A bag holder 6 includes weld nuts 7 and brackets 5 mounted to a ring 1 wherein legs 2 are attached to the ring 1, weld nuts 7, and brackets 5 with thumb screws, threaded hex bolts or similar fasteners 3. The threads of thumb screws, threaded hex bolts or similar fasteners 3 are coined after tightening to preclude the backing out or removal of the thumb screws, threaded hex bolts or similar fasteners 3 from the weld nuts 7 and brackets 5 and ring 1 upon disassembly and wherein said thumb screws, threaded hex bolts or similar fasteners 3 have wing portions 2a or heads that are used to hold the bag.
APPARATUS AND METHOD FOR HOLDING A BAG

CROSS-REFERENCE

[0001] This application claims priority of prior Provisional Application No. 60/206,739, filed May 24, 2000.

BACKGROUND OF THE INVENTION

[0002] Bags are used for various purposes and are available in a variety of sizes. For example, contractor bags can be obtained in various capacities and dimensions, such as in a 42 gallon capacity, generally three mil thickness and four feet long. A well-known “Husky” bag is used in the carpentry, electrical, landscaping, drywall, plumbing and painting trades.

[0003] Bag holders are usually in the form of trash barrels. With trash barrels, the bag is removed from the trash barrel when the bag is full. A problem is the expense and care for these large trash barrels. This includes the removal and storage of these trash barrels when they are no longer needed or the transportation of these trash barrels to another work site as required. The purchasing, storage and/or transportation of trash barrels can be a very costly and burdensome annoyance.

[0004] The present invention is directed to overcoming one or more of the problems set forth above.

SUMMARY OF THE INVENTION

[0005] In one aspect of the invention, a bag holder is disclosed. The bag holder includes a ring, at least three legs, and a mechanism for attaching one end of each of the legs to the ring.

[0006] In another aspect of the invention, a method for holding a bag upright and in the open position is disclosed. The method includes assembling a bag holder having a ring and at least three legs attached thereto, placing a bag though the ring, and attaching an open end of the bag around the ring of the bag holder.

[0007] Yet another aspect of the invention is to provide a lightweight holder for bags.

[0008] Still another aspect of the invention is the use of threaded thumb screws, threaded hex bolts or similar fasteners for fastening the legs to the ring and method for coining the threads of said threaded thumb screws, threaded hex bolts or similar fasteners to preclude their removal from brackets, weld nuts and ring.

[0009] Another aspect of this invention is to use thumb screws, threaded hex bolts or similar fasteners for piercing and holding a bag in place in a bag holder during high wind and heavy load conditions.

[0010] Yet another aspect of this invention is to provide an attachable sleeve for holding bag ties.

[0011] In another aspect of this invention a bag holder that is easily assembled and disassembled is provided.

[0012] Another aspect of this invention is to provide a bag holder wherein the holder is easily removed by moving the bag holder; however, the bag may remain unmoved.

[0013] These aspects are not meant to be all encompassing, but are merely a sampling of the numerous aspects and features of this invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] Reference is now made more particularly to the drawings, which illustrate the best presently known mode of carrying out the invention and wherein similar reference characters indicate the same parts throughout the views.

[0015] FIG. 1 is a perspective view of an assembled embodiment;

[0016] FIG. 2 is a side view of the leg;

[0017] FIG. 2a is an isolated view of the end portion of the leg, which is connected to the ring, weld nuts and brackets;

[0018] FIG. 2b is a front view of a bracket;

[0019] FIG. 2c is a side view of the bracket;

[0020] FIG. 3 is a partial top view of an assembled embodiment showing the ring; thumb screw, threaded hex bolt or similar fastener; bracket; weld nut and leg;

[0021] FIG. 3a is a partial side view of an assembled embodiment showing the ring; one thumb screw, threaded hex bolt or similar fastener; one bracket and one leg;

[0022] FIG. 4 is a side view of an optional sleeve attachment and sleeve attachment clip; and

[0023] FIG. 4a is a top view of the optional sleeve attachment and sleeve attachment clip.

