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BAG HOLDING AND DISPENSING MEANS

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Fig. 2

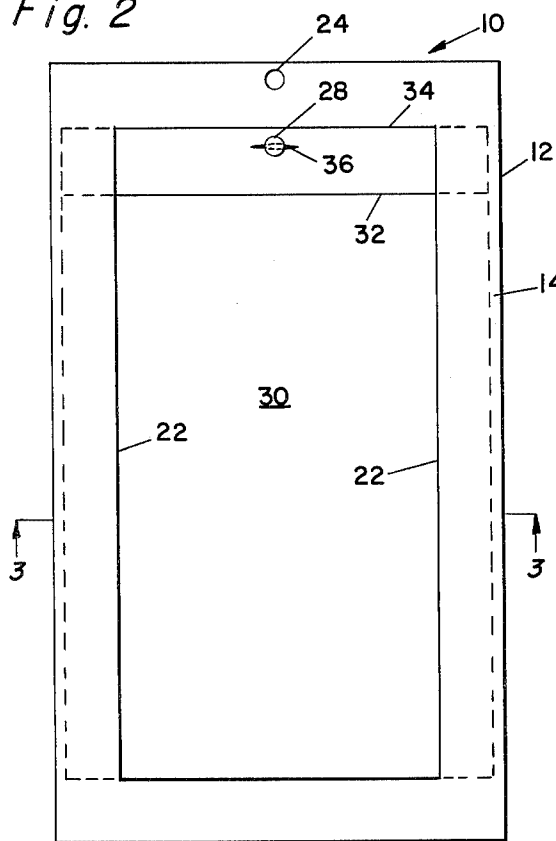


Fig. 1

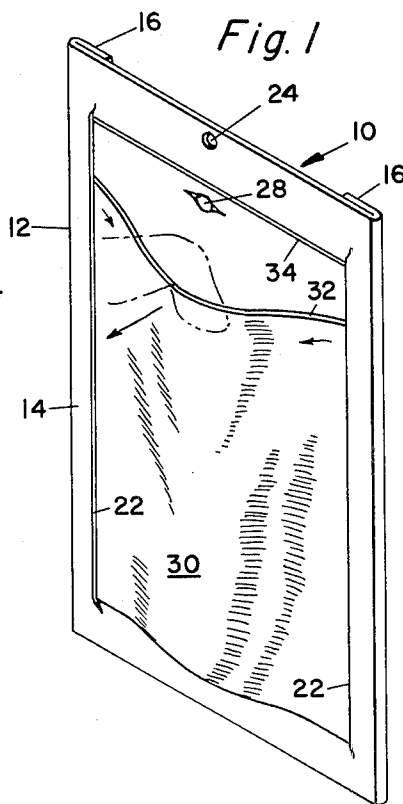


Fig. 3

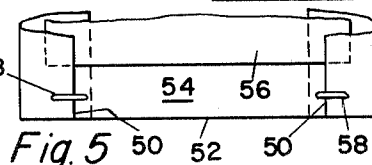
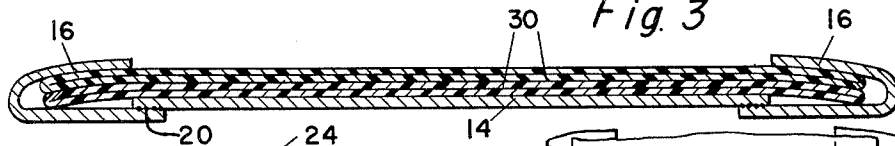


Fig. 4

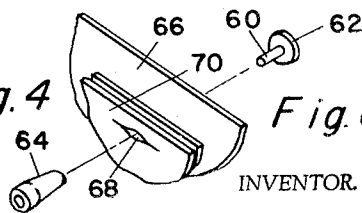


Fig. 6

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BAG HOLDING AND DISPENSING MEANS

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6 Claims. (Cl. 221-26)

This invention relates to a novel combination bag and bag holding and dispensing unit, and it particularly relates to a combination unit of the aforesaid type wherein the bags are automatically opened up when being dispensed.

Flexible plastic bags, made of polymeric materials such as polyethylene and the like, have become highly popular, both for industrial use and in the home, because of their strength, low permeability, resistance to corrosion by many chemicals, relatively low cost and great versatility. However, such bags are difficult to open from their flat state because of the tendency of their opposite wall surfaces to stick together and because their low permeability prevents entrance of air and results in a partial vacuum between the walls. It has, therefore, heretofore been necessary to either meticulously and slowly pull the wall surfaces apart from each other by hand or to use mechanical devices which either operate to mechanically pry the walls apart or do so by pneumatic pressure whereby air under pressure is forced between the walls before or during packaging of articles therein. These latter type of pneumatic bag openers are very expensive, with a cost of an individual machine generally running into many hundreds of dollars. They are, therefore, obviously feasible only for large industrial applications, being much too expensive as well as much too bulky and complicated for use in the home or in small industrial plants.

