United States Patent [19]

McSwain

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[54] **FLEXIBLE BAG HOLDER**

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[52] **U.S. Cl.** **248/101,** 248/98

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

[58] **Field of Search** ..... 248/101, 99, 95, 98, 97; 211/84; 280/36 C

[56] **References Cited**

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Assistant Examiner—Rodney H. Bonck
Attorney, Agent, or Firm—Clarence A. O'Brien; Harvey B. Jacobson

[57] **ABSTRACT**

A support and holder for a flexible bag, more particularly, a readily attachable and detachable plastic or equivalent trash or garbage bag characterized, broadly stated, by a bag spreading and support frame adapted to elevate and retentively suspend the bag. Means is cooperatively united with and functions to supportively mount the frame in an accessible elevated bag loading position. A hingedly mounted lid provides a cover and when closed serves to span the mouth of the bag and the support frame. A manually liftable and lowerable bag clamping frame is hingedly mounted on the stated means and is cooperatively alignable with the support frame and embodies frame members which coincide with and are coordinated with the frame members of the support frame. The clamping frame is interposed between the lid and support frame and is so constructed as to clench and clamp the outstretched lip portions in a manner that the bag's mouth is readily available for use between the respective frames.

1 Claim, 8 Drawing Figures

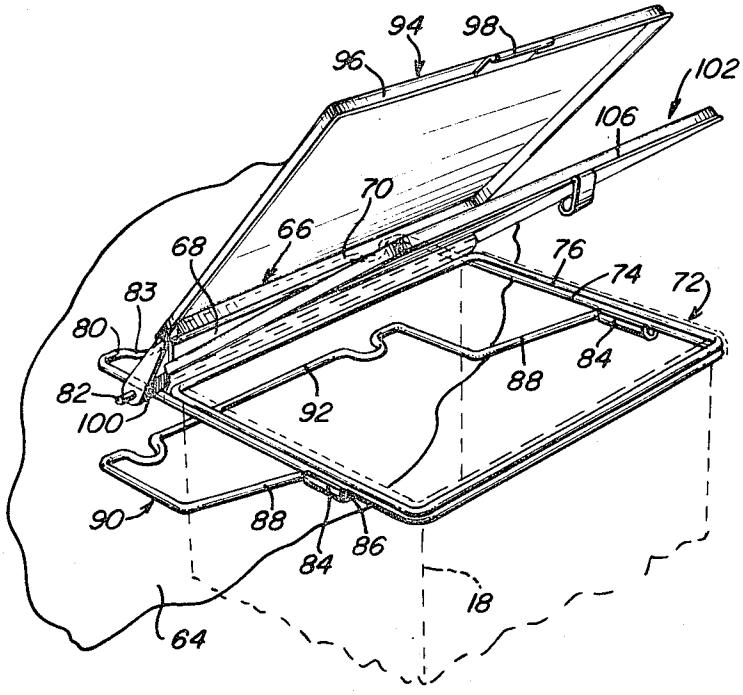

Fig. 1

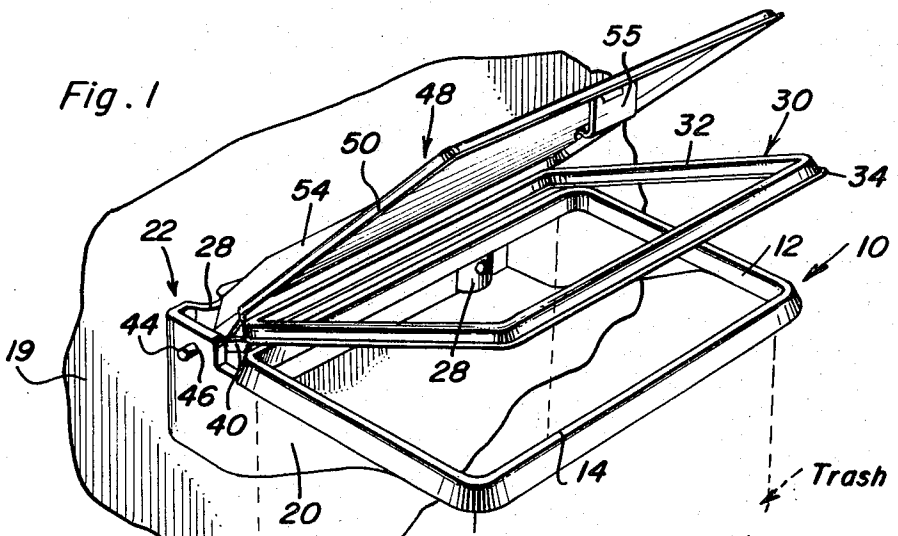

Fig. 3

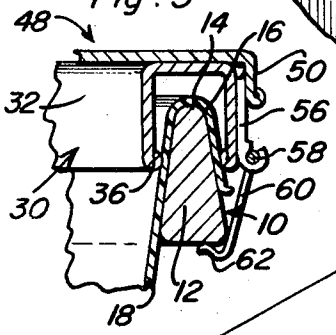

Fig. 2

Fig. 4

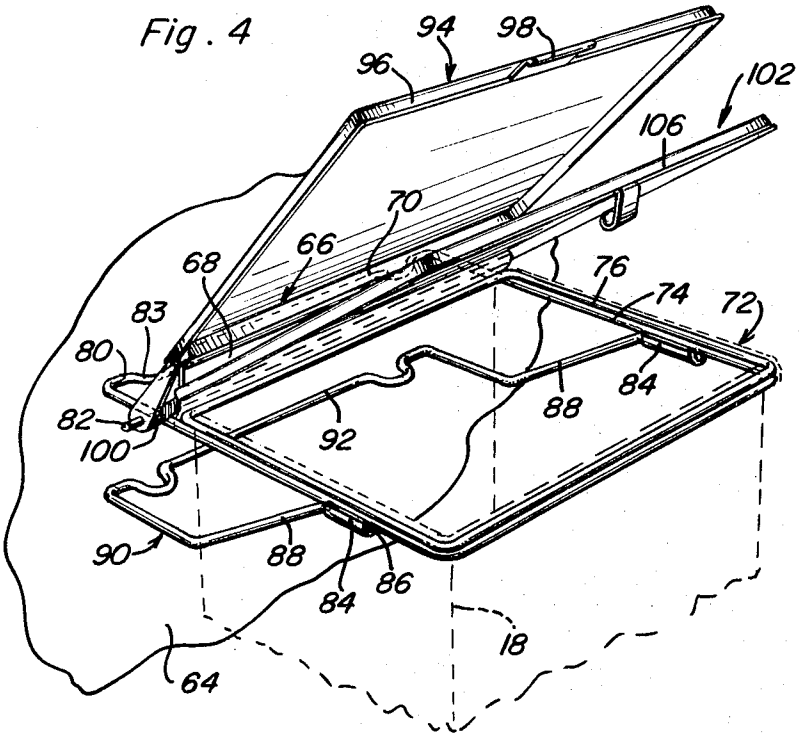

Fig. 6

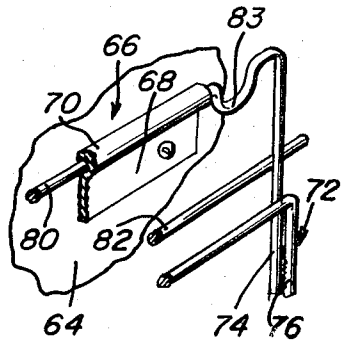

Fig. 5

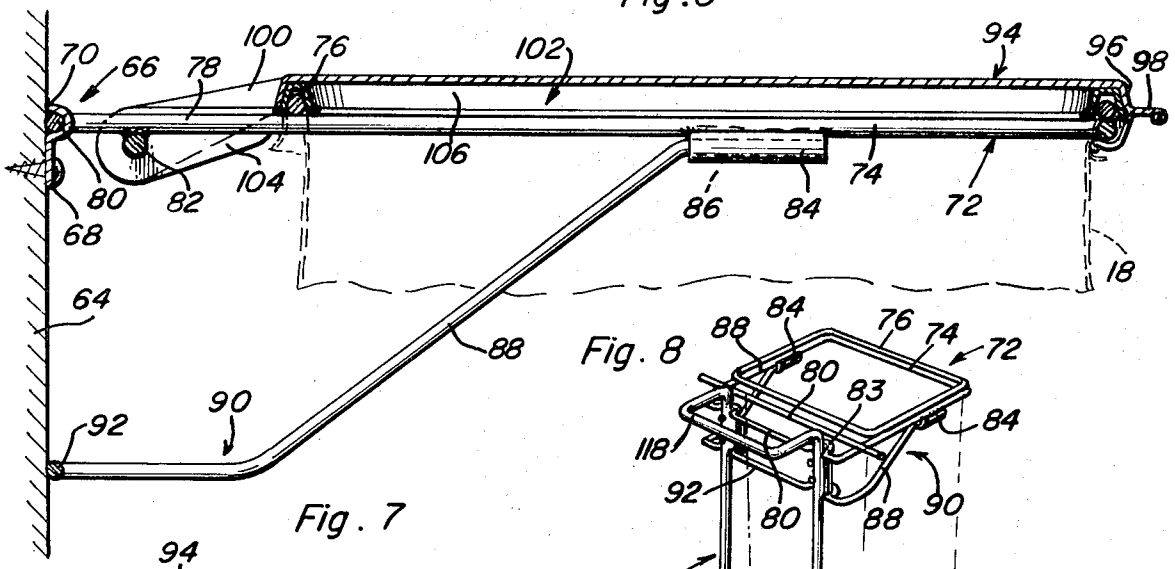

Fig. 7

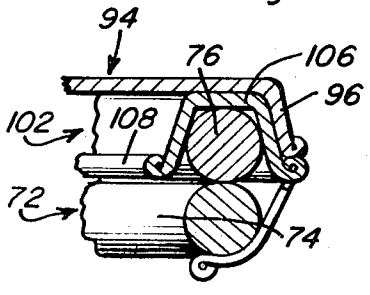

Fig. 8

FLEXIBLE BAG HOLDER

