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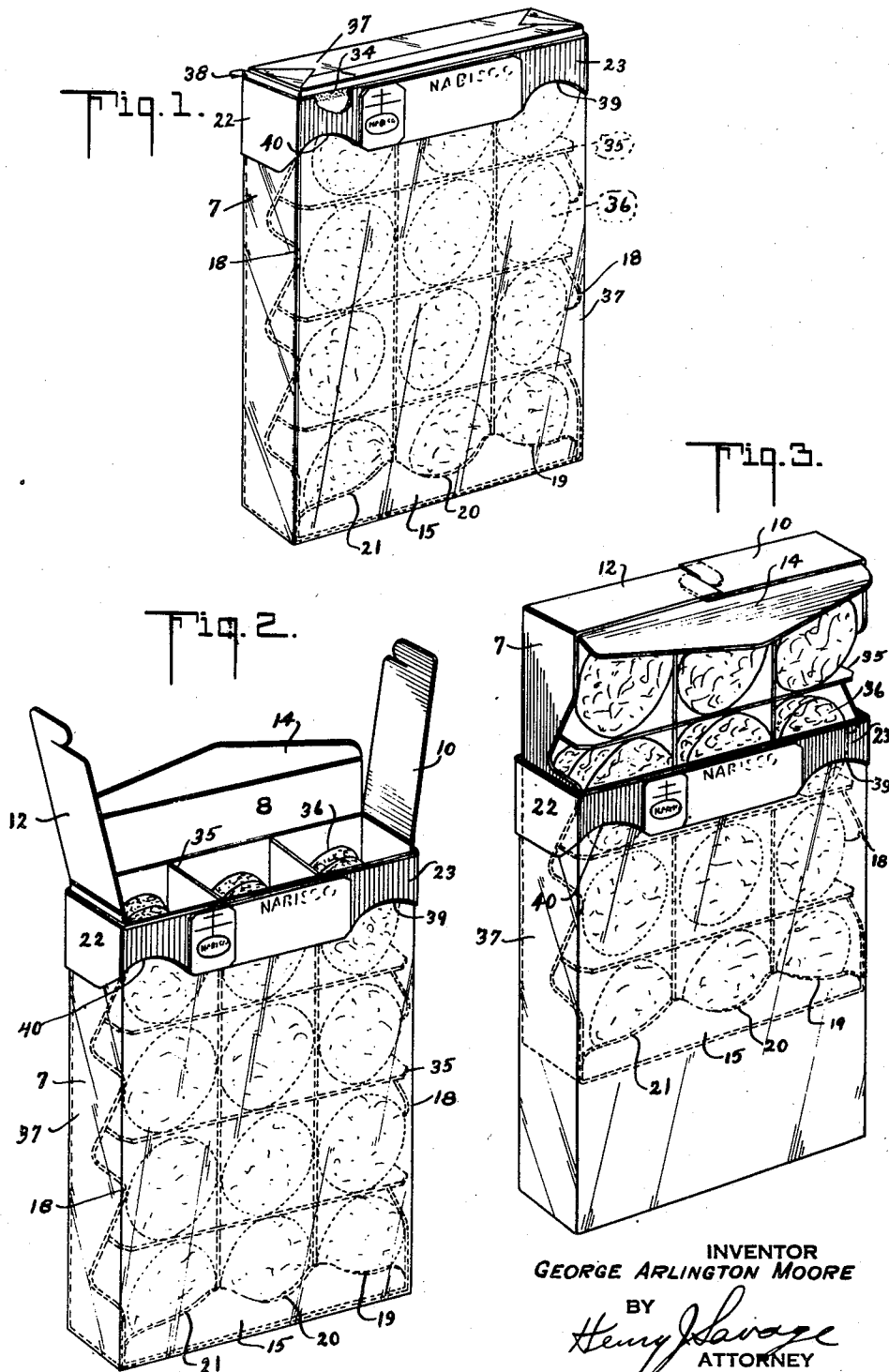
G. A. MOORE

