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F. ROSELIUS

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PACKAGE

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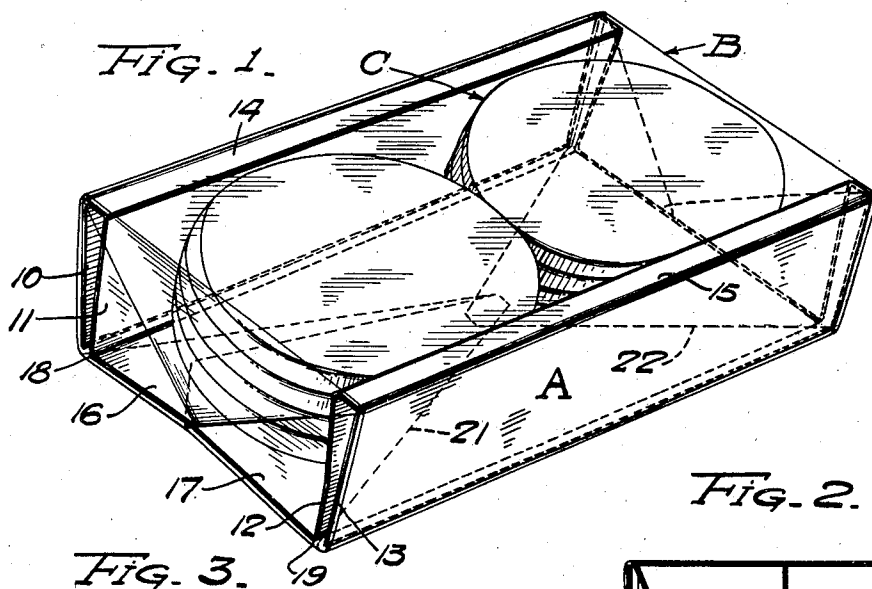
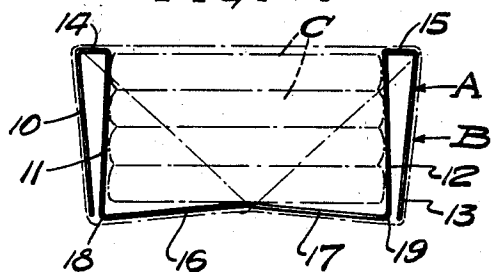
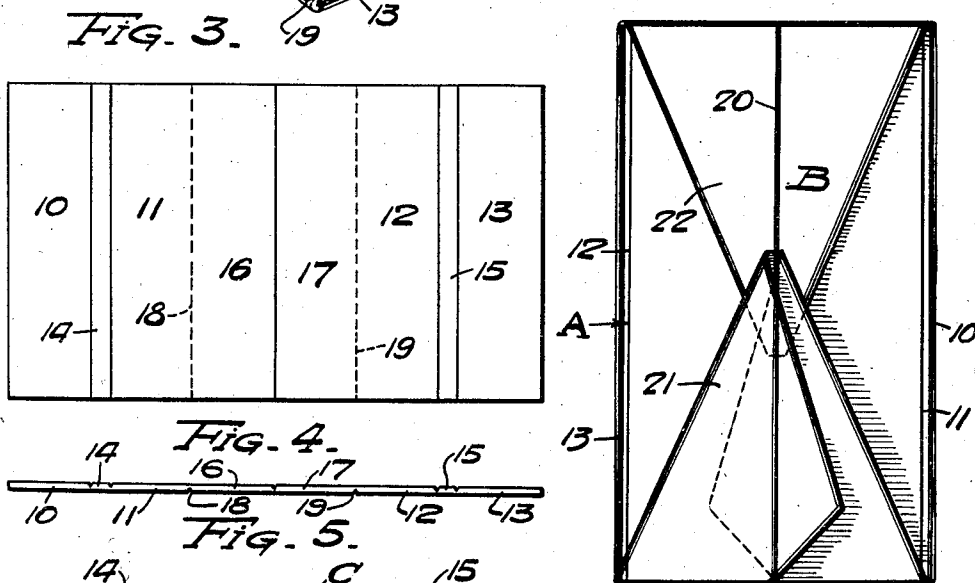


FIG. 2.



Inventor

FREDERICK ROSELIUS

By *Norris & Doremus*

Attorneys

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PACKAGE

Frederick Rosellus, Great Neck, N. Y., assignor to
George A. Krug Baking Company, Jamaica,
N. Y., a corporation of Delaware

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6 Claims. (Cl. 206—46)

This invention relates to the art of packaging articles, particularly food products, and it is more specifically concerned with the packaging of fragile food products.

5 The packages which have been heretofore proposed for this purpose possess several disadvantages. For instance, taking the packaging of cookies by way of example, they are now marketed in several ways:

10 (1) The cookies are stacked one on top of another and wrapped in a transparent wrapper to form a roll-shaped package. This mode of packaging affords no protection whatever to the cookies if they are dropped or roughly handled in transit.

