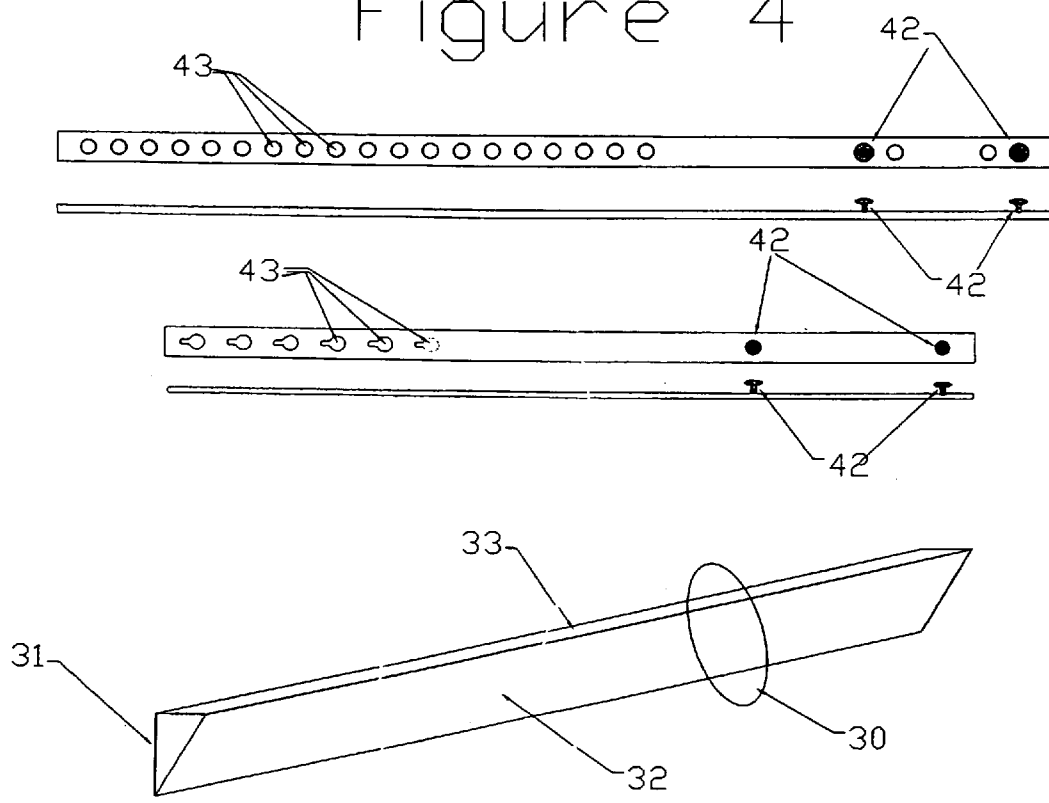


Figure 4



**GARBAGE RECEPTACLE THAT CONCEALS LINERS AND METHODS OF CONCEALING LINERS**

**FIELD OF THE INVENTION**

[0001] The present invention relates generally to the field of garbage receptacles and more particularly to a garbage receptacle which utilizes an internal lip or flange and, preferably, a removable ring consistent with the shape of the interior upper edge of the receptacle to secure a liner within the receptacle's interior, providing a visually appealing arrangement. This invention also relates to a method of securing a liner within the receptacle.

**BACKGROUND OF THE INVENTION**

[0002] Trash receptacles lined with plastic-bag type liners are not only well known in the prior art, but are in use in practically every home and office in the United States. The use of such liners in trash receptacles serves the dual purposes of insulating the interior walls of the receptacle from liquids and sticky substances (which would necessitate frequent cleaning of the receptacles), and providing a convenient way to empty the trash from such receptacles. To accommodate the wide variety of sizes and shapes of home, office, and commercial trash receptacles, liners of all different sizes are presently available. Such liners are typically formed from thin, water impermeable plastic sheet material that has been formed into a tube having a closed end and an open end. In use, the open end of the liner is spread apart to allow air to enter its interior. The liner is placed into the interior of a trash receptacle and the top portion of the liner is then folded over the upper edge of the trash receptacle. In many instances, the diameter of the liner is chosen to be slightly smaller than the outer diameter of the top of the trash receptacle so that the user must apply some amount of tension to the open end of the liner in order to fold a portion of the open end over the top portion of the receptacle. The tension thus generated by the upper portion of the liner advantageously helps to secure it in position around the open end of the receptacle. Another common practice is to tie a knot at the top end of the liner to tighten the bag around the external sidewall(s) of the receptacle, providing added tension.

