

Nov. 26, 1968

R. L. ALEXANDER

3,412,965

BAG HOLDERS

Filed May 17, 1966

3 Sheets-Sheet 1

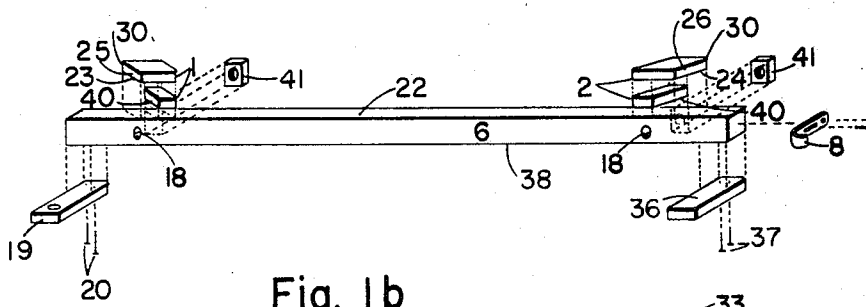


Fig. 1b

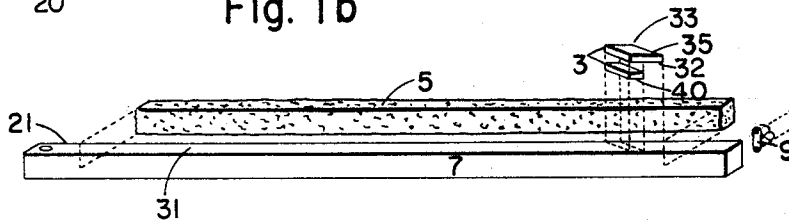


Fig. 1a

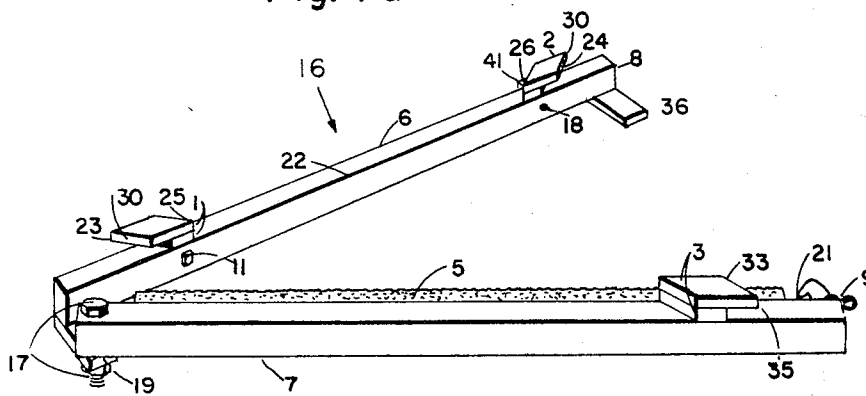


Fig. 1

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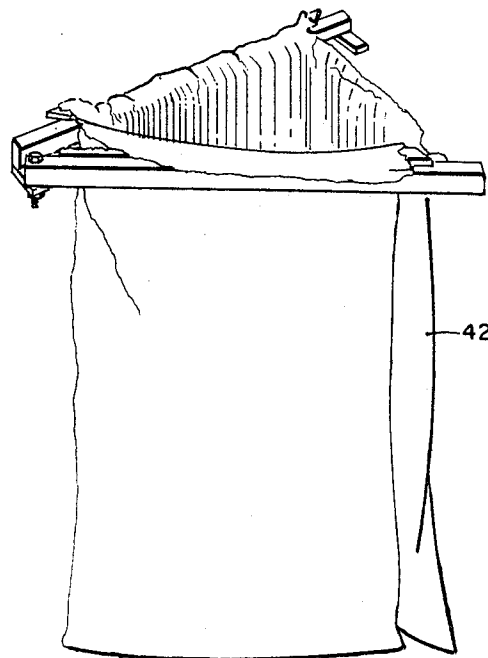
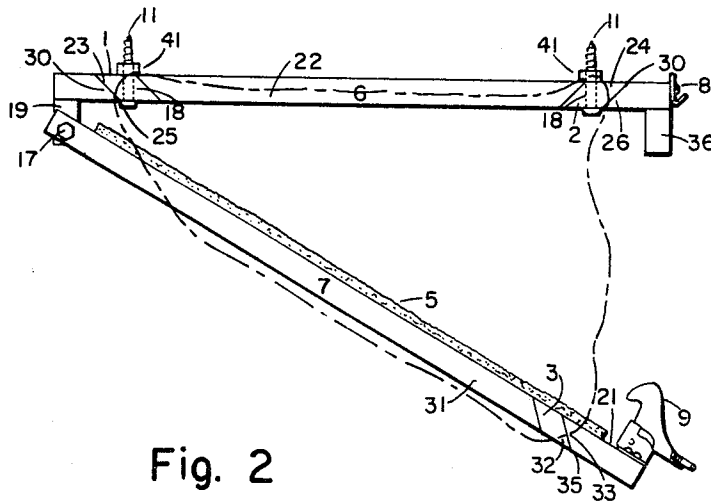
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3 Sheets-Sheet 2



