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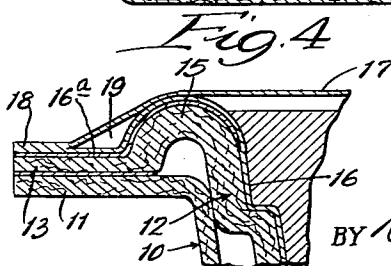
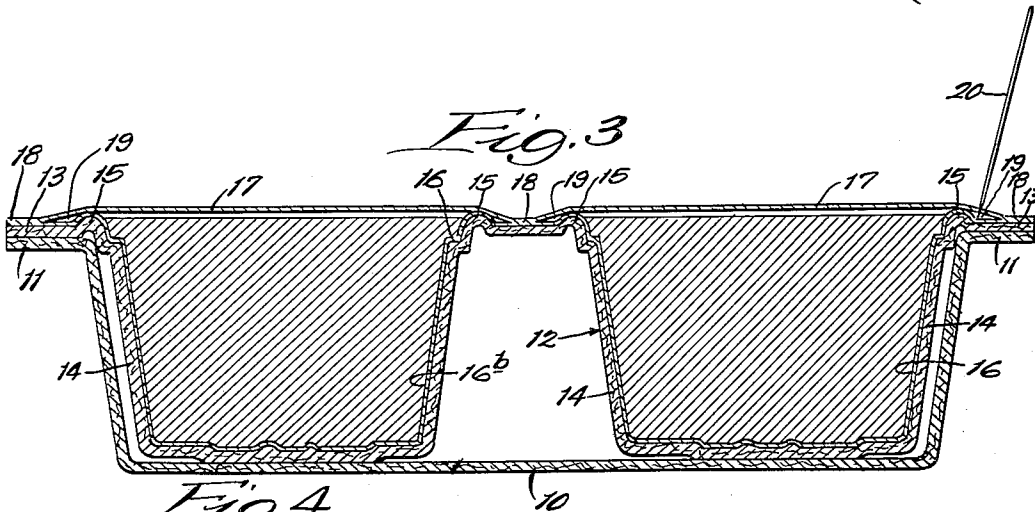
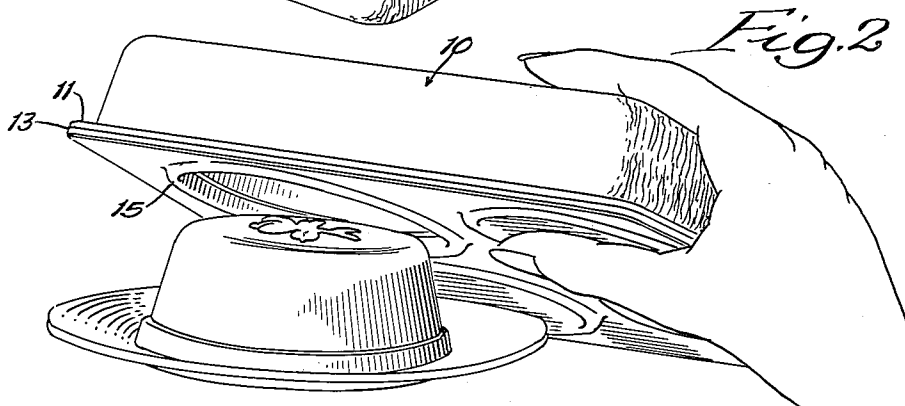
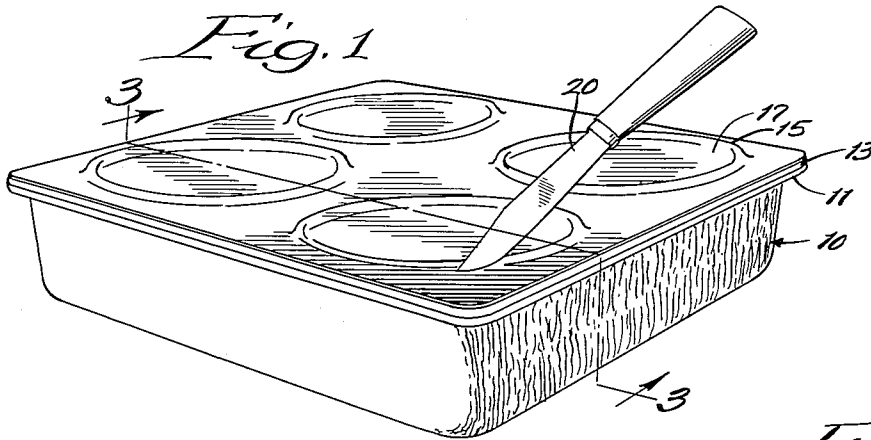
L. PETERS

