

- [54] **COMPACT, FOLDABLE INDOOR AND OUTDOOR BAG HOLDER**
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- [58] Field of Search **248/95, 96, 97, 98, 248/99, 136, 150, 100, 101, 156**

[56] **References Cited**

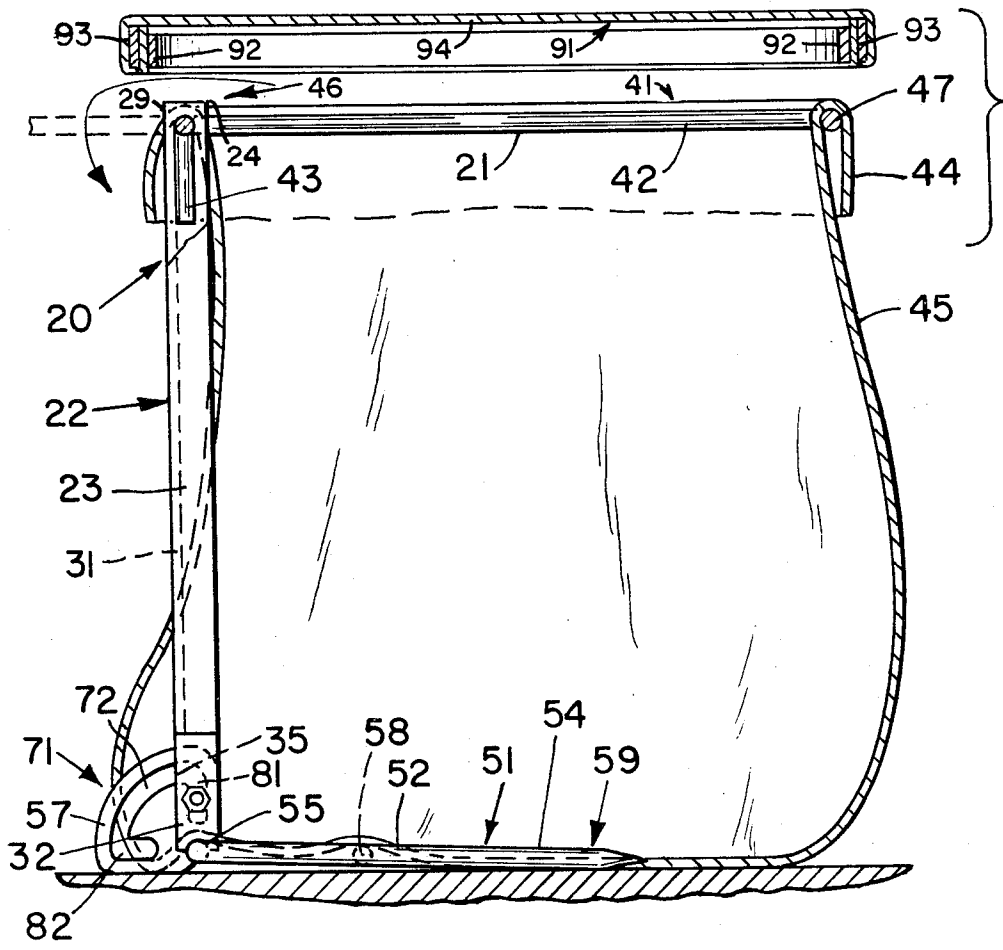
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[57] **ABSTRACT**
A relatively light weight, low cost holder for supporting the open end of a trash bag indoors, or a larger litter bag outdoors, is made of resilient bar, or wire, material such as steel or aluminum. The upper and lower frames are flat and planar to fold compactly against a vertical channel standard. The upper frame pivots 270° from bag holding position to folded position. The lower frame has a slotted locking plate, and prongs, so that indoors it is a flat, planar base, while outdoors it is an extension of the standard with the prongs thrust in the ground to support a larger plastic bag.

