Aug. 14, 1956 R. K. GRUNERT ET AL 2,758,774

PACKAGE

Filed Feb. 21, 1955 3 Sheets-Sheet 1

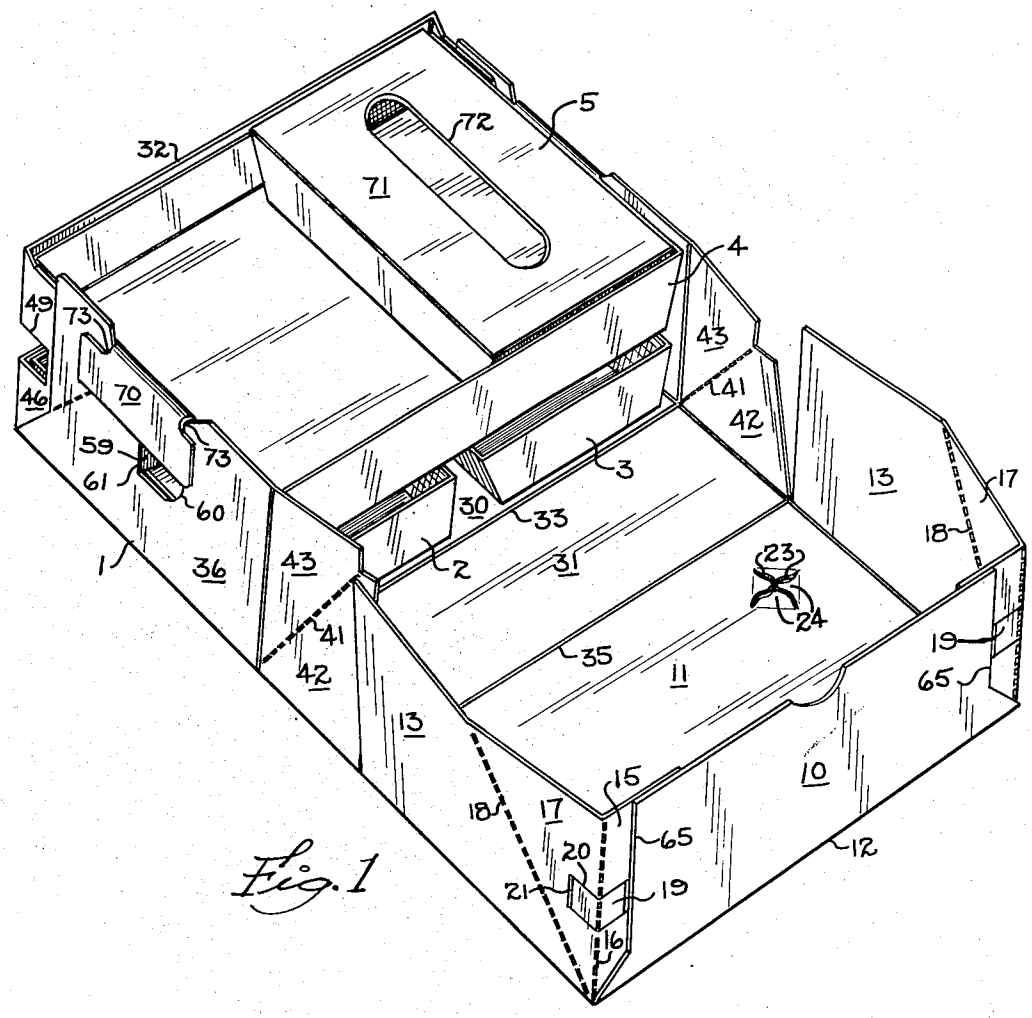


Fig. 1

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