

May 5, 1959

D. RODNON
PACKAGES

2,885,071

Filed June 14, 1957

2 Sheets-Sheet 1

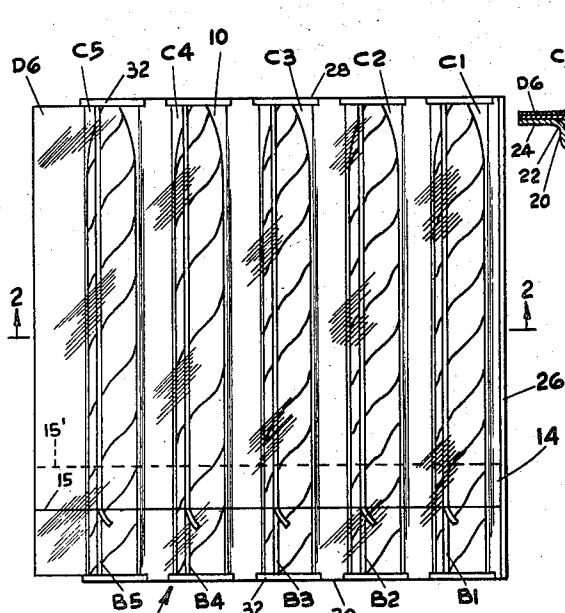


FIG. 1

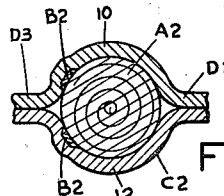


FIG. 2A

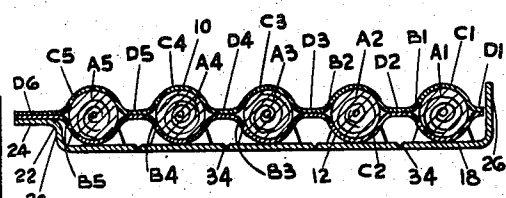


FIG. 2

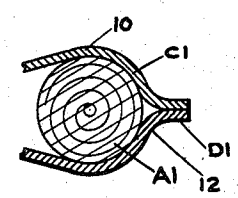


FIG. 4

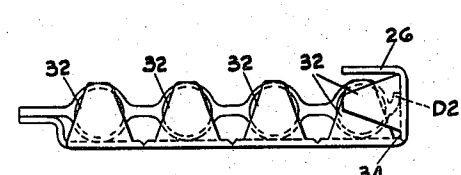


FIG. 5

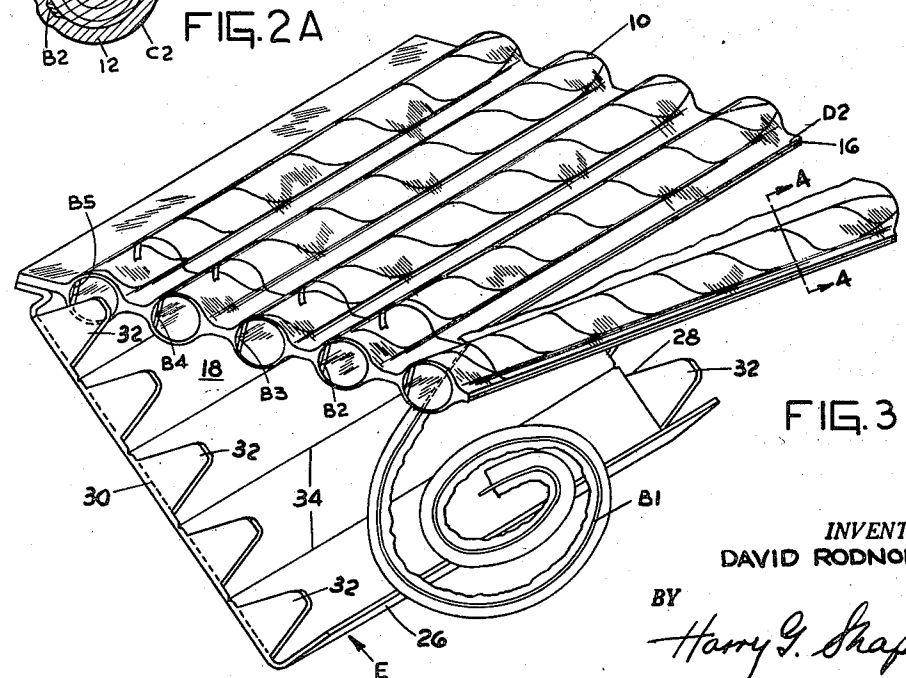


FIG. 3

INVENTOR.
