Jan. 17, 1961 G. C. SPARKS 2,968,391

TEAR-STRIP PILL PACKAGE

Filed June 19, 1958 2 Sheets-Sheet 1

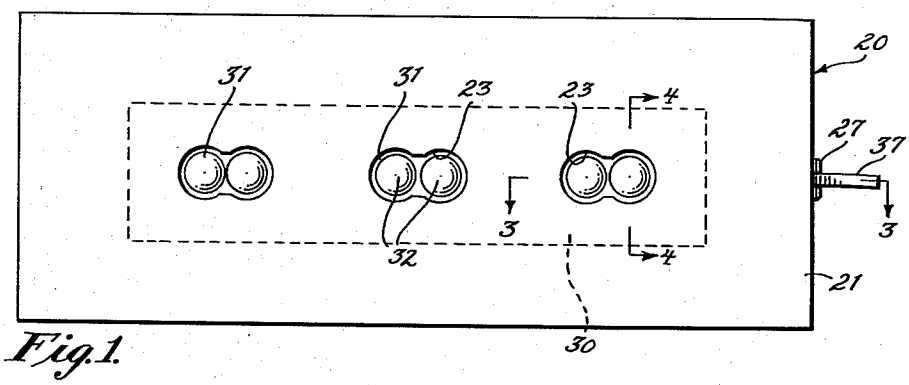


Fig. 1.

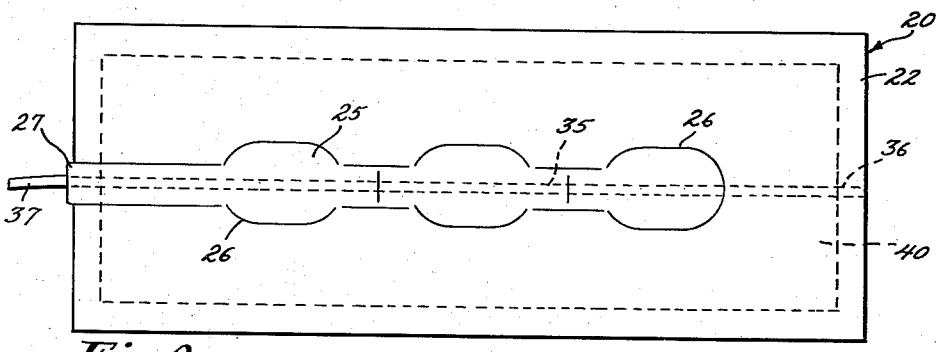


Fig. 2.

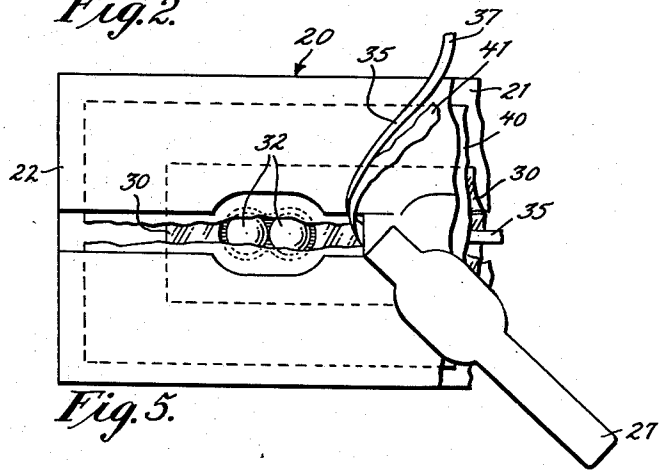


Fig. 5.

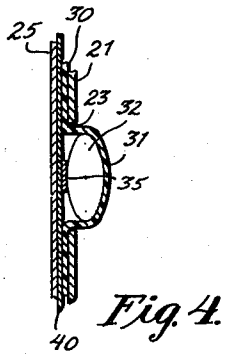


Fig. 4.

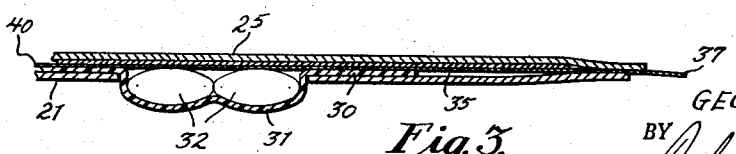


Fig. 3.