The present invention relates to supports and holders for flexible disposable bags and, more particularly, to readily attachable and detachable plastic or equivalent trash and garbage bags such as are currently and popularly used and has to do with bag elevating and supporting holders which may be free standing, portable or such that they may be mounted for serviceable use on a vertical wall, fence or the like.

Persons conversant with the art to which the invention relates are aware that bag spreaders and holders are of many and varied styles and types and, generally stated, are expressly designed and adapted to not only suspend the bag but to spread and maintain the bag's mouth in a readily accessible position for attaching and detaching needs and to maintain the bag in a readily accessible easy-to-load position.

For background information attention is directed to the trash bag holder disclosed in U.S. Pat. No. 3,218,014, granted to Michael E. Frazier and wherein bracket supporting coordinating frames are utilized to suspend the bag and also to cover and close the same when necessary or desired. Attention is also invited to U.S. Pat. No. 3,468,505, granted to William J. Reilly wherein bracket supported frame means spreads and supports the attachable bag and wherein a hinged lid is provided. Also, and as indicative of the bag holder which is self-standing and also portable attention is directed to the refuse bag holding rack of Michael Grille, U.S. Pat. No. 3,603,542.

An object of the present invention is to provide a support and holder which is expressly well adapted to accommodatingly suspend commonly and currently used plastic trash bags and which constitutes, as experience has shown, an advance in the art which aptly and satisfactorily serves the purposes for which it was devised and has been advantageously used.

Briefly the support and holder, generically construed, has to do with a bag spreading and supporting frame which is designed and adapted to retentively suspend the bag, that is, with the mouth of the bag presented for use in an open position. Means, more specifically adaptable bracket means, is cooperatively united with and functions to mount the bag in an accessibly elevated bag loading position. A cover or lid is hingedly mounted and so constructed that it is