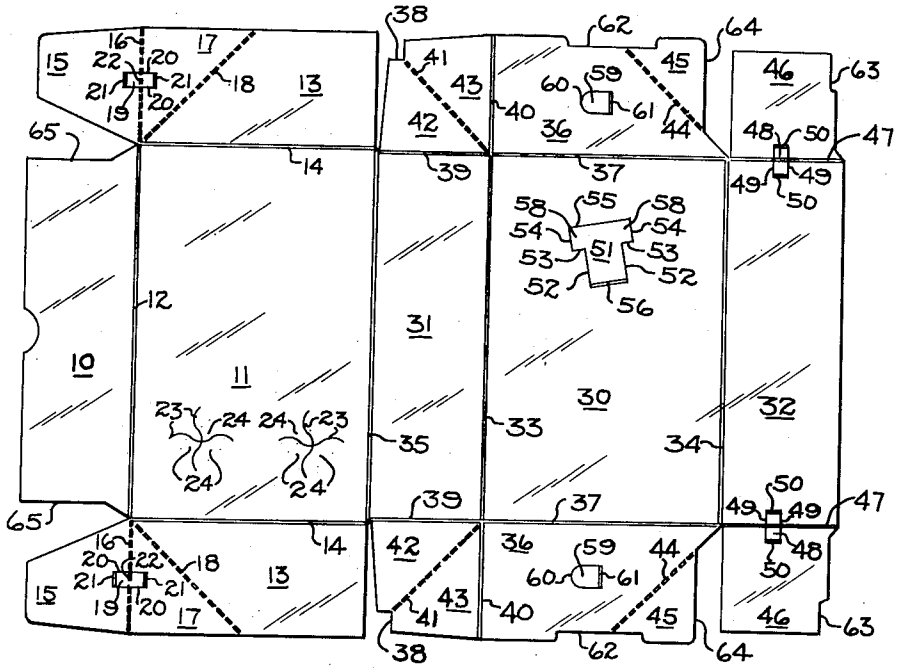


Fig. 2

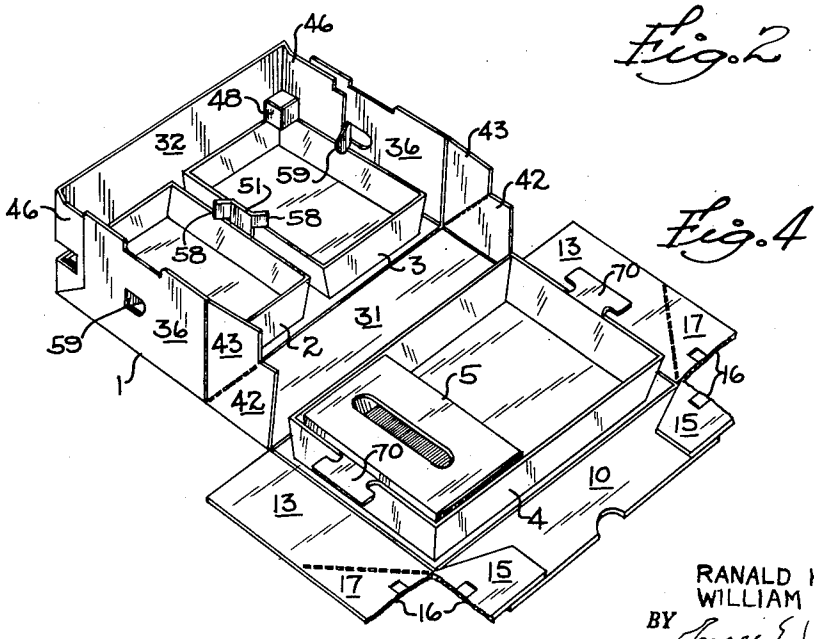


Fig. 4

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Filed Feb. 21, 1955 3 Sheets-Sheet 3