2,494,446

SLIDE DISPENSING PACKAGE WITH REINFORCED WRAPPER

Filed Sept. 21, 1944

3 Sheets-Sheet 1



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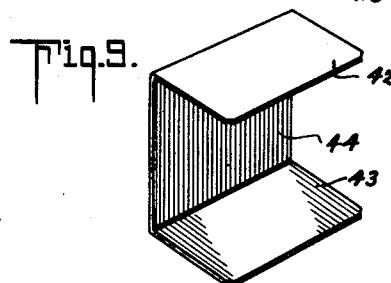
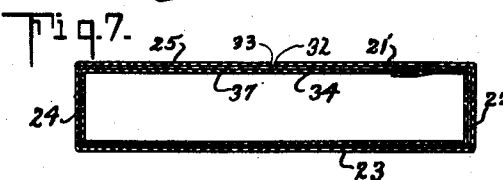
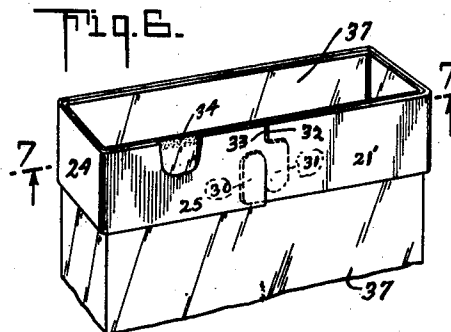
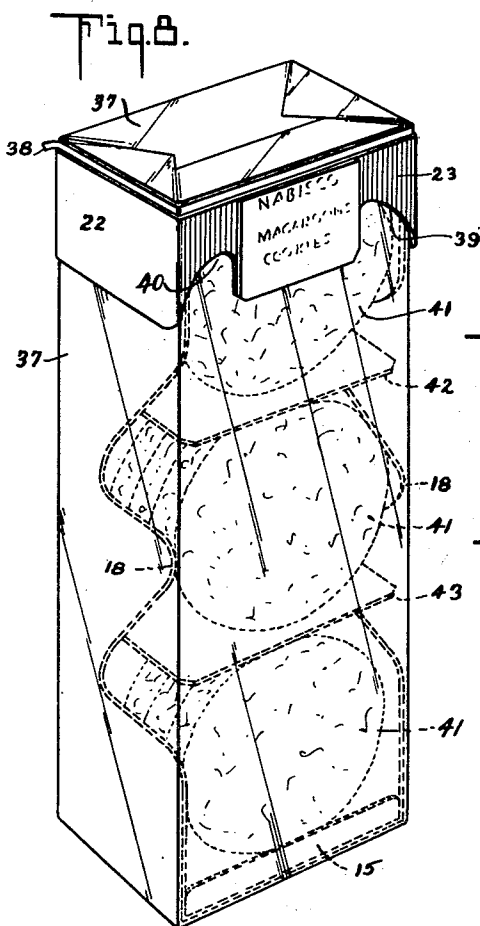
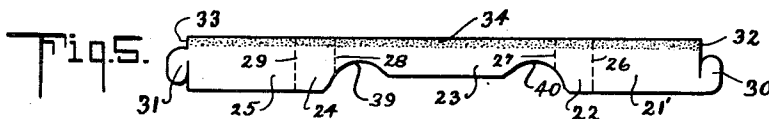
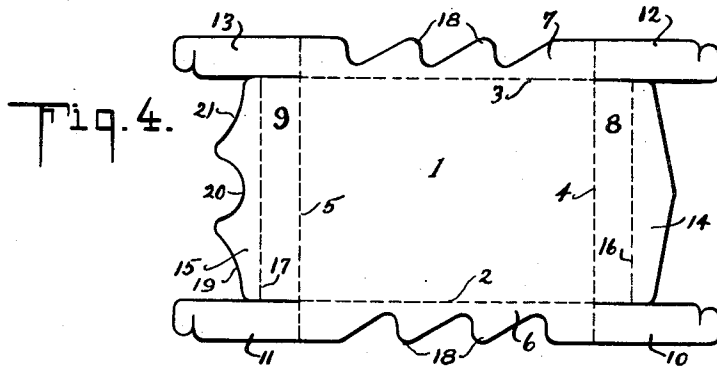
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3 Sheets-Sheet 2



