Aug. 3, 1943. L. L. SALFISBERG 2,325,921

COMPOSITE PACKAGE

Filed Oct. 31, 1942

Fig. 1

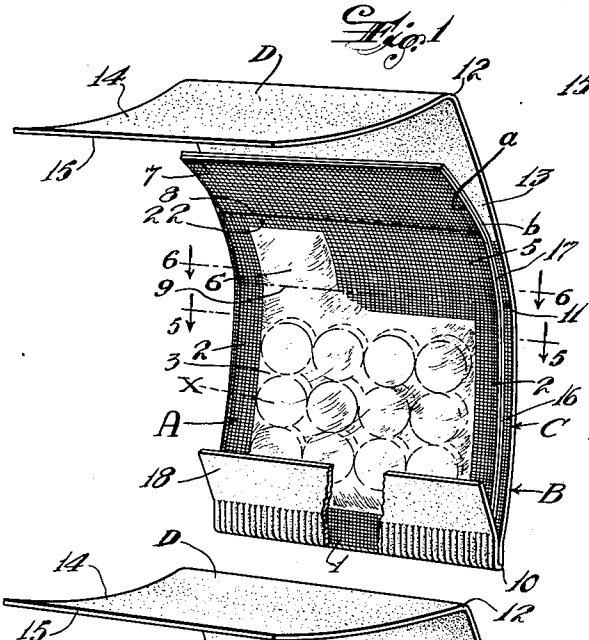


Fig. 2

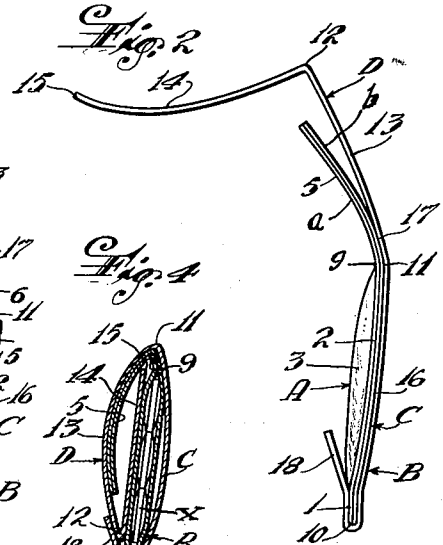


Fig. 4

Fig. 3

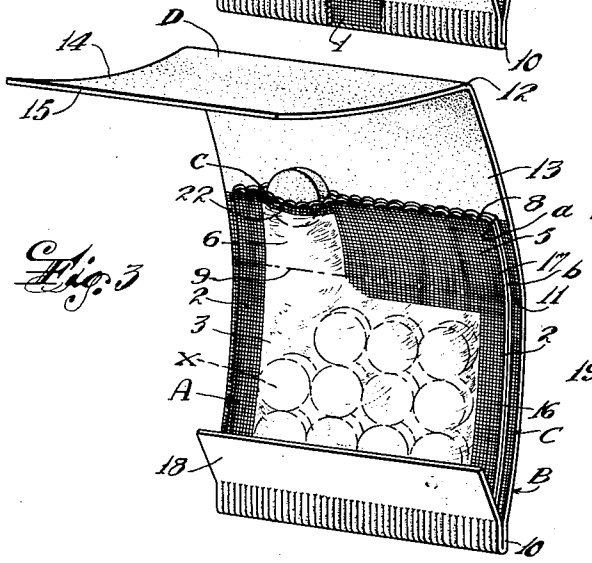


Fig. 6

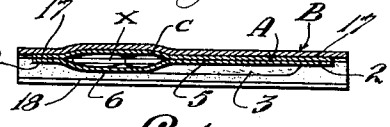


Fig. 7

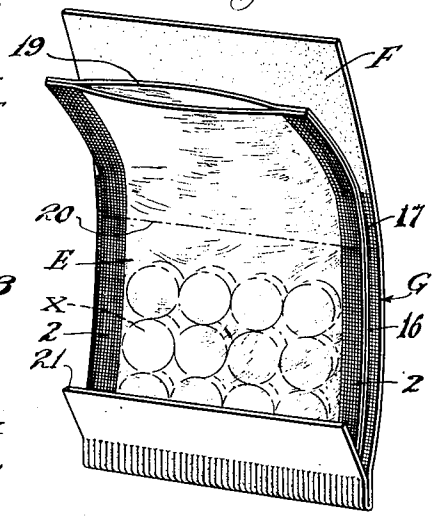


Fig. 8

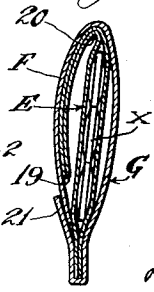
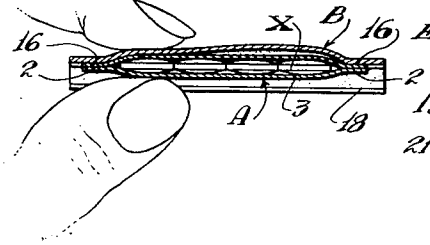


Fig. 5



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UNITED STATES PATENT OFFICE

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COMPOSITE PACKAGE

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Application October 31, 1942, Serial No. 464,002

2 Claims. (Cl. 206—56)

This invention relates in general to packages for small articles such as tablets, pills or buttons, or powdered or granulated substances, or liquid or paste, and particularly the invention contemplates a package of the type that is disclosed in my copending application Serial No. 444,670, filed May 27, 1942, wherein a bag or envelope having an initially open, or a sealed mouth and foldable closure therefor, is enclosed within a cover that is foldable about the bag and cooperates with said foldable closure so as to hold the latter in closed position when the cover is folded to enclose the bag and to release said foldable closure when the cover is unfolded for access to the bag or envelope, whereby the bag can be repeatedly opened and closed and is held firmly closed. When the cover is unfolded or opened, the bag is wholly exposed and accessible for viewing and removing the contents. Generally the contents are removed by squeezing the front and rear walls of the bag between the thumb and a finger to force the contents outwardly from the mouth of the bag.

In the package described in my aforesaid application, the bag is secured or attached to the cover only at one end of the bag so that the bag may swing about said end relatively to the cover, and the cover has a portion, such as a flap to enter the fold of said foldable closure so as to hold the latter folded and closed and also