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3 Sheets-Sheet 3

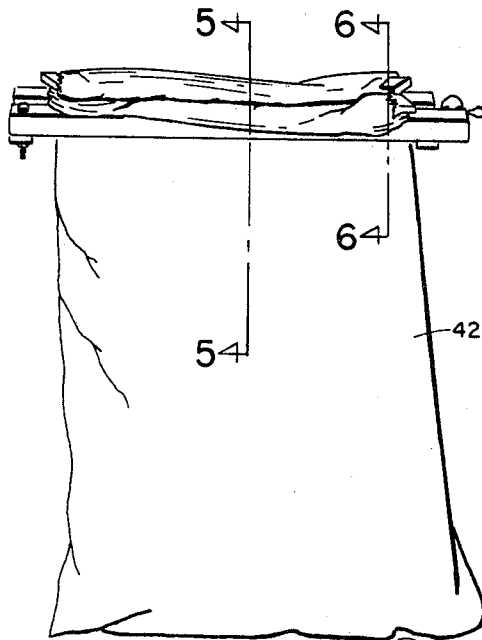


Fig. 4

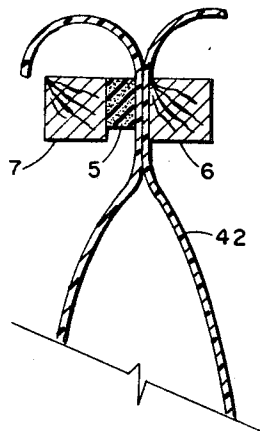


Fig. 5

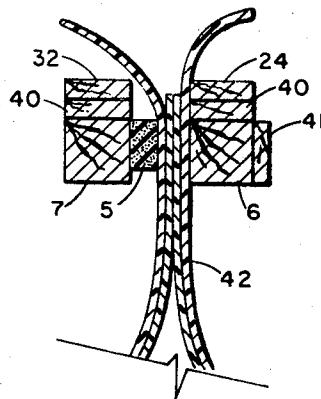


Fig. 6

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5 Claims. (Cl. 248—101)

ABSTRACT OF THE DISCLOSURE

A bag and holder assembly for the detachable holding of disposable plastic bags.

This invention relates to bag supporting devices, and more particularly to an apparatus or device for the detachable holding of disposable plastic bags.

It is the object of this invention to provide a novel bag supporting means.

It is another object of this invention to provide a novel supporting means for the detachable mounting of a disposable bag with means provided for opening and closing the bag.

A further object of this invention is to provide a novel and improved holder for the detachable mounting of a flexible plastic bag with means provided for the opening and substantially hermetic closing of the bag.

Other objects and advantages will become more apparent from the following description and the drawings in which:

FIGURE 1 is a perspective view illustrating one embodiment of the bag holder of this invention;

FIGURES 1a and 1b are exploded views of elements of the bag holder of FIGURE 1;

FIGURE 2 is a top plan view of the embodiment of FIGURE 1 including means for mounting the bag holder on a suitable backing support;

FIGURE 3 is a perspective view as in FIGURE 1 illustrating the bag holder having mounted thereon a flexible plastic bag in the open position;

FIG. 4 is a perspective view of the assembly of FIGURE 3 in a closed position;

FIGURE 5 is a cross sectional view taken along line 5—5 of FIGURE 4;

FIGURE 6 is a cross sectional view taken along line 6—6 of FIGURE 4.