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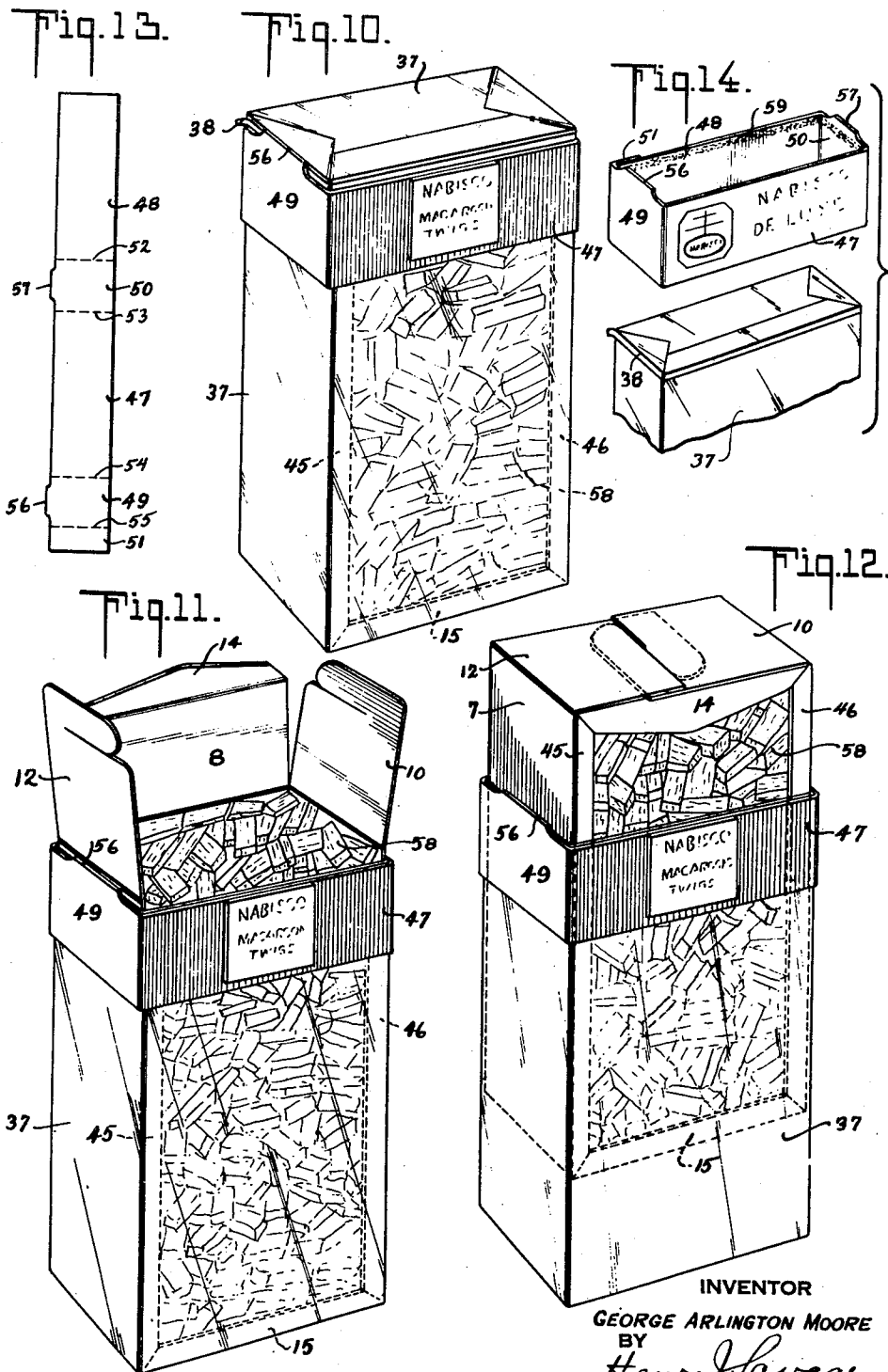
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SLIDE DISPENSING PACKAGE WITH
REINFORCED WRAPPER

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7 Claims. (Cl. 206—45.33)

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My invention relates to packages, and has for its principal object to produce a package for fragile and perishable foods, particularly bakery products, that not only will protect the goods against breakage and deterioration, but also will effectually display them and afford a convenient means for dispensing them, a few at a time, and reclosing the package.

Many bakery products, such as tarts, cookies, marshmallow topped cakes, enrobed and iced pieces and other decorated items present packaging problems to the baker that heretofore have not been satisfactorily solved when all the items of cost, protection, display, convenience, accessibility and consumer appeal are considered.

