United States Patent

Benoit

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[54] BAG HOLDER

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[52] **U.S. Cl.**.....**248/101,** 232/43.2

[51] **Int. Cl.**.....**B65b 67/12**

[58] **Field of Search**.....248/101; 232/43.2; 312/212

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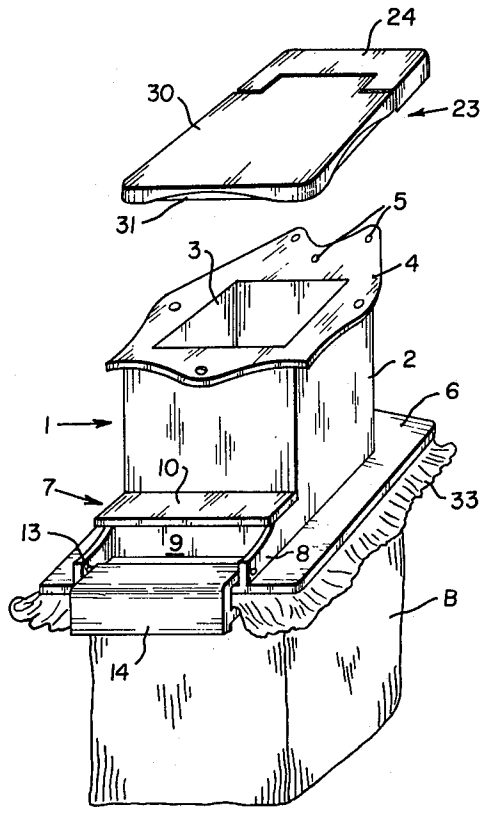
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[57] **ABSTRACT**

A bag holder for use in a kitchen counter includes a cover for mounting over an opening in the counter, a frame with a vertical garbage receiving passage for mounting beneath the counter, and a bag-supporting plate, which can be secured beneath the frame to fix the upper open end of a plastic garbage bag between the frame and the plate. The frame and plate have complementary cowl-shaped flanges on one side. The connection between the frame and plate is completed by a pivotable latch on a side of the frame remote from the cowl-shaped flanges for engaging the plate.