adapted when closed to span and cover the frame and also the open mouth of the bag. In addition a liftable and lowerable bag clamping frame is provided and is hingedly mounted on the stated means and is cooperatively alignable with the support frame in a manner that the frame components or members thereof coincide with the oriented and coordinating frame members of the support frame and are so constructed to gently but firmly clench and clamp the outstretched and folded lip portions of the bag's mouth between the two frames.

In carrying out the underlying principles of the inventive concept suitable bracket means is utilized and is equipped with a single horizontal rod on which the clamping frame and also the lip are independently hinged for timely as well as cooperating use. Then, too, this hinging rod, that is, the major median portion thereof is so located in relation to the other component parts that it is available for use in storing extra bags for compact and convenient use.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like part throughout.

FIG. **1** is a view in perspective showing a fragmentary portion of a support wall or the like and illustrating the wall type embodiment or form of the support and holder and showing the bracket supported stationary or main frame, the elevated lid or cover and the hinged in-between bag clamping frame, also elevated.

FIG. **2** is an enlarged detail view taken centrally through the structure shown in FIG. **1** and detailing the adapter bracket, main bag supporting and spreading frame and the associated parts appearing in FIG. **1.**

FIG. **3** is an enlarged fragmentary detail view showing the outstretched lip portion of the bag, how it is folded and clamped and held against displacement by the channel members of the clamping frame and how the lid may, if desired, be latched in a closed position.

FIG. **4** is a view in perspective similar to FIG. **1** and showing a modified form of the invention including a stabilizing prop and wherein the component portions of the support frame are constructed from suitably bent and proportioned rod stock.

