FLEXIBLE BAG HOLDING DEVICE

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ABSTRACT
A flexible bag holding device comprising an attachment for attaching the flexible bag holding device to a support, a frame member about which the upper end of a bag can be placed to hold the bag open, and a bag retainer on the frame member adapted to retain the bag in place on the frame member when the flexible bag holding device is in use.
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CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part of International Application No. PCT/AU2008/000939, filed on Jun. 26, 2008, which claims the priority benefit of Australian Patent Application No. 2007903461, filed on Jun. 27, 2007, the entire contents of which are hereby incorporated by reference.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention
[0003] The present invention relates to a flexible bag holding device. In particular, the present invention relates to a portable flexible bag holding device for indoor or outdoor applications that can reuse plastic shopping bags, rubbish bags, etc., especially of the type having handles.
[0004] 2. Description of Related Art
[0005] In many outdoors pursuits, such as camping, fishing, hiking, picnicking and so on, waste may be generated. This waste must be disposed in a way that is friendly to the environment. However, when camping, hiking and the like, it is not always practical to carry a domestic bin or trash can (hereinafter collectively referred to as a “bin”) in which to dispose of waste.
[0006] Similarly, in some indoors applications, such as sheds or garages, a device such as a bin to dispose of waste, or in which to store items, may be desirable. However, in many instances it may be impractical to store a conventional domestic bin in a shed or garage, such as when limited space is available.
[0007] In the applications described above, a common solution to the problem is simply to hang a plastic bag from a hook, door handle, tree branch, post, or the like, and place waste into the bag. There are a number of drawbacks with this technique. For instance, as the plastic bag is not covered or sealed in any way, any unpleasant odors are not contained within the bag. In addition, placing food scraps in a bag stored in this manner can attract unwanted attention from animals, birds or insects. Furthermore, when a bag is simply hung from a hook, post, tree branch or the like, adding new waste to the bag is a two-handed process, as it is necessary to hold the bag open while putting waste into the bag. Depending on the sort of waste in the bag, having to touch the bag in this way may be unpleasant or even unhygienic.
[0008] It is well-known to use a plastic bag and even to reuse a plastic shopping bag by lining an existing kitchen bin or something similar with the bag. This kitchen bin is generally not suitable for camping applications because it is rather large and bulky. Also, the plastic bag is sometimes the wrong size for the bin.
[0009] It is also known to provide devices that can support and hold open large canvas or cloth bags which are usually used as laundry bags. These devices contain a framework and some form of ring which extends outwardly from the framework. The bag mouth extends about the ring and is clamped to the ring using a separate clamp. These devices are not particularly suited for outdoor use or even indoor use such as with plastic shopping bags wherein for example removal of the bag requires the separate clamp to be released and stored somewhere while the bag is removed with the process needing to be reversed when another bag is attached.

[0010] Therefore, there would be an advantage if it were possible to provide a relatively simple and easy-to-use flexible bag holding device which could hold a plastic shopping bag (for example) in an open position and could hold the bag in such a manner that the bag will not easily fall off the holding device but at the same time allowing the bag to be quite quickly and easily attached and removed from the holding device without requiring any fiddly or clumsy separate clamps, etc.

[0011] It will be clearly understood that, if a prior art publication is referred to herein, this reference does not constitute an admission that the publication forms part of the common general knowledge in the art in Australia or in any other country.

[0012] Throughout this specification, the term “comprising” and its grammatical equivalents shall be taken to have an inclusive meaning unless the context of use indicates otherwise.

SUMMARY OF THE INVENTION

[0013] It is an object of the present invention to provide a flexible bag holding device which may overcome at least some of the above-mentioned disadvantages, or provide a useful or commercial choice.

[0014] In a first aspect of the invention there is provided a flexible bag holding device comprising a bracket for attaching the flexible bag holding device to a support, a frame member about which the upper end of a bag can be placed to hold the bag open, and a bag retainer on the frame member adapted to retain the bag in place on the frame member when the flexible bag holding device is in use, wherein the bag retainer comprises one or more projections that extend generally downward from the frame member, the projections being adapted to retain an upper edge and/or handle portion of the bag.

[0015] In this manner, a flexible bag (for instance a shopping bag) can be quickly attached to the holding device without requiring any separate clamps, etc., to do so, and can also be quickly removed when the bag is full and needs to be disposed.