7 Claims, 6 Drawing Figures



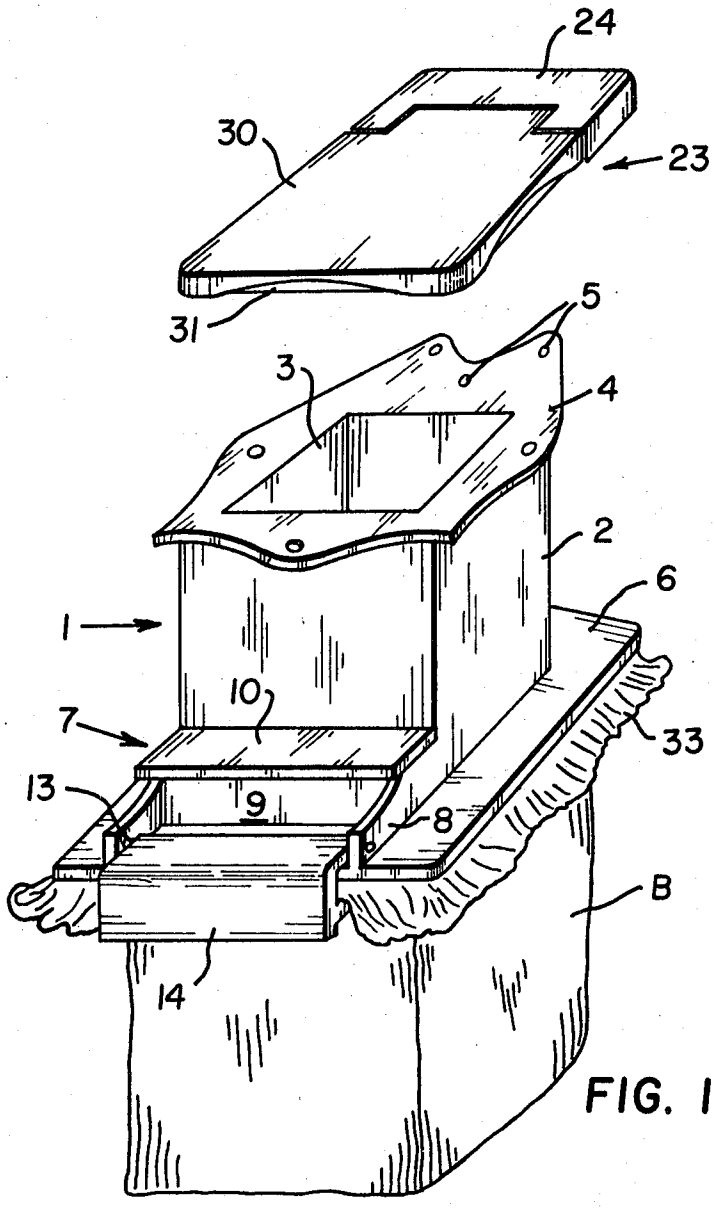


FIG. 1

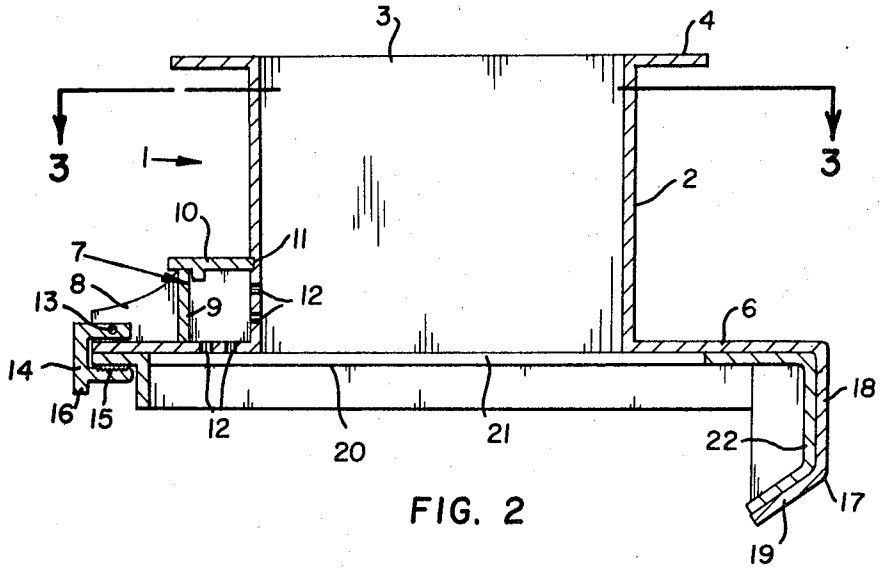
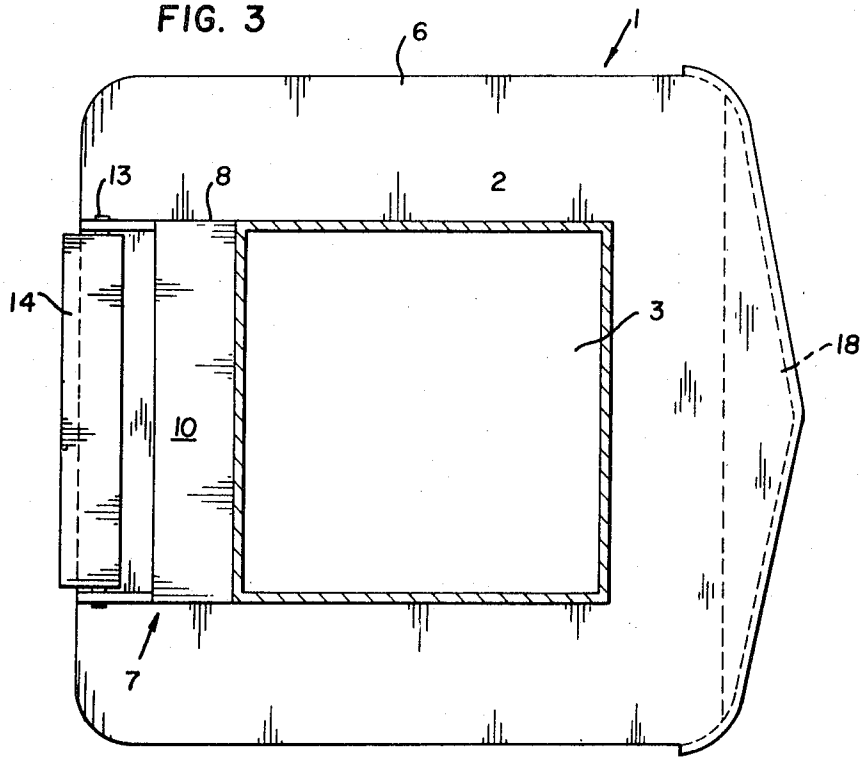