Usually, such products have been packaged in card board cartons (with or without window openings), wrapped card board trays, paper bags with window openings, or cellophane bags, with "egg-crate" type separators to separate the items and give some protection against crushing. None of these packages has been satisfactory because the bag packages are unsightly and the card board boxes and partitions absorb shortening from the products, which tends to produce staleness and rancidity in a very short time.

My invention provides an ideal package for bakery products as listed above and also for many other bakery products that are dumped filled into the packages. It also is adapted for packaging many kinds of confections and other products.

In the accompanying drawings I have illustrated various adaptations of my invention.

Fig. 1 shows a completed package for holding one dozen items, as marshmallow topped cakes.

Fig. 2 shows one way that the package of Fig. 1 may be opened to permit removal of part of its contents.

Fig. 3 shows another way of opening the package.

Fig. 4 shows a blank for forming the tray or insert of Figs. 1 to 3.

Fig. 5 shows a blank for forming the collar or neck of the wrapper.

Fig. 6 shows how the collar is secured to the wrapper.

Fig. 7 is a section taken substantially on line 7—7 of Fig. 6, the relative thicknesses of the materials being out of proportion.

Fig. 8 shows another form of completed package for cookies or other similar items.

Fig. 9 shows a separator that may be used in the package of Fig. 8.

Fig. 10 shows another form of the invention

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adapted for dump filling, and having a different form of collar.

Figs. 11 and 12 show two ways that the dump filled package may be opened for removal of part of its contents and then reclosed.

Fig. 13 shows a blank for forming the collar of Figs. 10 to 12.

Fig. 14 shows how the collar may be applied to the packages of any of Figs. 1, 8 and 10.

The blanks of Figs. 4 and 5 are used for forming the package of Figs. 1 to 3 in combination with a transparent wrapper and a separator, that may be of the egg-crate type. The tray blank is cut and scored to provide a panel 1 bounded by score lines 2, 3, 4, 5, along which it adjoins sides 6, 7 and ends 8, 9. At each end of each side there is an end locking flap 10, 11, 12, 13, which flaps lock together at the ends 8, 9, to form the tray. Each end panel has a tuck or tongue 14, 15, adjoined thereto along a score line 16, 17. Each of the sides may have teeth or serrations 18 formed thereon, corresponding in number and spacing with the number of tiers or rows of articles to be packed, so that one tooth is aligned with each row of articles. The tongue 15 may be generally rectangular or it may be cut away as at 19, 20, 21 in alignment with the rows of articles so as to afford a better display of the package contents.

The band shown in Fig. 5 is designed to form a neck or collar that is secured to the package wrapper and both stiffens and reinforces the same at the end where the package is opened, so that the tray may be slid easily in and out of the wrapper. The band or blank for forming it is relatively narrow and is long enough to encompass the package and interlock at its two ends. The blank is divided into five sections 21', 22, 23, 24, 25, by four transverse score lines, 26, 27, 28, 29. The sections 21', 25 have locking flaps 30, 31 which are adapted to interlock to form the band. The length of the section 23 equals the width of the package, that of the sections 22, 24 equals the depth of the package, and the combined length of sections 21', 25 from the respective score lines 26, 29 up to the shoulders 32, 33 equals the panel 23 or width of the package. The shoulders 32, 33 abut when the collar is secured to the package so that there will be no overlapping at this point, as best shown in Figs. 6 and 7. A stripe of adhesive 34 is applied to the top edge of the blank so that it may be secured to the wrapper. Any suitable adhesive may be used, but I prefer to use a thermo-plastic lacquer that may be heat-sealed to the cellophane or other wrapper.

To form a package as shown in Fig. 1, the sides and ends of the blank are turned up perpendicular to the bottom 1, and the flaps 10, 12, and 11, 13 are locked together usually outside of the ends 8, 9, respectively. The tucks or tongues 14, 15 are left standing vertical. A separator, as an egg-crate separator 35, is then set in the tray and filled with one or more articles 36 in each compartment or cell; in this case the articles are assumed to be marshmallow topped cakes. The tucks 14, 15, are then turned down and the filled tray enclosed in a transparent wrapper 37, as cellophane, which is heat-sealed against itself at the ends and bottom of the tray, but does not adhere to the tray. A tear tape or rip cord 38 is incorporated with the wrapper at that end where the package is designed to be opened, which is the end having the tuck 14. The collar is then placed around the package, with its straight edge abutting or substantially abutting the lower edge of the tear line 38, and secured to the wrapper by the adhesive 34. The package is now ready for delivery to the consumer.

