

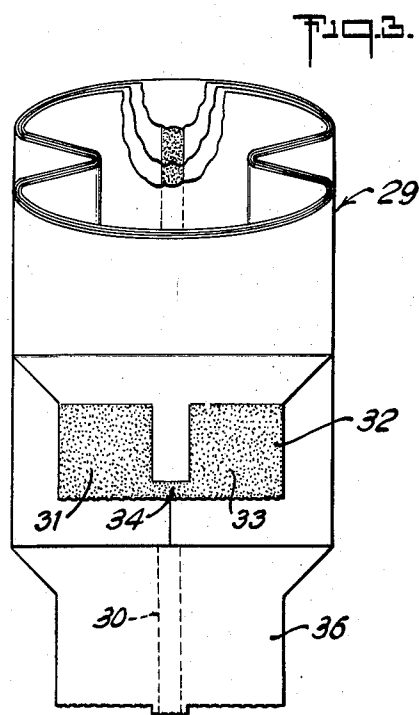
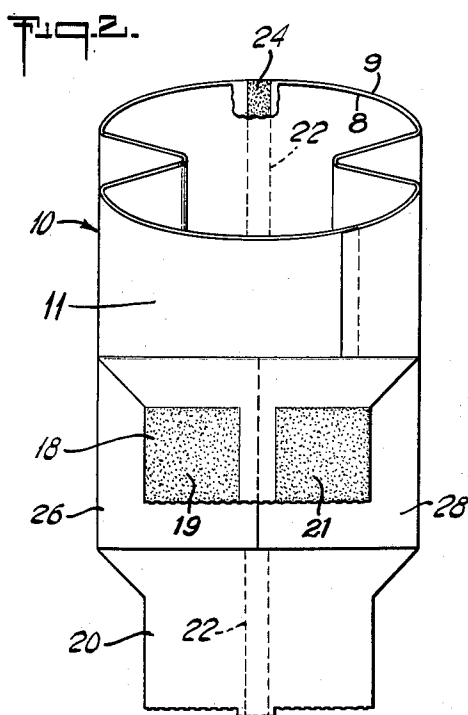
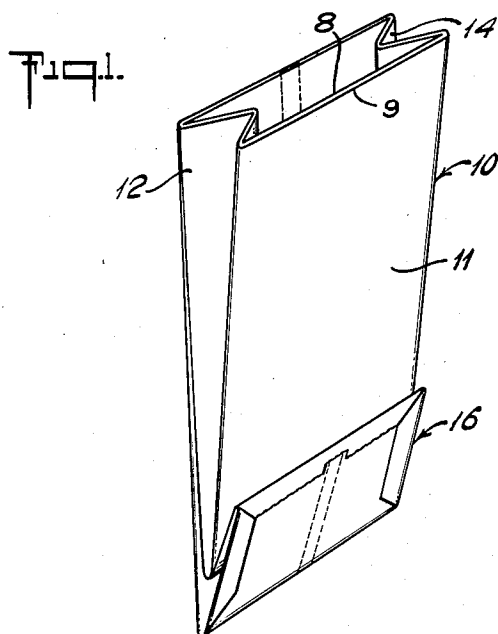
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QUICK-OPENING PASTED MULTIWALL PAPER BAG

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QUICK-OPENING PASTED MULTIWALL PAPER BAG

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2 Claims. (Cl. 229—55)

This invention relates to improvements in pasted multiwall paper bags, either of the open mouth or valve type, and particularly to a new and useful quick-opening pasted multiwall paper bag. The invention has particular application to baler bags or those bags which are used for the packaging of a number of small, individual filled bags. With this type of bag it is particularly desirable to have a means for readily tearing open the bag in order to remove the contents therefrom without damage.

It has been known to use such separately-applied devices as cords, wires, heavy paper strips, etc. for tear strips on bags and secure them along the desired opening area inside the bag with an extension outside the bag which is pulled to tear the bag open.

In accordance with this invention, however, a bag is provided which can be opened in the same manner without the necessity of employing a tear strip of separate material. Instead, at least the inner ply and the next adjacent ply of the bag are pasted together along an opening strip corresponding to a tear strip area, and the bag is opened by pulling an unsecured flap located at the bag bottom at the end of the opening strip of pasted-together bag plies.

Accordingly, it is an object of this invention to provide a quick-opening pasted multiwall paper bag.

A further object is to provide a pasted multiwall paper bag having at least the inner ply and the next adjacent ply thereof pasted together along a strip which starts at the bottom of the bag at a position at the end of the outside bag bottom flap and extends the width of the flap and along the length of the adjacent bag face, whereby the edge of the flap at the end of the pasted strip may be pulled outwardly to quickly open the bag.

A further object is to provide a bag which is simple in design, rugged in construction and economical to manufacture.

With these and other objects in view, the nature of which will be more apparent, the invention will be more fully understood by reference to the drawings, the accompanying detailed description and the appended claims.

In the drawings,

Fig. 1 is a perspective view of a quick opening, pasted, multiwall paper baler bag constructed in accordance with this invention;

Fig. 2 is a fragmentary front elevation of the bag shown in Fig. 1 but with the bottom flaps shown open prior to the completion of the bottom formation; and

Fig. 3 is a fragmentary front elevation of another embodiment of the invention incorporated in a bag similar to that shown in Fig. 1, but of four-ply construction.