2,745,752

SOFT PLASTIC FOOD PACKAGE

Filed May 10, 1950

3 Sheets-Sheet 1



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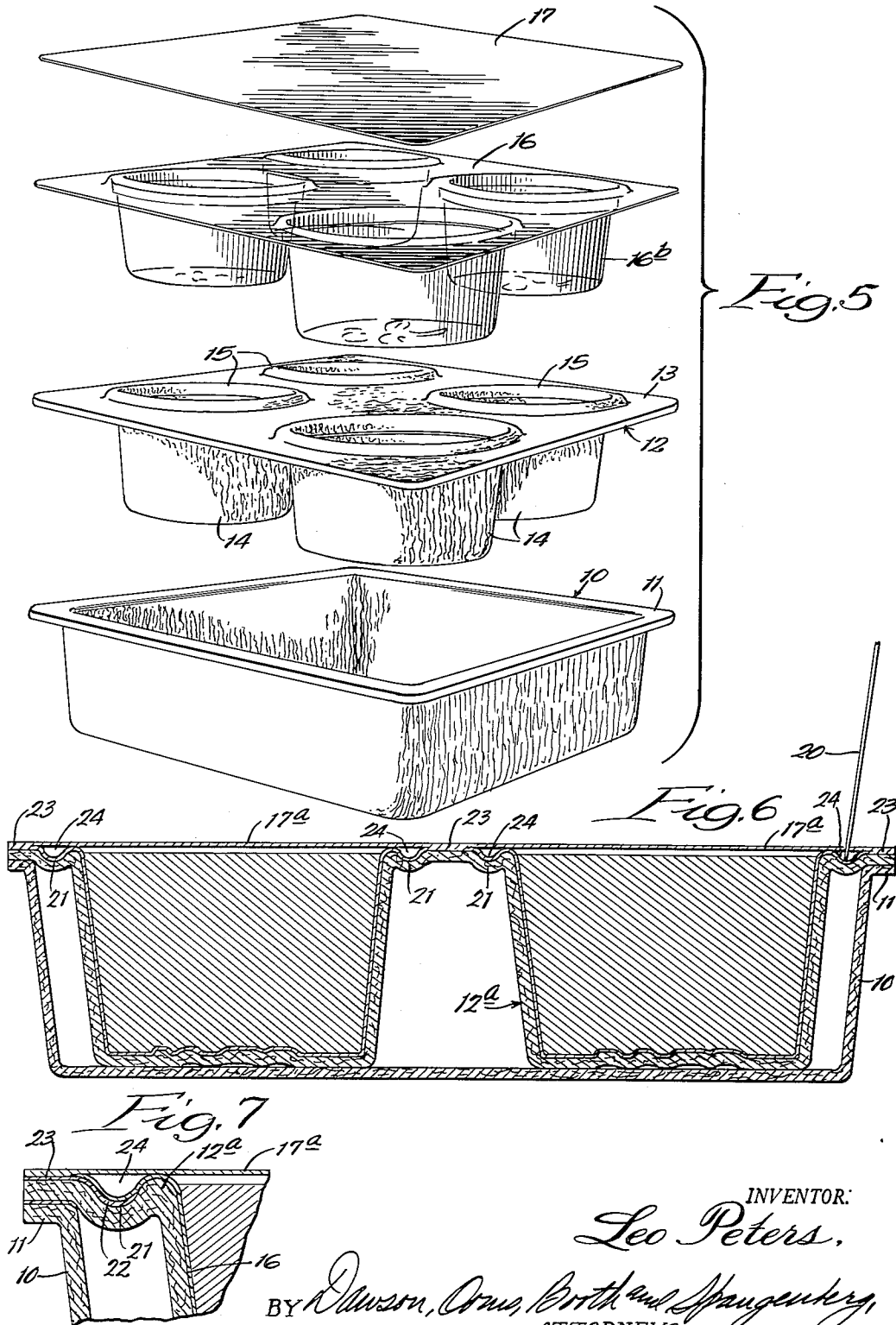
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2,745,752