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TEAR-STRIP PILL PACKAGE

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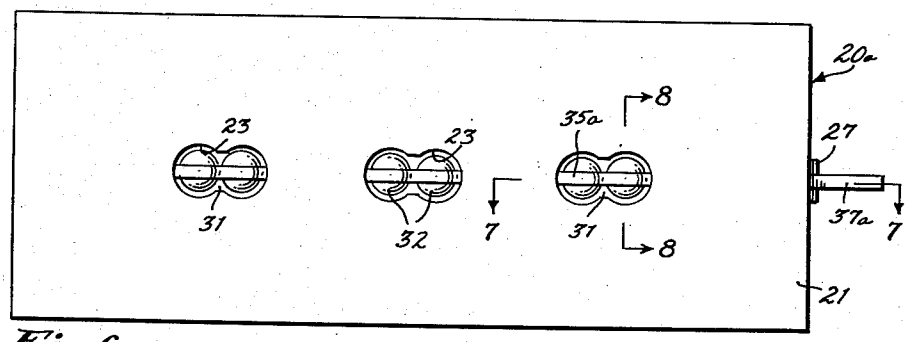


Fig. 6.

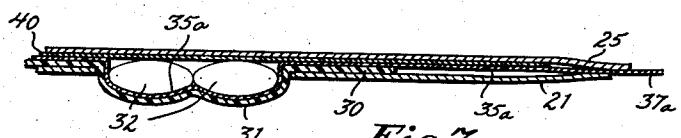


Fig. 7.

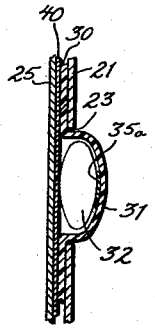


Fig. 8.

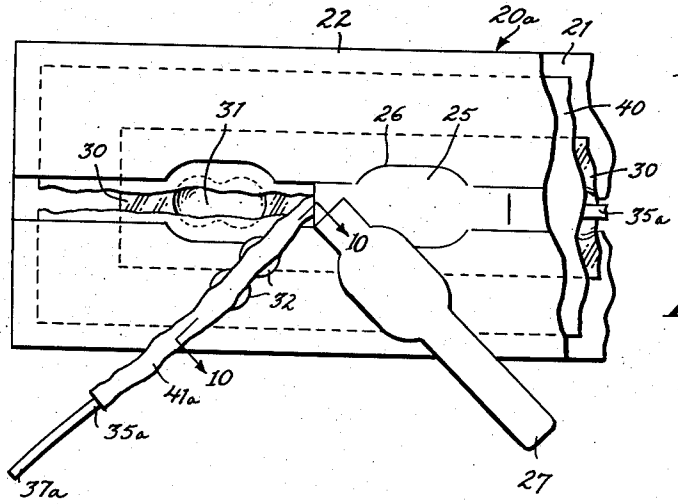


Fig. 9.

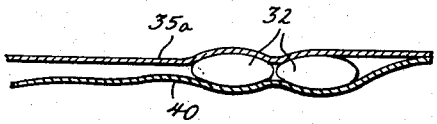


Fig. 10.

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TEAR-STRIP PILL PACKAGE

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8 Claims. (Cl. 206—42)

This invention relates generally to dispensing containers or packages of the general type disclosed in co-pending patent application Serial Number 587,143, filed May 24, 1956, of which this application is a continuation in part.

The particular embodiment of the present invention, which is illustrated in the drawings and which will be described hereinafter in greater detail, comprises generally an inner sheet having at least one indentation or depression formed therein for receiving an article to be contained, a pair of outer sheets on opposite sides of and sandwiched about the inner sheet with one of the outer sheets overlying and closing the article receiving recess, and means for operating upon one of the outer sheets to effect opening of the recess for discharge of the contained article.

It is one object of the present invention to provide a dispensing container of the type described which is extremely simple and inexpensive in construction, quickly operable without the exercise of great skill, attractive in appearance, and which enables the contents and advertising indicia to be advantageously displayed, if desired.

It is another object of the present invention to provide a dispensing container of the type described which is durable and reliable in use, foolproof in operation, and extremely light in weight and small in size, being substantially flat for convenience in mailing or carrying on the person of the user.

A more particular object of the present invention resides in the provision of a container having the advantageous characteristics mentioned in the preceding paragraphs, and which effectivley protects the contents against moisture and dirt, and which includes novel and advantageous opening or dispensing means not adversely affecting the protective character of the package.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings, which form a material part of this disclosure.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope will be indicated by the appended claims.