It will be noted that the crests of the serrations 18 reach to the top of the package, are in alignment with the rows of biscuit, and come between the wings or cross strips of the crate or separator. This gives good protection to the biscuit, yet affords adequate display thereof through the sides of the package, and also supports the wrapper at the corner folds so that it does not sag between the cross strips.

The front section 23 of the collar may be rounded out or cut away as at 39, 40 to further ornament the package and display the top articles. Between the cut-outs, it may bear the name of the article, the manufacturer's name or trade mark, or other insignia or ornamentation. Or the collar may be a plain rectangular one.

When the consumer wishes to open the package, he pulls on the loose end of the tear tape 38 which severs the wrapper along the top edge of the collar so that the folded end of the wrapper is freed. This exposes the reclosable end of the tray so that the flaps 10, 12 may be opened, as in Fig. 2, and the end panel 8 raised up to give access to the top articles. After which it may be pushed back and the end reclosed. An alternative way to get at the contents is to slide the entire tray part way out of the cellophane wrapper as shown in Fig. 3. This may be done by holding the collar with one hand and pulling on the exposed end of the tray with the other. After removing some of the articles from the tray, it is pushed back fully into the wrapper, which again forms an effectual closure.

As shown in Figs. 6 and 7, the shoulders 32, 33 of the collar abut so that there is no overlapping of the material within the width of the stripe of adhesive 34. Therefore, the adhesive makes close contact with the wrapper throughout its length and the collar keeps the wrapper from collapsing when the tray is slid in or out.

In Figs. 8 and 9, I illustrate how my invention may be adapted to a cookie package, the package shown containing twelve cookies in three stacks of four each. The tray and collar of this package are similar in all respects to the tray and collar of Figs. 1 to 7, except for dimensions and the omission of the cut-outs 19, 20, 21 from the tongue 15 and the same reference numbers are used to designate the same parts.

The cookies or biscuit 41 are arranged in three stacks of four each, the stacks being separated by the wings or cross bars 42, 43 of a separator

having a base 44 on which the center stack of cookies stands. The top edges of the wings 42, 43 are of the same height as the sides of the tray and afford a support for the wrapper 37 as well as protection for the cookies. The wrapper 37, tear strip 38 and collar are applied the same as in Figs. 1 to 7 and function in the same manner. The package may be opened in the same way.

Figs. 10 to 12 show how the invention may be adapted to a dump filled package. A separator is not used in this package, otherwise it is similar to the other two forms of the invention, except for a modified form of the collar. The wrapper and tear strip are identical with those previously described except for dimensions and proportions of parts, and the tray is the same except that the sides are not cut away but extend the full height of the tray throughout their lengths and have inturned tongues or lips 45, 46 at their top edges.

The collar shown in Figs. 1 to 6 has a straight top edge that is positioned at or very close to the lower edge of the tear tape 38. This requires careful work and gauging to place the top of the collar in just the right position with respect to the tear tape. In Figs. 10 to 14, I show how the collar may be modified so as to serve as its own gauge or locating means. I have shown the collar as having its ends glued together but they may be interlocked as in Figs. 5 and 6. Also the locating tabs of Figs. 10 to 14 may be used on the collar of Figs. 1 to 8.

The collar of Figs. 10, 11, 12 and 14 is made from the blank of Fig. 13 which has front and rear panels 47, 48, two end panels 49, 50 and a glue flap 51 separated by score lines 52, 53, 54, 55 along which the card board is folded to form the collar, the flap 51 being secured outside of the rear panel 48. The front panel 47 is shown as rectangular but its lower edge may have any contour, for example, like that of Figs. 1, 2, 3, 5 and 8. On the top edge of each end panel there is a locating tab or gauge 56, 57, the height of which is such that when its top is even with the top of the wrapped package, the top edges of the panels will lie at the lower edge of the tear tape 38. This serves as an easy and accurate gauge to position the collar properly on the package. The blanks of Fig. 13 may be died out singly and their ends secured together to form rectangular collars as shown at the top of Fig. 14. Instead of die cutting each blank singly, a shear or cutter might be used to chop off each blank from across the end of a continuous strip whose width is the same as the length of the collar blank. In such case, the tabs 56, 57 will leave a corresponding notch in the bottom of each end panel 49, 50 on the adjacently formed collar.