SOFT PLASTIC FOOD PACKAGE

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3 Sheets-Sheet 2



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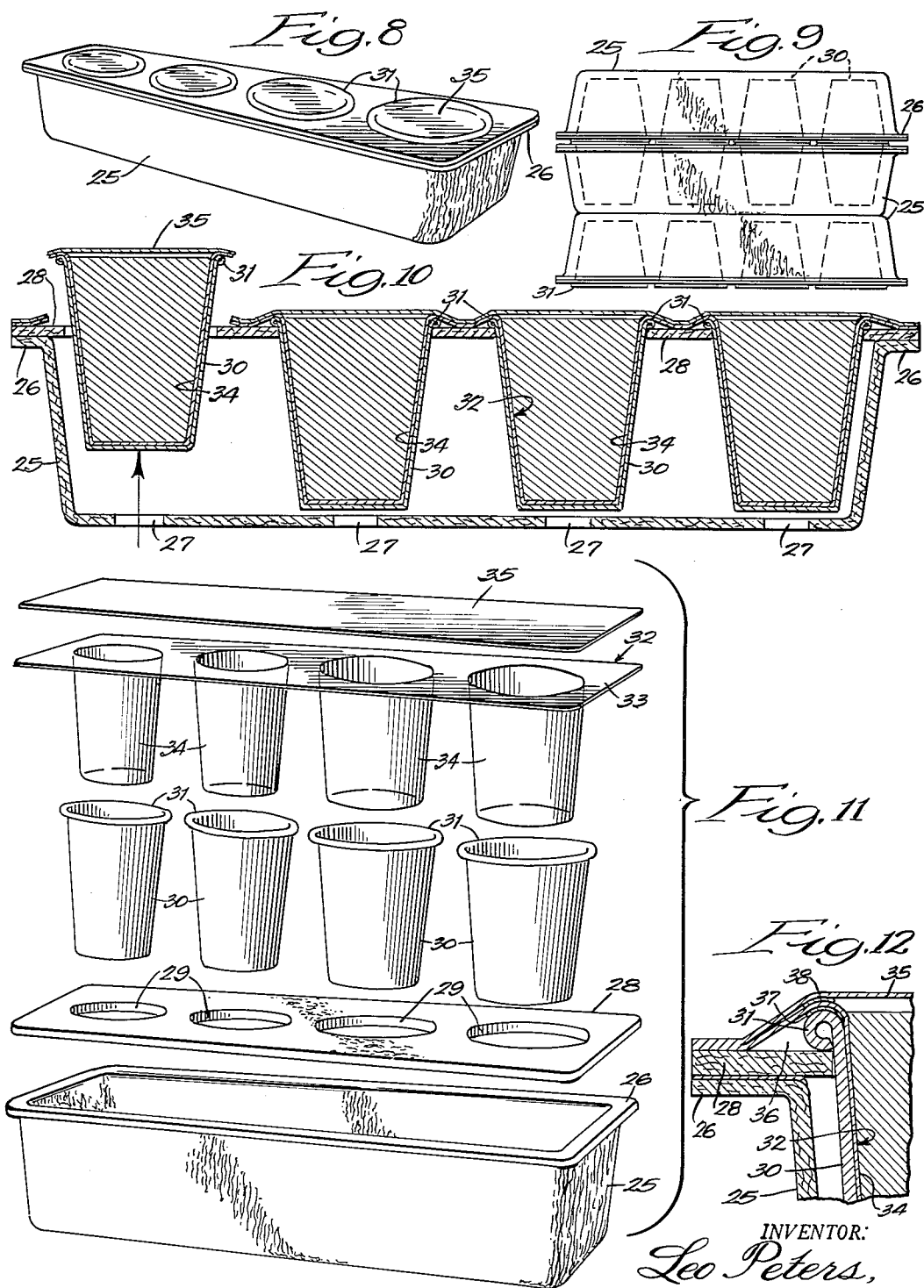
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2,745,752

SOFT PLASTIC FOOD PACKAGE

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3 Sheets-Sheet 3



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2,745,752

SOFT PLASTIC FOOD PACKAGE

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Application May 10, 1950, Serial No. 161,083

5 Claims. (Cl. 99—171)

This invention relates to packaging soft plastic foods in packages having individual compartments, and more particularly in packages provided with new and improved means for sealing and breaking the seal around compartments in a package containing table-size units of soft plastic foods. The package may be also useful for other purposes.