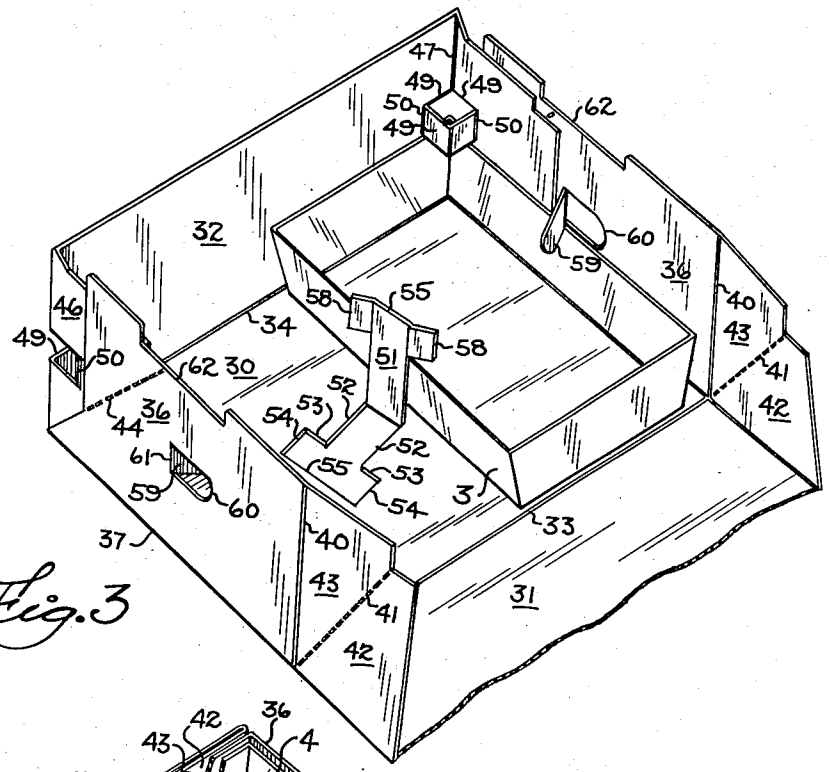


Fig. 3

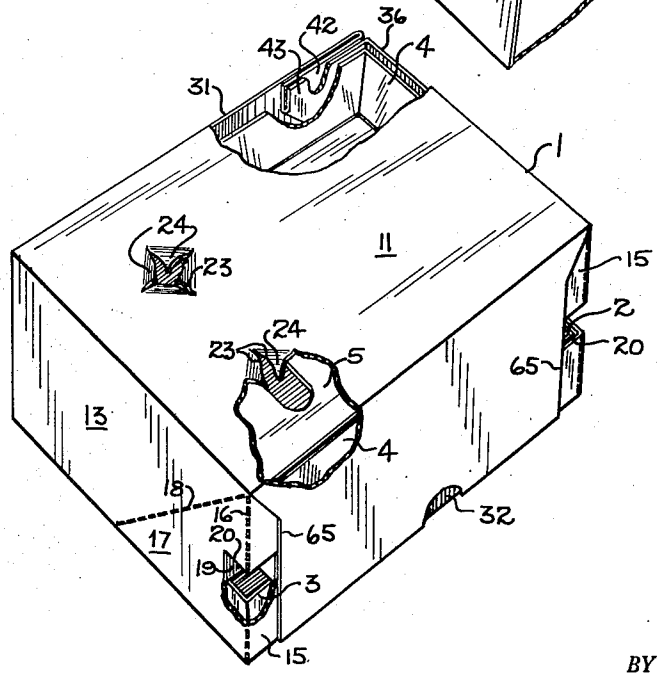


Fig. 5

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2,758,774

PACKAGE

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Application February 21, 1955, Serial No. 489,362

8 Claims. (Cl. 229—15)

This invention relates to a package for the unitary carrying of a multiplicity of items which must be retained in separate condition within the package. In a more particular application, the package is admirably suited for use in the relatively new field of packaged hot meals. In such particular use, the meal to be eaten is prepared and packaged by the restaurant or other food-selling institution, and in this form it is transferred to the consumer at the point of preparation for carrying to an ultimate destination for consumption, or is transported by the preparing institution to a place such as the consumer's home for consumption at that place. In either event, there results an appreciable lapse of time between preparation and consumption, and there is further involved the act of transportation which will inevitably cause considerable jostling of the packaged meal.

It is thus essential that the meal be so packaged that the lapse of time will not result in serious degradation of the various food items and that the act of transportation not result in displacement or intermixing of the various food items. Our package achieves these results in a highly satisfactory manner.

Until the advent of our package, there has been available no means of satisfactorily accomplishing the desired results. The packages commonly found are bulky, inconvenient to handle and use, and do not satisfactorily maintain separation of the various food items. In most usual form, these packages comprise merely a main carton or container in which the various items are loosely placed, or such a container having loosely placed receptacles for the various food items. As a result of the handling such packages inevitably receive, with no satisfactory means to prevent displacement and intermixing of the foods contained, there frequently results a most unattractive and unpalatable end product, for consumption by the purchaser.