FIG. **5** is a view similar to FIG. **2** taken centrally through the modification appearing in FIG. **4** and which shows the clamping frame and also lid closed.

FIG. **6** is a fragmentary detail perspective view showing how the support frame is pivotally or hingedly mounted on a wall or equivalent support means.

FIG. **7** is an enlarged detail view emphasizing the channel members of the clamping frame and showing the bottom and top rod members which are embodied in the main support frame.

FIG. **8** is a view in perspective on a small scale showing how the support and holder of FIGS. **4** and **5** can, if desired, be mounted on a roller-equipped truck-type free standing support.

Attention is first directed to that form of the invention appearing in FIGS. **1** to **3.** The bag spreading and support horizontally disposed main frame is denoted by the numeral **10** and while shown as rectangular in plan it may be of some other configuration if so desired. This frame is of one piece construction and embodies frame members **12** which are wedge shaped in cross section as brought out in FIG. **3** and wherein the upper edge portions of the frame members are convexly rounded as at **14** to facilitate stretching and folding the lip portion **16** (FIG. **3**) of the bag **18** in the manner illustrated. This frame **10** is fixed in a horizontal position at right angles to the vertical support surface or wall **19** and is maintained in position on the outwardly projecting arms **20** of the substantially U-shaped adapter frame **22.** The bight portion **24** of this frame is essentially flat and bears against the wall surface and is fastened in place by screw-threaded headed fasteners as at **26.** This bight portion also has spaced vertical indentations **28** which are susceptible of use in the manner suggested in FIG. **8.** The complemental relatively movable or liftable and lowerable bag clamping frame is denoted by the numeral **30** and is of corresponding shape and size for coaction with the frame **10.** This frame **30** is made up of frame members **32** which are channel-shaped in cross section and which may have outstanding marginal beads **34** (FIGS. **1** and **2**) or turned-in beads **36** (FIG.

3) for the obvious purposes shown. The frame member adjacent to the adapter bracket **22,** that is the member **38** (FIG. **2**) is provided at its ends with laterally directed ears **40** hingedly mounted on a horizontal hinging rod **42.** This rod has end portions **44** supported in holes **46** provided therefor in the manner illustrated in FIG. **1.** Thus the frame **30** can be lifted and lowered and when elevated, it is capable of frictionally holding itself in a set position. When the frame is lowered the channel portions of the frame members embrace the lip portions **16** of the bag in a manner (FIG. **3**) to not only maintain the lip portions in place but to prevent displacement when the open-mouth bag is being loaded. The imperforate lid is denoted by the numeral **48** and it is of a size and shape to coordinate with the frames **10** and **30.** The marginal portion is provided with a rim flange **50** which fits down over the frame **30** as brought out in FIG. **3.** The end portions of the inward marginal part of the cover are provided with lateral spaced parallel ears **52** which coordinate with the ears **40** and are hingedly mounted on the aforementioned rod **42.** Stabilizing braces may be provided, if desired, as at **54.** It is within the purview of the invention to provide hinged handle means of any suitable construction as denoted at **55** which handle also forms a latch means for lid **48** and includes a cleat as at **56** which is fixedly mounted and hingedly connected as at **58** to a J-shaped latch **60.** The hook portion of the latch **62** is engageable with the underneath side of the front frame member of the aforementioned main frame **10.**

It will be noted that the hinge rod **42** is positioned so that it is spaced between the bight member **24** and associated cover and frame permitting the median portion (not detailed) to be used as a hanger for storing extra plastic trash bags.

In the form of the invention shown in FIGS. **1** to **3** the lip portions are threaded or folded over the convexly rounded crown edges **14** after which the temporarily elevated clamping frame is brought down to hold the bag in place. The bag can then be loaded and the lid means closed in an obvious manner.

With reference now to the form of the invention appearing in FIGS. **4** to **7** inclusive the support wall is denoted by the numeral **64.** With this arrangement the adapter fixture **66** comprises a suitably fastened plate **68** whose upper end is provided with a hinging clip **70.** This bracket means serves to hingedly mount the main bag supporting frame which is here designated by the numeral **72.** This frame is made up of top and bottom rod members, the bottom rod member being denoted at **74** and the companion top rod member being denoted at **76.** The rod member **76** provides a rectangular frame which is smaller than the rectangular portion of the rod member **74,** the two rod members being joined together in the manner emphasized in FIG. **7.** The inward end portion of this rod member has extended portions **78** thus defining what is equivalent to the aforementioned bracket means **22.** To the ends desired the innermost rod member **80** is hingedly mounted in the clip **70** and is provided with indentations or bent portions as at **83.** These bent portions come into use when the device (FIGS. **4** and **5**) is mounted on the portable stand appearing in FIG. **8.** This bracket portion also supports a hinge rod **82** in the manner shown. Median portions of the side rod members are provided with socket members **84** to accommodate end portions **86** of the arms **88** of a prop **90.** The bight portion **92** of this prop is adapted when in use to rest against the support wall **64.** Thus the prop **90** is attachable and detachable as desired and when detached permits the dual-rod frame means **72** to fold down to an out-of-the-way position as shown in FIG. **6.**