In packaging soft plastic foods such as margarine, ice cream, butter, cheese, and the like, if the package is covered with a continuous web of material sealed to the edges of the package and over open compartments therein, it is sometimes difficult to break open the seal and expose only the selected compartments, and unless the consumer is careful, the common cover is opened to a greater extent than desired, and when the package is inverted to remove the contents from one of the compartments, unwanted material may leave from the other compartments. If she should discover that other compartments are thus opened, it is necessary for her to hold her hand over such compartments while emptying the desired compartment. Further, in the handling of a container having a plurality of compartments, even though the consumer is careful to expose only one compartment, the entire covering material is affected and loosens once the seal is broken. Thus, when the consumer tips the package over to remove the contents of one compartment, the contents of all the compartments are apt to move downward and press against the cover or covering material. Unless the consumer is careful, the pressing may cause the already broken seal to enlarge and cause the contents of compartments other than the one being emptied to escape.

Further, in the use of a compartmented package having a single cover sealed over the various compartments, there is the danger that if the foods within the compartments become soft and fluid, they will spill and spread out of the individual compartments and onto the top of the package. Even though the seal of the cover along the periphery of the cover remains intact and no food is lost or wasted, nevertheless the spilling of the food out of the individual compartments and over the top of the package produces an unsightly appearance and the food is difficult to remove.

Yet another problem presents itself in the use of a compartmented package having a common seal for the compartments in that when breaking the seal of the cover, the liner material which is employed within the individual compartments may be loosened from its anchorage to the retail package at the time of the breaking or cutting of the seal. It is usually desirable that the liner be held firmly to the package while that portion of the liner within the compartment is turned inside out to permit the table-size units to peel loose and fall from the compartment. By keeping the liner anchored to the package, it is unnecessary to peel it loose from the food as the latter falls out and onto the receiving dish. A problem is presented in enabling the seal of the cover sheet to be severed without in any way impairing the anchorage for

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the liner. In providing a means for easily cutting and opening of the seal covering the package compartments, provision, therefore, should be made for a structure which will prevent the liners of the compartments from being severed when the seal is broken.

Yet a further problem arises in connection with the packaging of ice cream in the structures described in which a compartmented package is provided with a single cover extending over the compartments and with the cover secured at its edges to the container, as when the ice cream is intended for use in ice cream cones. With such a structure, it requires practice to position the mouth of the cone over the base of the table-size unit so that the base of the latter will drop perfectly into the mouth of the cone when the package is turned over. A structure which will eliminate the above difficulty has long been needed.

An object of the present invention is to provide a package having individual seals for separate table-size compartments within a retail package while at the same time enabling such individual seals to be quickly and easily opened one at a time without disturbing or impairing the seal of the other compartments and the liners therefor. A further object is to provide a spacer member about each compartment or a portion thereof to enable the cover to be effectively severed without injury to the liner. A further object is to provide a bead or annular depression about each compartment or a portion thereof to facilitate the severing of the cover for the individual compartment without injuring the liner, or to permit the severing of both the liner and the cover. A further object is to provide a retail-size package made of molded material such as pulpwood, etc., having individual compartments for holding table-size units of soft plastic foods, said compartments being provided with a liner secured to the package but lying loosely within the compartment, said compartments having an outside covering web of material sealed to the package all around the compartments, and spacer means being provided to facilitate the severance of the cover about all or a portion of an individual compartment. A still further object is to provide a package having annular beads or rings for spacing the cover about the compartment while at the same time serving as positioning means for an ice cream cone so that the cone is positioned for receiving accurately the contents of the container. A still further object is to provide a container structure adapted to receive individual cups, the cups being provided with rims serving as spacers for a cover, together with means for securing the cover and liners for the cups to the container, whereby, upon severing the cover and liner, an individual cup may be removed with the cover and liner united in sealing relation to the cup. Other specific objects and advantages will appear as the specification proceeds.