Referring to the drawings, the preferred forms of the bag holder of this invention are generally indicated by the numeral 16 and are generally adapted to be attached semi-permanently or permanently by various means of mounting to a suitable backing support, such as a wall surface, cabinet door and the like. In general, the basic components of the bag holder may, except where otherwise indicated, be made of metal, wood, plastic or other suitable material. Wood or plastic are preferred materials, wood providing excellent frictional properties in association with the plastic bags comprehended in this invention. Although not to be limited thereto, the invention will hereinafter be described using wood as the basic material of construction. The bags for which the holder of this invention is designed are normally flexible bags formed of conventional polymeric materials normally employed in the fabrication of plastic bags, as for example polyethylene.

The holder 16 is comprised of an elongated base closure member or bar 6 and an elongated clamping closure member or bar 7 adapted to be pivotally mounted at one end of the base member or bar 6 by means of a suitable pivot, such as the screw, washer and lock nut assembly 17.

The base closure member or bar 6 may be secured to any backing support, such as a vertical wall surface, cabinet door, and the like, by mechanical fasteners or adhesives. Thus, where the bag is to be hung on the back of a cabinet door or wall, bar 6 may be mounted thereto by means of screws 11 passing through holes 18 provided therefor.

In the embodiment shown in the drawing the pivotal mounting of the clamping closure member 7 to base member 6 is effected by means of the pivot means assembly 17 which hingedly attaches the clamping member 7 on top of a pivot support 19 which in turn is suitably secured to the bottom or lower face of the base closure member 6, as for example by means of screws 20. As can be seen, this pivotal connection permits the clamping closure member 7 to be swung in a horizontal movement into open and closed relationship with the base closure member 6.

Carried on at least one of the directly opposed faces of the clamping closure member 7 and the base closure member 6 (as for example face 21 of clamping closure member 7) is a longitudinal deformable, resilient strip 5 formed of any suitable material, as for example polyurethane foam. The strip 5 can be conveniently secured to the supporting face 21 by means of adhesive and the strip will be of sufficient thickness so that it will be in compression when the holder is closed, i.e. when the clamping and base closure members are in closed or clamping relationship.

The clamping and base closure members 6 and 7 are maintained and held in closed or clamping relationship by means of any suitable locking means which is releasable and when actuated permits the closure members to be moved into open relationship. In the embodiment shown the locking means comprises a spring biased catch 9 mounted adjacent the free distal end of clamping closure member 7 and a latch 8 mounted adjacent the free distal end of base closure member 6 in a position to match the catch.

Provided on the top or upper surface 22 of base member 6 are a pair of spaced bag hanger means 1, 2, comprised of a first bag hanger means 1 positioned adjacent the pivot means and a second hanger means 2 positioned apart from hanger means 1. In the embodiment shown, each of the bag hanger means 1, 2 is comprised of a rear overhang vertically spaced from the supporting upper surface 22 of the base closure member with each of the overhangs projecting outwardly toward their respective adjacent sides of the base closure member. Specifically, the rear overhang 23 of bag hanging means 1 projects toward the side of the base closure member adjacent the pivot means and the rear overhang 24 of bag hanging means 2 projects toward the opposite side of the base closure member.

In the preferred embodiment, the overhangs 23 and 24 of bag hanging means 1 and 2 are adapted for piercing the plastic bag by means of portions which are tapered or bevelled horizontally at, respectively, 25 and 26 so as to define angles which converge, horizontally and inwardly of each other and of the base and clamping closure members, with the taper of the overhangs defining acute angles with the adjacent inner edge of the base closure member 6. Also the taper of the overhangs terminate at the distal extremity of the overhangs to define vertical chins or cutting edges 30 to facilitate penetration of the bag over the overhangs for purposes of mounting the bag.

In similar manner a front bag hanging means 3 is also provided on the upper or top surface 31 of the clamping closure 7 adjacent its free distal end and which also comprises an overhang 32 vertically spaced from its supporting surface 31 with the overhang 32 projecting outwardly toward the free distal end of the clamping closure mem-

ber. As with the overhangs of the rear bag hanging means 1 and 2, in the preferred embodiments the front overhang 32 of the front bag hanging means 3, is also tapered or bevelled horizontally at 33 so as to define an angle which coverages inwardly of the tapers 25 and 26, of rear overhangs 23 and 24, and also of the clamping and base closure members 6 and 7. The taper of front overhang 32 also defines an acute angle with its adjacent inner edge of clamping closure member 7. The front overhang 32 is adapted for piercing the plastic bags for facilitating the mounting thereof, by termination of taper 33 at the distal extremity of its overhang 32 in a vertical chine or cutting edge 35.