DAVID RODNON
BY
Harry G. Shapiro
ATTORNEY

May 5, 1959

D. RODNON
PACKAGES

2,885,071

Filed June 14, 1957

2 Sheets-Sheet 2

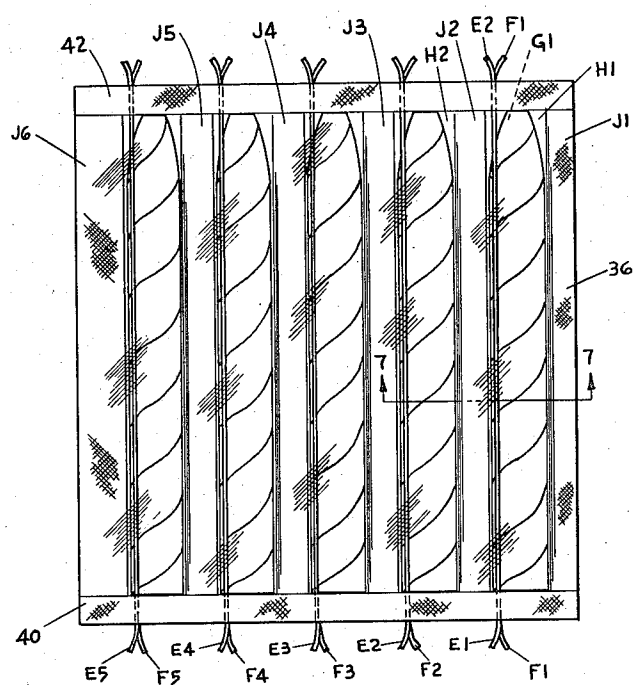


FIG. 6

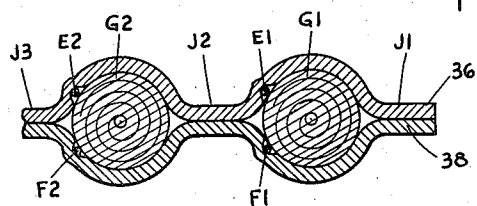


FIG. 7

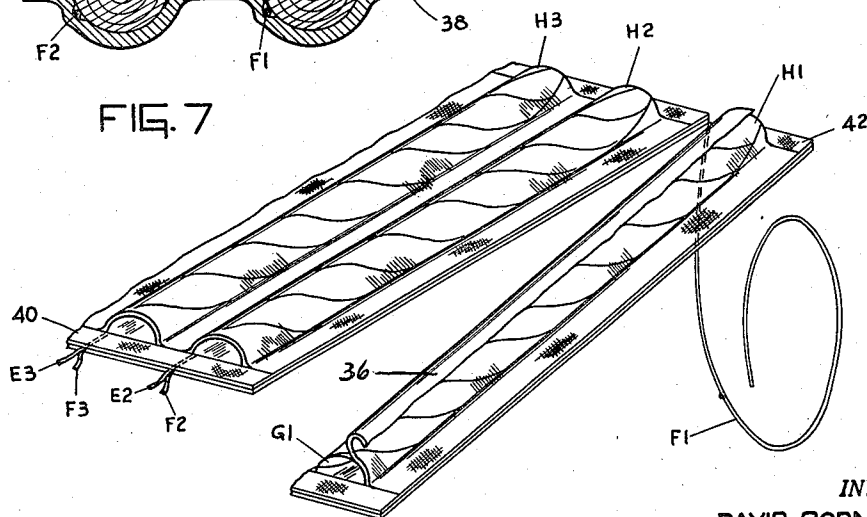


FIG. 8

INVENTOR.
DAVID RODNON

BY

BY *Harry G. Shapiro*
ATTORNEY

1

2,885,071

PACKAGES

David Rodnon, North Bergen, N.J.