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FIG. 2

FIG. 3


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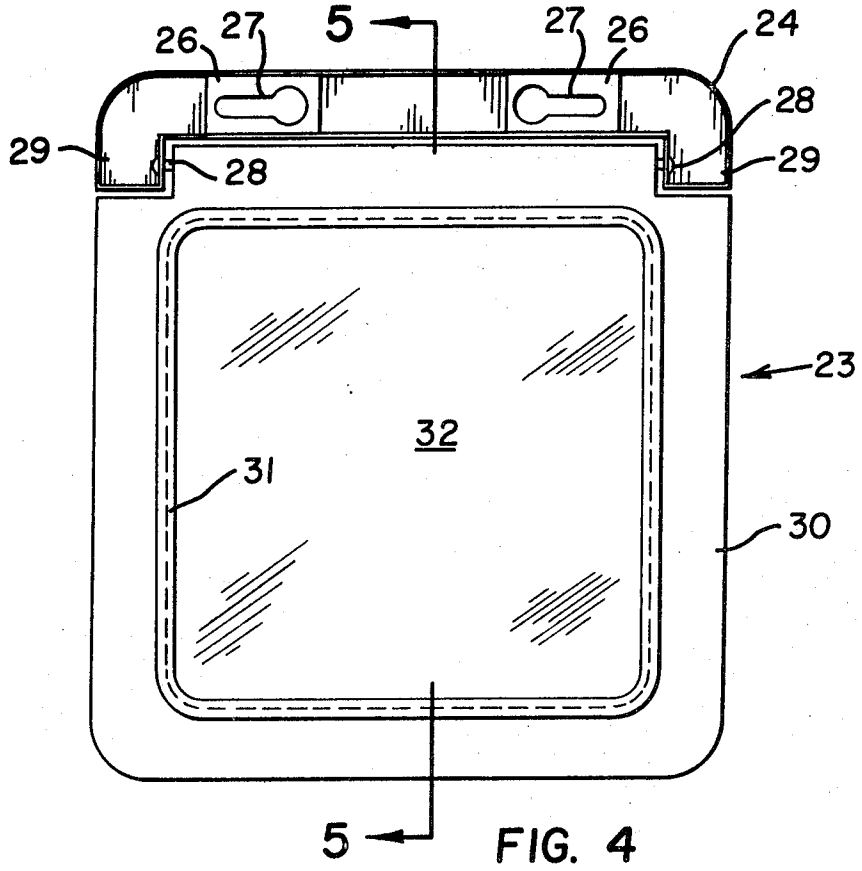