In the drawings:

Figure 1 is a top plan view showing a package constructed in accordance with the teachings of the present invention;

Figure 2 is a bottom plan view showing the package of Figure 1;

Figure 3 is a partial longitudinal sectional view taken substantially along the line 3—3 of Figure 1;

Figure 4 is a partial transverse sectional view taken substanitally along the line 4—4 of Figure 1;

Figure 5 is a partial bottom or rear view similar to Figure 2, but illustrating the opening procedure, and showing interior structure of the package;

Figure 6 is a front or top plan view similar to Figure 1,

but showing a slightly modified form of package constructed in accordance with the present invention;

Figure 7 is a partial longitudinal sectional view taken substantially along the line 7—7 of Figure 6;

Figure 8 is a partial transverse sectional view taken substantially along the line 8—8 of Figure 6;

Figure 9 is a partial rear or bottom plan view similar to Figure 5, but showing the embodiment of Figures 6–8 in the process of being opened; and

Figure 10 is a partial sectional view taken substantially along the line 10—10 of Figure 9.

Referring now more particularly to the drawings, and specifically to Figures 1–5 thereof, the package illustrated therein is generally designated 20 and includes a pair of substantially congruent, generaly rectangular outer walls, the front outer wall being designated 21, and the rear outer wall 22. The outer walls 21 and 22 are advantageously fabricated of cardboard, and may be formed as an integral, folded piece, or of separate sheets. The front sheet 21 is formed with at least one, and preferably a plurality of through holes or cutouts 23, advantageously arranged in a line, for purposes appearing presently. The cutouts 23 are located centrally of or in spaced relation within the peripheral edge of the front outer sheet 21.

The rear outer sheet 22 is formed with a weakened portion 25 defined within cut or score line 26. More specifically, the cuts or score lines 26 extend inward from one end edge of the outer sheet 22 to define thereof an elongate portion 25 bounded by the score lines, and thus weakened for easy severance and removal from the remainder of the rear outer sheet. The weakened rear outer sheet portion 25 may include a tab or extension part 27 projecting beyond one end edge of the outer sheet. In the congruent relation of the front and rear outer sheets 21 and 22, the weakened rear outer sheet portion 25 is located to lie directly behind the cutouts 23 of the front outer sheet.

Interposed in sandwiched relation between the front and rear outer sheets 21 and 22 is an inner sheet 30, preferably fabricated of relatively thin, transparent plastic, and which may be of rectangular configuration similar to but substantially smaller than that of the outer sheets. The plastic inner sheet 30 is sandwiched between the outer sheets 21 and 22 in homothetic relation with respect thereto, so as to have its peripheral edge spaced substantially inward at all points from the peripheral edges of the outer sheets. Formed in the plastic sheet 30, centrally thereof or in spaced relation with respect to the peripheral edge thereof, is one or more indentations or depressions 31 which project forward from or onto the forward side of the inner sheet and open rearward from or on the rearward side of the inner sheet. With the inner sheet 30 sandwiched between and in homothetic relation with respect to the congruent outer sheets 21 and 22, the depressions 31 are located in respective alignment with and projecting forward through the cutouts 23 of the front outer sheet; and further, the depressions define recesses facing rearward toward the scored or weakened strip portion 25 of the rear outer sheet. The depressions 31 are illustrated as each containing the pair of pills 32, being specially configured to conformably receive the pills, but of course, other articles and other quantities thereof may also be accommodated.

The outer sheets 21 and 22 may be adhesively secured in facing engagement about their peripheral portions, which portions lie beyond the peripheral edge of the inner sheet 30; and, the inner sheet will be effectively retained in its homothetic relation with respect to the outer sheets both by frictional engagement therewith and the positive retaining action of the depressed portions 31 in the cutouts 23.

A flexible, relatively strong tear strip, as of metal foil,

plastic, or the like, is generally designated **35**, and arranged on the rear face or side of the inner sheet **30** extending along the line of, across and over the openings of the depressions **31**. That is, as best seen in Figure 3, the tear strip or tape **35** is disposed in facing engagement with, but unsecured to the rear side or face of the inner sheet **30**, and extends along the weakened rear sheet portion **25**, across and over the depressions **31**, so as to be spaced from the bottom or forward, depressed wall of the depressions by the contained articles **32**. The tear strip or tape **35** may be seen in outline in Figure 2 as extending the entire length of the weakened rear sheet portion **25**, and therebeyond, as at **36** to the right-hand end edges of the outer sheets. The end tape portion **36** may be anchored to the outer sheets by the marginal adhesive securement of the latter. Also as seen in Figure 2, the tear tape or strip **35** projects leftward beyond the left-hand end of the outer sheets, and also beyond the projecting tab **27** of the weakened portion **25**, to define a free end or pull portion **37**.

