May 9, 1967 C. SCHNER III 3,318,445

BUTTON PACKAGE

Filed Feb. 9, 1966

FIG. 1

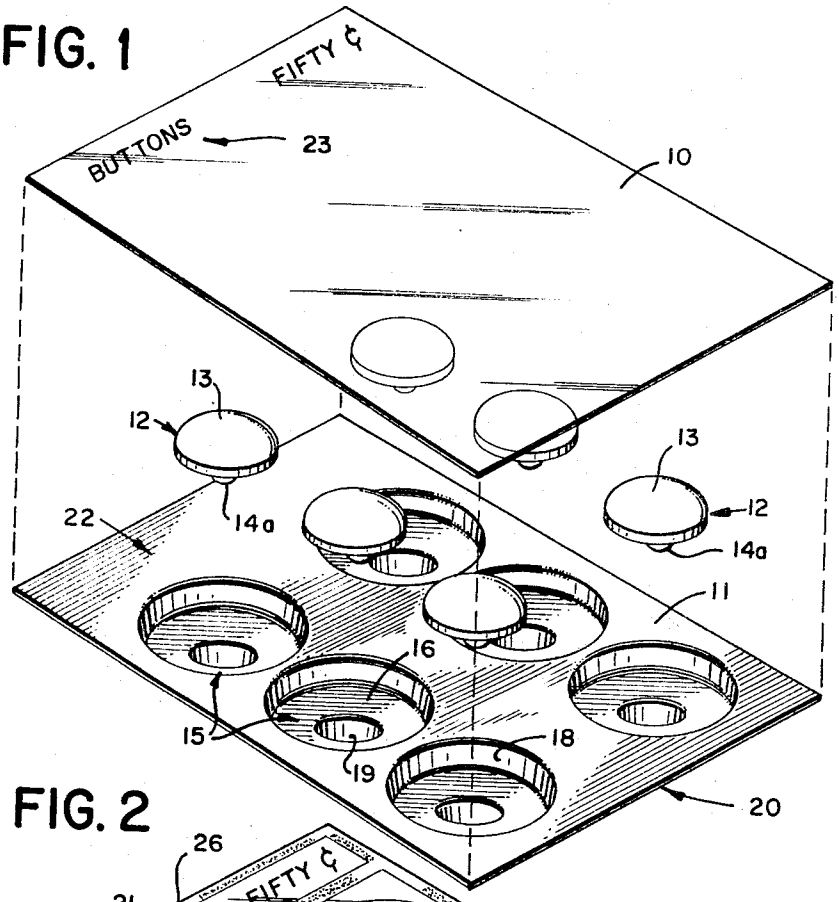


FIG. 2

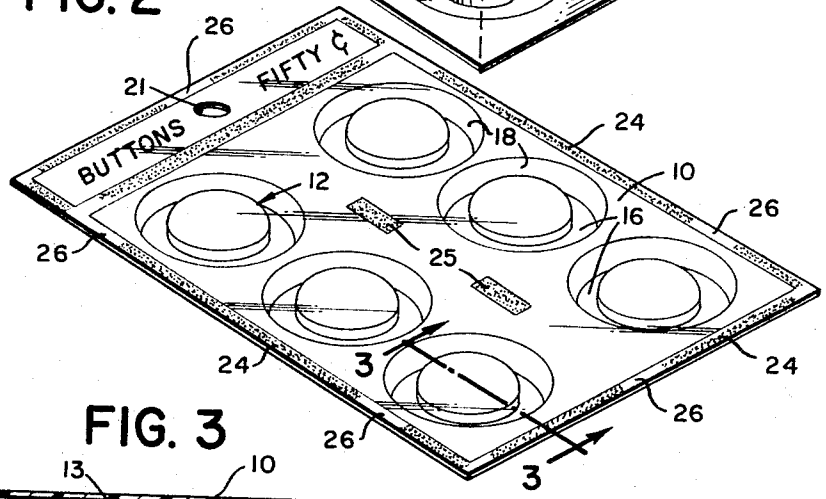
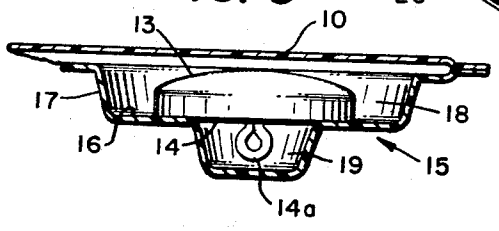


FIG. 3



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BUTTON PACKAGE

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The present invention relates to the packaging of buttons and the like and, more particularly, to a new and improved display package in which a plurality of buttons having shanks, hooks, eyes, or like projections may be completely enclosed in an attractive manner.

It is an object of the present invention to provide an inexpensive, two-walled package for buttons which completely encloses the same and which may be expeditiously and simply opened by tearing through the packaging material itself.

A further object of the invention is to provide a button package which has a substantially long shelf life and which may be employed with disklike buttons of varying sizes and configurations.

Another object of the invention is to provide a heat-sealable button package of the type described which maintains the top and bottom walls in intimate overall physical contact without being sealed in overall face-to-face contact.