hold the bag flat in proper position and against crumpling in the cover. However, it is possible for the user of the package to forget to insert said portion or flap of the cover into said fold of the closure, so that the closure may not be properly folded or tightly closed and the bag may become crumpled in the cover. Furthermore the bag might be torn or damaged by a careless user in squeezing the contents from the bag. Also the foldable closure must be unfolded directly and manually, and this is sometimes difficult due to "setting" of the closure in folded condition, especially when the bag is formed of material such as "Cellophane," "Pliofilm," metallic foil and the like.

Therefore, one object of the present invention is to provide a package of the character described which shall embody novel and improved features of construction such that the bag shall be held permanently and firmly in proper position and against crumpling in the cover, said foldable closure shall be positively and automatically folded and unfolded as the cover is folded and unfolded respectively, and said cover shall reenforce the bag and serve as a slideway or guide for the contents as the latter are squeezed from the bag.

Other objects, advantages and results of the invention will be brought out by the following description in conjunction with the accompanying drawing in which

Figure 1 is a front perspective view of a package embodying my invention, showing the package unfolded for opening.

Figure 2 is a side elevational view thereof.

Figure 3 is a view similar to Figure 1 showing the package unfolded and open.

Figure 4 is a central vertical sectional view through the package showing it completely folded and closed.

Figure 5 is a horizontal sectional view on the line 5—5 of Figure 1 showing the manner of pressing the contents from the package.

Figure 6 is a similar view on the line 6—6 of Figure 1.

Figure 7 is a view like Figure 1 showing a modification of the invention, and

Figure 8 is a central vertical sectional view through the package illustrated in Figure 7, showing it completely folded and closed.