15 Claims, 7 Drawing Figures



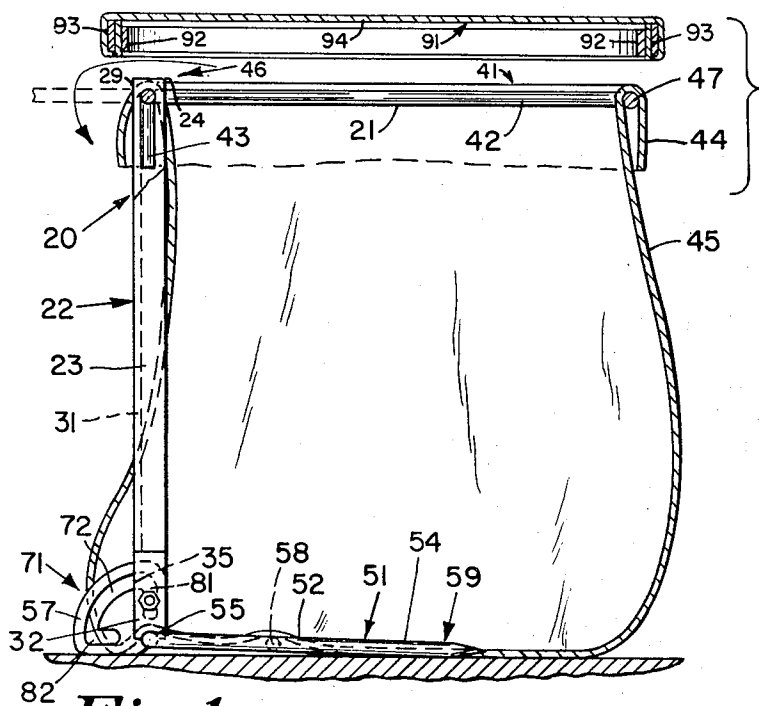


Fig. 1.

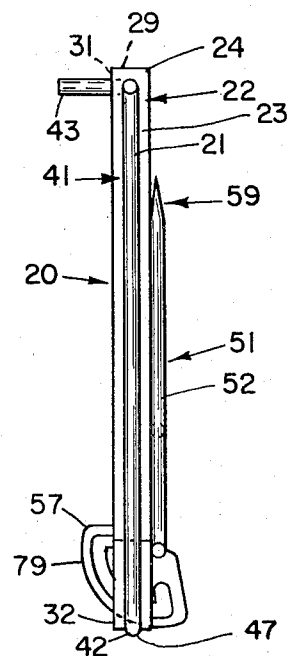


Fig. 2.

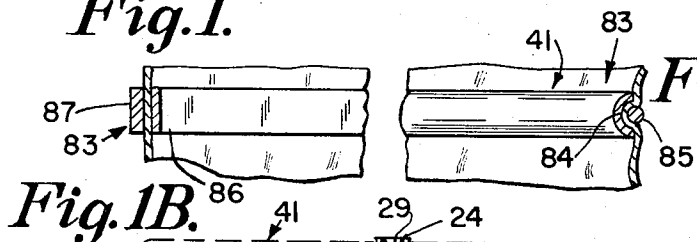


Fig. 1B.

Fig. 1A.

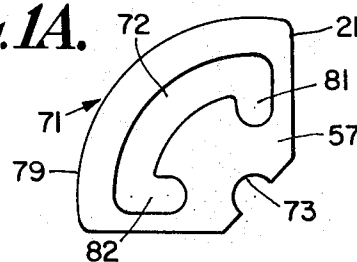


Fig. 4.