The lid in this arrangement is denoted at **94** and has encompassing rim means **96** provided as shown in FIG. **5** with a finger grip **98.** The left hand end portion of the rim of the lid is provided with lug-type ears **100** hingedly mounted on the rod **82.** The cover is cooperable with the clamping frame which is here denoted by the numeral **102.** Hereagain the clamping frame is provided with ears **104** which are hingedly mounted as brought out in FIG. **5.** Also, the frame members are channel-shaped in cross section as at **106.** These members fit down over the top rod member of the main frame as brought out in FIG. **7.** If desired the flange portions of the channels may be provided with encompassing beads **108.**

In this arrangement the upper mouth portion of the bag is threaded or folded so that the lip portions are draped or folded over the rod members after which the clamping frame is lowered to maintain the bag in place. The lid may be either closed or swung up and out of the way for bag loading purposes.

It is within the purview of the invention to utilize the bag holding means of FIGS. **4** and **5** in the manner shown in FIG. **8.** Here the bag supporting and holding means is the same in construction as already described and the same reference numerals are employed to designate like parts. It should be added however that with the arrangement shown it is within the purview of the invention to mount the device on a portable but self-supporting stand as at **110** (FIG. **8**). The stand is provided with a base **112,** transporting rollers **114** and vertical leg portions **116.** The upper ends of the leg portions are bent and fashioned into an appropriate handle **118** which permits the bag support and holder to be set-up for use as suggested in FIG. **8** or wheeled about in a seemingly obvious manner.

It is submitted that the manner of using the several embodiments of the invention should be understandably clear from the views of the drawings. Then, too, the generic and specific aspects of the overall concept are believed to be comparably evident. The latch means for holding the parts in closed position, as well as handling means may vary in construction and for this reason a description of the alternatives is not deemed to be necessary here.

An enclosing cabinet may be provided for the trash bag in order to enhance the appearance and sanitation characteristics of the invention as well as protect the bag from being torn open or otherwise damaged by dogs or other animals, rodents or the like. The enclosure may be in the form of a three-sided member defining three vertical wall panels in which the top edge of the panels have an inturned lip for sliding and supporting engagement with an outwardly facing track or groove formed in the frame **10** or **72** to enable the enclosure to be easily removed and replaced to provide easy access to the bag.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and

equivalents may be resorted to, falling within the scope of the invention.

What is claimed as new is as follows:

1. As an article of manufacture, a support and holder for a flexible bag, a U-shaped adapter bracket having a bight portion removably fastened to a vertically oriented support, a pair of spaced parallel arms extending horizontally from said bight portion, a rigid bag suspending frame attached to said arms, said frame around its periphery having upwardly facing convexly rounded bag seating surfaces receiving the lip portion of the open mouth of a bag, said bight portion being spaced from said frame and having bent portions which extend from said bight portion toward said frame, the space between the bent portions and the adjacent parts of the frame providing space for the storage of bags, a horizontal hinging rod spanning said storage space and having end portions supported by the spaced parallel arms, a clamping frame having attaching ears pivotally mounted on said hinging rod, coextensive in dimensions with said suspending frame, and being channel-shaped in cross-section and coacting with the bag seating surfaces of said suspending frame to clamp the lip portion of a bag therebetween, a lid generally coextensive in dimensions with both said frames, having apertured ears which also pivotally support said lid from said hinging rod, having a latching means on the periphery thereof opposite said bight portion engaging the suspending frame, and covering the open mouth of a bag and the two frames when in closed position, said bight portion of said bracket includes hinge means allowing said bracket to assume either a horizontally disposed in-use position or a downwardly disposed collapsed position and wherein said bracket includes a sleeve member secured to a central portion of each of said parallel arms, and being substantially parallel thereto, for receiving the end of bracing means, extending from the sleeves to a vertical support, which braces the bracket, frames and lid in an in-use position, but when removed, allows the bracket, frames and lid to pivot about the bight portion of the bracket to a collapsed position.

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