[0003] While the folding of the liner over the open end of the receptacle provides an easy, convenient, and inexpensive way to position the liner within the receptacle, there are two major shortcomings associated with the resulting lined receptacles. First, if the diameter of the open end of the liner is the same size or larger than the outer diameter of the upper end of the receptacle, the folding over of the top end of the liner may not adequately secure it to the trash receptacle since there is no tension between the folded-over portion of the bag and the receptacle. Accordingly, as the receptacle is filled with trash, the upper end of the liner may easily be disengaged from its folded-over position. Once this happens, liquid or other noxious substances thrown into the receptacle can become lodged between the outer surface of the liner and the inner walls of the receptacle, thereby necessitating the cleaning of the receptacle. This problem is exacerbated when the receptacle is covered with a lid where it is impossible to see where the trash is going. It is for this reason that many people tie a knot at the end of the liner. While this may decrease the likelihood that the liner will come loose,

this method can require that an even larger portion of the liner adorn the exterior surface of the garbage receptacle, leading to an even greater waste of liner space. Furthermore, while this method differs from the fold-over method, it still may not adequately support the bag around the exterior of the receptacle as the tension created is often an unsuitable supporting force. In these instances, the liner would be significantly more secure if a system of multiple frictional and gravitational forces interacted to stabilize the liner within the receptacle. A second problem with the current method of securing such liners is that the result is unsightly, even when they are formed from translucent or transparent plastic materials. Thus, much of the aesthetic effort spent by designers and manufacturers of trash receptacles is negated by the broad fringe of ugly plastic material that overhangs the upper ends of these receptacles when they are lined with plastic trash bags. This visual faux pas is especially aggravated when a knot is tied at the end of the exposed liner.

[0004] Several advances in the art have sought to address these two problems. For example, U.S. Pat. No. 6,837,394, SANITARY DISPOSAL UNIT, issued to Nnamani on Jan. 4, 2005, teaches a garbage receptacle with an insert bag that has a peripheral adhesive layer on a top exterior surface and on a top interior surface thereof, whereby the insert bag may be adhered to an inside surface of the receptacle body for maintaining the insert bag in an open attitude and for sealing the bag upon removal of the bag from the container with the insert bag in a closed attitude. While this invention proposes a method for concealing the presence of a liner within a receptacle, no mention is made of employing a lip or flange or a removable ring to secure the bag within the interior of the receptacle.

[0005] U.S. Pat. No. 5,971,194, LINER CONCEALING TRASH RECEPTACLE, issued to Freedland on Oct. 26, 1999, describes a garbage receptacle that utilizes a lip or flange within the container to secure and conceal a liner. The lip or flange system extends above the receptacle body so that a lid is provided in order to properly conceal the liner within the receptacle body. While this patent uses a flange to secure the liner within the receptacle interior, it only conceals the liner fully when the lid is covering the receptacle body. Thus, the 194 patent only serves to conceal liners where the receptacle has a lid. In the present invention, concealment of the liner is possible in both receptacles with and receptacles without lids

[0006] U.S. Pat. No. 5,887,748, BAG SUPPORTING SYSTEM, issued to Nguyen on Mar. 30, 1999, discusses a system for enabling a minor receptacle to be positioned within a major receptacle employing a pair of bag supports formed from a length of wire, part of which hangs outside the garbage receptacle, anchoring them to the receptacle. Inside the receptacle, the supports resemble two hooks and are typically situated opposite each other. The liner is folded over each of the supports within the receptacle to hold it open.

[0007] U.S. patent application Ser. No. 10/756,323, GARBAGE CAN CAPABLE OF HOLDING A GARBAGE BAG IN POSITION, by Chen-Hung Kuo, published on Jul. 14, 2005, shows a garbage receptacle that secures a liner within its interior using an elastic ring to support the bag in the open position. Said elastic ring is positioned very closely adjacent to the interior sidewall, which has an annular groove in it, creating friction between the groove and the ring on the sides of the container that works to secure the

container. While this application utilizes a ring to secure the bag within the receptacle, nowhere is a lip or flange used in conjunction to provide two areas where friction secures the garbage bag.