It is one object of the present invention to overcome the above disadvantages of prior plastic-bag opening devices by providing a simple, inexpensive and easy to use bag opening device adapted for use in the home as well as in both small and large industrial plants.

Another object of the present invention is to provide a plastic-bag opening device of the aforesaid type which, in addition, is also a holding and dispensing device of efficient and highly utilitarian construction.

Other objects and many of the attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following description when read in conjunction with the accompanying drawings wherein:

FIG. 1 is a front perspective view of a unit embodying the present invention.

FIG. 2 is a front elevational view, somewhat enlarged in scale, of the unit of FIG. 1.

FIG. 3 is a cross-sectional view taken on line 3-3 of FIG. 1.

FIG. 4 is a rear elevational view of the blank used to form the holder.

FIG. 5 is a fragmentary, front perspective view of a modified form of the invention.

FIG. 6 is a fragmentary front perspective view of a second modified form of the invention.

Referring now in greater detail to the various figures of the drawings wherein similar reference characters refer to similar parts, there is shown a combination bag and bag holding and dispensing unit, generally designated 10, which comprises a holder 12 which may be made of any desirable, relatively rigid material such as cardboard, wood, plastic, metal, etc. The holder illustrated here is made of cardboard and is constructed from the blank shown in FIG. 4. This blank comprises a cardboard sheet 14 having a hinged flange 16 at each of its opposite longitudinal edges, each of these flanges being integrally connected to the main portion of the sheet by a folded hinge line 18.

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The flanges 16 are furthermore each provided with adhesive 20 around the free edge portions of their rear surfaces.

The blank is also provided with a pair of oppositely-disposed, parallel, longitudinal slits 22. Each of these slits 22 is positioned close to but spaced from the corresponding hinge fold 18 but its upper and lower ends do not extend as far as the upper and lower edges of the sheet (as is clearly seen in FIG. 4).

The blank 14 is, in addition, provided with a pair of vertically-spaced holes 24 and 26 adjacent the upper edge thereof. The hole 24 is provided for the purpose of hanging the unit on a hook or other type hanger on a wall, while the hole 26 is adapted to receive a paper fastener or the like, indicated at 28 in FIGS. 1 and 2, which comprises a head portion and a pair of distortable prongs. After insertion through the slits 36 of the bags and through the hole 26 in the holder, the prongs are spread and flattened against the rear surface of the sheet. This, of course, is only one type of fastener which might be used, since it is also possible to use screws, bolts, hooks, etc. in accordance with the type of construction desired and the type of material of which the holder is made, or to eliminate the hole 26 and make the fastening means integral with the holder.

The bags utilizable in the present invention are indicated at 30 and comprise plastic bags made of polyethylene or similar polymeric materials. Each of these bags 30 is provided with an open top. The open top is defined by a front wall upper edge 32 and a rear wall upper edge 34. Both of the edges 32 and 34 are straight, but the edge 32 is lower than the edge 34 whereby it forms a lip. The upper portion of the rear wall of the bag, just below the upper edge 34 but above the edge 32, is provided with a slit 36 which, because of the flexible nature of the bag itself, is normally closed but may be pried open sufficiently to insert the fastener 28 therethrough or to pull the bag off the fastener. The slit 36 is illustrated as being horizontal. It may, however, be vertical or there may even be used a pair of cross-slits.

In assembling the unit illustrated in the drawings, a stack of bags 30, one lying flat upon the other, are attached at their slits 36 to the fastener 28 so that the entire stack lies flat on the front surface of the sheet 14. The side edges of the bags are then inserted laterally through the slits 22 so that the bags are held on the sheet by a releasable but firm clamping action. The flanges 16 are then folded back and adhesively secured to the rear surface of the sheet 14 inwardly of the slits 22 whereby the side edges of the bags are completely encased but may still be pulled out of the slits 22 by a force applied to the exposed front of the bags. The upper bag in the stack is exposed at the front between the slits which form a frame or window therefor.

The unit may then be hung up on a wall or placed down flat on a horizontal surface or placed in any other desirable position with the front face exposed. In such position, when it is desired to obtain a bag, it is merely necessary to grasp the lip formed by the upper edge 32 of the front wall of the upper-most bag and pull out until the slit 36 is released from the fastener 28 and the side edges of the bag are pulled out from the slits 22. During the initial portion of this pulling movement, as the lip formed by edge 32 is pulled out and the sides of the bag are still being retained by the slits 22, the bag becomes automatically opened so that when the sides are thereafter pulled from the slits 22, the bag is not only released from the holder but is also open and ready for immediate filling. In this manner, the bags are not only dispensed but are immediately ready for use without the necessity of having to pull the bag open by hand or, as in the case of industrial operations, employing complex and expensive air-pres-

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sure machines which, in turn, require added labor and time.