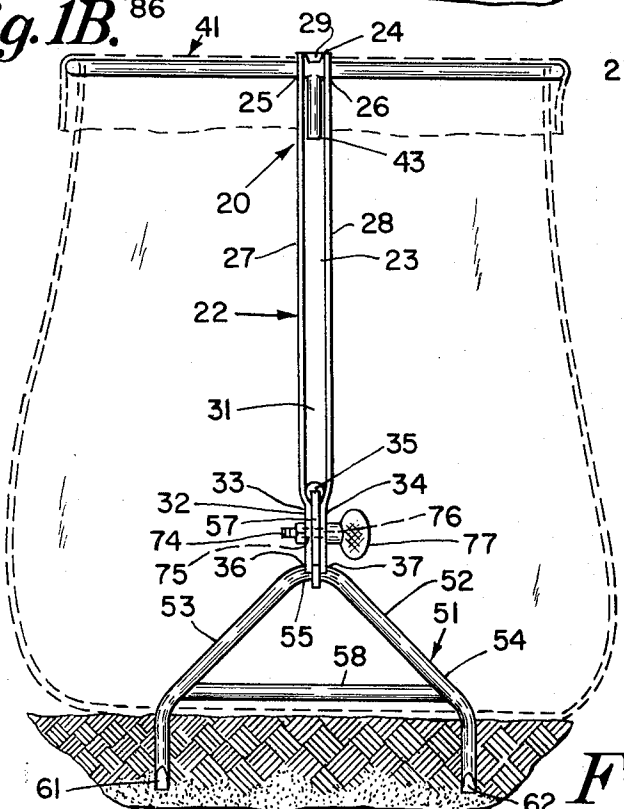


Fig. 3.

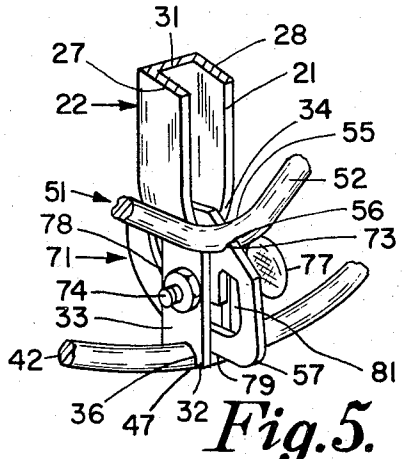


Fig. 5.

COMPACT, FOLDABLE INDOOR AND OUTDOOR BAG HOLDER

BACKGROUND OF THE INVENTION

It has heretofore been proposed to provide indoor bag holders, usually consisting of a heavy thick base, a vertical standard fixed to the base and a closed loop fixed at a desired height on the standard. Such devices are shown in U.S. Pats., No. 310,101 to Wagner of Dec. 30, 1884; No. 611,498 to Lyon of Sept. 27, 1898; No. 1,322,445 to Hyer of Nov. 18, 1919; and No. 3,491,973 to Hartbauer of Jan. 27, 1970. They do not lend themselves to low cost high production, raise problems of shipment and storage, and are not foldable or usable both indoors and outdoors.

Another approach to the problem of holding open the limp end of a limp garbage, trash or litter bag of thin plastic is found in the type of device which is made of low cost light material such as wire or strip metal. A hoop, supported by rods stuck in the ground, is taught in U.S. Pats., No. 3,532,314 to Vosbikian of Oct. 6, 1970 and No. 3,604,677 to Gits of Sept. 14, 1971, but these devices are useful only outdoors and have no base for use indoors. Bag holders made of similar material which are usable only indoors and not outdoors, and which have no folding capability, are disclosed in U.S. Pats., No. 3,576,306 to Grebon of Apr. 27, 1971, and No. 3,598,350 to Kaufman of Aug. 10, 1971.

Another bag holder, usable with small garbage bags, is taught in U.S. Pat. No. 3,614,042 to Jensen of Oct. 19, 1971, wherein a table-like pivoted framework is suggested for use indoors on a table and of a size which would fit in a package of the garbage bags.

SUMMARY OF THE INVENTION

In this invention, the bag holder is foldable into a relatively flat, compact package for shipment and storage because it is formed from a vertical standard, a horizontal planar upper bag-holding frame and a horizontal planar lower base-forming frame, all of light weight rod, or wire, material such as metal, the frame being foldable flatwise against the standard. The holder is unique in that the lower frame includes prongs and can be folded into position in extension of the standard and thrust into the ground for outdoor use, the upper frame being thereby at a higher level to accommodate larger trash or litter bags.

