April 20, 1948. L. L. SALFISBERG 2,440,022

PACKAGE

Filed June 29, 1944

Fig. 7

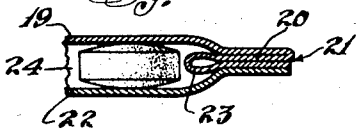


Fig. 6

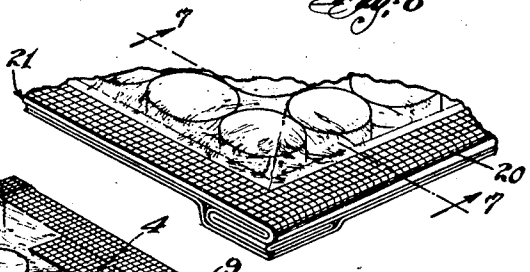


Fig. 1

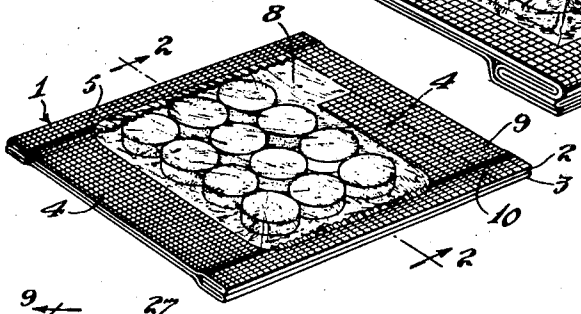


Fig. 8

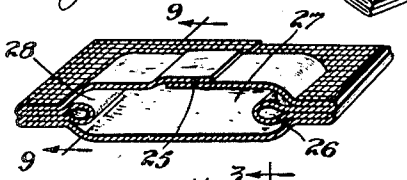


Fig. 3



Fig. 2

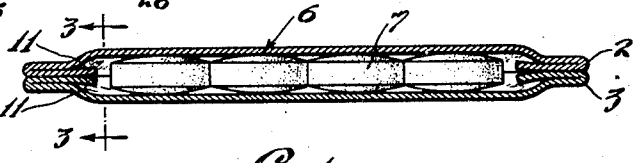


Fig. 4

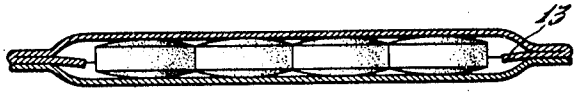


Fig. 9

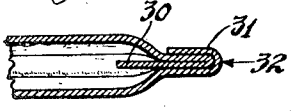


Fig. 5

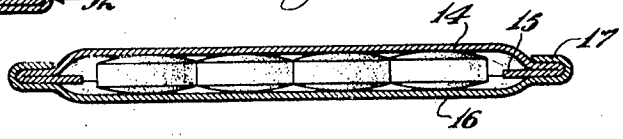
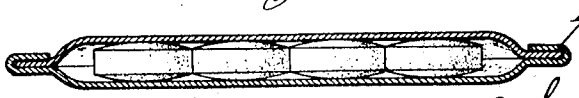


Fig. 10



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PACKAGE

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Application June 29, 1944, Serial No. 542,671

5 Claims. (Cl. 229—48)

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This invention relates in general to packages for small articles such as tablets, pellets, buttons and the like, which comprise two opposed layers or sheets of packaging material such as "Cellophane" or "Pliofilm" joined together, as by sealing under heat and pressure or by folds, along longitudinal and transverse margins to form a compartment or receptacle between said layers or sheets for articles to be packaged.

During handling of packages of this type or when pressure is exerted on the exterior of such packages, there is a tendency of the contents to press against the inner sides of the sheets or layers of packaging material adjacent the sealed joints or folds, between said sheets or layers in such a manner as to force the sheets apart or to tear the packaging material at said joints or folds.

Prime objects of my invention are to provide in a package of the character described novel and improved means to reduce the possibility of the layers of packaging material being separated or torn at the joints or folds between said layers; and to provide such means in the form of a cushion, baffle or barrier for holding or deflecting the articles in the package away from such sealed joints or folds.

Another object is to provide such a package wherein the layers or sheets of packaging material shall be arranged or folded in a novel and improved manner to provide such cushions, baffles or barriers, such that the package shall be capable of withstanding rough handling or hard usage without breaking or tearing at said joints or folds between said layers, and at the same time the package shall be relatively simple and inexpensive.