In the embodiment illustrated in the drawing the bag hanging means comprises a hanger spacer 40 suitably secured to the closure members by means such as adhesives and nails, with the main hanger component of substantially longer dimensions secured to the top of spacers 40 to protrude therefrom and provide the various overhangs described above.

In similar manner and if desired, back spacers 41 may be provided on the back of the base closure member to provide any desired set-back of the holder from the backing support to which it may be mounted.

If desired the bag holder may be provided with an arm support 36 which may be secured by suitable fasteners 37 to the underside 38 of base closure member 6 at the free side thereof, i.e. opposite that carrying the pivot means 17. The arm support 36 is normally positioned on base closure member 6 so as to receive the clamping closure member 7 and to vertically support it when it is closed in clamping relationship with the base member 6.

In operation, the flexible plastic bag, for which this holder is designed, will have a width, when closed, which will be substantially greater than the lateral dimension of the holder, particularly between the hanger means provided on the base closure member 6. In order to mount the bag on the holder, a rim portion at the mouth of the bag which will be disposed between the base and clamping closure members 6 and 7, will normally be gathered or puckered and the bag hooked at that point over the rear overhang 23 of rear hanging means 1 with the pucker formed placed under the overhang. Preferably the bag will be forced onto the overhang 23 so that its vertical chine 30 will pierce the bag. The rim portion or lip of the bag will then be stretched tight from its point of attachment at the rear hanging means 1 to the rear hanging means 2 at which point a puckered or gathered rim portion at the mouth of the bag will be hooked over the rear overhang 32 with the puckered rim portion disposed beneath the overhang, and preferably the bag will be forced on the rear overhang 32 so that its vertical chine 33 will pierce the bag at that point. A second free span of the rim portion of the bag, adjacent its point of mounting at rear hanging means 1, is then extended and stretched tight from this point of attachment to front hanger means 3, and a puckered or gather rim portion at the mouth of the bag is hooked over front overhang 32 with the pucker placed under the overhang. As at the other points of attachment, the bag will be forced on front overhang 32 so that its vertical chine 35 punctures the bag at this point. Since the width of the bag is greater than the lateral dimensions of the holder, a substantial free span of the rim portion of the bag will extend between rear hanger means 2 and front hanger means 3, i.e., at the free ends of base closure member 6 and clamping closure member 7, in open relationship with each other. In this open relationship of the base and clamping closure members 6 and 7, the mouth of the bag will be open to have various refuse deposited therein. In order to close the bag, its free span between rear hanger means 2 and front hanger means 3 is tucked or folded inwardly, and the clamping closure member 7 swung into clamping relationship with the base closure member 6, and the coacting closure members locked in the clamping position by

means of the associated catch and latch components provided for this purpose. Since the resilient member 5 provides an inner face of the coacting closure members 6 and 7, the compression of the resilient member 5 (upon closing of the clamping closure member 7 into clamping relationship with base closure member 6) will, due to its contact with the bag, for all practical purposes provide the closed bag with a hermetic seal against odors, insects, dirt, moisture, pests, and the like.

In order to dispose of the mounted bag, the clamping and base closure members 7 and 6 are opened, and the bag either unhooked from the hanging means 1, 2 and 3 or torn therefrom in order to detach it from the holder, and a new bag mounted thereon in the manner described above.

The simplicity of operation of the holder and the base of its attachment to various backing surfaces adapts the holder and bag assembly to a variety of applications. Thus, it may be used for garbage and trash disposal, for the collection of dirty laundry in lieu of hampers or for the collection of clean laundry in laundromats, for use in doctors' offices for the disposal of contaminated bandages and the like, for the use as litter bags in service stations and department stores, as refuse and waste collectors for shops, factories, plants, etc., and for the collection of grass clipping and leaves in various gardening functions.