Our package in a unique manner further functions as the serving means from which the food is eaten, requiring no transfer from the carrying package to plates or other means of service. In addition, our package also provides means for retention of certain desired characteristics of the food products to be contained. Other objects and advantages of our invention will be readily apparent from the description of the following drawings, in which:

Figure 1 is a perspective view of our complete package in open position,

Figure 2 is a plan view of the blank from which the main carton forming a part of our package is formed,

Figure 3 is a perspective view, partially cut away, similar to Figure 1 but with a part of the elements of the package removed,

Figure 4 is a perspective view, similar to Figure 1, but with the package in condition for consumption of the food contents, and

Figure 5 is a perspective view, with certain portions cut away, of our completed package as it is ready for transportation of the food contents.

Referring first to Figure 1, it is seen that our package

comprises a main carton 1 within which are disposed a pair of lower trays 2 and 3, only partially visible, an upper tray 4 and an auxiliary carton 5 supported within upper tray 4.

The main carton 1 is formed from the integral flexible blank shown in Figure 2, of paperboard or other suitable material. The blank of Figure 2 is divided by a series of cut, score and perforation lines into a series of walls, flaps, panels and other members. These include cover front and top walls 10 and 11 hinged together along a score line 12 and a pair of cover side walls 13 hinged to the side edges of top wall 11 along score lines 14. Glue flaps 15 are hinged to the side edges of side walls 13 adjacent cover front wall 10 by perforation lines 16. Triangular portions 17 of cover side walls 13 are defined adjacent flaps 15 by perforation lines 18. Locking segments 19 are defined in adjacent portions of flaps 15 and portions 17 by cut lines 20 parallel to score lines 14 and score lines 21 parallel to perforation lines 16. Segments 20 are divided by score lines 22 which are a condition of perforation lines 16. Top wall 11 contains irregular cut lines 23 defining depressable tabs 24, the purpose of which will be explained later herein.

The blank of Figure 2 further includes a box part bottom wall 30 having a rear wall 31 and front wall 32 hinged to opposite edges thereof along score lines 33 and 34. Rear wall 31 is integrally hinged to cover top wall 11 along score line 35. The end edges of bottom wall 30 have box part end walls 36 hinged thereto along score lines 37, and a pair of bellows panels 38 are hinged to the end edges of rear wall 31 and the adjacent side edges of side walls 36 along score lines 39 and 40 respectively. Bellows panels 38 are diagonally divided by perforation lines 41 into triangular shaped portions 42 and 43. Diagonal perforation line 44 in side walls 36 define glue flap portions 45 in side walls 36.

A pair of glue flaps 46 is hinged to the side edges of box part front wall 32 along score lines 47. Locking segments 48 are defined from box part front wall 32 and glue flaps 46 by score lines 49 parallel to score line 34 and score lines 50 parallel to score lines 47.

A T-shaped locking tab 51 is formed in bottom wall 30 by cut lines 52, 53, 54 and 55, tab 51 being hinged to bottom wall 30 along score line 56. Tab 51 has lateral extensions or portions 58, the function of which will be explained later herein. Locking tabs 59 are formed in box part side walls 36 by U-shaped cut lines 60 and are hinged to walls 36 along score lines 61.

Cut out portions 62 are formed in the end edges of box part side walls 36, cut outs 63 are made in the remote corners of glue flaps 46 to correspond to cut outs 62 in the erected condition of the main carton, and box part side walls 36 and cover front panel 10 are along the side edges cut away at 64 and 65 respectively, all for a purpose to be described later herein.

Referring also to Figures 1, 3 and 4, it will be noted that lower trays 2 and 3 are of well known manufacture, in which the four side walls are somewhat inclined relative to the bottom. Upper tray 4 is similar, except that it is provided with supporting tabs 70 which function in a manner to be described in detail later herein. Auxiliary carton 5 is also of well known construction, and its bottom portion is similar to trays 2 and 3, but it has a cover wall 71 attached to one side wall thereof, the cover wall having elongated opening or slot 72 formed therein.