These and other objects of the invention have been realized in a new and improved package having a planar, transparent front wall against which a plurality of buttons are held by an opaque or translucent, molded rear wall, having a plurality of stepped cylindrical cavities.

For a more complete understanding of the invention and its attendant advantages, reference should be made to the following detailed description taken in conjunction with the accompanying drawing, in which:

FIG. 1 is an exploded, perspective view of the components of the package of the invention;

FIG. 2 is a perspective view of an assembled button package embodying the principles of the invention; and

FIG. 3 is a fragmentary, cross-sectional view taken along line 3—3 of FIG. 2 showing details of construction of the package of the invention.

As shown in FIG. 1, the new and improved package is made from two elements, a front sheet **10** made from a planar, transparent, heat-sealable and readily tearable material, and an opposing, pre-molded tray **11** made from a non-transparent, heat-sealable and readily tearable material. A group of buttons **12**, each of which has a front face **13** and a rear face **14** from which an appurtenance **14***a* extends, is disposed and retained between the front and rear elements **10**, **11** in a manner to be more fully described. As will be understood, the new package may be used with equal facility with buttons having holes therein in lieu of appurtenances such as hooks, shanks, eyes, and the like.

Specifically, the rear element **11** is generally rectangular and is formed with a plurality of stepped cavities **15** equal in number to the quantity of buttons (six in the illustrated embodiment) to be included in a single package. Each of the cavities has a button supporting shoulder **16** which is defined by a step between the outer walls **17** thereof which define a large button-receiving recess **18** and a smaller appurtenance-receiving recess **19**. In the illustrated preferred embodiment the recesses **18**, **19** are generally annular, although being slightly tapered in their cross section to facilitate their formation by conventional molding processes, but recesses of other shapes may be employed for odd-shaped buttons and the like, as should be understood.

In a typical package, the rearmost recess **19** of a cavity **15** will be approximately ⅜ inch in diameter and will have a depth of approximately 3/16 inch. The larger recess **18** may have any diameter greater than that of the buttons being packaged and usually has a depth of approximately 3/16 inch. As an important aspect of the invention, the rear elements will be able to accommodate a large number of different button sizes ranging between diameters slightly in excess of the small recess and diameters slightly less than the large recess. Moreover, a variety of sizes and types of buttons may be packaged in a single tray, as should be understood.

In accordance with the principles of the invention, cavities are formed in the rear element **11** in regions spaced inwardly (approximately ¼ inch) from the side and bottom edges and spaced further inwardly from the top edge to provide circumferential frame-forming margins **20**. In a typical arrangement such as illustrated in FIG. 1, the topmost row of cavities **15** is spaced approximately 1 3/16 inch from the top edge to provide a wide enough margin to define an opaque or translucent contrasting field **22** for any advertising or identifying legend **23** that may be carried by the transparent and planar front sheet **10**. Furthermore, and for purposes of enhanced display, the rear element is of a predetermined hue which contrasts with the hue of the buttons being packaged. Thus, when lightly colored or white buttons are to be packaged, a contrastingly hued rear element (blue, for example) is employed. Conversely, if colored buttons are to be packaged, a white tray may be used to advantage.

In the preferred embodiment the tray **11** is pre-molded from sheets or webs of expandable polystyrene foam having a thickness of 40 mils and a sufficiently low density, e.g., 7 pounds per cubic foot, to provide a relatively rigid, relatively non-stretchable button support which may be torn (although not punctured) with ease. As will be understood, the elements **11** may be mass produced on large sheets or webs, which may subsequently be cut down to a predetermined finished size, for example, 3 x 5½ inches as in the illustrated package.

In accordance with the invention, the front sheet **10** is transparent and of a similiar shape and size to that of the tray **11**. In addition to being transparent, the front sheet must be relatively free of moisture, in order not to deleteriously effect the material from which the buttons are manufactured, and it must be relatively puncture-proof in order to withstand rough handling by consumers when the packages are marketed in "rummaging bins" rather than on display racks. The front sheet **10** also must be heat sealable to and compatible with the tray **11**. Furthermore and similarly to the rear element **11**, the front sheet must be capable of being easily torn in the subsequent opening of the package by the consumer. It has been found that a most suitable material for use as the front element **10** of the new package is a sheet of extruded, bi-axially oriented polystyrene having a thickness of 5 mils.

Formation of the new package is quite simple and may be carried out with conventional apparatus and with minimum expense. Specifically, the buttons **12** are placed into the cavities **15** with their rear faces **14** resting on the shoulders **16** and with their hooks **14***a* projecting into the recesses **19**. Thereafter, the sheet **10**, which advantageously carries an appropriate identifying legend **23** at its upper edge, is aligned with the tray **11** in a manner in which the field portions **22** of the tray underlie the legend **23**, as shown clearly in FIG. 1. With the components of the package thus aligned, they are heat sealed together at temperatures of 400–450° F. and pressures of 70–100 p.s.i., along predetermined spaced peripheral and central

bands 24 and 25 of ⅛-inch width. As shown in FIG. 2, the heat seal pattern provides unsealed, tear-opening zones 26 and secures the front sheet 10 to the rear sheet 11 in a manner which precludes escape of the buttons from the cavities in which they are placed. Moreover, the heat seal pattern provides separation and attractive framing of the buttons 12 and the upper field portions 22. In certain applications, when the package is to be displayed by suspension from a hook, an aperture 21 may be appropriately formed within the framed field, as shown in FIG. 2.