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

Figure 1 is a perspective view of a merchandise container or package constructed in accordance with my invention.

Figure 2 is an enlarged transverse vertical sectional view on the line 2—2 of Figure 1.

Figure 3 is a fragmentary vertical longitudinal sectional view on the line 3—3 of Figure 2.

Figure 4 is a view similar to Figure 2 showing a modification of the invention.

Figure 5 is a view like Figure 2 showing another form of the invention.

Figure 6 is a fragmentary perspective view of another embodiment of the invention.

Figure 7 is a transverse vertical sectional view on the line 7—7 of Figure 6.

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Figure 8 is a sectional perspective view of another type of container embodying the invention.

Figure 9 is a fragmentary longitudinal vertical sectional view on the line 9—9 of Figure 8, and

Figure 10 is a view similar to Figure 2 illustrating another embodiment of the invention.

Specifically describing the form of the invention shown in Figures 1 to 3 inclusive, the container comprises a bag, envelope or the like 1 formed of suitable material, preferably thin and flexible sheet or strip material which has inherent resiliency of low degree, such as paper and "Cellophane," "Pliofilm," metallic foil, cloth or the like, particularly 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 or pressure or with an adhesive to form a seal.

As shown, the bag comprises two opposed layers 2 and 3 of packaging material joined together along transverse or end zones 4 and longitudinal or side zones 5 to form a compartment or receptacle 6 for a commodity, for example, three dimensional articles such as tablets 7 to be packaged. Specifically, the layers 2 and 3 comprise separate sheets of material such as "Pliofilm" which are sealed together along their marginal zones under heat and pressure to form relatively stiff flanges. In the specific package, one end sealing zone 4 has certain juxtaposed portions of the layers unsealed to form a restricted discharge neck 8 leading outwardly from the compartment for removal of the contents thereof, and said zone also has a tearing flap 9 extending across said discharge neck as shown in Figure 1 for producing a discharge opening for the compartment 6 when the flap is torn off. Preferably a scored line 10 is provided to facilitate removal of the tearing flap.

In general the structure so far described is known for example in my Patent No. 2,325,021, dated July 20, 1943. When packages of this type are handled roughly or when pressure is exerted on opposite sides of the package, tending to press the articles toward the sealed zones, the articles have a wedging effect upon the layers or sheets of packaging material tending to separate or tear the layers or sheets at said zones.

The present invention contemplates means for protecting said zones of the container from such action by the contents of the commodity-receiving compartment, and more particularly the invention provides a barrier or guard between

the contents of said compartment and said zones of the package to hold said contents in spaced relation to said zones or to prevent the contents from exerting such pressure on the layers as might tend to tear or separate them at said zones.

In the form of the invention shown in Figures 1 to 3 inclusive, the longitudinal marginal portions of at least one sheet, and preferably each sheet, are turned or folded inwardly between the other sheet and project into the compartment 6 beyond the corresponding zones as indicated at 11 so as to form cushions or resilient barriers or guards to be abutted by the articles 7 and prevent the latter from entering between the sheets in the zones 5 or exerting such pressure on the sheets adjacent said zones as might tear or separate the sheets. Preferably the portions 11 of the sheets that project into the compartment have corrugations 12 which extend perpendicularly to the corresponding edges of the sheets so as to provide both extended areas for contact with the articles 7 and sufficient rigidity to resist the pressure of the articles against said edges.

Figures 1 to 3 inclusive show the edges of both sheets 2 and 3 turned inwardly to form barriers while Figure 4 shows the edge of only one sheet turned inwardly as indicated at 13. Figure 5 shows a structure similar to Figure 4 wherein one sheet 14 has its edge portions turned inwardly as at 15 to form barriers for the sealed zones, while the corresponding marginal portions of the other sheet 16 are folded outwardly and around the edge portions of the first-mentioned sheet as indicated at 17. The outwardly folded portions 17 reenforce the sealed zones against such pressure as may be exerted thereon through the barriers 15 by the articles 7 in the commodity-receiving compartment.

The construction shown in Figure 10 is similar to that illustrated in Figure 5 with the barriers omitted, the edge portion 18 of one of the sheets being simply folded outwardly around the edge of the other sheet in the sealed zones.