Application June 14, 1957, Serial No. 665,818

5 Claims. (Cl. 206—41)

The invention relates to improvements in packages of the type wherein a plurality of articles are enclosed between layers of packaging material sealed to each other in zones intermediate adjacent and spaced articles to provide connected, closed cells for each of the articles.

Packages of the type under consideration require tearing or separation of a closed cell from the remainder of the package, and then, in another operation, opening the separated cell, as by tearing the packaging material, to obtain access to the article within the cell. To facilitate the separation of the individual cells from the remainder of the package, weakened areas, such as lines of perforations in the intermediate sealed zones, have been provided, and to open an individual closed cell which has been separated from the package, it has been suggested to form the packaging material with notched areas to aid in the opening thereof. In any event, in packages of this kind, two separate operations have been necessary to reach the commodity and to remove the packaging material of the opened cell.

The primary object of the invention is to provide a package of the type under consideration with means which is so related to the packaging material and the sealed zones between cells that separation or removal of the packaging material of a cell from the remainder of the package and opening of such cell for access to the commodity therein is accomplished simultaneously, or in one and the same operation or motion.

Another object of the invention is to provide a flexible, closed cell package with supporting and protective means formed to enable diminution in the size of the protective means as article-containing cells are separated from the remainder of the package.

These, and other objects and advantages, will be apparent from the following detailed description of a preferred embodiment of the invention, taken in conjunction with the drawing, in which:

Fig. 1 is a top plan view of a package made in accordance with the invention;

Fig. 2 is a vertical cross-sectional view taken approximately in the plane of line 2—2 of Fig. 1;

Fig. 2A is a vertical cross-sectional view, on an enlarged scale, of a cell before it is opened and separated from the remainder of the package;

Fig. 3 is a perspective view showing the manner in which a cell is separated from the remainder of the package, the cell as it is separated being opened for ready access to the article therein;

Fig. 4 is a vertical cross-sectional view of a separated and opened cell taken approximately in the plane of line 4—4 of Fig. 3;

Fig. 5 is an end view of the package showing the manner in which means for supporting and protecting the article-containing cells may be folded to conform to the size of the remainder of packaged articles after a cell and article have been removed;

Fig. 6 is a top plan view showing another form of the invention;

2

Fig. 7 is a cross-sectional view taken approximately in the plane of line 7—7 of Fig. 6; and

Fig. 8 is a perspective view showing the manner in which a cell is opened for access to the article and the cell separated from the remainder of the package.

Generally, a package made in accordance with the invention comprises a plurality of spaced articles enclosed in substantially flexible packaging material providing top and bottom layers sealed to each other in zones intermediate adjacent articles to provide connected and closed cells for each of the articles. The package is provided with means for tearing the packaging material, such means extending coextensively with both the top and bottom layers of the packaging material, about the entire periphery of a cell, and closely adjacent and substantially parallel with respect to the edge of the sealed zone of the next succeeding cell. By grasping and pulling upon the tear means, an individual cell is opened, and in the same motion of opening, the packaging material of such cell is separated and removed from the remainder of the package. The location of the tear means in a position immediately adjacent a sealed zone also serves to confine the separation of the packaging material of a cell to the very edge of the sealed zone. As a result, the package can be uniformly and successively diminished in size to include only closed article-containing cells, with the edge of the package from which the last article-containing cell has been removed in a clean, neat and sharply defined condition.