The new package, having a planar, transparent front wall and non-transparent molded rear wall, provides a relatively puncture-proof package for buttons or like notions, which may be readily opened by simply tearing the opposed package walls, advantageously starting the tear at one of the tear-opening zones 26. In addition the package of the invention has an especially long shelf life, the materials of the package themselves resisting deterioration, clouding, embrittlement, and the like, as well as protecting the buttons from environmenal attack.

Thus, it should be appreciated that the finished package of the invention provides a complete and high degree of protection for the buttons contained therein, as well as providing an attractive and durable display therefor. Furthermore, the package may be produced simply and economically with available, conventional packaging machinery.

It should be understood that the specific button package structure herein illustrated and described is intended to be representative only, as certain changes may be made therein without departing from the clear teachings of the disclosure. Accordingly, reference should be made to the following appended claims in determining the full scope of the invention.

I claim:

1. A package of a plurality of buttons or the like, comprising
(a) a molded traylike rear element of lightweight, rigid, but readily tearable, thermoplastic foam material;
(b) said rear element being imperforate and defining a plurality of stepped recesses therein receiving the articles packaged and any subsequent appurtenances extending therefrom;
(c) a transparent, planar front element heat-sealed to said rear element in predetermined marginal and central areas thereof in a manner whereby each of said recesses is completely closed off to retain the article contained therein.

2. The package of claim 1, in which
(a) said rear element is formed of a non-transparent material.

3. A package of buttons or like articles, including
(a) a transparent planar lightweight front wall of relatively rigid yet tearable thermoplastic material;
(b) a lightweight rear wall of relatively rigid but tearable thermoplastic material;
(c) said rear wall being imperforate and defining a plurality of article-receiving recesses supporting the rear surfaces of the articles packaged;
(d) said recesses being of stepped configuration and including article-supporting shoulders;
(e) said front wall being superimposed upon said rear wall to close off said recesses and to provide display of the front surfaces of the articles packaged and to enclose completely said articles; and
(f) discontinuous heat-seal bands joining said superimposed walls in predetermnied peripheral regions thereof and joining said superimposed walls in predetermined regions between adjacent ones of said article-receiving recesses;
(g) whereby the discontinuities in the peripherally heat-sealed regions provide tear opening zones.

4. A package of buttons or like articles, including
(a) a transparent planar lightweight front wall of relatively rigid yet tearable thermoplastic material;

(b) a lightweight rear wall of relatively rigid yet tearable thermoplastic material;
(c) said rear wall being imperforate and defining a plurality of article-receiving recesses supporting the rear surfaces of the articles packaged;
(d) said rear wall being formed of a non-transparent material;
(e) said front wall being superimposed upon said rear wall to close off said recesses and to provide display of the front surfaces of the articles packaged and to enclose completely said articles; and
(f) discontinuous heat-seal bands joining said superimposed walls in predetermined peripheral regions thereof and joining said superimposed walls in predetermined regions between adjacent ones of said article-receiving recesses;
(g) whereby the discontinuities in the peripherally heat-sealed regions provide tear opening zones.

5. The package of claim 4, in which
(a) said front wall is formed of bi-axially oriented, extruded polystyrene having an approximate thickness of 5 mils; and
(b) said rear wall is formed of expandable polystyrene foam having a thickness of approximately 40 mils and a density of approximately 7 pounds per cubic foot.

6. A package of buttons or like articles having a first predetermined hue, comprising
(a) a lightweight tray element of a thermoplastic material having a second predetermined hue contrasting to that of the articles packaged;
(b) said tray element being imperforate and including a plurality of article-receiving recesses;
(c) said tray element including predetermined planar field portions;
(d) a transparent, planar, tray covering element;
(e) said covering element including indicia adapted to overlie said field portions;
(f) sealing bands uniting said planar covering element and said tray element in superimposition and completely enclosing said articles;
(g) said sealing bands defining framing for said recesses and said field portions.

7. A package of buttons or like articles having a first predetermined hue, comprising
(a) a lightweight tray element of a thermoplastic material having a second predetermined hue contrasting to that of the articles packaged;
(b) a transparent, planar, tray covering element;
(c) said tray element being imperforate and including a plurality of article-receiving recesses;
(d) said recesses being of stepped configuration and including article-supporting shoulder portions;
(e) sealing bands uniting said planar covering element and said tray element in superimposition and completely enclosing said articles.

8. A package in accordance with claim 7, in which
(a) said covering element is a sheet of extruded, biaxially oriented polystyrene; and
(b) said tray element is formed from expandable polystyrene foam.

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