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2,721,023

BAG CLOSURE

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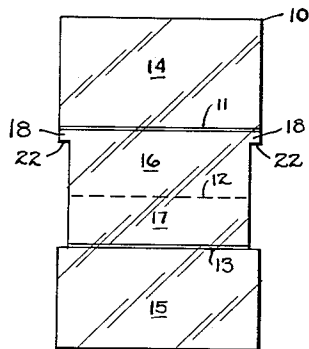


Fig. 1

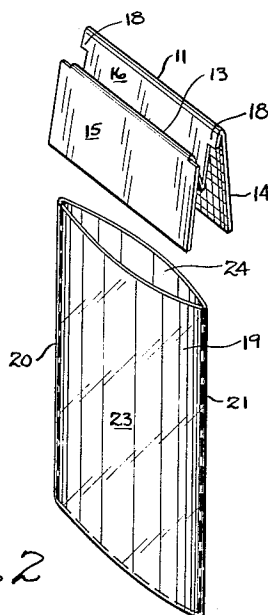


Fig. 2

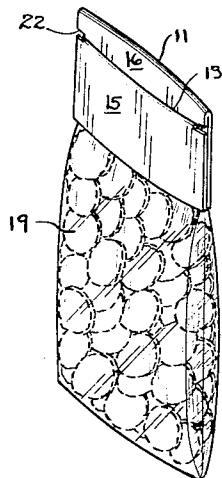


Fig. 3

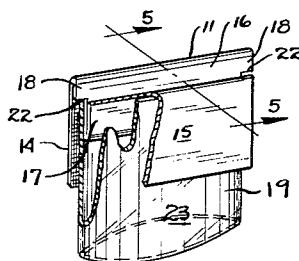


Fig. 4

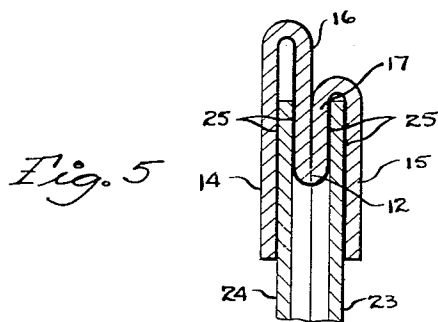


Fig. 5

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BAG CLOSURE

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1 Claim. (Cl. 229—62)

This invention relates to new and useful improvements in devices for protecting the opening in packages, particularly bags, and for facilitating the opening of and the accessibility of the contents contained in such packages. More particularly, it pertains to a device to be associated with the open ends of bags for facilitating the easy opening and dispensing of the contents thereof.

In bags of this sort, especially when made of paper of transparent material such as cellophane, there is a marked tendency of the bag material to split or tear along the edges at the open end of the bag. In the case of cellophane bags, this tendency becomes more serious with increasing age of the bag, for this material tends to become brittle with dryness and age. It is therefore highly desirable to have a means for facilitating the opening of these bags, and where possible to reinforce the open end.

Further, it is frequently difficult to pour from an opened end of these bags a fine grained homogeneous contained product such as flour or sugar. A substantial marketing advantage may be obtained from having associated with such an open end a device whereby the pouring out of such a product is facilitated.

Also, with many products it is essential that the bag be sealed to prevent the passage of air into and out of the bag. My invention readily provides means for achieving this air-tight closure.

This invention provides these features and advantages, and in addition other advantages and features which will be readily apparent from the drawings and the following description thereof, in which the same reference numeral is used to identify the same or similar parts.

Figure 1 is a plan view of the bag closure comprising my invention,

Figure 2 is a perspective view of the bag closure of Figure 1 in position to be inserted within the opening of a bag,

Figure 3 is a perspective of the assembled bag closure,

Figure 4 is a perspective view, partially cut away, of the assembled bag closure of Figure 1,

Figure 5 is an enlarged cross-sectional view, partially cut away, taken along the line 5—5 of Figure 4.

Referring first to Figure 1, it is seen that the bag closure comprises a rectangular paper blank 10 divided by score lines into a number of panels. Blank 10 preferably is made of relatively thin flexible paper, although obviously other flexible sheet materials might be very satisfactorily substituted. Score lines 11, 12 and 13 divide the blank 10 into a pair of outer panels 14 and 15, and a pair of inner or intermediate panels 16 and 17 to the outer ends of which panels 14 and 15 are hingedly connected. Inner panel 16 and outer panel 14 are of slightly greater length (the vertical dimension as seen in Figure 1) than inner panel 17 and outer panel 15 respectively, and the width (the horizontal or right-to-left dimension as seen in Figure 1) of the inner panels is of slightly less dimension than the width of outer panels 14 and 15 except for slight tabs or shoulder-like projec-

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tions 18 on the edges of inner panel 16 adjacent score line 11. The width of inner panel 17, and of the major portion of inner panel 16, is substantially equal to the width of the opening in the bag top closure. As indicated in Figure 1, for reasons later explained, score line 12 may be marked by a dotted or broken line. The bottom surface (Figure 1) of blank 10 is coated with a heat- and/or pressure-sensitive adhesive such as disclosed in Abrams et al. Patent 2,054,115, September 15, 1936, and/or a pressure sensitive composition, such as disclosed in Abrams et al. Patent 2,142,039, December 27, 1938.