The upper frame is preferably circular with a tail which fits in the channel groove of the single standard, and the standard includes a pair of locking recesses in the lower terminal end which receive the upper frame. A novel locking means is provided consisting of a plate with a U-shaped slot and an arcuate cam surface, so that the lower frame is a lever for snapping the upper frame out of folded position and so that the lower frame is lockable in both horizontal and vertical extended positions.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a side elevation of the bag holder of the invention, used indoors with an indoor size plastic bag;

FIGS. 1A and 1B are fragmentary views of clamping means usable with the upper frame;

FIG. 2 is a side elevation of the device in compact folded condition;

FIG. 3 is a front elevation of the device of FIGS. 1 and 2, but showing the lower frame pivoted down-

wardly with the prongs inserted in the ground for outdoor use with an outdoor sized plastic bag;

FIG. 4 is a side elevation of the locking plate which locks the base in two position; and

FIG. 5 is a perspective detail view of the locking means.

DESCRIPTION OF THE PREFERRED EMBODIMENT

As shown in the drawing, the bag holder 20, of the invention, is preferably formed of relatively low cost, light weight rod, wire or strip material, such as the steel 21, or other metal, or structurally equivalent material.

The bag holder 20 includes vertical standard means 22, preferably in the form of a single upright metal standard 23 of channel cross section, having an upper end 24 with holes 25 and 26 in the side walls 27 and 28 and a recess 29 in the rear wall 31. Standard 23 includes a lower end 32, in which the side walls 27 and 28 are pinched toward each other at 33 and 34 to receive a locking plate, there being a slot 35 in the rear wall for the plate and a pair of recesses 36 and 37 in the terminal ends of the side walls 27 and 28 to receive the upper frame, as shown in FIGS. 2 and 5, or to receive the lower frame as shown in FIGS. 1 and 3.

The upper frame means 41 is flat, planar, light weight and preferably in the form of a closed circular loop forming a frame 42, made of aluminum of round cross section about one-quarter of an inch in diameter, and having an integral tail 43 normal thereto. As shown, the upper, flat, planar frame 42 is approximately the diameter of the open end 44 of a limp, thin-walled, plastic trash bag, or liner, 45 so that the end 44 may be draped thereover and supported while the bag is being filled. When the frame 42 is folded, as in FIG. 2, the tail 43 projects slightly from recess 29 of standard 23, but when turned through an angle of 270°, the tail rests in the channel to maintain the frame in horizontal bag-holding position. The tail 43 thus cooperates with the upper end 24 of the channel to form stop means 46 which normally supports the upper frame 42 horizontally. Preferably, the aluminum, or other material, 21, of which frame 42 is made, is resilient and slightly deformable so that in folded position the free end 47 of the loop can be stretched over the terminal end 32 of standard 23 to snap into the recesses 36 and 37, as shown in FIG. 5.

The lower frame means 51 is also flat, planar, light weight and may be formed of the same round cross section rod-like material 21 as the upper frame 42. The frame means 51 comprises a frame 52 which is bifurcated into a pair of oppositely disposed legs 53 and 54 which define a triangle having its apex 55 welded at 56 to the cam locking plate 57, and having an integral cross brace 58 intermediate thereof, the legs terminating in prong means 59, comprising the parallel free terminal ends 61 and 62 which are blunt, chisel-pointed for insertion into the ground.

The locking means 71 includes the cam and locking plate 57 which is provided with a U-shaped slot 72 and a recess 73 for weldment to the apex 55 of lower frame 52, the plate being pivotable on a pivot pin 74, passing through holes 75 and 76 in side walls 27 and 28 of the pinched portions 33 and 34, which pivot pin is conveniently a wing nut set screw 77, although the device will remain in selected positions by spring bias even if not screw tightened by set screw 77. As shown in FIG. 1,

the legs 53 and 54, when horizontal, constitute a pair of oppositely disposed, side frame elements sufficiently spaced apart to firmly support the standard vertically on the floor of a room, while the open end of a bag is supported in the upper frame 42 for filling. The standard 23 is of predetermined length, substantially equal to the length of the bag 45, to hold the conventional indoor type bag 45 at the correct height for filling. The resilient deformable looped upper frame 42, as shown in FIG. 2, is of a cross-dimension substantially equal to the length, or height, of standard 23 to be snap received, and cam unseated, from locking recesses 36 and 37. The lower frame and prong means are so dimensioned that when the cross brace is used as a foot rest and the prongs inserted into the ground to the brace, the upper frame will be at the correct height to support the larger outdoor type bag.