**[0008]** Although the prior art shows advancements to combat the problems raised above, there is still a need for a securing system that contains a liner within a receptacle using multiple frictional and gravitational force interactions. Furthermore, there is a need for a method of concealing liners within receptacles that can be adapted to retrofit any garbage receptacle.

#### SUMMARY OF THE INVENTION

**[0009]** The present invention is directed to a garbage receptacle which utilizes an internal lip or flange and, preferably, a removable ring shaped like and just smaller than the upper edge of the receptacle to secure a liner within the receptacle. This can be in the form of a ready made receptacle or a kit which conceals a liner within a garbage receptacle. The invention includes a supporting flange that preferably extends along the interior sidewall(s) of the receptacle, and a removable ring which together secure and conceal the liner within the receptacle. The upper end of the liner is folded outward over the ring, and the ring with liner folded over it is placed on the supporting flange. The ring may or may not be adjustable to suit a variety of different container sizes and configurations.

**[0010]** In one preferred embodiment, the present invention is an entirely new garbage receptacle with the ability to contain and secure a liner within its interior. The garbage receptacle includes a receptacle body with or without a cap or lid. The receptacle body is defined by a lower closed end and an upper opened end and at least one sidewall. The present invention also utilizes a liner, typically and preferably, a plastic garbage bag. Concealment of the liner within the interior of the receptacle is achieved by the use of a flange along the interior sidewall and a removable ring apparatus to secure the bag to the receptacle.

**[0011]** The supporting flange is preferably permanently attached to the interior of the receptacle but alternately may be adherable. It may be made of any material suitable for supporting the liner sufficiently, but preferably is made of the same material as the garbage receptacle, typically a polymeric material of a lightweight but solid structure. Although the flange extends along the interior sidewall of the receptacle, the flange does not have to be continuous, and in an alternate embodiment, a number of smaller flanges protruding from the interior sidewall(s) of the receptacle are utilized to support the liner and removable ring. These spaces in the flange structure would facilitate easier removal of the removable ring. Additionally, the lip or flange may be either adherable or permanent. The flange has a top surface on which the ring rests when in place as well as an inner surface and outer surface. The flange also may or may not have a bottom surface.

**[0012]** The removable ring is preferably made of a generally flat strip of either metal or plastic material, although it alternatively has a circular cross-section. In another embodiment, the ring would be a wire which is bent by the user to achieve the desired shape and size. The removable ring may include any of a number of suitable materials, as long as the material can conform to the shape of any of a variety of garbage receptacle openings. For instance, the material generally must be able to form a circle as well as a

rectangle and once formed into its proper shape, must hold that shape fairly rigidly. The removable ring is also preferably adjustable so that it can be custom fit to the size and shape of the upper edge of a receptacle. This can be achieved a number of ways. The preferred embodiment uses a material and shape that can overlap to form the ring so that there is no need to cut the piece to the correct size. This is important, as the material used to form the ring must be somewhat hard and rigid and would be difficult to cut with tools ordinarily found in someone's home.