Figures 6 and 7 show another form of the container wherein the marginal portions of one layer 19 of packaging material are folded inwardly at 20 in the sealed zone 21 between itself and the other sheet 22 and are then folded outwardly at 23 with the latter folds projecting into the commodity receiving compartment 24 of the package to form a resilient barrier of the nature above described.

Figures 8 and 9 show another form of the invention wherein the container is made of one piece of packaging material folded upon itself into tubular form with its edges overlapping and sealed together as at 25, said piece being reentrantly folded along two longitudinal marginal zones 26 which form the boundaries of a commodity-receiving compartment 27, one fold 28 extending into said compartment from each zone to form a resilient barrier similar to the barrier 23. If desired the superposed layers of the packaging material at the ends of the container may be simply sealed together, although it is possible to turn the end of one layer inwardly as at 30 to form a barrier and turn the other layer outwardly around the fold of the first-mentioned layer as indicated at 31 to reenforce the sealed zone 32 at the end of the container.

While in the form of the container shown in Figure 1 only the longitudinal marginal sealed zones have barriers, it will be understood that it is within the scope of the invention to form barriers along the transverse marginal sealed zones if desired, and this is true of the other types of containers in which the invention is embodied.

In all forms of the invention, it will be noted that the barriers such as the barriers 11, 13, 28, etc. are in substantially predetermined, rigid, immovable or fixed relation to the material in the sealed zones from which the respective barriers project, so that in none of the relative positions of the two opposed layers of the package will the sealed zones be exposed to contact with the contents of the package.

Many other modifications and changes in the details of construction of the invention will occur to those skilled in the art as within the spirit and scope of the invention.

What I claim is:

1. A merchandise container comprising opposed layers of flexible material joined together in zones which form boundaries for a commodity-receiving compartment between said layers, at least one of said layers having portions folded inwardly between itself and the other layer in certain of said zones and then folded outwardly into said zones to form resilient folds of said material projecting into said compartment from said zones, said opposed layers being relatively immovable throughout said certain zones outwardly of said folds.

2. A merchandise container comprising opposed layers of flexible material having inherent resiliency of low degree sealed together in zones that form relatively stiff flanges each of which comprises a boundary of a commodity receiving compartment whose walls comprise the portions of said layers disposed inwardly of said flanges, at least one of said layers having parts thereof folded inwardly between said layers in said zones, certain portions of said inwardly folded parts being in abutting contact with and sealed to both said layers in relatively immovable relation in the respective zones while other portions of said inwardly folded parts permanently project into said compartment beyond said zones and in spaced relation to said walls of the compartment to restrain the contents of the compartment against entering between the abutting areas of said layers in such a manner as to force said layers apart in said zones.

3. A container of three-dimensional articles comprising opposed layers of flexible material having inherent resiliency of low degree sealed together in zones that form relatively stiff flanges each of which forms a boundary of a compartment for said articles, the walls of said compartment comprising the portions of said layers disposed inwardly of said flanges, at least one of said layers having marginal portions folded inwardly between said layers in said zones, certain areas of said marginal portions being in abutting contact with and relatively immovably sealed to both said layers in the respective zones while the terminal edges of at least one of said marginal portions project permanently into said compartment beyond said zones and in spaced relation to said walls of the compartment to form barriers between said zones and said articles in said compartment.

4. A merchandise container comprising opposed separate sheets of flexible material sealed together in zones which form the boundaries of a commodity-receiving compartment whose walls

comprise the portions of said sheets disposed inwardly of said zones, at least one of said sheets having marginal portions folded inwardly between itself and the other sheet in certain of said zones and projecting into said compartment beyond and in substantially immovable relation to the respective said zones, the terminal edges of said marginal portions of said sheet that project into said compartment being in spaced relation to said walls and corrugated.

5. A merchandise container comprising opposed separate sheets of flexible material sealed together in zones which form the boundaries of a commodity-receiving compartment whose walls comprise the portions of said sheets disposed inwardly of said zones, at least one of said sheets having marginal portions folded inwardly between itself and the other sheet in certain of said zones and projecting into said compartment beyond and in substantially immovable relation to the respective said zones, the terminal edges of said marginal portions of said sheet that project into said compartment being in spaced relation to said walls and having corrugations extending perpendicularly to the corresponding edges of the sheet.

LEROY L. SALFISBERG.

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