Specifically describing the form of the invention shown in Figures 1 to 5 inclusive, the package comprises a bag, envelope or like container A formed of suitable material, preferably thin and flexible sheet or strip material such as paper, "Cellophane," "Pliofilm," metallic foil, cloth or the like, especially sheet material which itself is thermoplastic and can be softened by heat or has a thermoplastic or fusible coating, so that the juxtaposed layers of material can be fused or caused to adhere together by application of heat and pressure, or with glue, to form a seal.

As shown, the bag comprises two opposed layers or sheets *a* and *b* of packaging material joined together, as by sealing, under heat and pressure, along one transverse or end margin 1 and longitudinal or side margins 2, to form a compartment or receptacle 3 for articles or a commodity, for example tablets *x* to be packaged. The layers *a* and *b* at the other end of the bag are sealed or bonded together in a sealing flange 5 to close the compartment and make it tamper-proof, certain juxtaposed portions of the layers in said flange being unsealed to form a restricted discharge neck 6 leading outwardly from the compartment for removal of the contents thereof.

Preferably the layers in the sealed zones 1, 2 and 5 are also interdigitated or corrugated, both for greater security and for stiffening the edges of the bag.

The sealing flange 5 has a tearing flap 7 extending across said discharge neck as shown in Figure 1, for producing a discharge opening *c* for the compartment 3 when the flap is torn off as shown in Figure 4. More particularly the free marginal end portion of the sealing flange is scored or weakened along a line 8 which crosses the discharge neck to facilitate removal of the tearing flap.

The bag is folded transversely through the sealing flange and across said discharge neck between the compartment and the tearing flange, as indicated at 9, so that after the bag has been opened by removal of the tearing flap, it is closable by folding the bag along said fold 9.

The bag is especially adaptable to the packaging and dispensing of small articles, such as tablets, or flowing substances, such as powder, the discharge neck facilitating single delivery of the small articles or pouring of a small stream of flowing substance.

It will be understood that the layers *a* and *b* are sealed together inwardly of said fold 9, or in other words, the fold traverses the sealed zone 5 so that should the bag be torn along the fold by mistake or by wear, only the relatively small neck 6 will be opened, rather than the whole side of the compartment, and such a small opening can be closed relatively easily.

The bag A is associated with a cover 7 which is foldable around the bag to enclose and protect it and also to receive printed matter such as advertising media. Preferably the cover is formed of a single strip of material relatively stiffer than the material of which the bag is formed, and is folded at 10 around and secured to the end of the bag opposite the sealing flange as by adhesive or by heat and crimping where the material of which the bag is formed is thermoplastic.

The body portion C of the cover strip lies along or is juxtaposed to one side of the bag A, and the cover strip has a second fold 11 to receive the fold 9 of the bag and to form a cover flap D that is hingedly connected at 11 to the body portion of the cover strip. The flap D is folded at 12 to form two hingedly connected sections 13 and 14, the latter of which is adapted to be arranged in side-by-side relation to and beneath the section 13 as the cover is folded about the package. The section 13 is of a size to cover the side of the package opposite the body portion of the cover strip, and the section 14 is of such size that its free end edge 15 may separably enter the fold 9 of the bag so as to stretch and hold flat the bag between said fold and the point of connection 10 of the bag with the cover and at the same time hold the transverse fold 9 of the bag between said end edge 15 and the fold 11 of the cover when the cover is folded around the bag to enclose it, as most clearly shown in Figure 4 of the drawing.

The rear wall *a* of the bag, i. e., the side of the bag that is adjacent the body portion C of the cover, is permanently secured to the cover at opposite sides of the transverse folds 9 and 11 of the bag and cover, and the other or front wall or side of the bag is exposed and accessible when the flap D is unfolded. More particularly the longitudinal margins 2 of the bag are secured to the cover at one side of said folds 9 and 11 as at 16, and said margins are secured to the flap of the cover at the other side of said folds as at 17.