FIG. 4

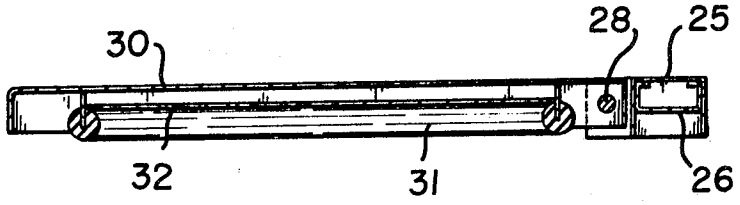


FIG. 5

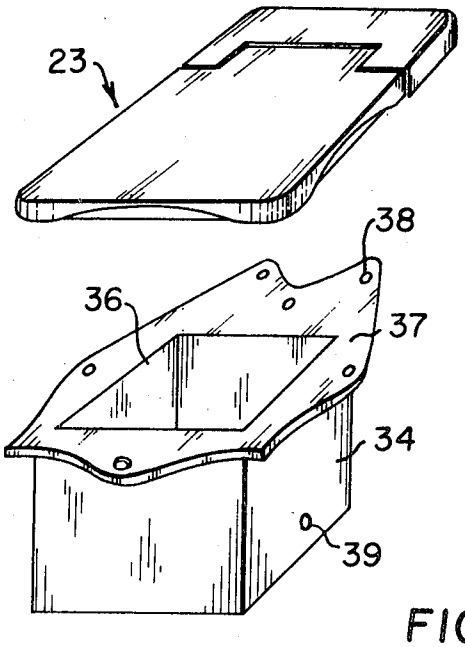
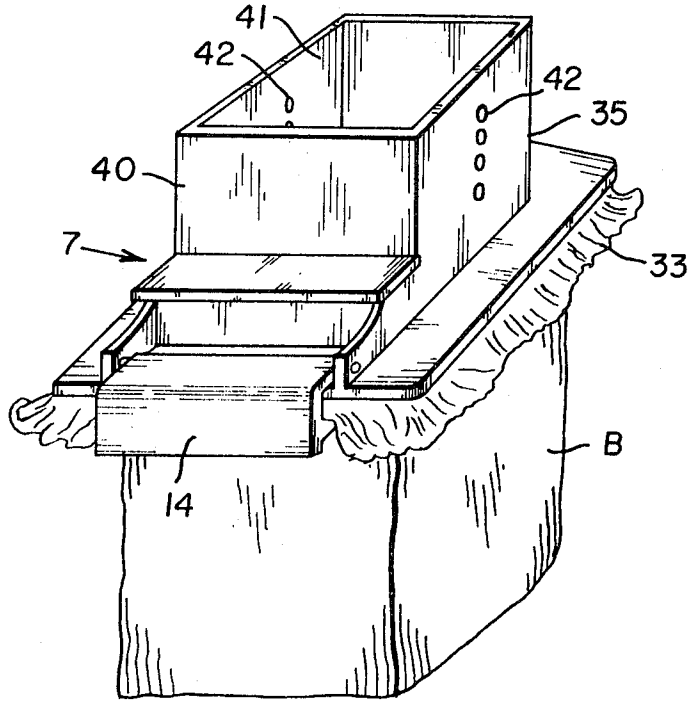


FIG. 6



BAG HOLDER

This invention relates to a bag holder, and in particular to a holder for so-called plastic garbage bags for use in disposing of household waste.

Generally, bag holders for household use include frames supporting movable arms or bars for gripping a bag and holding it in an open or closed position. If the bag is held in an open position, a lid is provided for preventing the escape of odours. With the bag in the closed position, usually the mouth of the bag can be opened against the action of one or more springs, which bias the bag into a closed position.

In any event, presently existing bag holders are, in general, relatively complicated structurally, and often considerable effort is required to mount a bag in the holder.

The object of the present invention is to alleviate the above mentioned disadvantages of bag holders by providing a bag holder, which is of simple construction and easy to load with a bag.

In its simplest form, the bag holder of the present invention includes a frame adapted to be mounted in a kitchen counter, the frame having a passage for receiving garbage; a bag-supporting plate having an aperture for alignment with the passage in the frame; at least one downwardly and inwardly extending flange on the base of the frame for engaging at least one side of said bag-supporting plate when the plate is placed beneath the frame; and latch means for interconnecting the frame and the plate at a position remote from the flange, whereby the plate can be secured to the frame with the upper end of a bag therebetween.

In a second embodiment of the invention, the frame is replaced with a main frame and an intermediate frame, each frame having passages through which garbage can pass. The main and intermediate frames are co-axial, and can be interconnected at various locations for altering the length of the bag holder. Thus, the bag holder can be used with kitchen counters or the like of a variety of heights.

The invention will now be described in greater detail with reference to the accompanying drawings illustrating a preferred embodiment of the invention, and wherein:

FIG. 1 is an exploded perspective view of one form of bag holder constructed in accordance with the present invention;

FIG. 2 is a cross sectional view of the frame and bag-supporting plate of the bag holder of FIG. 1;

FIG. 3 is a sectional view of the frame of the bag holder taken generally along line 3—3 of FIG. 2;

FIG. 4 is a bottom view of the lid of the bag holder of FIG. 1;

FIG. 5 is a cross sectional view taken generally along line 5—5 of FIG. 4; and

FIG. 6 is an exploded perspective view of a second form of bag holder constructed in accordance with the present invention.

With reference to FIG. 1, the bag holder of the present invention includes a frame, generally indicated at 1, which can be secured to the bottom surface of a kitchen counter top (not shown). The frame 1 is in the form of a hollow body 2 having a square cross sectional configuration, and defining a central passage 3 through which garbage can pass. A continuous flange 4 extends outwardly from the periphery of the body 2 at the top thereof. Holes 5 are provided in the flange 4 through which screws can pass for connecting the frame 1 to the bottom surface of the counter top.