Thus, although the invention has been described with reference to specific materials, embodiments and details, various modifications and changes, within the scope of the invention, will be apparent to one skilled in the art and are contemplated to be embraced within the invention.

What is claimed is:

1. A holder for a flexible plastic bag comprising a base member adapted to be mounted to a backing support, a clamping arm adapted for pivotal mounting at only one side of said base member for horizontal movement into open and clamping relationship with said base member, pivot means pivotally mounting said clamping bar to said base member and adapting said arm for said movement, a first rear bag hanger means on the upper surface of said base member at the side thereof adjacent to said pivot means, a second rear bag hanger means on the upper surface of said base member at the opposite side thereof and spaced from said first bag hanger means, a front bag hanger means on the upper surface of said clamping arm adjacent to the free distal end thereof, each of the said rear and front bag hanger means comprising an overhang vertically spaced from their supporting surfaces with each of said overhangs projecting outwardly toward the respective adjacent sides of their supporting surfaces, each of said overhangs being adapted for piercing said bag below a marginal edge portion at the mouth thereof to hold said bag thereon, an elongated resilient means on at least one of the directly opposed faces of said base member and said clamping arm with said resilient means being adapted to be compressed when said clamping arm is crossed in said clamping relationship with said base member with said bag therebetween, and releasable locking means for holding said clamping arm in its said clamping relationship with said base member and releasable to permit said clamping arm to be moved to the open position.

2. The holder of claim 1 wherein the distal ends of each of said overhangs are tapered horizontally to define angles converging inwardly of each other and of said base member and said clamping bar, and said taper defining vertical chines on the extremity of said overhangs adapted for the said piercing of said bag.

3. A holder for a flexible plastic bag comprising a wooden base bar adapted to be mounted to a backing support, a wooden clamping bar adapted for pivotal mounting at one side of said base bar, pivot means mounting said clamping bar at the said one side of said base bar and adapting said clamping bar for pivotal

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movement in a horizontal plane into open and clamping relationship with said base bar, an elongate resilient member on at least one of the directly opposed faces of said base bar and said clamping bar with said resilient member being adapted to be compressed when said clamping bar is disposed in clamping relationship with said base bar with said bag therebetween, a pair of spaced wooden rear hanger means on the top surface of said base bar with each of said rear hange means comprising a rear overhang on each of said rear hanger means vertically spaced from the said top surface and extending away from each other with the distal ends of each said overhangs being tapered horizontally with the taper thereof defining an acute angle with the adjacent inner edge of said base bar and said taper defining vertical chins on the extremity of said overhangs adapted for piercing said bag, a wooden front hanger means on the top surface of said clamping bar adjacent the free distal end thereof and comprising a front overhang vertically spaced from the top surface of said clamping bar and extending toward the free distal end thereof, said front overhang being horizontally tapered with the taper thereof defining an acute angle with the adjacent inner edge of said clamping bar, said taper defining a vertical chine on the extremity of said front overhang adapted for piercing said bag, and releasable locking means for holding said clamping bar in clamping relationship with said base bar and releasable to permit said clamping bar to be pivoted to the open position.

4. A bag and holder assembly comprising the holder of claim 1 and a flexible plastic bag mounted on the overhangs of the hanger means to said holder with said overhangs puncturing through said bag at the point of attachment thereon, and comprising a first span of the mouth rim portion of said bag mounted in extension on and between the overhangs of the first and second rear

hanger means and an immediate second adjacent span of the mouth rim portion mounted in extension on and between the overhangs of the first rear hanger means and the front hanger means, said bag being adapted to provide a substantial span of the mouth rim portion of said bag in extension between the free ends of said base member and said clamping bar in the open position.

5. A bag and holder assembly comprising the holder of claim 3 and a flexible plastic bag mounted on the overhangs of the hanger means of said holder with the tapered portions of said overhangs puncturing through said bag at the points of attachment thereon, and comprising a first span of the mouth rim portion of said bag mounted in extension on and between the overhangs of said rear hanger means and an immediate second adjacent span of the mouth rim portion of said bag mounted in extension on and between the overhang of the one of the rear hanger means adjacent said pivot means, said bag being adapted to provide a substantial span of the mouth rim portion in extension between the overhangs of the front mounting means and the other of said rear mounting means when said clamping bar is open relationship with said base bar.

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