[0016] Any suitable type of flexible bag may be used in conjunction with the flexible bag holding device, such as bags made from plastic, paper or any other suitable material. Preferably, the bags used with the flexible bag holding device may be of the sort comprising a pair of handles, such as those provided at retail outlets such as supermarkets, although any sort of bag comprising a pair of handles may be suitably used with the flexible bag holding device. Alternatively, any type of bag comprising an uneven upper lip, such as bags with a wave-shaped upper lip and the like, may also be suitably used with the flexible bag holding device.

[0017] Any embodiments of the invention, bags with even upper lips may also be used with the flexible bag holding device.

[0018] The bracket may be any suitable bracket such as, for example, one or more hooks, clamps or the like. The bracket may be provided with one or more holes allowing the flexible bag holding device to be nailed, screwed, riveted or otherwise attached to a support. In embodiments of the invention in which the flexible bag holding device is designed to be installed only temporarily, such as when camping, the bracket may be adapted to allow the flexible bag holding device to be attached to a support using a U-clamp or similar device. In embodiments of the invention in which a bracket is used, the bracket may be shaped so as to allow a more secure engagement with the support. Preferably the bracket can be attached
to and removed from a support by hand, without using any tools. Where the bracket is a U-clamp or similar device, the bracket is preferably tightened using wing nut fastening members or similar items.

In other embodiments of the present invention, the bracket of the flexible bag holding device may be adapted to engage with mounting means located on a support member. The bracket may engage with the mounting means using any suitable technique, such as, but not limited to, sliding engagement, press engagement and the like. The mounting means may be of any suitable form. In some embodiments of the invention the mounting means may comprise a corresponding mounting bracket.

The support to which the flexible bag holding device may be attached may be of any suitable form. In embodiments of the invention in which the flexible bag holding device is to be attached to a support only temporarily, the support may comprise a post, tree, fence or any other suitable surface. If the flexible bag holding device is to be attached to a support in a more permanent manner, such as in a garage or shed, the support may comprise a bench, door, wall, wall stub and the like. In some embodiments of the invention, the flexible bag holding device may be adapted to be attached to a substantially vertical support. However, in alternative embodiments of the invention the flexible bag holding device may be adapted to be attached to horizontal or angled supports.

In use, the upper end of a bag may be placed around the frame member to hold the bag open. The frame member may be of any suitable shape and size. In some embodiments of the invention, the frame member may comprise a hollow circular, square or rectangular member when viewed from above or below. In use, a bag may be passed through the hollow centre of the frame member in such a way that the open top of the bag faces upwards. The bag may then be opened and the open top of the bag may be located on the frame member by folding the open top of the bag over an upper rim of the frame member. Thus, in a preferred embodiment of the invention, the dimensions of the frame member are such that most common varieties of bag may be held open on the upper rim of the frame member.

The bag retainer may comprise any suitable means for retaining the bag in place in the flexible bag holding device, such as, but not limited to, one or more clips, hooks, clamps and the like. Preferably, the bag retainer is associated with, connected to, or formed integrally with the frame member. The bag retainer may comprise a set (e.g., a pair) of projections around which the upper edge or the handles of a bag may be hooked. Preferably, the projections are integral with the frame member. While it is not crucial as to the exact direction in which the set of one or more projections extend, in preferred embodiments the projections extend perpendicularly downward from the frame member.

In embodiments of the invention in which the bags to be used have handles, the bag retainer may comprise more than one projection located at intervals around the frame member to correspond with the bag handles. In a preferred embodiment of the invention, the bag retainer comprises two projections located opposite one another on the frame member. In this form of the invention, the handles of the bag are hooked under or around the downwardly extending projections, thus preventing the bag from falling off the frame member. Furthermore, as additional weight is placed in the bag, the handles of the bag draw more tightly against the bag retainer, ensuring that the bag is even more securely retained on the frame member.

The bag retainer may be adapted to assist in removing the bag from the portable bin when full. This may be achieved in any suitable way. However, in a preferred embodiment of the invention, the projection(s) comprises one or more finger slots, holes, grooves and the like for assisting the user in removing the bag from the bag retainer. The slots may be of any suitable shape, such as, but not limited to, U-shaped, V-shaped or the shape of keyholes. In some embodiments of the invention, the shape of the slots may not only be used as finger slots to assist in removing the bag from the bag retainer, but may also be used to assist in retaining the bag in place. For instance, an upper lip of the bag may be tied in a knot and wedged into a V-shaped or keyhole-shaped slot in order to retain the bag in place.