DETAILED DESCRIPTION

[0024] An embodiment for holding a bag in the opened position shown generally in FIG. 1. In the preferred embodiment as shown in FIGS. 3 and 3a, a symmetrical ring 1 is indirectly or directly connected to legs 2. The ring 1 could be round, oval, or any other shape, including square and rectangular. The legs 2 are at an angle with respect to the ground or tapered, or are vertical with respect to the ground. The number of legs is three; however, three or more legs can be utilized. The legs 2 are tubular steel and preferably 14 gauge; however, the legs 2 can be made of different gauge sizes and materials. The legs 2 could be plastic, wood or other suitable materials sufficient to support the load of the ring 1, bag and any materials deposited in the bag. The legs 2 are adjustable in the preferred embodiment; however, the legs 2 can be fixed at a certain length. The adjustment for varying the leg 2 length can be done in any number of known ways and a further explanation is not considered necessary. The legs 2 can be vertical; however, in the preferred embodiment the legs 2 extend outwardly and at an angle from the ring 1. The angle at which the legs extend from the ring 1 can be adjusted. For tight areas or high pedestrian traffic areas, the angle between the ring 1 and legs 2 may be small; however, in other situations, the angle may be larger. In short, the angle is determined by the user depending on the application. An optional sleeve attachment 4 can be attached to the legs 2 as shown in FIG. 1. The attachment 4 is used to hold bag ties. The attachment 4 is similar to a canister with one capped end 9. The capped end 9 is the bottom surface. At the opposite end, the attachment 4 has an uncapped end or opened end 10. The uncapped end 10 allows the bag ties entry and exit into the attachment 4. The
The ring 1 is constructed of steel; however, other suitable materials can be used. The ring 1 is suspended off the ground by the legs 2. The ring 1 is parallel with respect to the ground as shown in FIGS. 1 and 3a. The ring 1 has an opening and is supported by the legs 2 positioned such that the opening of the ring 1 is penetrated in vertical direction with respect to the ground.

The legs 2 and ring 1 are connected and fastened together at the junction of brackets 5, weld nuts 7 by thumb screws, threaded hex bolts or similar fasteners 3. The thumb screws, threaded hex bolts or similar fasteners 3 are threaded. In the preferred embodiment, the thumb screws, threaded hex bolts or similar fasteners 3 are made of steel but other materials can be used. Brackets 5 are attached to the ring 1 to provide a mating junction for the legs 2 and the ring 1. The brackets 5 have a hole wherein weld nuts 7 are connected to the brackets 5. The weld nuts 7 are threaded and used for receiving the thumb screws, threaded hex bolts or similar fasteners 3. The flattened portion 2a of the legs 2 are slipped between the ring 1 and inner surface of the brackets 5 with respect to the ring 1. The thumb screws, threaded hex bolts or similar fasteners 3 are threaded through the weld nuts 7 and contact the flattened portion 2a of the legs 2. After assembling the thumb screws, threaded hex bolts or similar fasteners 3, the threads of same are coined by means for coining said threads. In the preferred embodiment, a punch tool is hammered down onto the threads of the thumb screws, threaded hex bolts or similar fasteners 3 resulting in coined threads. Many tradesmen use pliers or other means for tightening the thumb screws, threaded hex bolts or similar fasteners 3. The coining of the threads of the thumb screws, threaded hex bolts or similar fasteners 3 preclude the thumb screws, threaded hex bolts or similar fasteners 3 from being backed out or removed from the weld nuts and brackets 5 while allowing the legs 2 to be disassembled from the ring 1. This is desirable because it prevents the thumb screws, threaded hex bolts or similar fasteners 3 from being lost or misplaced. The thumb screws, threaded hex bolts or similar fasteners 3 remain connected to the weld nuts 7 and brackets 5 of the ring 1 when the legs 2 are removed from the brackets 5 and ring 1.