**[0013]** A fastening mechanism may be used to secure the ends of the ring. There can be an orifice in one end which receives the other end. There can be a friction fit or a clamp that secures the ends of the ring together. The ring can also employ one or more fasteners, generally pins or buttons, on one end of the ring, while the other end of the strip of material has a plurality of holes through which the fastener(s) may fit for securing the ring and adjusting its size. These holes could take on any of a number of configurations, including, for example, holes with an elliptical shape as well as holes with a circular shape. One example of an acceptable arrangement would utilize a bayonet locking mechanism whereby one end of the ring would contain a spring-loaded button and the other end, a plurality of holes through which the button springs into to lock the removable ring in its desired shape. Another bayonet locking mechanism would employ a pin in place of the button and the hole where the pin would enter would be an L-shaped recess. Another possible fastening mechanism would use a simple snap button mechanism, whereby a button on one end is snapped through one of a plurality of holes on the other end. The holes could also be "keyhole shaped" so that there is a circular, larger portion and a thinner portion, which may be either rectangular or round or oval/elliptical in shape. In one embodiment a button passes through the large end of the orifice and an end region of the ring is pulled to force the button into the smaller portion of the orifice. An alternative locking mechanism would employ a fastener, which is a protruding member, extending from one end of the ring that would fit into a hole on the opposite end. The protruding member may be a pin in one embodiment but could take a variety of forms. Additionally, member may also be either retractable or spring-enforced although this is not necessary. Alternate embodiments could employ any of a variety of methods where a piece would be screwed into a hole on each end of the strip using a screwing mechanism. In this manner, an alternate embodiment would employ screws and lock nuts to secure the ring in the desired size and shape to conform to the interior sidewall of the receptacle. The ring may also be secured in a variety of other ways, such as with the use of glue, tape, or Velcro.

**[0014]** Although the mechanism for securing the liner in the preferred embodiment within the receptacle interior relies entirely on frictional and gravitational interactions between the removable ring and the flange, there are several alternate mechanisms which can secure the liner. In an alternate embodiment the flange has a U-shaped channel, where the ring would fit inside the recess. In order to optimally secure the liner within the receptacle in this embodiment, the flange and the removable ring can be form fit so that the ring snaps into the U-shaped channel on the upper surface of the supporting flange and provides a tighter fit. Alternately, the flange is not U-shaped but has individual fingers extending upwardly from the upper surface of the

flange into which the removable ring may be snapped to secure the liner. In another embodiment, these fingers extend outwardly from the interior surface of the receptacle and no flange is necessary. In another embodiment of the flange-ring mechanism, the removable ring has a U-shaped channel in its bottom surface and when the ring is pressed onto the flange, the flange is shaped so that it snaps into the channel in the ring's bottom surface.

**[0015]** This embodiment also preferably contains a lid or cap to close the garbage receptacle and prevent odor and unpleasant view of the garbage itself from being exposed to users and their possible guests. Nonetheless, alternately, a lid need not be utilized as the securing mechanism does not require a lid to conceal or secure the liner within the receptacle's container. Thus, the present invention has equal effectiveness regardless of whether or not the receptacle has a lid on it. In other words, the aesthetic appeal of the garbage receptacle is preserved even when no lid is utilized. It is preferable that the supporting flange be situated low enough that it not interfere with a lid's attachment to the upper edge of the receptacle body. The lid has a closed upper end as well as an open lower end, at least one sidewall and an opening in which trash may be placed. The opening preferably is concealed by a hinged swinging door although it may be left open. The diameter of the bottom end of the lid is generally the same as the upper edge of the receptacle body and there exists a fastening mechanism for holding the lid in place on top of the receptacle body. This is optimally achieved by a lip extending out from the sidewall and a skirt extending downward therefrom. However, in an alternate embodiment, there may be a frictional interfitting mechanism that secures the lid when it is turned slightly on the receptacle body upper edge. In this embodiment, the receptacle and lid would be threaded in a common manner so that the lid is properly secured when locked in. Although the present invention is especially applicable to the plastic or metal based garbage receptacle one would find in a residence, this does not limit its application to this class of receptacle. For example, the present invention is readily applicable to a receptacle, where a user presses down on a pedal and the lid opens.

**[0016]** In a second preferred embodiment, the present invention is a method of retrofitting existing garbage receptacles to conceal the liners contained within them. This embodiment includes a lip or flange that is preferably securable and adjustable to the receptacle's interior diameter and a removable ring of the type discussed above. The lip or flange is preferably formed from a strip of plastic or rubber-based material, but may be made of any non-porous, conformable material with an adhesive backing. There may be other methods of adherence, such as glue, Velcro or protruding blocks or using a scaffolding system with supports on the bottom of the receptacle or the sidewall, etc. A strip of plastic or rubber-based material with at least an adhesive coated area on one side thereof and a protective pull away strip covering the adhesive can be used as the flange. This is easily applied, lightweight and yet strong enough to support the bag and the ring's mass.

#### OBJECTS OF THE INVENTION

**[0017]** It is therefore an object of the present invention to provide a system for concealing liners placed within a garbage receptacle to improve the aesthetic quality of the trash receptacle.