Referring particularly to FIGS. 2 and 3, the frame 1 is provided with a flat base 6 extending horizontally outwardly from each side of the body 2 at the bottom end thereof. The front side of the base 6 defines the bottom of a deodorizing compartment, generally indicated at 7, which includes side walls 8 defined by extensions of bottom portions of the sides of the body 2, a front wall 9, a rear wall defined by one wall of the body 2, and a top wall or cover 10. The cover 10 is formed as a separate strip of metal or other material which rests on the upper edges of the side and front walls 8 and 9 with its rear edge in a groove 11 in one side wall of the body 2. Apertures 12 in the wall of the body 2 forming the rear wall of the compartment 7 and in the base 6 permit the passage of odors into the compartment, or the passage of deodorant fumes into the passage 3.

The side walls 8 of the compartment 7 extend forwardly beyond the front wall 9 of the compartment for supporting pins 13, about which a latch 14 can pivot. The latch 14 is generally C-shaped when viewed from one side and extends across a major portion of the front edge of the frame 1. The bottom arm of the latch 14 normally extends beneath and is spaced from the bottom surface of the front edge of the base 6. Teeth 15 are provided on the top surface of the bottom arm of the latch 14 for engaging the upper end of a bag. A downwardly extending flange 16 at the front edge of the latch 14 serves as a handle for manually pivoting the latch between open and closed positions about the pins 13. The rear end of the plate 6 extends vertically downwardly and then inwardly at 17 to form a generally cowl-shaped flange 18 with a lower portion 19 inclined at approximately 45° to the horizontal. The rear end of the base 6 is generally V-shaped when viewed from above or below.

The latch 14 is used, in conjunction with the flange 18 to secure a bag-supporting plate 20 against the bottom of the base 6. The bag-supporting plate 20 is similar in shape to the base 6 and includes a square central opening 21 permitting the passage of garbage through the plate. The opening 21 is larger than the passage 5, so that a portion of the opening 21 lies beneath the apertures 12 in the base of the deodorizing compartment 7. The plate 20 is provided with a flange 22 similar in shape to the flange 18 of the base 6. The plate 20, and in particular the flange 22 is slightly smaller than the base 6 and flange 18, so that the flange 22 fits snugly into the flange 18. Except for the flange 22, the plate 20 is coextensive with the base 6, the front edge of the plate 20 being flush with the front edge of the base 6 when the plate 20 is in position against the base 6.

A cover, generally indicated at 23, (see FIGS. 1, 5 and 6) is used to close the open top end of the bag holder. The cover 23 includes a generally C-shaped hollow frame 24, with a top plate 25, for mounting on a counter top. A pair of metal brackets 26 are provided in the frame 24 for securing the frame to a counter top. Each bracket 26 includes a key-shaped slot 27 in its base for receiving a bolt (not shown). The head of the bolt is inserted through the slot 27 and the bolt is slid transversely of the frame 24 to lodge the bolt in the bracket 26. By passing the bolt through a bore in the counter top and threading a nut onto the bolt, the frame 24 can be secured to the counter top. A pin of rivet 28 is provided in the inner side wall of each side arm 29 of the frame 24 for pivotally supporting a cover plate 30 for rotation between a closed and open position about the rivets 28.

The cover plate 30 is provided with a flexible, e.g., rubber ring 31 on its bottom surface for absorbing shock when the cover is let fall from an open to a closed position. A mirror 32 is provided within the ring 31, so that the level of the waste material in a garbage bag can be determined merely by opening the cover.

In order to assemble the bag holder, an aperture of approximately the same size as the passage 5 is cut in a counter top, and the main frame 1 is then connected by screws to the bottom surface of the counter top, with the passage 5 beneath the aperture in the counter top.

In use, the upper end 33 of a bag B is inserted through the opening in the bag-supporting plate 20, the edge 33 is folded over the sides of the plate 20 and the plate is slid into position beneath the base 6, with the flange 22 mating with the flange 18. The latch 14, which must be raised when the plate 20 is inserted beneath the base 6, is swung downwardly so that the teeth 15 on the bottom arm of the latch 14 engage the edge 33 of the bag B to lock the plate 20 in position against the base 6, with the upper edge 33 of the bag B therebetween.