In greater detail, and referring to the drawing for a preferred embodiment of the invention, a plurality of spaced, parallel arranged articles A_1, A_2, A_3, A_4, A_5 , are enclosed between a pair of layers 10 and 12 of substantially flexible packaging material. In the embodiment shown, elongated articles, specifically cigars, are packaged, there being five (5) cigars shown in the package. It will be understood, however, that the invention is applicable to a wide variety of other articles which are variously shaped, and for any desired number of articles in a package. The packaging material preferably is transparent, flexible and moisture-proof, examples of such materials being moisture-proof coated regenerated cellulose (cellophane), rubber hydrochloride (Pliofilm), or the like, such materials also possessing the property of heat-sealability. If desired, the packaging material may be non-transparent, for example, metal foil.

In the illustrated and preferred form of the invention, the layers 10 and 12, which are disposed on opposite sides of the parallel arranged cigars, are provided by a single sheet of material having a plurality of transversely spaced tear tapes B_1, B_2, B_3, B_4 , and B_5 , adhered to the surface of the sheet in a manner well-known in the art. The tear tapes are on that side of the sheet which will be in juxtaposition to the articles. As shown in Figs. 1 and 3, the tear tapes are united to the entire length of sheet, and are sufficiently long to provide exposed ends for grasping when the sheet is folded around the articles, overlapped at 14, and adhered, as by a suitable adhesive. As seen in Figure 1, the ends of the sheet are indicated by the full line 15 and the dotted line 15'. The cigars are thus disposed within a substantially flattened, open-ended tube of the flexible packaging material, with the narrow sides of the tube located about the mouth and lighting ends of the cigars. The package is completed, and individual closed cells, C_1, C_2, C_3, C_4 , and C_5 , are provided for the spaced cigars arranged in parallel relationship, by suitably adhering, as by heat-sealing, the layers 10 and 12 to each other in zones intermediate the articles, and at the open ends of the flattened tube. The sealed areas are designated D_1, D_2, D_3, D_4, D_5 , and D_6 . The sealed zones lie in substantially the same plane.

As shown in Figs. 1, 2 and 3, the sealing of the zones

3

to provide closed cells for each of the articles is accomplished so that the tear tapes B_1 , B_2 , etc. are each located to extend parallel and closely adjacent to the edge of a sealed zone of the next succeeding article-containing cell to be removed from the package. Each tear tape extends around the entire periphery of a cell, just outside of the edge of an adjacent sealed zone, and is coextensive with the fully projected length of the packaging material which constitutes each cell. Thus, tear tape B_1 , for opening the cell C_1 , is located closely adjacent the edge of sealed zone D_2 , tear tape B_2 for opening the cell C_2 is located close to the sealed zone D_3 , and so forth.

As a result of the described relationship of tear tapes with respect to the packaging material of each of the cells, and the sealed zones defining the cells, grasping a tear tape end and pulling, as shown in Fig. 3, causes a cell to be opened for access to the article, and simultaneously, and in the same motion, the packaging material of a cell is cleanly separated from the remainder of the package. The path of tearing by the tear tape B_1 , for example, is guided by the edge, designated 16, of sealed zone D_2 to provide a straight, sharply defined edge for the remainder of the package. The same action of separation and opening, with the formation of sharp, neat edges for the size-diminishing package, of course, occurs as the tear tapes B_2 , B_3 , and B_4 are successively grasped and pulled.

In order that the cigars may be removed from their cells in proper sequence, or as in the illustrated embodiment, from right to left, the packaging material may be imprinted with instructions, or with numbers on the cells. If the cell C_5 were first opened, the packaging material for such cell would be in the form of extended flaps, instead of only the adhered edges of the sealed zone, or at most, extremely short plied edges.

The described package, with many more article-containing closed cells, may be rolled up into a coil or spiral for insertion into a suitable container.