**[0018]** It is a further object of the present invention to provide a garbage receptacle that has a built-in system of concealing liners within its interior.

**[0019]** It is a further object of the present invention to provide a method of retrofitting existing garbage receptacles to conceal liners within their interiors.

**[0020]** It is a further object of the present invention to provide a system for concealing liners within the interior of a lidless garbage receptacle.

**[0021]** It is a further object of the present invention to provide a method for concealing liners which secures the bags within the interior utilizing a removable ring conformable to the shape of the upper edge of the receptacle, but slightly smaller, which rests when in position on a lip or flange near the upper edge of the receptacle.

**[0022]** It is a further object of the present invention to provide a method for concealing liners within the interior of a garbage receptacle by securing the liners through multiple frictional interactions.

**[0023]** It is a further object of the present invention to provide a method for concealing liners within the interior of a garbage receptacle by securing the liners through multiple gravitational forces.

**[0024]** It is still a further object of the present invention to provide a method for concealing liners within the interior of a garbage receptacle utilizing materials that are affordable, such as plastic and rubber-based materials.

**[0025]** It is a final object of the present invention to provide a method for concealing liners within the interior of a garbage receptacle which is adjustable based on the size and shape of the particular garbage receptacle utilized.

#### BRIEF DESCRIPTION OF THE DRAWINGS

**[0026]** FIG. 1 shows a perspective view of the garbage receptacle system of the present invention where the removable ring has been removed to illustrate its features.

**[0027]** FIG. 2 shows a perspective view of the garbage receptacle system of the present invention where the removable ring is in place within the receptacle's interior.

**[0028]** FIG. 3 shows a front cutaway view of the garbage receptacle system of the present invention where a liner has been placed inside the receptacle.

**[0029]** FIG. 4 shows perspective views of preferred embodiments of the fastening mechanism utilized by the removable ring, and the strip which forms the supporting flange.

#### DETAILED DESCRIPTION OF THE INVENTION

**[0030]** As required, detailed embodiments of the present invention are disclosed herein; however, it is to be understood that the disclosed embodiments are merely exemplary of the invention, which may be embodied in various forms. Therefore, specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in the art to variously employ the present invention in virtually any appropriately detailed structure.

**[0031]** The present invention is a garbage receptacle 10 capable of concealing the presence of a liner 20 within its interior and the method of concealing said liner 20 within the receptacle's interior. The term "liner" is intended to denote



any minor receptacle which may suitably fit within the major garbage receptacle **10** interior, and most frequently refers to a liner. The present invention utilizes a garbage receptacle **10** of any suitable shape or configuration. The container typically has a base **11** which is generally flat. Extending up from the base **11** is at least one sidewall **12**. Usually, however, there are a plurality of sidewalls which may have portions that are straight, curved or combinations thereof.

[0032] The present invention has at least two preferred embodiments, the first being an entirely new garbage receptacle **10**, and the second, a method of retrofitting any existing garbage receptacle so as to make it capable of concealing a liner within a receptacle interior. The method of concealing a liner **20** in the present invention utilizes a supporting flange **30** and a removable ring **40** of variant material to secure in place the interior garbage receptacle **20**. In a preferred embodiment, the present invention includes a garbage receptacle **10** consisting of a receptacle body **13** as well as optionally a cap or lid. The body of the garbage receptacle **10** is defined by a lower closed end **11** and an upper opened end **13**. The connection of these two ends is achieved by at least one sidewall **12**. The present invention also contains a liner **20**, typically and preferably, a plastic garbage bag, which is disposable and is placed within the receptacle **10** to prevent the interior surface of the receptacle **14** from being dirtied. In this way, the receptacle **10** requires less frequent and less strenuous cleaning by the user. The liner **20** preferably utilized has an open end **21** and a closed end **22** as well, with an inner **23** and outer surface **24**. In typical application to a garbage receptacle, the bag's outer surface **24** is folded over the exterior surface of the receptacle **17** so that the upper edge **21** of the outer surface of the liner **24** rests on the exterior surface of the receptacle **15** in full view of any person capable of viewing the receptacle itself, causing an aesthetically unappealing image for the viewer.