The invention is shown in an illustrated embodiment, by the accompanying drawings, in which—

Figure 1 is a perspective view of a package embodying my invention; Fig. 2, a perspective view of the package, after severing of the cover above a compartment, the package being inverted to remove the contents of the compartment; Fig. 3, a transverse sectional view, the section being taken as indicated at line 3 of Fig. 1; Fig. 4, a broken, enlarged, detailed view of the sealing structure shown in Fig. 3; Fig. 5, a perspective view of the component parts used in making up the package shown in Figs. 1 to 4, inclusive, the parts being shown in separate relation; Fig. 6, a transverse sectional view of a modified form of structure embodying my invention; Fig. 7, a broken, enlarged, detailed view of a portion of the structure shown in Fig. 6; Fig. 8, a perspective view of a second modified form of package embodying my invention; Fig. 9, a side view in elevation showing the manner

in which the packages may be compactly stacked together for shipment; Fig. 10, a longitudinal sectional view of the modified form of structure shown in Fig. 8; Fig. 11, a perspective view of the component parts employed in the making up of the modified form of structure shown in Fig. 8, the parts being shown in spaced apart relation; and Fig. 12, an enlarged broken sectional view of a portion of the structure shown in Figs. 8 to 11 inclusive.

In the structure shown in Figs. 1 to 5 inclusive, 10 designates a box or shell open at its top and equipped with a laterally-extending flange 11. I provide a container 12 having a horizontal flange portion 13 adapted to rest upon the flange 11 of shell 10. In the specific illustration given, the container 12 is formed of molded material such as molded pulpwood and compartments are formed integrally with the flange 11, the compartment walls 14 depending from the flange 13. About each compartment is provided a bead or spacer ridge 15, as shown more clearly in Figs. 3, 4 and 5.

I provide a liner 16 which preferably extends over the horizontal flange portion 13 and is secured thereto about each of the compartment beads 15. As shown more clearly in Fig. 4, liner 16 is adhesively attached to the flange portion 13. This adhesive layer preferably extends completely about each of the compartments or about a portion thereof.

The liner 16, as illustrated in Fig. 5, preferably has a flange portion 16a and a depending compartment liner portion 16b. The liner may be allowed to hang loosely within each compartment 14 or, if desired, a form-fitting die may be used for pressing the liner within each compartment to cause it to lie closely against the walls of the compartment, which may be irregular or of any desired shape.

The cover 17 is drawn over the top surface of the package and secured in taut relation thereto, as illustrated in Fig. 3. In the specific illustration given in Figs. 3 and 4, the cover 17 is formed of thermoplastic material and is united to the thermoplastic lining 16 by heat sealing at 18. Since the liner is already anchored to the container 12 by adhesive, as shown in Fig. 4, the sealing of the cover in the straight or taut relation shown forms with the bead 15 a severance space 19 so that the edge of a knife 20 may be thus drawn readily through the cover portion about a compartment to effect severance of the cover about the selected compartment.

Instead of providing a bead 15, as illustrated in Figs. 1 to 5 inclusive, the molded container 12a may be provided with an annular depression 21, as illustrated in Figs. 6 and 7. The liner 16 is secured to the container 12a by adhesive 22, as shown in Fig. 7. The cover 17a, which in the illustration given is formed of thermoplastic material, is heat sealed to the thermoplastic liner 16 at 23. With the structure shown, the annular grooves or recesses 21 extend about each of the compartments and provide a severance space 24 through which the edge of the knife 20 may be extended so as to sever the cover while at the same time avoiding damage to the liner. With certain plastic materials, the severance can be effected by using the fingernail to pierce the cover over the recesses 24.

Operation

In the operation of the structures shown in Figs. 1 to 7 inclusive, the container provided with its liner may be passed under a filling machine to receive the molded or fluid material, and the cover may then be secured in position in the manner already described by heat sealing or by the application of adhesive. The package may then be cooled or subjected to freezing temperatures if ice cream is being handled, and the package is shipped to the desired destination.