To prepare this package, the tray is set up and a measured or weighed quantity of crackers 58 or other small articles sufficient to fill the tray are dumped or poured into it. The filled tray is then wrapped and the wrapper sealed on the ends and one side, the same as in the two previous forms of the invention. Next, the collar is slipped over the top end of the package until the tops of the tabs 56, 57 are flush with the top of the package. The collar then is secured to the wrapper. It may be secured to the wrapper by any suitable adhesive, but I prefer to apply a narrow stripe of thermo plastic adhesive to the inside of the collar near its top edge, either before the collar is formed, or after, and then secure it firmly to the wrapper just below the tear tape by the application of heat and pressure,

The completed package, ready for sale to the customer is shown in Fig. 10. Figs. 11 and 12 show two ways of opening the package, the same as in Figs. 2 and 3.

The inside surfaces of the tray and all surfaces of the separators preferably are grease-proofed as by coating or impregnating with lacquer, gelatin or other grease-resistant material. I have found that a very satisfactory material for the trays and separators is made by coating card board, such as cracker shell board, with silicate of soda followed by a coating of starch which serves as a foundation for the grease-proof coating of lacquer. This is very advantageous with my hermetically or tightly sealed package, because, if the trays and separators are not grease-resistant, they will absorb shortening from the products and induce staleness or rancidity in the contents within a very short time. In fact, the absorption of grease by trays and separators in packages prior to my invention has made it impracticable to use tightly sealed packages, because rancidity would develop very soon unless the material of the packages was porous enough to permit the packages to "breathe."

The lacquer for coating the inside of the package and for the crates or separators must be non-toxic. I have found that a coating formulated from either a nitro or ethyl cellulose lacquer base with a neutral plasticizer and solvent is entirely satisfactory. A minute portion of vanillin may be added if desired. This lacquer formulation is non-toxic and when the solvent is removed by the drying process, the coating is neutral and will not impart either taste or odor to sensitive products. A suitable lacquer that serves well to meet these rigid requirements is Beckwith Chandler No. 312N.

When the collar is made from card board and the wrapper is cellophane, the adhesive to secure the two together must be compatible with both materials. I have found Upaco adhesive No. 726 to serve the purpose well.

The tray and crate or separator of Figs. 1, 2, 3 and 8 serve as a form over which the cellophane is folded and prevents its collapse. The crate also serves to brace and strengthen the tray and give greater protection to the contents. In Figs. 10 to 12, the intumed lips 15, 45, 46, give strength and rigidity to the package and prevent sagging of the cellophane wrapper. In all of the figures, the collar supports the main wrapper structure and prevents its collapse or the front section from sagging after the package has been opened. It also holds the top edge of the front section in place so that the tongue or tuck 14 can be inserted readily and without wrinkling or tearing the wrapper when reclosing the package.

Heretofore, articles such as are herein illustrated have been packaged in cellophane bags to a large extent. These bags provide good visibility for the merchandise, but give no protection against breakage or crushing. They have to be packed in strong shipping cases for shipment, which cases are a considerable item of expense and also take up considerable shipping space. My improved package is strong and rigid and therefore adapted for bundling for shipment, thereby saving the cost and bulk of shipping cases. In bundling, a unit number of packages, usually six or twelve, is grouped together and wrapped and sealed tightly in a paper wrapper. This paper wrapped bundle takes up much less space than a shipping case and costs very much less. It will thus be seen that my invention has many advantages over pack-

ages used prior thereto, among which are decreased cost, better protection to the merchandise during shipment and handling, better protection to the merchandise in the hands of the consumer, both before and after opening the package, better display, easier access to the contents, added attractiveness and consumer appeal.

I have shown and described the inner rectangular container that is formed from the blank of Fig. 4 as a tray having an open top. However, the term tray is used only as an illustration and is not to be considered as imposing a limitation on the invention. The term is intended to include any rectangular container or receptacle that will serve the purpose of holding the merchandise and provide a support or form for the wrapper.

I have shown the tear strip 38 on all forms of the package, but this part may be omitted, in which case the top edge of the collar will serve as a guide for cutting or tearing the wrapper.