[0033] The present invention, however, eliminates this problem and all others that occur from the former method through a system utilizing preferably a supporting flange **30** and a removable ring **40** to secure the liner **20** in place within the interior surface of the garbage receptacle **14** and out of view. The flange **30** may either be made from the same material as the garbage receptacle **10** itself is made (mainly a lightweight polymeric material), or it may be made of a different type of material altogether. In this same manner, it may be adherable or it may be permanently fixed on the interior surface **14** of the garbage receptacle. In the present embodiment, the flange **30** is preferably permanently affixed to the interior surface of the receptacle **14** as well as preferably made of the same material as the garbage receptacle. Additionally the flange **30** is preferably not continuous along the interior surface of the receptacle **14**, but rather the flange **30** is actually a series of smaller flanges along the interior surface of the receptacle **14**, on which the liner **20** and removable ring **40** will rest in the manner disclosed below. The spaces between sections of the flange are preferable because they are conducive to easy removal of the removable ring. Alternately, however, the supporting flange is continuous. In this manner, there are a number of configurations utilizing different numbers of flanges of various shapes and sizes that could be foreseeably useful in embodying the present invention.

[0034] Where the supporting flange **30** is attached to the interior surface of the receptacle **14** itself, the flange **30** preferably has an inner surface **33** that is at angle to the

interior surface of the receptacle **14** as well as an outer surface **32** adjacent to the interior surface of the receptacle, and an upper surface **33** that is parallel to the base of the receptacle **11**. Alternatively, the flange **30** may be ring-shaped or, instead of having only a top surface, would have both an upper **31** and lower surface that are parallel to the bottom closed end of the receptacle **14** and an inner **33** and outer surface **32**, both of which are perpendicular to the upper **33** and lower surfaces. Alternatively, the flange **30** may also be a hollow member of various shapes and sizes.

[0035] In this embodiment, the garbage receptacle system preferably also utilizes a removable ring **40** to secure the liner **20** in place within the receptacle **10**. In an alternate embodiment, no ring may be utilized at all, and the flange **30** would have a built-in securing mechanism, such as an adjustable upper rim that clamps on the liner to stabilize it within the receptacle's interior. However, in the preferred embodiment, the ring **40** may be of any material suitable to one skilled in the art, but preferably is made of either metal or plastic. Plastic is preferable because, although it may be thin and lightweight, it is still heavy enough to sufficiently secure the liner **20** in place within the receptacle **10**. Plastic is also easier to adjust to the size of various trash receptacles. In addition, the removable ring **40** may be made of a metal-coated plastic. Regardless, the ring **40** is preferably a generally flat member of an adjustable material whose length may be altered dependent upon the size and shape of the receptacle **10**, the flange **30**. Alternately, the ring **40** may not be flat, and its cross-section could be any number of practicable shapes, such as a circle. In an alternate embodiment the ring is also metal or polymeric but is made of a wire-like material that is bendable to the size and shape of the upper edge of the receptacle **13** like the wires commonly used to hold lawn bags upright during yard work.

[0036] Additionally, there are several ways which the ring **40** may be adjusted, but preferably, this is achieved by a locking or fastening mechanism **41**. The ring **40** is preferably fastened through the use of a system utilizing a fastener **42** on one end of the ring that is placed through one of a plurality of holes **43** along the length of the other end of the ring **40**. In one embodiment, a bayonet fastening mechanism may be used, where one end has a spring-loaded button on its surface and the other end of the ring **40** has a thin, hollow canal and a plurality of holes **43** roughly the same shape and diameter of the button on its surface. To fasten the ring **40**, one must hold down the spring-loaded button on one end and drive that end into the canal on the other end releasing the button when it passes through the hole desired for the proper diameter to fit the receptacle. In another preferred embodiment, the spring-loaded button is replaced with a pin and the holes on the surface of the mating end are L-shaped, so that by driving the pin through one of the arms of the L and turning, the ring **40** is locked in place. Alternately, a simple strap locking mechanism utilizing one or more buttons and a plurality of holes **43** may be employed to adjust the size of the ring **40**. The button is tapered so that its diameter is larger at the head than at the stem. To close the ring, the button is driven through one of the holes **43** at the other end until it "snaps in" and the entire head is through the desired hole. In another embodiment of the locking mechanism, a plurality of keyhole type orifices would be utilized in conjunction with the tapered button described above. These holes would have two sections, one, a rounded piece that is much larger in diameter than the other part, and two, a generally rect-