The flexible bag holding device may further comprise a lid. The lid may be of any suitable form; however, it is preferred that the lid is of a similar shape and size to the frame member so as to be able to seal the top of the bin when the lid is closed. In use, a seal is preferably created between the lid and a surface of the bag (e.g., an upper surface of the bag when the bag is retained thereon). The lid may be attached using any conventional method. In a preferred embodiment of the invention, the lid is attached to the portable bin using a hinge arrangement.

The flexible bag holding device may be constructed of any suitable material such as, but not limited to, plastic, metal or fiberglass. However, for simplicity and cost of production, as well as durability, it is preferred that the flexible bag holding device is made from plastic. The flexible bag holding device may be manufactured using any known method, such as moulding. The flexible bag holding device may comprise a number of individual parts joined together, although in a preferred embodiment the flexible bag holding device comprises a single moulded piece of plastic.

The flexible bag holding device may further comprise a bag protector. The bag protector is preferably an outer sleeve or bag located inside the frame member. The bag protector may be held in place by the retainer, but may comprise a generally rigid ring at its opening that sits on the frame member in addition or alternatively to the retainer.

The rigid ring is preferably made of steel, but other materials could be utilised instead of, or in combination with, the steel such as, for example, plastic or aluminum. The rigid ring is preferably a similar size and shape to the frame member so that it sits on the frame member without falling through the frame member, and without obstructing an opening of the bag in use.

The bag protector may also be affixed to the frame member by other means (either instead of, or in addition to, the rigid ring). For example, the bag protector may be affixed to the frame member using a plurality of straps (in a preferred form, three straps), and/or with domes or press studs. In a preferred embodiment, the bag protector is affixed to the frame member using three straps with press studs and, preferably, the straps and/or studs are arranged such that the bag protector can only be affixed to the frame member in one way to minimize or prevent incorrect attachment.

The bag protector may be made of any suitable material, but is preferably a relatively durable material. In a preferred embodiment, the bag protector is a mesh material,
allowing ventilation around the bag being protected therein, as well as draining of any liquids. Preferably the bag protector has a closeable opening. The closeable opening preferably extends along at least one side of the bag protector, but it will be appreciated the closeable opening can be located elsewhere including, for example, the bottom of the bag protector. The closeable opening is preferably closed/opened using a zip, but any suitable means may be utilised including, for example, Velcro®, buttons, domes, laced string, magnets, or the like.

In a second aspect of the invention there is provided a flexible bag holding device comprising a bracket for attaching the flexible bag holding device to a support, a frame member and bag retainer adapted to retain the bag in place on the frame member when the flexible bag holding device is in use, wherein the bag retainer comprises one or more projections that extend generally downward from the frame member, the projections being adapted to retain a handle portion of the bag.

BRIEF DESCRIPTION OF THE DRAWINGS

An embodiment of the invention will be described with reference to the following drawings in which:

FIG. 1 illustrates a plan view from above of the flexible bag holding device in accordance with an embodiment of the present invention;

FIG. 2 illustrates a side-elevation view of the flexible bag holding device in accordance with an embodiment of the present invention;

FIG. 3 illustrates the flexible bag holding device in accordance with an embodiment of the present invention when viewed from below;

FIG. 4 illustrates a rear view of the flexible bag holding device in accordance with an embodiment of the present invention;

FIG. 5 illustrates a plan view from above of the flexible bag holding device in accordance with an embodiment of the present invention;

FIG. 6 illustrates a side-elevation view of the flexible bag holding device in accordance with an embodiment of the present invention when in use;

FIG. 7 illustrates a side-elevation view of the flexible bag holding device in accordance with an embodiment of the present invention;

FIG. 8 illustrates a side-elevation view of the flexible bag holding device in accordance with an embodiment of the present invention;

FIG. 9 illustrates a side-elevation view of the flexible bag holding device with a bag protector in accordance with an embodiment of the present invention when in use.

DETAILED DESCRIPTION OF THE INVENTION

Referring to FIG. 1 of the drawings there is illustrated a plan view of a flexible bag holding device 10 which may be embodied as a portable bin according to an embodiment of the present invention. The portable bin comprises attachment means 11 in the form of a bracket and a circular frame member 12. The attachment means 11 comprises an indentation 13 which allows the flexible bag holding device 10 to be more securely attached to a support (not shown) such as a pole, fence, tree, etc. In use, the closed end of a bag (not shown) is passed through the frame member 12, and the edges of the open end of the bag (not shown) are folded over the upper rim 14 of the frame member 12.