In operation, it will be seen that the bag holder 20 folds compactly with upper frame 42 flatwise, in parallelism with the rear of standard 23, and lower frame 52 flatwise, in parallelism with the front of standard 23. As shown in FIG. 5, the upper frame is locked in position by being snapped into the recesses 36 and 37, and the lower frame is locked in position because the pivot pin 74 is at 78, intermediate of the length of slot 72 with the resilient frame 42 pressing on the arcuate exterior cam-like surface 79 of plate 57 to spring press the lower frame against the standard.

A novel feature of the invention is that to unfold the device, a slight pressure on the prongs 61 or 62 applies leverage through cam face 79 to unseat the loop frame 42 from the recesses 36 and 37, whereupon the upper frame may be pivoted 270° to bag-holding position.

The lower frame may be placed in indoor base-forming position by straddling the portion of lower frame 52 adjacent the plate 57 by the recesses 36 and 37 in the end of the standard 23, and permitting the pivot pin to enter the end 81 of U-shaped slot 72, as in FIG. 1, the device then being fixed in position. The screw 77 is preferably then tightened.

To achieve outdoor position, the lower frame is unfolded into extension of standard 23, as in FIG. 3, the recesses 36 and 37 are straddled on the adjacent portion of the lower frame, and the pivot pin permitted to enter the end 82 of U-shaped slot 72. The screw 77 is then tightened, the device thrust into the ground and used to support a larger sized bag outdoors.

As shown in FIG. 1A, clamping means 83 may be used, wherein the upper frame 42 includes an annular peripheral groove 84 for a resilient deformable clamping ring 85 of rubber, plastic, metal, or the like, to grip the bag 45 therebetween.

Alternatively, as shown in FIG. 1B, the clamping means 83 may include an upper frame 42 of magnetizable metal 86, such as steel, and at least one permanent bar magnet 87 for clamping the bag 45 therebetween.

A cover 91 is provided which is also light weight and comprises a pair of concentric metal rings 92 and 93, ring 92 fitting closely within ring 93, with limp plastic material 94, such as a plastic bag, clamped therebetween and tautly stretched thereacross in the manner of a drum head. The plastic 94 is wrapped around the outside of the outer ring 93 and then extends between the clamp rings to cover up the steel strip material of the rings. The cover 91 can be used in the manner of a scoop to pick up leaves outdoors, and it forms a closure for the trash bag held in the holder to lock in odors

and prevent access by insects. Preferably, the diameter of rings 92 and 93 is slightly greater than the diameter of the upper frame 42 so that a relatively tight closure is obtained. When folded, as in FIG. 2, the holder fits within the cover for protection and shipment, the area enclosed by the rings being substantially equal to the area of the upper frame, regardless of the configurations thereof.

We claim:

1. A compact, foldable holder for maintaining a limp bag open for filling, said holder comprising:
 - a lower, planar frame adapted to be supported flatwise on a horizontal surface, said frame having prong means at one end adapted to be inserted in the ground, and having an opposite end;
 - a vertical standard having a lower end pivotally connected to the said opposite end of said frame and extending upwardly to an upper end at a predetermined height above said surface;
 - an upper, planar frame pivotally connected to said upper end of said standard for supporting the open end of said bag;
 - stop means associated with the pivotal connection of said upper frame and standard for normally supporting said upper frame horizontally; and
 - locking means associated with the pivotal connection of said lower frame and standard for selectively affixing said lower frame either in parallelism with said upper frame, or in extension of said standard, with said prong means in the ground.
2. A holder as specified in claim 1, wherein: said lower planar frame is generally triangular in configuration, with an integral cross bar as a foot rest.
3. A holder as specified in claim 1, wherein: said lower planar frame includes at least a pair of oppositely disposed side frame elements, spaced apart to provide a firm base for said holder, but having free terminal ends in parallelism, and forming said prong means.
4. A holder as specified in claim 1, wherein: said upper planar frame is a closed loop outlining a circle, said standard is a channel open to the front, and said stop means is an integral tail depending from said loop into said channel; whereby said depending tail maintains said frame in a horizontal plane but said frame may be pivoted up and around through an angle of 270° to fold flatwise against the back of said standard.
5. A holder as specified in claim 1, wherein: said locking means includes a plate slidably pivotable in the lower end of said standard and having a U-shaped slot, a pivot pin received in said slot, and a pair of recesses at the terminal end of said standard adapted to receive the adjacent part of said lower frame and lock thereon when said frame is in parallelism with, or normal to, said upper frame.
6. A holder as specified in claim 5, wherein: said upper planar frame is of resilient metal-like material adapted to be distorted and snapped into said pair of recesses and said plate includes an arcuately curved edge in contact with said upper frame when so snapped in said recesses; whereby the resilience of said upper frame biases said lower frame into compact, folded condition flatwise against the front of said channel and said upper frame may be snapped out of said recesses