The orientation for the opening and separation of the cells in the sequence desired, coupled with the provision of substantially rigid means to support and protect a package of a commercially suitable number of cigars, preferably is accomplished by supporting the flexible, cellular package within a carton E, as shown. The carton comprises a bottom wall 18 having a linear area coextensive with the linear dimensions of the connected article-containing cells. The bottom wall is provided with an upstanding side wall 20, which is folded at 22, to provide a horizontally extending portion 24. The edge of the connected cells, or the flap constituting the sealed zone D_6 , is secured to the portion 24 in any suitable manner, as by adhesive, heat-sealing, or by means of staples. The opposite side of the cellular package is left free or unattached to thereby indicate, even without numbering of the cells or otherwise providing instructions for the sequence in which they are to be opened, that the articles are to be used in the sequence starting with cell C_1 . The carton is provided with an opposite side wall 26 extending upwardly from the bottom wall 18, the side wall preferably having a height at least equal to the diameter of a cigar.

The carton is also provided with end walls 28 and 30 extending vertically upward from the bottom wall, and adjacent the smoking and lighting ends, respectively, of the cigars. As shown in Figs. 2 and 3, the end walls 28 and 30 are die-cut to provide substantially triangular-shaped tabs 32, the tabs diminishing in width from bottom to top. The bottom wall is provided with transversely spaced fold-lines 34, which are spaced apart a distance substantially equal to the distance between, and are coincident with, the center lines of adjacent sealed zones D_2 and D_3 , D_3 and D_4 , etc. The tabs 32 are each located between, or are defined by, each pair of adjacent fold-lines 34.

After a cell is opened, and the packaging material thereof is separated from the remainder of the package, as shown in Fig. 3, the carton is successively folded at

4

the fold-lines 34. As shown in Fig. 5, sections of the bottom wall may be folded up and over the remainder of the diminishing package, the tabbed formation of the end walls 28 and 30 permitting adjacent tabs to bypass each other to allow folding without interference.

If desired, the bottom wall may be scored or perforated along the lines 34 to permit successive removal of sections of the carton, and therefore diminution in the size of the carton to correspond to the size of the remainder of the package after removal of cells.

It is believed that the advantages of a package made in accordance with the invention will be apparent from the foregoing detailed description. It will also be apparent that the illustrated and described preferred embodiment may be variously modified without departing from the spirit and scope of the invention.

While it is preferred, for reasons of more simplified manufacture and easier manipulation in use, to provide the top and bottom layers by use of a single sheet of packaging material as shown, it is within the scope of the invention to use two sheets to provide such layers, each sheet having transversely spaced tear tapes coextensive therewith which are matched when adhering the edges of the sheets and sealing the zones. In this form of the invention, two ends of tearing means require grasping and pulling for the opening of each of the cells and the successive and simultaneous removal of the material of each cell. Such form of the invention is shown in Figs. 6, 7 and 8.

A pair of sheets 36 and 38 are provided with transversely spaced tear strings E_1 , E_2 , E_3 , etc. and F_1 , F_2 , F_3 , etc., respectively, extending across the entire width of the sheets and extending beyond at least one edge of each sheet to allow them to be grasped for the tearing function. The sheets with the strings secured thereto are disposed on opposite sides of spaced, parallel arranged articles G_1 , G_2 , etc., with the tear strings on the sides of the sheets in juxtaposition to the articles. Cells H_1 , H_2 , H_3 , etc. are provided for the spaced articles by adhering the sheets 36 and 38 to each other at their transverse edges and intermediate zones J_1 , J_2 , J_3 , etc., the closing of the cells being completed by sealing the edges of the sheets at 40 and 42. The sealing of the zones to provide a closed cell for each of the articles is accomplished as previously described. A pair of tear strings E_1F_1 , E_2F_2 , etc. is provided for each of the cells, and the tear strings for each cell are located to extend parallel and closely adjacent to the edge of the sealed zone of the next succeeding article-containing cell to be opened and removed from the package. To open the cell H_1 , for example, the exposed end of the tear string E_1 is grasped and pulled across the package. This results in the adjacent portion of the sheet 36 being severed across its entire width. As shown in Fig. 8, the end of the tear string F_1 is then grasped and pulled across the package, whereupon the packaging material comprising the opened cell H_1 is completely separated from the remainder of the package.

The terms "tear strip means" and "tear strips" refer to tearing strings of textile or metal, tear tapes, or the like. The invention is applicable to a wide variety of articles, other than the cigars, and having any desired configuration.