In FIG. 5 there is illustrated a modified form of the device wherein the unit is identical to that shown in FIG. 1 except that instead of the side slits terminating in spaced relation to the bottom edge of the holder, as is the case with slits 22 in FIG. 1, the corresponding slits, designated 50 in FIG. 5, extend down to the bottom edge 52 of the holder sheet 54, although the upper ends of the slits 50 (not shown) remain spaced from the top edge similarly to slits 22. The reason for the construction of FIG. 5 is that it permits a stack of bags, the bottom ends of which are shown at 56, to be inserted as a unit through the bottom end of the holder rather than first attaching them to the holder and then having to insert their side edges laterally through the side slits in the holder. This end insertion is more rapid and permits greater efficiency during manufacture. After the bags 56 have been inserted through the lower end of the holder, staples 58 are used to close the open end of the holder. If desired, adhesive or any other feasible fastening means may be substituted for the staples.

In FIG. 6 there is illustrated another modification of the device wherein the entire unit is identical to that of FIG. 1 except that in place of the fastener 28 which has a head and a pair of prongs which are first inserted and then spread, a two-piece fastening means is used comprising as one part, a pin 60 having a head 62 and as the other part, a tapered sleeve 64. The pin 62 and sleeve 64 are preferably constructed of a plastic material such as polyethylene or the like. However, they may be constructed of any other desirable material such as metal, wood, ceramic, etc.

In use, the pin 60 is inserted through the hole in the holder 66, such hole corresponding to the hole 24 in FIG. 1, and then the slits 68 of the bags 70 are inserted over the pin. The sleeve 64 is then applied over the portion of the pin extending through the slits in the bag and held therein by its inherent frictional force. The tapered sleeve 64 acts as a stop means similar to the head of the fastener 28 and the bags are similarly removed therefrom by pulling outwardly on the lips of the bags. By means of this two-piece construction, however, the bags can be more easily attached by merely inserting the slits thereof over the pin 60 while the pin is attached to the holder. Then, while the bags are lying flat, the sleeve is inserted over the pin. In this manner, no manipulation requiring the holding of the bags in place while they are fastened is necessary.

Instead of using a pin and sleeve having frictional engagement, as in the device of FIG. 6, it is also within the scope of the present invention to use other similar means such as nuts and bolts, telescoping sleeves, etc.

The present invention has been described above as being especially applicable to plastic bags, however, it is also adapted for use with paper bags, metal foil bags, or bags of another desirable material.

Obviously many modifications and variations of the present invention are possible in the light of the above teachings. It is, therefore, to be understood that within

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the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

The invention claimed is:

1. A bag holding and dispensing unit comprising a retaining means having an open front framed portion defined by a pair of oppositely-disposed linear slits, each of said slits defining a linear pocket, a fastening means adjacent one end of said framed portion between said linear pockets, and a plurality of flattened flexible bags arranged in a stack and positioned within said framed portion, each of said bags having a rear wall and a front wall, said rear wall extending beyond said front wall to form a lip, those portions of said rear wall of said bags which extend beyond said front walls being commonly releasably secured to said retaining means by said fastening means, and the opposite side edges of the bags in said stack being positioned within corresponding linear pockets.

2. The unit of claim 1 wherein each of said slits terminates at both its ends short of the corresponding edge of the retaining means.

3. The unit of claim 1 wherein one end of each of said slits terminates at the corresponding edge of the retaining means to form an open end for the corresponding pocket, both said open ends being at the same edge of the retaining means, and closure means for said open ends.

4. The unit of claim 1 wherein said fastening means is a single unit having a head and a piercing portion, said piercing portion being distortable into retaining position while said head holds said bags.

5. The unit of claim 1 wherein said fastening means comprises at least two separably connected parts, one part being connectable to said retaining means and the other part being connectable to the stack of bags on said retaining means.

6. A bag holding and dispensing device comprising a retaining means in the form of a generally flat sheet, a framed portion on one face of the sheet, said framed portion being defined by oppositely-disposed linear pockets, and a fastening means adjacent one end of said framed portion between said linear pockets, said fastening means being constructed to releasably retain a stack of flattened bags against said sheet within said framed portion and said linear pockets being constructed to releasably retain the corresponding edges of said bags, said linear pockets being defined by a pair of slits in said sheet each of which, at least at one end, terminates at the corresponding edge of the sheet to form an open end for the corresponding pocket, each pocket having an open end at a common edge of the sheet, and closure means for closing said open ends.

References Cited in the file of this patent

UNITED STATES PATENTS

646,738	Ingalls	Apr. 3, 1900
1,788,826	Domber	Jan. 13, 1931
2,513,474	Greer	July 4, 1950
2,560,110	Horn	July 10, 1951
2,779,500	Thomasma	Jan. 29, 1957
3,100,569	White	Aug. 13, 1963

FOREIGN PATENTS

102,761	Australia	Dec. 16, 1937
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