The flexible bag holding device 10 further comprises hinge posts 15 for enabling a lid (not shown) to be connected to the flexible bag holding device 10.

FIG. 2 shows a side-elevation view of the flexible bag holding device 10 in accordance with an embodiment of the present invention. The flexible bag holding device 10 comprises a bag retainer or retention means 16 in the form of a retainer having a pair of projections extending downwardly from the frame member 12. In the embodiment of the invention illustrated in FIG. 2, the open top of a bag (not shown) may be folded over the upper rim 14 of the frame member 12 and the handles of the bag (not shown) may be hooked under and around the bag retention means 16. Thus, the bag is retained in place in the flexible bag holding device 10. When additional weight is placed into the bag (not shown), the handles of the bag (not shown) are drawn more tightly against the bag retention means 16, thereby securing the bag (not shown) even more firmly to the flexible bag holding device 10.

The bag retention means 16 further comprises a slot 17 for allowing the user to insert a finger through the bag retention means 16. The user may then slide the handle of the bag (not shown) hooked under the bag retention means 16 downwards until it is free of the bag retention means 16. In this way, a bag (not shown) may be removed from the flexible bag holding device 10.

This provides a very easy yet effective mechanism to enable the bag to be securely attached (with little likelihood of the bag falling off the device) yet enables the bag to be removed very easily without needing to fiddle with any part of the bag. Instead, a person’s finger can be placed in the slot to very easily remove the bag handles and therefore the bag from the device.

The flexible bag holding device 10 illustrated in FIG. 2 comprises a pair of hinge posts 15 extending upwardly from a region 18 of the flexible bag holding device 10 intermediate the attachment means 11 and the frame member 12.

Turning now to FIG. 3 of the drawings there is illustrated a view of the flexible bag holding device 10 in accordance with an embodiment of the present invention when viewed from below. In this embodiment of the invention the flexible bag holding device 10 is connected to a support 19 in the form of a post. The support 19 is received in the indentation 13 in the attachment means 11 and the flexible bag holding device 10 may then be secured in place using a U-bolt (not shown), strap (not shown) or any other suitable means.

In the embodiment of the invention illustrated in FIG. 3, it can be seen that the flexible bag holding device 10 comprises a pair of slots 17 associated with the bag retention means (not shown) located opposite one another on the frame member 12.

In FIG. 4 a rear view of the flexible bag holding device 10 according to an embodiment of the present invention is shown. The attachment means 11 of this embodiment of the invention comprises a bracket 20 including a number of apertures 21 through which a U-bolt (not shown), strap (not shown), screws (not shown), nails (not shown) and other similar fastening devices may pass in order to attach the flexible bag holding device 10 to a support (not shown).

FIG. 5 illustrates a plan view from above of the flexible bag holding device 10 according to an embodiment of
the present invention. In this figure there is illustrated a method of attaching the flexible bag holding device 10 to a support (not shown) using a U-bolt 25. The legs of the U-bolt 25 pass through the apertures 21 of the attachment means 11, and nuts (not shown) or the like are threaded on the legs of the U-bolt 25. In this way, the flexible bag holding device 10 may be retained on a support (not shown) when in use.

In FIG. 6 there is shown a flexible bag holding device 10 according to an embodiment of the invention when in use. A flexible bag 22 is pushed through the frame member 12, and the upper edge 23 of the flexible bag 22 is folded over the upper rim (not shown) of the frame member 12. The handles 24 of the flexible bag 22 are hooked underneath the bag retention means 18. As the weight of material in the flexible bag 22 increases the handles 24 are pulled more tightly against the back of the bag retention means 18 ensuring that the handles 24 cannot slip off or pull loose from the flexible bag holding device 10. When the flexible bag 22 is full or needs to be removed from the flexible bag holding device 10 for some reason, a user can insert a finger or fingers (e.g., of a hand) into a slot 17 in the bag retention means 18 and pull the handles 24 of the flexible bag 22 downwards until the handle is unhooked from the bag retention means 18. In this way, the flexible bag 22 may be removed from the flexible bag holding device 10.