A moisture barrier or liquid-impermeable sheet **40** is sandwiched between the rear face of the inner sheet **30**, and the front face of the rear outer sheet **22**, which sheet is advantageously fabricated of metal foil or other impermeable sheet material having the free-rupturing characteristics of metal foil. As may be observed in Figures 2, 3 and 5, the moisture barrier or foil sheet **40** is also of a rectangular-outline configuration similar to that of the outer sheets **21** and **22**, but smaller in dimensions than the outer sheets and larger in dimensions than the inner sheet **30**. The moisture barrier **40** is arranged in homothetic relation with respect to the outer and inner sheets, completely overlying the inner sheet on the rear face thereof, also overlying the tear tape **35**, and having its peripheral portion extending beyond the peripheral edge of the inner sheet to the marginal portion of the outer sheets, where it is adhesively secured between the latter. The moisture barrier **40** is advantageously also adhesively secured to the rear face of the inner sheet, whereby its overlying and closing relationship with the depressions **31** effectively seals the article-containing space within the depressions.

In manufacture, with articles **32** received in the recessed portions **31** of the previously formed inner sheet **30**, the tear strip or tape **35** is positioned on the rear surface of the inner sheet, extending across the recessed portions **31** and on top or rearward of the contents thereof. The moisture barrier or foil sheet **40** is then arranged on the rear surface of the inner sheet, completely overlying the latter, and over the tape **35**, with the peripheral moisture-barrier portions extending beyond the peripheral edge of the inner sheet. The moisture barrier, in this position, is secured in facing engagement with the rear surface of the inner sheet. These thus-assembled elements may then be placed on the rear surface of the front outer sheet **21**, with the depressed inner-sheet portions **31** received in and projecting forward through the cutouts **23** of the front outer sheet. The rear outer sheet **22** may then be superposed on the rear surface of the moisture barrier **40** and extending therebeyond in congruent relation with respect to the front outer sheet **21**. It may be observed in Figures 2, 3 and 5, that the peripheral edge of the moisture barrier **40** extends closely adjacent to but spaced inward from the peripheral edges of the front and rear outer sheets **21** and **22**; and, the outer sheets are preferably adhesively secured together about their facing peripheral margins with the peripheral margin of the moisture barrier secured therebetween.

In order to operate the instant device, it is only necessary to apply a rearward pulling force to the free end **37** of tear tape **35**, which will effect severance of the weakened rear outer-sheet portion **25** from the remainder of the rear outer sheet in the rightward direction, as seen in Figure 2. Simultaneously, the tape **35** effects rupture of the moisture barrier **40** along a portion **41** contiguous to the tear tape, see Figure 5. This, of course, effects opening of a recess **31** for convenient access to the contained articles **32**. The articles **32** may be discharged from the recess **31** by mere inversion of the device. As illustrated in Figure 5, the tear tape **35** may be pulled sufficiently to open a single recess **31**, or any desired number of recesses, while the remaining recesses, if any, stay closed in their sealed condition.

In the embodiment of Figures 6–10, the dispensing container is there generally designated **20*a***, and the structure thereof is substantially the same as that of Figures 1–5, except that the tear tape or strip **35*a*** of the device **20*a***, corresponding to the tear tape **35** of the device **20**, is located and arranged differently with respect to the remaining parts of the device.

More specifically, as best seen in Figures 6, 7 and 8, the tear tape **35*a*** extends along the rear surface of the inner sheet **30**, successively across each of the depressed pockets or recesses **31**, but interiorly of each depression along the bottom or forwardly projecting wall thereof, to lie between the contained articles **32** and the inner surfaces of the depressions. This arrangement may be obtained in assembly of the device by introducing the articles **32** into the recesses **31** after the tear tape **35*a*** has been positioned on the rear side of the inner sheet **30** extending across the recesses. The moisture barrier **40** may then be secured in position as described hereinbefore; and, it will be noted that the articles **32** are arranged directly between the tear tape and moisture barrier.