15 (2) The cookies are stacked on a strip of cardboard and the assembly wrapped in transparent paper. This method of wrapping offers little if any advantage as regards protection to the food product over the plain paper package just described. The cardboard is merely incorporated in the package for the purpose of stiffening it.

20 (3) The cookies are placed in a box and the box is sometimes divided into individual cookie compartments by partitions. Besides possessing the disadvantage of requiring the cookies to be of absolutely uniform size to properly fill the box, this form of package requires a considerable quantity of paper stock. The packaging of so-called "dropped" cookies in a box or carton of this character is still more difficult because with such cookies the dough is dropped onto the pans and there is accordingly no control over the size of the cookies as there is no way in which to predict to what extent the dough will ultimately spread before the baking operation is complete.

25 It is accordingly the primary object of this invention to provide novel packages for fragile products which will afford complete protection for the product against breakage in response to shocks and pressure, and yet which is of low cost and affords a display of the product contained therein.

30 A further important object is to provide novel packages for fragile articles which are of flexible capacity as regards article size and yet which will snugly hold the articles against shifting about therein.

35 Another object is to provide novel packages for fragile articles which are so constructed as to protect the articles against damage in response to shocks imparted thereto and which

also resist distortion in response to pressure upon the package.

My invention also aims to devise novel packaging materials and novel methods of making and assembling the packages.

5 Further objects will become apparent as the specification proceeds in connection with the annexed drawing, and from the appended claims.

In the drawing:

10 Figure 1 is a view in perspective of the assembled package of my invention;

Fig. 2 is a bottom plan view of the package shown in Fig. 1;

15 Fig. 3 is a top plan view of the blank from which the package is made;

Fig. 4 is an end view of the blank shown in Fig. 3, and

20 Fig. 5 is an end elevational view of the blank as it appears when folded into final position and in this figure the transparent wrapper and the articles contained in the package are indicated in dotted lines.

25 With continued reference to the drawing, wherein like reference characters have been employed to designate like parts throughout the several views thereof, the package is made up of a comparatively stiff cardboard body A and a preferably transparent wrapper B.

30 As seen in Fig. 1 the articles packaged are cookies C, but it is to be understood that the invention is applicable to many other articles. Body A is made up of side panels 10, 11, 12 and 13; top panels 14 and 15; and bottom panels 16 and 17. In Figures 3 and 4 it is seen that five score lines are provided in the upper surface of the blank, whereas only two score lines 18 and 19 are provided on the lower surface of the blank for dividing panels 11, 16, 12 and 17.

35 The thickness of the material has been somewhat exaggerated in Fig. 4 to illustrate the manner of scoring the blank. The blank is folded by any suitable form of mechanism into the position shown in Fig. 5, so as to provide a deep, open-ended tray in which cookies C may be stacked in two stacks as shown, with four cookies in each stack. It is to be understood that more or less than two stacks may be made and that more or less than four cookies may be placed in each stack without departing from the spirit of the invention. Moreover the dimensions of the tray may be varied to suit the particular use to which it is to be put without sacrificing the advantage of the invention. For instance, flanges or side walls 10, 11, 12 and 13 may be made higher so as to provide a deeper tray than

that shown. Also, the tray may be made longer or shorter or wider or narrower than shown, as I have merely illustrated one preferable form of package for cookies.

After the cookies have been placed in the tray the wrapper B is put in place. As seen in Figs. 1, 2 and 3 the wrapper is placed on the top of the package in order to present a clear view of the contents which is unbroken by a seam. The wrapper is then brought down over the sides to form a longitudinal seam 20 on the bottom. The ends are folded in to provide flaps 21 and 22 which are brought under the package and secured together in overlapped relationship, as seen in Figs. 1 and 2. The wrapper may be secured in place by any suitable adhesive, for instance, a thermoplastic adhesive or the like. If desired, however, the wrapper may be waxed or it may be made of a self-sealing variety of "sylphrap" or "cellophane", so that when the completed carton is pushed over a hot plate the wrapper will seal itself.

Wrapper B may be made of any suitable sheet material. Preferably a flexible transparent material such as "cellophane" or "sylphrap" is employed but waxed paper or other materials may be used.

Analyzing the completed package, side walls 10, 11, 12 and 13, together with their interconnecting top walls 14 and 15, constitute a pair of channel members which manifest considerable resistance to flexing and thus render the package a rigid structure. Also, the dihedral angles defined by the side and bottom walls at score lines 18 and 19 stiffen the structure.