Except for details previously indicated and to be fully described later, our main carton 1 is generally of conventional construction, and is erected in a conventional fashion. Front wall 32 is erected perpendicularly to bottom wall 30, and glue flaps 46 are turned inwardly. Box part side walls 36 are then erected perpendicular to

the bottom wall, with glue portions 45 lying outwardly of flaps 46, and exterior surface portions 45 are adhered by any suitable adhesive to the adjacent inner surface of glue flaps 46. The main carton cover is formed by erecting cover side walls 13 perpendicularly to top wall 11, with glue flaps 15 turned inwardly, and then erecting cover front wall 10 also perpendicularly to top wall 11. The exterior surface of glue flaps 15 is adhered to the adjacent inner surface of front wall 10, again by any suitable adhesive. It will be obvious that both the box part and the cover of main carton 1 are readily collapsible from the thus-erected position. To achieve this collapsed position, box part side walls 36 are collapsed inwardly of bottom wall 30, with portions 45 and flaps 46 adhered thereto swinging about perforation lines 44, this causing the inward collapse of box part front wall 32 over bottom wall 30. Similarly, cover side walls 13 may be collapsed inwardly over top wall 11, portions 17 swinging about perforation lines 18, with this swinging movement causing a collapse of cover front wall 10 and glue flap 15 adhered thereto over top 11. The operation and function just described is shown and described in detail in United States Patent Nos. 2,652,969, 2,567,598, 2,437,835 and Re. 23,266.

To complete erection of the main carton 1, rear wall 31 is erected perpendicular to bottom wall 30 by the infolding of bellows or web panel 38 about perforation line 41. This construction and its function are clearly described in United States Patent No. 2,527,167. The erection of rear wall 31 brings the cover of the main carton into position where it may be placed over the open top of the box part to close the carton, cover front wall 10 overlying box part front walls 32 and cover side walls 13 overlying box part side walls 36.

For complete assembly of our package as shown in Figure 5, main carton 1 is first erected as shown in Figure 1, tab 51 is then swung inwardly about score line 56 perpendicular to bottom wall 30 and lower trays 2 and 3 are placed upon the bottom wall. It is obvious that tab 51 is positioned within bottom wall 30 so that when erected it will extend upwardly between the adjacent side walls of trays 2 and 3. It is equally obvious that more than two lower trays could be included in our package, by lesser variation in sizes, in which event additional tabs 51 could be formed in bottom wall 30. After trays 2 and 3 are placed upon the bottom wall, with tab 51 extending upwardly therebetween, portions 58 of tab 51 will be bent oppositely as indicated in Figure 3 each portion to overlie the adjacent side of one of trays 2 and 3. It is clear that the length of cut lines 52 is dependent upon the height of trays 2 and 3. The edges of portions 58 formed by cut lines 53 closely overlie the top edges of the adjacent side walls of trays 2 and 3, so that tab 51 serves to maintain the relatively fixed position of the trays. Tabs 59 in box part side walls 36 are then placed inwardly to closely overlie the top edges of the outer side walls of trays 2 and 3, and these tabs similarly serve to maintain trays 2 and 3 in fixed position.

Upper tray 4 is then placed in the box part of the main carton 1 with the cut out portions 73 at the hinge connection between tabs 70 to the side walls of tray 4 riding the shoulders formed by cut outs 62 and side walls 36. Tabs 70 are pressed downwardly over the side walls 36 of the main carton box part, and tray 4 is thus securely held in the position determined by the dimensions of the various package complements. As indicated in Figure 1, we prefer that upper tray 4 be spaced substantially above lower trays 2 and 3, and further prefer that such space in vertical dimension be substantially equal to the vertical dimension of tabs 59, tab portions 58 and locking elements 19 and 48 (see Figure 3).

Auxiliary carton 5 is placed in upper tray 4 in the position where tabs 24 in cover wall 11 will overlie slot 72 in the cover of carton 5. The cover of main carton 1 may then be brought upwardly to telescope over the box part, whereupon inward pressure applied at the fold corners of the assembled carton to locking segments 19 (superimposed over corresponding locking segments 48) will force segments 19 and 48 inwardly to securely lock the cover and the box part of the main carton together. Of course, segments 48 may be independently pressed inwardly to overlie lower trays 2 and 3, prior to closing of the cover of the main carton, if desired. Tabs 24 may then be pressed downwardly, the usual paperboard carton material taking a semi-permanent deformation, whereupon auxiliary carton 5 will be securely locked from lateral displacement. It will be clear that tabs 70 of upper tray 4 are securely held between the side walls of the box part and cover of the main carton, thus eliminating any possibility of release of the upper tray from its specified relation from above the lower trays. With particular reference to Figures 3 and 4, it is preferred that the height dimension of locking segments 19 and 48 be equal to the spacing between the lower trays and the upper tray, so that the locking segments also serve not only to help retain the lower trays in fixed position but also to support the upper tray by contact adjacent the corners thereof.