Turning now to FIGS. 7 and 8 there is shown a flexible bag holding device 10 according to an embodiment of the present invention. The flexible bag holding device comprises attachment means 11, a frame member 12, bag retention means 16 and a lid 26. The lid 26 is adapted for connection to the flexible bag holding device 10 through engagement with a pair of hinge posts 15 extending upwards from a region 18 intermediate the attachment means 11 and the frame member 12. Thus, the lid may be opened (FIG. 7) and shut (FIG. 8) by pivoting the lid 26 around the hinged posts 15. When closed, the lid sits snugly over the upper rim 14 of the frame member 12, thereby preventing unpleasant odors from escaping from the bag (not shown) held by the flexible bag holding device 10, while also stopping animals, insects, etc. from gaining access to the contents of the bag (not shown).

FIG. 9 illustrates a bag protector 30 being utilised with the flexible bag holding device 10. The bag protector 30 is an outer bag with a rigid ring that sits on the frame member 12. The rigid ring (which cannot be seen) is of a similar shape and size to the frame member 12. The bag protector 30 is made of a durable mesh or mesh material that allows ventilation and visual inspection of bag 22. The bag protector 30 has a closeable opening in the form of a zip 31. The zip is located down a side of the bag protector, extending from the top (at or near the rigid ring) to the bottom.

The zip 31 allows access to the internal space of the bag protector 30, including to the bag 22 contained therein (e.g. for removal of the bag). Advantageously, the bag protector provides protection to bags 22 held by or therein the elements as well as from animals, insects, and/or pests. A further advantage of the bag protector 30 is that if any solids fall from the bag (e.g., if the bag 22 breaks or has a hole in it) then the fallen solids will be contained in the bag protector 30 until emptying.

Those skilled in the art will appreciate that the present invention may be susceptible to variations and modifications other than those specifically described. It will be understood that the present invention encompasses all such variations and modifications that fall within its spirit and scope.

What is claimed is:

1. A flexible bag holding device comprising a bracket for attaching the flexible bag holding device to a support, a frame member about which the upper end of a bag can be placed to hold the bag open, and a bag retainer on the frame member adapted to retain the bag in place on the frame member when the flexible bag holding device is in use, wherein the bag retainer comprises one or more projections that extend generally downward from the frame member, the projections being adapted to retain an upper edge and/or handle portion of the bag.

2. A flexible bag holding device according to claim 1, wherein the bracket comprises a U-clamp with one or more fastening members.

3. A flexible bag holding device according to claim 2, wherein the fastening member(s) are wingnuts.

4. A flexible bag holding device according to claim 1, wherein the bracket is adapted to engage with a mounting portion of the support.

5. A flexible bag holding device according to claim 1, wherein the frame member is circular.

6. A flexible bag holding device according to claim 1, wherein the bag retainer is formed integrally with the frame member.

7. A flexible bag holding device according to claim 1, wherein the bag retainer comprises a pair of projections.

8. A flexible bag holding device according to claim 7, wherein the projections extend perpendicularly downward from the frame member.

9. A flexible bag holding device according to claim 1, wherein the projection(s) comprise a portion adapted to provide access to the upper edge and/or handle portion of the bag being retained when in use.

10. A flexible bag holding device according to claim 9, wherein the portion adapted to provide access to the upper edge and/or handle portion of the bag comprises a slot in the projection(s).

11. A flexible bag holding device according to claim 1, further comprising a lid.

12. A flexible bag holding device according to claim 11, wherein the lid is hingedly engaged with the frame member or bracket.

13. A flexible bag holding device according to claim 1, further comprising a bag protector.

14. A flexible bag holding device according to claim 13, wherein the bag protector comprises a rigid ring that sits on at least a portion of the frame member in use.

15. A flexible bag holding device according to claim 13, wherein the bag protector is affixed to the frame member using a plurality of straps.

16. A flexible bag holding device according to claim 13, wherein the bag protector comprises a closeable opening.

17. A flexible bag holding device according to claim 16, wherein the closeable opening comprises a zip.

18. A flexible bag holding device according to claim 13, wherein the bag protector is substantially a mesh material.

19. A flexible bag holding device comprising a bracket for attaching the flexible bag holding device to a support, a frame member and bag retainer adapted to retain the bag in place on the frame member when the flexible bag holding device is in use, wherein the bag retainer comprises one or more projections that extend generally downward from the frame member, the projections being adapted to retain a handle portion of the bag.

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