angular or elliptical second section that is thinner. Fastening would be achieved by placing the head of the button through the larger section and then moving the stem into the smaller section where it will be locked in place. An alternative fastening mechanism would employ a protruding member extending from one which would fit into an orifice on the opposite end. The protruding member may be a pin in one embodiment but could take a variety of forms. Additionally, member may also be either retractable or spring-enforced although this is not necessary. Additionally, other locking mechanism that would be practicable to any person so skilled in the art may also be utilized.

[0037] Although the ring 40 described above is preferably removable, it may be attached to the interior surface of the receptacle 14 through a similar fastening mechanism to the one utilized to close the ring itself. In this embodiment, the interior surface of the receptacle 14 would have a plurality of fasteners 42 that would fit through one of a plurality of holes 43 on the ring itself to attach the ring 40 to the interior of the receptacle. However, preferably, the ring 40 is not attached to the receptacle 10 in any way and is completely removable so that the recommended method of installing the liner 20 into the receptacle 10 is to remove the ring 40 first and place the liner 20 through the ring 40, folding the upper edge 21 over the ring 40 so that the outer surface of the ring 44 is covered by the upper edge of the bag 21. Only after this is done is the liner 20 placed into the receptacle 10 onto the flange 30, making sure that the upper edge of the liner is positioned between the ring 40 and the flange 30. In this manner, the liner 20 is secured inside the receptacle 10 in two ways. First, the friction between the upper surface of the flange 31 and the bottom surface of the ring 45 provides support. Second, the friction between the outer surface of the ring 44 and the interior surface of the receptacle 14 provides additional support.

[0038] In another embodiment, the flange 30 may have a U-shaped upper or lower surface so that the ring 40 will fit directly into the recess in the surface to provide greater friction to hold the liner in place. In order to optimally secure the liner 20 within the receptacle 10 in this embodiment, the flange 30 and the removable ring 40 can be form fitted so that the ring snaps into the U-shaped channel on the upper surface 33 of the supporting flange 30 and provides a tighter fit. This U-shaped channel may also be on the lower surface of the flange 30, so that the ring 40 snaps upward into the channel to secure the liner 20. Alternately, the flange 30 is not U-shaped but has individual fingers extending upwardly from the upper surface of the flange 33 into which the removable ring 40 may be snapped to secure the liner 20. In another embodiment, these fingers extend outwardly from the interior surface of the receptacle 14 and no flange is necessary.

[0039] The receptacle in this preferred embodiment may or may not utilize a lid. Preferably, for sanitary and aesthetic purposes, however, it does have a lid. The lid may be of any shape or size suitable given the shape of the receptacle body 13, but is generally hollow with a upper end that is closed and a bottom end that is open, one or more sidewalls, an opening for trash objects to be placed into the receptacle 10, and a locking mechanism for securing the lid to the receptacle body. In the preferred embodiment, this would be achieved by making the surface area of the bottom end of the lid slightly smaller than that of the top edge of the receptacle body 15 and providing the lid with a lip extending out from

the sidewall(s) and possibly a skirt extending downward from the lip, both of which run along the entire circumference of the bottom edge. This mechanism is seen in many garbage receptacles and will secure the lid onto the receptacle body 13, while, at the same time, allowing for easy removal of the lid from the body 13 to change the liner 20. Removal would simply be achieved by lifting the lid straight upward. A similar mechanism could have a locking mechanism that secures when a lid with a circular bottom end is turned slightly in one direction. Another locking mechanism could fasten the lid to the receptacle body 13 by a snapping mechanism that locks around a lip or flange at the upper opened end of the receptacle body 15. A number of other practical securing mechanisms could also be utilized. The opening in the lid has a door covering it that is on a swinging hinge in the preferred embodiment, but a covering is not necessary.