Side walls 10 and 13 manifest an inherent tendency to rock outwardly about their upper edges in the direction indicated in Fig. 5, which tends to maintain wrapper B taut and thereby provides a neat appearing package. This tendency of panels 10 and 13 to spring outwardly is also advantageous should the sides of the package be struck, because they provide resilient shock-absorbing walls and thereby prevent the shock from being transmitted to the contents. Even if the sides of the package are struck a sufficiently sharp blow to displace the lower edge of panel 10 or 13 against the bottom of the package the panels must still flex a considerable distance before they can be brought into surface engagement with panels 11 and 12, which enclose the articles.

Side walls 10, 11, 12 and 13 also provide four comparatively rigid compression members for resisting deformation of the package in response to vertically downward forces. For instance if the packages are stacked one upon the other the lowermost packages are subjected to considerable pressure but I have found that the package illustrated will successfully resist downwardly forces up to 60 pounds in magnitude without damage to the contents.

As seen in Fig. 5, the panels defining the bottom of the tray are inclined upwardly out of the plane of their lower edges. This is an extremely important feature of the invention as it makes it possible for the package to automatically adapt itself to cookies of varying sizes. For example, the cookies shown in place in the package are slightly smaller than the maximum diameter the package will accommodate, with the result that bottom panels 16 and 17 are disposed at an angle to each other. This relationship of panels 16 and 17 is brought about by the tension of wrapper B, and they are accordingly resiliently urged up-

ward into engagement with the lowermost cookies in the package. This results in the sides of the cookies being placed under a slight pressure in the direction of their diameters and in a slight pressure on the top and bottom of the cookies. The cookies or other articles are therefore maintained against shifting around in the package.

Assuming now that the cookies illustrated are replaced by cookies or other articles of smaller diameter, when wrapper B is applied and drawn into place the sides of the tray will move inwardly until they contact the articles. Simultaneously panels 16 and 17 will move upwardly and engage the bottom of the lowermost articles. Therefore, although panels 16 and 17 are disposed further upwardly than shown in Fig. 5, the cookies will nevertheless be firmly held by engagement of the side and bottom panels therewith.

I have found that the particular package illustrated will accommodate cookies whose diameters vary from two and one quarter inches to three and one half inches in diameter. Also, the cookies or other articles may vary in thickness and yet be firmly held in the package.

A further important advantage of this package resides in the fact that it may be turned on its side on a counter to display the contents without danger of their shifting around.

It is therefore apparent that I have provided a package that is free from all of the disadvantages of those shown in the prior art and one that may be cheaply produced and readily assembled.

What I claim is:

1. In a package, a tray-like member adapted to support the articles and having at least one joint in its bottom dividing the latter into two inwardly swingable parts, said member also having at each longitudinal marginal edge an upstanding flange, and a wrapper enveloping said member, said wrapper, being under tension circumferentially of said member and pulling said flanges into engagement with the sides of said articles and holding the parts of said bottom in inwardly swung positions and thereby holding said joint up against the bottom of said articles.

2. The package described in claim 1, wherein said flanges are each provided with a wall-forming element which is connected to the upper edge thereof and which extends outwardly from said upper edge and then downwardly adjacent the bottom of said tray-like member, for protecting said flanges against harmful shocks, said elements being spaced from the outer surface of said flanges.

3. The package described in claim 1, wherein said joint consists of scoring on the upper side of the bottom and which extends in a direction parallel to the longitudinal axis of said tray and is located substantially medially thereof.

4. A blank for forming a tray-like member having upstanding side walls and a jointed bottom wall, comprising a scored sheet of flexible material, said sheet having a pair of spaced score lines on one surface thereof for forming the junction of said side walls with said bottom wall, and a score line on its other surface located intermediate said first named line for forming said joint in said bottom, said other surface of said sheet of flexible material also being provided with a pair of score lines disposed outwardly of said first named score lines for providing a pair of downwardly folding auxiliary side walls.

5. In a package, a tray-like member having a

bottom wall, a pair of side walls attached to opposite side edges of said bottom wall and extending upwardly, said bottom wall having a longitudinal joint therein dividing the latter into
5 two parts swingable upwardly above their side edges, and a wrapper smoothly and tightly drawn around said member and holding said side walls in contact with said articles and simultaneously holding said two parts of said bottom wall in
10 upwardly swung positions between said longitudinal joint and the joints between said bottom wall and said side wall and in engagement with the bottom of said articles.

6. In a package, a tray-like member adapted to
15 support the articles and comprising a bottom wall

upon which the articles are adapted to rest, a side wall connected to opposite sides of said bottom wall and rising upwardly therefrom, said side walls being adapted to contact the sides of said articles and terminating in a comparatively narrow
5 flange which extends substantially horizontally away therefrom, each of said flanges having an auxiliary wall member depending downwardly therefrom in substantial parallelism with said
10 side walls, and a wrapper enveloping said tray-like member and maintaining said auxiliary wall members in proximity to said side walls and maintaining the latter in contact with the
articles.

FREDERICK ROSELIUS. 15