This construction and arrangement of the parts ensures that the bag shall be held firmly against the body portion of the cover, and the portion of the bag outwardly of the fold 9 is constrained by said cover flap D accurately to fold and unfold as said flap is folded and unfolded respectively. However, the portions of the rear wall *a* of the bag are free from the cover between the longitudinal margins of the bag, as shown in Figures 4 and 5 and consequently are flexible so that the strains imposed by the bag and cover upon each other incident to the folding will be reduced to the minimum and the walls of the bag may easily accommodate themselves to the contents of the bag. In other words, the wall *a* of the bag will have a minimum tendency to hinder closing of the closure flap D of the cover and the cover will have a minimum of tendency to tear the walls of the bag as the cover is folded around the bag.

After the bag has been unfolded and opened the contents, i. e., the tablets *x* may be ejected from the mouth *c* by pressing or squeezing the wall of the package between the thumb and forefinger at a point behind the tablet or substance to be ejected, as shown in Figure 5. During this operation the body portion of the cover reenforces the bag and forms a relatively stiff and smooth guide surface for sliding of the tablet or other substance to and through the mouth *c*. The possibility of injury to the bag is reduced and the bag is prevented from becoming crumpled or displaced in the cover.

Suitable means may be provided for holding the closure flap D in its cover-closing position, but as shown the marginal end portion 18 of the cover strip beyond the fold 10 is in spaced relation to the side of the bag A so as to releasably receive the fold 12 of the closure flap when the cover is folded around the package, to hold the closure flap against unfolding, as shown in Figures 3 and 4.

With this construction it will be observed that the fold 10 of the cover strip closes and reenforces one end of the bag A, the cover protects the relatively thin and weak material of the bag, the cover flap firmly holds the closure fold 9 of the bag against unfolding, and the section 14 of the closure flap also serves in the nature of a spring follower and stretches and holds the bag in proper position and against crumpling or displacement in the cover. After the bag has been opened initially by removal of the tearing flap 7, the bag can be closed and opened repeatedly by simple folding and unfolding of the cover flap C and the fold 9 of the bag.

It may be preferred for some purposes to leave the whole end of the bag E initially open and unsealed as indicated at 19 in Figure 7 so that the bag initially and at all times will be closed by folding of the bag along the transverse fold line 20.

Also, it is possible to omit the section 14 of the closure flap of the cover and to utilize a closure flap F having one section which can be folded coincidently with the fold 20 to close the bag and the free end of which can be tucked between the front wall of the bag and the marginal end portion 21 of the cover strip, all as shown in Figures 7 and 8.

The bag E may be secured to the cover G in the same manner in which the bag A is attached to the cover B.

In some cases it may be desirable to initially seal the layers of packaging material together to close the bag along a narrow zone 22 inwardly of the scored line 8, as shown in Figure 1, or inwardly of the end of the bag where no tearing

flap is used, so that the layers in said narrow zone can be forced apart or separated to open the bag by simply squeezing or pushing the contents of the bag, e. g., a tablet, outwardly between said layers across said zone.

Other modifications in the structure and combination of the bag and cover will occur to those skilled in the art as within the spirit and scope of the invention.

What I claim is:

1. A package comprising a bag of flexible material openable at one end to form a mouth and having a transverse fold inwardly of said end to form a foldable closure for said mouth, and a cover comprising a strip of relatively stiff material having a body portion at one side of said bag and a transverse fold to nicely receive said transverse fold of the bag and to form a flap to overlie the other side of the bag, the first-mentioned side of said bag being permanently secured along its longitudinal margins to said cover at opposite sides of said transverse fold of the bag and being otherwise free from said cover and the cover and the second-mentioned side of said bag being exposed and accessible when said flap of the cover is unfolded, so that said foldable closure will be closed and opened automatically by and when said flap is folded and unfolded respectively, said bag will be exposed when said flap is unfolded to permit the contents of the bag to be squeezed out of the bag by pressure on the front wall of the bag, the first-mentioned wall of the bag is flexible independently of said cover, and said body portion of the cover will reenforce said bag and provide a smooth guide surface for sliding of said contents and will prevent crumpling of said bag at all times.

2. The package set forth in claim 1 wherein said marginal portions of both walls of the bag are secured to both said body portion and said flap along zones that traverse said transverse folds of said bag and said cover.

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