These, and other changes will be apparent from the foregoing detailed description, and such changes are contemplated within the spirit and scope of the invention, as sought to be defined in the following claims.

I claim:

1. A package comprising a plurality of articles enclosed in substantially flexible packaging material providing top and bottom layers, said layers being sealed to each other in spaced parallel zones intermediate adjacent articles and extending substantially the entire extent of the package to provide connected, closed cells for each of the articles, and tear strip means within each of said

5

cells and secured to each of said layers for completely separating the packaging material of a cell from the remainder of the package and simultaneously opening such cell for access to the article therein, said tear strip means in a cell comprising a pair of juxtaposed tear strip portions located adjacent to and extending substantially parallel with respect to the edge of the sealed zone for the next succeeding cell to be similarly separated and opened.

2. In combination, a package as set forth in claim 1 supported in a carton, one end of said package being secured to the carton, the other end being free or unattached, said carton having a bottom wall and a pair of opposite end walls extending therefrom, said bottom wall being provided with transversely spaced fold-lines substantially coincident with the sealed zones, said end walls being formed to provide spaced tabs located between said fold-lines to enable folding the carton up and over the remaining package after removal of cells from the unattached side of the package.

3. A package comprising a plurality of articles enclosed in a single sheet of substantially flexible packaging material folded into a flattened tube providing top and bottom layers on the sides of the articles, said layers being sealed to each other in spaced parallel zones intermediate adjacent articles and extending substantially the entire extent of the package and at the ends of the tube to provide connected, closed cells for each of the articles, and spaced tear strip means, one within each of said cells, and adhered to said sheet and coextensive with the length thereof for completely and successively separating the packaging material of each of the cells from the remainder of the package and simultaneously opening each cell for access to the article therein, said tear strip means each extending coextensively with said top and bottom layers, and each comprising a pair of juxtaposed tear strip portions adjacent to and substantially parallel with respect to the edge of the sealed zone for the next succeeding cell to be similarly separated and opened.

4. A package comprising a group of three or more elongated articles enclosed in a pair of sheets of substantially flexible packaging material providing top and bottom layers, said layers being sealed to each other in spaced parallel zones intermediate adjacent articles and extending substantially the entire extent of the package

6

to provide closed parallel cells for each of said articles, and tearing means within each of said cells and secured to each of said layers for completely separating the packaging material of a cell from the remainder of the package and simultaneously opening such cell for access to the article therein, said tearing means comprising a pair of juxtaposed tear strips extending around the entire periphery of the cell, coextensively with each of said top and bottom layers and adjacent to and substantially parallel with respect to the edge of the sealed zone for the next succeeding cell to be similarly separated and opened.

5. A cigar package comprising a group of three or more cigars enclosed in a single sheet of substantially flexible packaging material folded into a flattened tube providing top and bottom layers on opposite sides of the cigars, said layers being sealed to each other in spaced parallel zones intermediate adjacent, parallel arranged cigars and extending substantially the entire extent of the package and at the ends of the tube to provide connected, closed cells for each of the cigars, said zones normally lying in the same plane, and spaced tear tapes, one within each of said cells, adhered to said sheet and coextensive with the length thereof for completely separating the packaging material of a cell from the remainder of the package and simultaneously opening such cell for access to the cigar therein, said tear tapes each comprising a pair of juxtaposed tape portions extending coextensively with said top and bottom layers and adjacent to and substantially parallel with respect to the edge of the sealed zone for the next succeeding cell to be similarly separated and opened.

References Cited in the file of this patent

UNITED STATES PATENTS

595,763	Chope	Dec. 21, 1897
1,589,345	Anchors	June 22, 1926
1,815,800	Respass	July 21, 1931
1,830,571	Sullwald	Nov. 3, 1931
1,887,503	Freedman	Nov. 15, 1932
2,135,518	Jacobstein	Nov. 8, 1938
2,447,096	Schneider	Aug. 17, 1948
2,833,401	Lefebvre	May 6, 1958