To open our package, it is merely necessary to insert a knife blade or similar slender article between either the front walls or the side walls of the cover and box part main carton and then bring pressure of such article against the locking segments for forcing the segments outwardly to their original position coincident with the walls and flaps from which they are formed, whereupon the main carton cover will be released from the box part. The cover may then be laid open to the position shown in Figure 1 and perforation lines 16 severed so that cover front wall 10 and cover side walls 13 may be laid out flat. The cover of the main carton as thus flattened is admirably suited for use as a place mat, as shown in Figure 4, and the upper tray with its contained auxiliary carton 5 may be placed on this mat. As is clear from Figure 4, the contents of the carton are thus conveniently and attractively presented for consumption of the food contents, and in an arrangement similar to that in the usual table place setting. The cover of the auxiliary carton is of course readily opened in a well known fashion for access to its contents. As an example of specific use, the lower trays 2 and 3 may contain food items such as a salad and a dessert, respectively, auxiliary carton 5 may contain French fried potatoes, and the remainder of upper tray 4 not occupied by carton 5 may contain the main meat course.

Auxiliary carton 5 is particularly adapted to serve as a receptacle for French fried potatoes. This product requires means whereby the interior of the receptacle has access to the atmosphere to permit dispelling of the excess moisture as the product awaits consumption. This is provided in our package by slot or opening 72 in the cover of auxiliary carton 5 and by the apertures in cover wall 11 which are created when tabs 24 are depressed inwardly. Thus, tabs 24 and slot 72 serve not only to fix the position of auxiliary carton 5 within the assembled package, but also provide the means whereby moisture from the product may be dispelled to the atmosphere to prevent deterioration of the contents.

Not only does our carton serve admirably for the packaging and consumption of "take-out" meals, but it may be shipped from the carton manufacturer to the packager in a most convenient manner involving a minimum of transportation cost. Trays 2, 3 and 4 and auxiliary carton 5, since they have inclined walls, may be stacked in the well known manner to prevent wasted space for shipment and storage. Main carton 1 is fully collapsed and may be shipped in such condition again without waste of shipping or storage space. These features are of great importance where, as in this situation, savings in cost of shipment and storage are of prime significance in determining the eventual economic success or failure of the article.

It will be obvious that numerous modifications might be made in our package without departing from the spirit of our invention. For example, perforation lines **18**, **41** and **44** might equally well be score lines providing the required weakness for collapsing of the carton. And as previously mentioned, additional lower trays might be provided by merely adding additional corresponding features already described. Therefore, it is to be understood that no limitations upon our invention are intended except as specifically set forth in the appended claims.

We claim:

1. A package for separately containing a variety of items, the package comprising a collapsible main carton having a box part including bottom, front and side walls and a rear wall connected to the side walls by webs permitting collapse of the rear wall to a position coplanar with said bottom wall and a cover hinged to the rear wall for telescoping over the box part and including top, front and side walls, the cover walls in cover-telescoped position overlying the corresponding box walls, the cover front wall at its side edges being connected to the adjacent edges of the cover side walls by a readily-severable connection, a plurality of lower trays positioned on the bottom wall of the box part and together forming a tray layer superimposed on substantially all of said bottom wall surface, an upper tray spaced above the lower trays of size to fit within the open box part, the side walls of said upper tray having tabs connected to the free upper edges thereof and folded over the free top edges of the box part side walls to overlie the outer faces thereof to support said upper tray in such spaced relation above the lower trays, and a closed auxiliary carton supported within said upper tray and having an opening in the top thereof, the box part front and side walls and cover front and side walls having adjacent the edges along which such front and side walls are joined together a pair of spaced cut lines parallel to the box part bottom wall, the upper cut lines being positioned immediately below the lowermost portion of the upper tray and the lower cut lines being positioned immediately above the upper portion of said lower trays, said cut lines defining locking and supporting portions pushed inwardly to lock the cover and box part together, to support the adjacent lower portions of the upper tray and to override the adjacent portions of the lower trays for retention thereof, the box part side walls having tabs defined therein and hinged inwardly parallel to the bottom wall to closely overlie the upper portion of the adjacent lower trays for retention thereof, and the box part bottom wall having a tab defined therein and extended upwardly between adjacent lower trays, said tab having lateral extensions on its free end bendable to closely overlie the upper portion of the lower trays for retention thereof, and the cover top wall having a confined portion thereof depressed into the opening in the top of the auxiliary carton disposed therebelow for retention of said carton in fixed position.