Operation of the device **20*a*** is illustrated in Figures 9 and 10, the free end **37*a*** of tape **35*a*** having been pulled to sever and remove a part of the weakened back or outer-sheet portion **25**. Pulling of the tape to effect this opening or severance of the weakened back sheet portion necessarily causes displacement of the articles **32** out of the recess **31**, the tape being in front of the articles and moving rearward to carry the articles rearward and effect their removal from the recess. However, the moisture barrier **40** is ruptured by pulling of the tape to define a severed portion or strip **41*a*** extending along the tape. Moreover, the strip **41*a*** formed of the moisture barrier **40** by rupture thereof is located on the rearward side of the articles **32**, opposite to the tape, and combines with the latter to frictionally retain therebetween the articles upon removal of the latter from the depressions **31**. This is the condition illustrated in Figures 9 and 10. Of course, the articles **32** carried between the tape **35** and strip portion **41*a*** may be readily dislodged therefrom for use.

From the foregoing, it is seen that the present invention provides a dispensing container which fully accomplishes its intended objects, and is well adapted to meet practical conditions of manufacture, distribution, and use.

Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be made within the spirit of the invention and scope of the appended claims.

What is claimed is:

1. A dispensing container comprising a relatively thin plastic inner sheet formed with at least one depression spaced inward from the peripheral edge of said inner sheet and defining a recess opening toward one side of said inner sheet, said depression projecting on the other side of said inner sheet and being configured to contain a predetermined quantity of articles, a tear strip on said one side of said inner sheet arranged across and of a width less than said recess and having one end extending beyond the adjacent edge portion of said inner sheet, a first coplanar cardboard outer sheet arranged in facing engagement with said one side of said inner sheet in closing relation with said recess overlying said tear strip and having its peripheral portion extending beyond the peripheral edge of said inner sheet and terminating short of said one tear-strip end, said first outer sheet having a

weakened portion extending along said tear strip overlying and of a width greater than said recess, and a second substantially coplanar outer sheet arranged on the other side of said inner sheet overlying and having its peripheral portion extending beyond the peripheral edge of said inner sheet terminating short of said one tear-strip end and adhesively secured directly to and in facing engagement with the peripheral portion of said first outer sheet, whereby said one tear-strip end extends beyond said outer sheets for manual grasping and a pull exerted on said tear strip effects severance of said weakened first outer sheet portion to completely open said recess.

2. A dispensing container according to claim 1, said inner sheet being formed with a plurality of depressions spaced inward from the peripheral edge of said inner sheet and defining a plurality of recesses opening toward said one side of said inner sheet, said tear strip extending successively across all of said recesses, and the weakened portion of said first outer sheet extending along said tear strip and overlying all of said recesses, whereby a pull exerted on said tear strip effects severance of said weakened first outer sheet portion to successively open said recesses.

3. A dispensing container according to claim 1, said second outer sheet being cut out to receive the projection of said depression.

4. A dispensing container according to claim 1, in combination with a rupturable moisture barrier interposed between said inner and first outer sheets completely overlying said recess and tear strip said barrier being severable simultaneously with said weakened first outer sheet portion by said tear strip along a width approximately equal to said tear strip to leave barrier portions partially overlying said recess and retaining the contents therein.

5. A dispensing container according to claim 4, said moisture barrier comprising metal foil adhesively secured to said one side of said inner sheet.

6. A dispensing container comprising a relatively thin plastic inner sheet formed with at least one depression spaced inward from the peripheral edge of said inner sheet and defining a recess opening toward one side of said inner sheet, said depression projecting on the other side of said inner sheet and being configured to contain

a predetermined quantity of articles, a tear strip on said one side of said inner sheet extending interiorly across said recess along the bottom thereof and therebeyond for interposition of said tear strip between an article in said recess and the bottom of said recess, a first coplanar cardboard outer sheet arranged in facing engagement with said one side of said inner sheet in closing relation with said recess overlying said tear strip and having its peripheral portion extending beyond the peripheral edge of said inner sheet, said first outer sheet having a weakened portion extending along said tear strip and overlying said recess, and a second substantially coplanar outer sheet arranged on the other side of said inner sheet overlying and having its peripheral portion extending beyond the peripheral edge of said inner sheet and adhesively secured directly to and in facing engagement with the peripheral portion of said first outer sheet, whereby a pull exerted on said tear strip effects severance of said weakened first outer sheet portion and ejection of said article from said recess.

7. A dispensing container according to claim 6, in combination with a rupturable moisture barrier interposed between said inner and first outer sheets overlying said recess and tear strip for severance by said tear strip with said weakened first outer sheet portion.

8. A dispensing container according to claim 7, said moisture barrier having the rupturing characteristics of metal foil to rupture upon said exerted pull and define of said barrier a second strip extending closely along said tear strip, said second strip and tear strip serving to retain therebetween an article removed from said recess and preventing its projection from said recess.

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