In order to remove a full bag B, the latch 14 is moved outwardly to release the front edge of the plate 20, which can then be withdrawn from engagement with the base 6.

It will be appreciated that flanges for engaging the bag-supporting plate can also be provided at the side edges of the base **6**, but such flanges would render the bag holder more complicated.

Referring now to FIG. **6**, the second embodiment of the invention is identical to the first embodiment, except that the frame **1** is replaced by a pair of frames **34** and **35** (hereinafter referred to as the main frame **34** and the intermediate frame **35**). The main frame **34** includes each of the elements of frame **1** (see FIGS. **1** to **5**), except the base **6** and deodorant compartment **7**.

The frame **34** includes a hollow body having a square cross sectional configuration defining a central passage **36** through which garbage can pass. A continuous flange **37**, similar to flange **4** (FIGS. **1** and **2**), extends outwardly from the upper peripheral edge of the body of the frame **34**. The flange **37** is provided with bores **38** for connecting the frame **34** to a counter top (not shown). An aperture **39** (only one shown) is provided in each of two opposed sides of the body for a purpose defined hereinafter.

The intermediate frame **35** is mounted beneath and coaxial with the main frame **34**. The intermediate frame **35** includes a hollow body **40** having a square cross sectional configuration, and defining a central passage **41**, which is aligned with the passage **36** of the main frame **34**. The diameter of the passage **41** is slightly larger than the outer diameter of the body of the frame **34**, so that the body **35** can be slid upwardly to surround the lower end of the body **34**.

Each of two opposed sides of the body **35** is provided with vertically aligned apertures **42**, whereby the main frame **34** and the intermediate frame **35** can be interconnected, with the position of the intermediate frame **35** relatively to the fixed main frame **34** being variable. Thus, this embodiment of the bag holder can be used beneath counter tops having different heights, the overall length of the bag holder being readily adjustable. In order to interconnect the main and intermediate frames **34** and **35**, respectively one pair of opposed apertures **42** in the body **35** is aligned with the opposed apertures **39** in the body **34**, and a bolt (not shown) is inserted through each aligned pair of apertures **39** and **42** on each side of the frames **34** and **35**. A nut (not shown) on each of the bolts completes the coupling of the frames **34** and **35**.

Thus, there has been provided a bag holder, which may be of variable length, for relatively easy use beneath counter tops or the like with conventional plastic garbage bags.

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

1. A bag holder comprising a frame adapted to be mounted in a counter; a passage in said frame for receiving garbage; a bag-supporting plate having an opening for alignment with said passage; a downwardly and inwardly extending flange on one side of said frame for engaging one side of said bag-supporting plate when said plate is placed beneath and against said frame; and latch means on a side said frame opposite said flange for interconnecting said frame and said bag-supporting plate, whereby the bag-supporting plate can be secured to said frame with the upper end of a bag therebetween.

2. A bag holder according to claim **1**, including a cover adapted to be mounted on a counter top above said passage for closing said passage.

3. A bag holder according to claim **1**, including a deodorizing compartment on said frame and in fluid communication with said passage and with the interior of a bag when the bag holder is in use.

4. A bag holder comprising a main frame adapted to be mounted in a counter, said main frame including a first passage for receiving garbage; an intermediate frame having an upper portion coaxial with at least a portion of said main frame, said intermediate frame including a second passage for alignment with said first passage; a bag-supporting plate having an aperture for alignment with said first and second passages; a downwardly and inwardly extending flange on said intermediate frame for engaging at least one side of said bag-supporting plate when said plate is placed beneath and against said intermediate frame; and latch means on a side of said intermediate frame opposite said flange for interconnecting said intermediate frame and said bag-supporting plate, whereby the bag-supporting plate can be secured to the intermediate frame with the upper end of a bag therebetween.

5. A bag holder according to claim **4**, including means for adjusting the location of said intermediate frame relative to said main frame, whereby the length of the bag holder can be varied.

6. A bag holder according to claim **4**, including a cover adapted to be mounted on a counter top above said first passage for closing said first passage.

7. A bag holder according to claim **1**, **2**, or **4**, including a deodorizing compartment on said intermediate frame and in fluid communication with said second passage, and with the interior of a bag when the bag holder is in use.

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