2. A package for separately containing a variety of items, the package comprising a main carton having a box part including bottom, front and side walls and a rear wall and a cover for telescoping over the box part and including top, front and side walls, the cover walls in cover-telescoped position overlying the corresponding box part walls, the cover front wall at its side edges being connected to the adjacent edges of the cover side walls, a lower tray positioned on the bottom wall of the box part, an upper tray above the lower tray of size to fit within the box part, the side walls of said upper tray having tabs connected to the free upper edges thereof and folded over the free top edges of the box part side walls to overlie the outer faces thereof to support said upper tray, the box part side walls having tabs defined therein and hinged inwardly above the bottom wall to closely overlie the upper portion of the lower tray for retention thereof.

3. A package according to claim 2, further characterized by the fact that the main carton is collapsible, the upper tray is spaced above the lower tray and maintained in such spaced relationship by said tabs connected to the upper edges of the upper tray, and the cover in package closed position is releasably locked to the box part.

4. A package according to claim 3, further characterized by the fact that the rear and side walls of the box part are connected together by integral webs permitting collapse of the rear walls to a position coplanar with the bottom wall.

5. A package according to claim 4, further characterized by the fact that the cover front wall at its side edges is connected to the adjacent edges of the cover side walls by a readily-severable connection.

6. A package according to claim 5, further characterized by having a plurality of lower trays positioned on the bottom wall of the box part, and by the fact that the bottom wall has tab portions defined therein and extended upwardly between adjacent lower trays, said tab portions having lateral extensions on their free ends folded to closely overlie the upper portion of the lower trays for retention thereof, said tab portions being of such length that their free ends supportingly contact the lowermost portion of the upper tray.

7. A package for separately containing a variety of items, the package comprising a collapsible main carton having a box part including bottom, front and side walls and a rear wall and a cover for telescoping over the box part and including top, front and side walls, the cover walls in cover-telescoped position overlying the corresponding box part walls, the box part rear wall being connected to said box part side walls by webs permitting collapse of said rear wall to a position coplanar with the bottom wall, the cover front wall at its side edges being connected to the adjacent edges of the cover side walls by a readily-severable connection, a lower tray positioned on the bottom wall of the box part, an upper tray spaced above the lower tray of size to fit within the box part, the side walls of said upper tray having tabs connected to the free upper edges thereof and folded over the free top edges of the box part side walls to overlie the outer faces thereof to support said upper tray, said main carton including means for releasably locking the box part and cover together in package-closed position.

8. A package according to claim 7, further characterized by having a plurality of lower trays positioned on the bottom wall, and by the fact that the box part side walls have tabs defined therein hinged inwardly above the bottom wall to closely overlie the adjacent upper portion of the lower trays for retention thereof and the bottom wall has cut lines therein defining tab portions therein and extended upwardly between adjacent lower trays, said tab portions having lateral extensions on their free ends folded to closely overlie the upper portion of the lower trays for retention thereof, said tab portions being of such length that their free ends supportingly contact the lowermost portion of the upper tray.

References Cited in the file of this patent

UNITED STATES PATENTS

814,069	Naylor	Mar. 6, 1906
1,669,617	Kennedy	May 15, 1928
1,901,530	Pellymounter	Mar. 14, 1933
1,991,427	Spachmann	Feb. 19, 1935
2,329,637	Miller	Sept. 14, 1943