To ready the blank 10 for assembly with the bag, the two ends of the blank are folded upwardly about score line 12, and then folded downwardly respectively about score lines 11 and 13. This is best illustrated in Figure 2, in which the bag is indicated at 19. The bag here illustrated is generally called an "envelope" type bag, and has very wide use in the packaging of candy, dried fruit and many other articles. To assemble the thus formed bag closure with the bag 19, the end of the bag is partially opened such as by squeezing the edges 20 and 21, and the two inner panels, 16 and 17, are inserted into the open end of the bag. Lower edges 22 of tabs 18 will meet the open end of the bag, so that although the score line 13 will be substantially coincident with the end of one wall of the bag, panels 16 and 14 will protrude above the opening in the bag and above the end of the other panel of the bag in amount equal to the distance between lower edges 22 of tabs 18 and score line 11. In addition, outer panels 14 and 15 and tabs 18 will protrude beyond the outer dimensions of the bag by an amount equal to the difference in width dimension between panel 17 and panels 14 and 15. This construction facilitates opening of the bag, since one side of the bag, represented now by score line 13, is lower than the effective other side of the bag represented by score line 11. Also, the side edges of end panels 14 and 15 which protrude beyond the side margins of the bag, will be sealed together when the heat and/or pressure is applied, thus reinforcing the edges of the bag to a very considerable extent. The method of this assembly will be readily apparent from an inspection of Figures 2, 3 and 4. When the bag closure has been thus inserted, outer panels 14 and 15 are brought into face to face contact with the outer faces of the bag, and the closure is then adhered to the bag by applying heat and/or pressure. The final assembled form of the bag closure and bag is illustrated in Figures 3, 4 and 5.

Since the heat- and/or pressure-sensitive adhesive 25 (Figure 5) is on what is now the inner face of panels 14, 15, 16 and 17, these panels will be firmly adhered to the walls 23 and 24 of the bag 19; panels 17 and 16 being adhered to the inner faces of walls 23 and 24 respectively, and panels 15 and 14 being adhered to the outer surfaces of walls 23 and 24 respectively. If the width of blank 10 is substantially equal to the width of the opening in bag 19, the closure thus formed will be substantially air tight and leakproof; the forming of this air tight closure is facilitated by natural extrusion of the adhesive into the corners of the bag along the edges of panels 16 and 17 when the heat and/or pressure is applied to adhere the bag closure to the bag. If this leakproof quality is not essential, the adhesive may be eliminated from one of panels 16, 17.

To open the bag after it is sealed as described above, the lips of the closed bag are spread and the closure is slit or otherwise torn along score line 12. This may be more easily done if the blank 10 has previously been perforated along score line 12, although if this is done the feature of air tightness will depend upon extrusion of the adhesive at the time of sealing to seal the per-

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forations, and consequently under certain conditions this feature may be lost.

It will readily be seen that the accordion- or bellows-like fold presented by my invention might be extended to include one or more additional sets of folds (and thus of panels), but obvious substitutions such as this would not depart from the spirit of my invention.

It will be obvious that the bags and closures described herein might be constructed of various flexible materials, such as paper, cellophane, polyethylene, rubber hydrochloride, metal foil and the like, and for the adhesive means described there might be substituted water activated glues or other available means of adherence. While only one embodiment of my invention has been described it is to be understood that the invention is to be limited only as defined in the following claim.

I claim:

A bag closure formed from a flexible blank having an adhesive on its under surface and divided into connected panels consisting only of a pair of adjacent inner panels insertable within the open mouth of a bag and a pair of outer panels adaptable to overlie the walls of a bag adjacent the mouth thereof, each of said outer panels being hingedly connected to an end of one of said inner panels, one of said inner panels having a shoulder-like projection on each side edge adjacent the end of said panel to which one of said outer panels is connected adapted to contact the mouth of a bag to prevent complete insertion of said one inner panel therein, the shoulder-like projections lengthwise extending sub-

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stantially less than the entire length of said one inner panel, said outer panels being of width equal to the width of said one inner panel including said shoulder-like projections, the other of said inner panels being of the same width as said one inner panel adjacent the connection therebetween and substantially equal to the width of the mouth opening of the bag to be closed, said one inner panel being greater in length than the other inner panel by the length of said shoulder-like projections, said one outer panel being of length greater than the length of said shoulder-like projections, and the other of said outer panels being of length less than said one outer panel by the length of the shoulder-like projections, said closure when positioned with the inner panels inserted within the mouth and the outer panels overlying the walls of a bag being adaptable to be adhered to the bag to close the open mouth thereof.

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