[0040] An alternate preferred embodiment of the present invention, in addition to an entirely new garbage receptacle 10 is a do-it-yourself method of adapting any garbage receptacle to the specifications of the first preferred embodiment. In this embodiment, an existing garbage receptacle would be modified using an attachable supporting flange 30 and a removable ring 40. The flange 30 is preferably a strip of rubber-based material of a satisfactory size, although, it does not have to be continuous and can also be a series of smaller strips of rubber based material. On the outer surface of the flange 32 is an adhesive substance that would secure the strip to the interior surface of the garbage receptacle 16. The cross-section of the flange strip 34 is preferably triangular, but it could also be rectangular or any other workable shape. The rubber-based material is preferable because it is easily adjustable to the size and shape of the upper edge of the receptacle 19, being that it is a bendable material and its length is easily adjustable because all a user needs to do to shorten its length is cut it with a scissor. Nevertheless, in alternate embodiments, the flange 30 is composed of any material which is easily adjustable in length and can conform to both rectangular and circular interior surfaces. However, other means of attaching the flange 30 to the interior surface of the receptacle 14 could be employed, such as a plastic fixture that would stand upright from the bottom of the receptacle. This would not be adjustable, however.

[0041] This embodiment also utilizes of a removable ring 40. The ring 40 would fit the specifications applied in the previous embodiments with no alterations and would be applied in the same manner described previously. The only difference is that the removable ring 40 in the present embodiment is preferably adjustable in the manner discussed above in order to make the ring 40 applicable to as many receptacles as possible.

I claim:

1. A receptacle for waste and the like comprising a base and one or more sidewalls extending from the base, said sidewall forming an open end, said sidewall having an interior surface and an exterior surface, said interior surface having an area in the vicinity of the open end wherein there is a flange extending from said interior surface of the sidewall, said flange having a surface which contacts a liner in said receptacle, said liner being secured to a surface of said flange by means of a member that has a shape that conforms to at least a portion of the inner surface of said sidewall, said member securing said liner to said flange.

2. The receptacle according to claim 1 wherein the member is a flat strip.

3. The receptacle according to claim 1 wherein the member is tubular.

4. The receptacle according to claim 3 wherein said tubular member is hollow.

5. The receptacle according to claim 1 wherein said member is adjustable to conform to different sized receptacles.

6. The receptacle according to claim 5 wherein said flange has a top surface that is generally perpendicular to the sidewall of said receptacle, said top surface contacting said liner.

7. The receptacle according to claim 6 wherein a portion of said liner is between said top surface of said flange and said adjustable member.

8. The receptacle according to claim 7 wherein said flange is formed with the sidewall of said receptacle.

9. The receptacle according to claim 7 wherein said flange is secured to said sidewall by an adhesive.

10. The receptacle according to claim 7 wherein said adjustable member has a first end and a second end and said first end is inserted into said second end to form a closed loop of varying sizes.

11. The receptacle according to claim 10 wherein at least a portion of an outer surface of said adjustable member is secured in said second end by a friction fit.

12. The receptacle according to claim 10 wherein said first end has a protruding member that is received by a recess in said second end of said adjustable member.

13. The receptacle according to claim 12 wherein said protruding member is a retractable.

14. The receptacle according to claim 12 wherein said protruding member is spring biased.

15. The receptacle according to claim 12 wherein said protruding member is a pin.

16. The receptacle according to claim 12 wherein said recess is an orifice.

17. The receptacle according to claim 5 wherein said flange has a top surface that is generally parallel to the base of said receptacle, said top surface contacting said liner.

18. A kit for a receptacle and the said receptacle having a base and one or more sidewalls extending from the base, said sidewall forming an open end, said sidewall having an interior surface and an exterior surface, said interior surface having an area in the vicinity of the open end, said kit comprising a flange member adapted to be secured to a sidewall of said receptacle by a securing means, said flange member when secured to said receptacle extending from said interior surface to the sidewall, said flange having a surface which contacts a liner in said receptacle said kit further comprising a member that has a shape that conforms to at least a portion of the inner surface of said sidewall, said member being adapted to secure said liner to said flange.

19. The kit according to claim 18 wherein said securing means is an adhesive.

20. The kit according to claim 18 wherein said securing means is Velcro.

21. The kit according to claim 18 where in said securing means is a tape.

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