Referring to the drawings in particular, the invention is embodied therein on a gusseted pasted open-mouth multiwall baler bag, generally designated 10. The invention is particularly adaptable to baler type bags or those used to contain a plurality of individual filled bags. However, other types of pasted, multiwall bags, such as valve bags and pasted open mouth bags having satchel

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bottom closures, are within the scope of the invention.

The bag 10 as illustrated is provided with side gussets 12 and 14. However, the invention is equally applicable to bags formed from a flat tube without gussets. Flat bags are usually provided with what is known as satchel bottom type of closure, while the gusseted bag shown is provided with an S.O.S. type of bottom closure, generally designated 16.

The bag 10 is of two-ply construction, including the plies 8 and 9 and the top is left open until after the bag is filled, then it is closed by folding over the top and either stapling, sewing or pasting it closed. The bottom closure 16 is provided with an inside bottom flap 18 and an outside bottom flap 20 which are each formed as extensions of the body portion 11 of the bag including its plies 8 and 9.

In accordance with the invention the inner ply and the outer ply are adhesively secured together forming a continuous tear strip or tear bar 22 which extends from the extreme edge of the flap 20 back across the flap 20 and bottom closure 16 and up along the adjacent face of the bag 10 lengthwise of the body portion 11 to the top thereof. The plies are adhesively secured along this tear strip 22 which thus consists of a bonded laminate formed by the plies 8 and 9 and an adhesive strip 24 of glue or paste between them. The paste along the tear strip 22 is, of course, in addition to the usual longitudinal seam and bottom pasting of the plies of multiwall bags.

In folding the bottom closure 16 to a closed position the inside bottom flap 18 is folded downwardly first and adhesively secured to end flaps 26 and 28 and then the outside bottom flap 20 is folded downwardly on top of the inside bottom flap 18 and adhesively secured thereto by an adhesive or glue zone having portions 18 and 19 extending on both sides of the part of the tear strip 22 which crosses the outside flap 20. Care is taken, however, that no adhesive is applied to the area between the flaps 18 and 20 immediately under the tear strip 22 so that the latter area is substantially free of glue and the tear strip can be pulled freely to open the bag.

When very fine materials are to be packaged in the bag it may be desirable or even necessary to insure that no sifting will occur along the tear strip 22 between the inside bottom flap 18 and the outside bottom flap 20. The bag construction shown in Fig. 3 and generally designated 29 is similar to that shown in the other two figures, but it is of four-ply construction and is constructed so that no sifting will occur along the tear strip or at other locations. This four ply bag 29 has a tear strip 30 located in the same relative area as on the bag 10, but is formed by pasting together the inside bag wall and the next two adjacent walls instead of pasting just two plies together. In order to insure that the bag will be sift proof an inside bottom closure flap 32 is provided with a sift proof barrier consisting of a narrow band of adhesive 34 along its outer edge immediately below the location of the tear strip 30 connecting the portions 31 and 33 of the adhesive zone on either side of the tear strip 30 when an outside bottom closure flap 36 is in its closure-forming position. With this provision the edge of the tear strip 30 can be pulled freely to start opening the bag and may be continued to be pulled to open the bag by tearing the strip free from the flap 32 at the location of the adhesive 34. The narrow band of glue 34 in conjunction with the pasting of the inside bottom closure flap 32 and the outside bottom closure flap 36 is sufficient to tightly seal the bag, preventing sifting underneath the tear strip 30 while still permitting the quick opening of the bag. While the tear strip 30 as shown is formed by pasting together the inner ply and the next two adjacent plies it is, of course, apparent that any

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desired combination or number of plies may be pasted together to form the tear strip.

Thus the invention provides a multiwall bag having an integrally formed opening tear strip having its starting point located at the edge of the bottom outside flap which may be picked up by the fingers and pulled outwardly from the bag to easily and readily open the bag. This tear strip is provided by simply gluing together the inside ply and one or more of the next adjacent outside plies of the bag along the tear strip opening area; and no additional equipment, wires, cords, etc., need be placed in the bag or in any way connected thereto to provide means for opening the bag.

It is, of course, to be understood that various details of arrangements and proportions of parts may be modified within the scope of the appended claims.

I claim:

1. A quick opening multiwall paper bag including a body portion and a bottom closure formed by inside and outside bottom flaps each extending from the body portion, said body portion and flaps each consisting of at least two plies; and in combination, a continuous tear strip extending from the extreme edge of said outside flap across said flap and bottom closure and lengthwise of

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said body portion, said tear strip consisting of a bonded laminate formed by said plies and an adhesive strip between them, and an adhesive zone securing said outside flap to said inside flap, said adhesive zone having portions extending on both sides of the part of the tear strip which crosses said outside flap; and the area between the outside and inside flaps under said part of the tear strip being substantially free of adhesive.

2. In the combination as set forth in claim 1, said area between the outside and inside flaps under said part of the tear strip having a narrow band of adhesive connecting the said portions of said adhesive zone on either side and forming a sift proof barrier.

References Cited in the file of this patent

UNITED STATES PATENTS

1,752,370	Cornell	Apr. 1, 1930
2,306,335	Feigenbutz	Dec. 22, 1942
2,336,088	Goodyear et al.	Dec. 7, 1943
2,376,256	Karlson	May 15, 1945
2,420,212	Volkendorf	May 6, 1947
2,494,965	Rosen	Jan. 17, 1950