After the legs 2 are connected to the weld nuts 7, brackets 5 and ring 1 by the thumb screws, threaded hex bolts or similar fasteners 3, a bag is placed through the diameter of the ring 1. The open end of the bag is wrapped around the circumference of the ring 1. When thumb screws 3 are used, the thumb screws 3 are tightened with a torque wrench so that the wing portions 3a of the thumb screws 3 are vertical with respect to the ground. This is beneficial because the bag is secured to the ring 1 by piercing the bag with the wing portion 3a of the thumb screws 3 during high wind or heavy load conditions. Alternatively, the wing portions 3a could be in various positions and still serve the same purpose.

The length of the legs 2 and ring 1 diameter can be made in various sizes depending on the diameter and length of the bag. For example, a 55 gallon bag would require a 23 in. diameter ring 1 and 40 in. legs 2; whereas, a 42 gallon bag would require a 20.5 in. diameter ring 1 and 36 in. legs 2. When the bag is placed in bag holder 6, the bag contacts the ground as shown in FIG. 1. The ground serves to support the bag and its contents.

The assembly and disassembly of the legs 2 to the weld nuts 7 and brackets 5 of the ring 1 with the thumb screws, threaded hex bolts or similar fasteners 3 is easily done. Further, during disassembly the thumb screws, threaded hex bolts or similar fasteners 3 remain connected to the weld nuts 7, brackets 5 and ring 1 preventing them from being misplaced or lost.

Another feature being that the bag holder 6 can be removed by detaching the bag from the thumb screws, threaded hex bolts or similar fasteners 3 and by lifting the bag holder 6. During the removal of the bag holder 6, the bag remains in the same location unmoved. Whereas with a trash barrel, the bag must be removed from the trash barrel. In certain situations, it is advantageous to remove the bag holder 6 while leaving the bag unmoved. For example, a heavy loaded bag could cause back strain so it might be advantageous to remove the bag holder and then with assistance lift and move the bag to the desired location.

What is claimed is:
1. A bag holder, comprising:
a ring;
at least three legs; and
a mechanism for attaching one end of each of said legs to said ring.
2. The bag holder as recited in claim 1, wherein said attachment mechanism includes a bracket and a fastening mechanism, wherein said fastening mechanism connects said bracket to said ring and secures said legs between said bracket and ring.
3. The bag holder as recited in claim 1, wherein said bracket has a larger periphery than a periphery of said ring.
4. The bag holder as recited in claim 1, wherein said fastening mechanism includes a threaded opening.
5. The bag holder as recited in claim 4, wherein said threaded opening includes a nut.
6. The bag holder as recited in claim 1, wherein said fastening mechanism includes a threaded member.
7. The bag holder as recited in claim 6, wherein said threaded member includes a thumb screw.
8. The bag holder as recited in claim 6, wherein said threaded member includes a threaded hex bolt.
9. The bag holder as recited in claim 1, wherein said legs are unpared.
10. The bag holder as recited in claim 1, wherein said legs are tapered.
11. The bag holder as recited in claim 1, wherein said legs taper from narrow to wide in the direction away from said ring.
12. The bag holder as recited in claim 1, wherein said legs are adjustable in length.
13. The bag holder as recited in claim 1, wherein said legs are a fixed length.
14. The bag holder as recited in claim 1, further comprising:
   an optional sleeve attachment connected to at least one said leg for holding bag ties.

15. The bag holder as recited in claim 2, wherein said fastening mechanism can be utilized to retain said bag in an open position.

16. The bag holder as recited in claim 15, wherein said fastening mechanism when engaged the threads are coined thereby preventing disengagement.

17. The bag holder as recited in claim 16, wherein when said fastening mechanism includes a threaded member and a threaded opening wherein at least one thread of said threaded member is coined thereby preventing said threaded member from backing out or being removed from said threaded opening.

18. A method for holding a bag upright and in the open position, comprising:
   assembling a bag holder having a ring and at least three legs attached thereto;
   placing a bag though said ring; and
   attaching an open end of the bag around said ring of said bag holder.

19. The method as recited in claim 18, further comprising:
   piercing an open end of said bag on protrusions located on said bag holder so that said bag is held in an open position.

20. A method for moving a bag holder that contains a bag without moving said bag from its location, comprising:
   unwrapping the bag from said bag holder having a ring and at least three legs attached thereto; and
   moving said bag from its location.

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