by the leverage of said lower frame to unfold said device.

7. A holder as specified in claim 1, plus:

clamping means, mounted on and cooperable with said upper frame and extending at least partially therearound, for clamping on the material of a bag in said frame and detachably gripping the same.

8. A holder as specified in claim 7, wherein:

said upper planar frame is a circular ring with an exterior annular groove therein; and
said clamping means is a similar ring of resilient, deformable material arranged to snap in and out of said annular groove.

9. A holder as specified in claim 7, wherein:

said upper planar frame is a closed loop formed of magnetizable material; and
said clamping means comprises at least two magnets adapted to adhere to said material and grip the open end of said bag therebetween.

10. A compact, foldable holder for maintaining a limp bag open for filling said holder, comprising: standard means of predetermined height having an upper end and a lower end;

upper frame means pivotally mounted at the upper end of said standard means to fold from a vertical position flatwise against, and in parallelism with, said standard to a horizontal, bag-holding position normal to said standard means;

lower frame means pivotally mounted at the lower end of said standard means to fold from a vertical position flatwise against, and in parallelism with, said standard, to a horizontal base-forming position normal to said standard means and to a vertical, ground-insertion position in extension of said standard means, said lower frame means including prong means; and

locking means for selectively affixing said frames in said various positions relative to said standard means;

whereby said frames may be folded against said standard for compactness, unfolded to support a bag on a floor, and further unfolded, with said prong means thrust in the ground, to support a longer bag outdoors.

11. A holder as specified in claim 10, plus:

cover means comprising a pair of clamp rings, one fitting relatively closely within the other, and a sheet of limp plastic clamped between said rings

and stretched tautly thereacross, said rings being substantially equal in area to said upper frame means to form a detachable closure therefor.

12. A holder as specified in claim 1, plus:

cover means in the form of a pair of clamping rings, having a plastic bag stretched tautly thereacross to form a light weight, planar, cover fitting over said upper planar frame.

13. A compact, foldable holder for maintaining a limp bag open for filling, said holder being of the type having a lower planar frame adapted to be supported flatwise on a surface, a vertical standard having a lower end pivotally connected to said lower frame and extending upwardly to an upper end at a predetermined height above said surface, and an upper planar frame pivotally connected to said upper end of said standard for supporting the open end of a bag, said frames being foldable from bag supporting position normal to said standard to storage position in parallelism with, and flatwise against, said standard,

said bag holder being characterized by:

at least one of said frames being formed of resilient, deformable material and defining a closed loop with an integral tail, having a cross-dimension substantially equal to the said height of said standard; a locking recess proximate the end of said standard remote from the pivot location of said at least one frame adapted to receive the free portion of said frame in storage position; and

locking means associated with the other said frame for selectively affixing the same in either normal or parallel position relative to said standard.

14. A compact, foldable holder as specified in claim 13, wherein:

said locking means includes a cam face engagable with said at least one frame proximate said locking recess, and fixed to the other said frame, the unfolding of said other frame causing said cam face to unseat said at least one frame from said locking recess.

15. A compact, foldable holder as specified in claim 13, wherein:

said vertical standard is a single central channel having side walls and the integral tail of said at least one frame fits within said channel when said frame is in position normal to said standard.

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