Having thus described and illustrated how my invention may be practiced, I claim all forms, adaptations and modifications thereof that may come within the scope or intent of the following claims:

1. A package of the class described comprising a tray having one end adapted for opening and reclosing, a wrapper enclosing the tray and sealed over the ends and bottom thereof, a collar encircling the wrapper adjacent the reclosable end of the tray and secured to four sides of the wrapper, and a tear tape for severing the wrapper between the edge of the collar and reclosable end of the tray close to said end of the tray, whereby the wrapper sealed over the said end of the tray may be removed and said end be opened and reclosed, and the collar will support the four sides which remain intact and the tray may be slid in and out thereof.

2. A package comprising a tray having one end adapted for opening and reclosing, a wrapper enclosing the tray and sealed over the ends and bottom thereof, a collar encircling said wrapper and tray adjacent the reclosable end of the tray and secured to said wrapper, the edge of said collar serving as a guide for severing the wrapper adjacent said reclosable end whereby the part of the wrapper covering said end may be removed, said tray being slidable within said collar and wrapper when the end of the wrapper has been removed.

3. A package comprising a tray having an end adapted for opening and reclosing, each side and end of the tray having a tongue turned in over its open top, a tightly sealed transparent wrapper closely enclosing said tray on all sides but not adhering thereto, a collar encircling said wrapper and secured thereto adjacent the reclosable end of the tray, a tear line for severing the wrapper adjacent the edge of said collar whereby the part of the wrapper covering said end of the tray may be removed and the tray may be slid out of said wrapper in part.

4. A package comprising a rectangular container having one end adapted for opening and reclosing, a wrapper enclosing the container and sealed over the ends and one side thereof, a tear tape associated with the wrapper for severing therefrom the sealed end that covers the reclosable end of the container, whereby the reclosable end is made accessible, a rectangular collar surrounding and secured to the wrapper with the top edge of the collar adjacent said tear tape, said collar having means for aligning the main portion of its top edge with said

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tear tape around the wrapper at a level slightly spaced from the end of the wrapper.

5. A package comprising a rectangular container having one end adapted for opening and reclosing, a wrapper enclosing the container and sealed over the ends and one side thereof, a tear tape associated with the wrapper for severing therefrom the sealed end that covers the reclosable end of the container, whereby the reclosable end is made accessible, a rectangular collar surrounding and secured to the wrapper with the top edge of the collar adjacent said tear tape, said collar having projecting tabs of such height that when their top edges are flush with the sealed end of the wrapper the top edge of the collar will substantially coincide with said tear tape.

6. A package for packaging rows of stacked articles comprising a tray having an end adapted for opening and reclosing, the sides of the tray being as high as the stacked articles and being cut away in part between adjacent stacks to form a number of serrations, a separator in said tray dividing it into cells, said separator having cross bars spaced between the crests of the serrations on the sides of the tray, a tightly sealed transparent wrapper closely enclosing said tray on all sides but not adhering thereto, and a tear tape for severing said wrapper adjacent the reclosable end of the tray, whereby the part of the wrapper over said end may be removed and said end made accessible for opening and reclosing the package, and the tray and wrapper become relatively slidable.

7. A package for packaging rows of stacked articles comprising a tray having an end adapted for opening and reclosing, the sides of the tray

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being as high as the stacked articles and being cut away in part between adjacent stacks to form a number of serrations, a separator in said tray dividing it into cells, said separator having cross bars spaced between the crests of the serrations on the sides of the tray, a tightly sealed transparent wrapper closely enclosing said tray on all sides but not adhering thereto, a collar encircling said wrapper adjacent the reclosable end of the tray and secured to the wrapper, and a tear tape for severing the wrapper adjacent the edge of the collar around the reclosable end of the tray whereby the part of the wrapper covering said end may be removed and said end made accessible for opening and reclosing, and the tray becomes slidable relative to the wrapper and its attached collar.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
D. 99,326	Hauswald	Apr. 14, 1936
312,421	Bauer	Feb. 17, 1885
1,516,455	Panza	Nov. 18, 1924
1,922,208	Knorpp	Aug. 15, 1933
1,977,687	Medoff	Oct. 23, 1934
2,031,886	Heifetz	Feb. 25, 1936
2,047,625	Geerlings	July 14, 1936
2,143,957	Petter	Jan. 17, 1939
2,164,495	Brown	July 4, 1939
2,226,089	Anthony et al.	Dec. 24, 1940
2,281,165	Miller	Apr. 28, 1942