When the consumer desires to remove one of the table-size units, she may draw the cutting edge 20 through the cover above the severance spaces 19 or 24 so as to free the cover entirely about one compartment. If desired,

the severance may be made merely about a major portion of the area about a compartment and the cover then folded back so as to open the compartment. The package may then be inverted, as illustrated in Fig. 2, so as to cause the removal of the contents of the compartment onto a dish, ice cream cone, or other receptacle. When butter, margarine, gelatin, or cheese is being removed, the loose liner within the compartment facilitates such removal by falling out of the compartment and when peeling slowly from the material as it is being deposited in the dish. After the removal of one or more of the units, the package may be returned to the refrigerator, the remaining units of the package being sealed and held intact and thus protected for future use.

In the modification, illustrated in Figs. 8 to 12 inclusive, I provide a shell 25 which may be of elongated or any other desired shape. The shell or case 25 is preferably provided with a laterally extending flange 26 and at its bottom with finger openings 27. A plate 28 of molded wood, plastic, metal or any other desired material may be placed upon the flange 26, as illustrated in Figs. 10 and 11. The plate 28 is provided with cup receiving apertures 29. Cups 30 may be provided, each having rims or flanges 31 adapted to rest upon the plate 28 and to provide spacer beads thereabove, as illustrated in Figs. 10 and 12.

In the modified structure, I provide liners 32 having a horizontal flange portion 33 and a depending cup liner portion 34. Over the liner 32 extends a cover 35.

In the specific illustration given, both the cover 35 and the liner 32 extend over the bead 31 of the cup 30 so as to provide a severance space 36 about each cup.

The cover and liner are preferably secured by adhesive or other means to the plate 28 about each of the cups. If desired, both the liner and the cover for each cup may be individually secured together so that after the severance of the cover and liner about the cup, the cup may be removed with the liner and cover therefor united in sealing relation as shown in Fig. 12. As shown in Fig. 12, an adhesive layer 37 unites the liner 32 to the bead portion 31 of the cup 30 while adhesive 38 unites the cover portion 35 to the liner at a point just above bead 31.

In the modification shown in Figs. 8 to 12 inclusive, the separate cups may be removed selectedly by passing a sharp edge through the cover and liner portions above the severance space 36, as illustrated in Figs. 10 and 12, and the cup with its cover and liner in sealed relation to the cup may be removed by inserting the finger through the opening 27 below the cup, etc.

The complete structure is compact, and Fig. 9 illustrates the minimum of space which the packages will occupy when brought together for shipping or storing, etc.

The shell employed in the various modifications may be formed of molded pulpwood, metal, plastic, or any suitable material. Similarly, the container 12 may be formed of such material. I find that molded pulpwood or moldable paper is unusually well suited for the purpose because the concave, convex, rounded and curving surfaces desired for the package structure are most easily and economically achieved through the use of such material. Such material further is flexible to a degree while at the same time providing the stiffness and support desired for molding the plastic food material and supporting it.

The liners and covers may likewise be formed of any suitable material such as, for example, plastic or thermoplastic materials such as vinylidene chloride, polyethylene, polyamides, rubber hydrochloride, and other resinous substances which produce light-weight, thin, flexible plastic films. Instead of plastics, parchment paper and metal foils may be used. Other materials which provide a grease-proof and moisture-proof liner or cover of a flexible type may be employed. In each of the modifications shown, there is an effective sealing off of each individual compartment to prevent running over or spilling of the contents, while at the same time the consumer may open

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a selected compartment and remove its contents by puncturing the covering material at the outer edge of the spacer member by cutting or removing the cover completely, as by running a knife or fingernail around the outer edge of the spacer member. The spacer member may be a raised member or depressed member providing a severance space between the cover and container, or between both the cover liner and container.

While in the foregoing specification I have set forth a specific structure in considerable detail for the purpose of illustrating one embodiment of the invention, it is to be understood that such details of structure may be varied widely by those skilled in the art without departing from the spirit of my invention.

I claim:

1. In a soft plastic food package having an open-topped compartment and a soft plastic food body within said compartment, a flange about the top of said compartment providing an attachment surface around said compartment and lying at a spaced distance from the top edges thereof, a plastic film cover over the top of said compartment extending to said attachment surface and secured thereto around said compartment, said flange being provided with a variation in surface contour inwardly of said attachment surface and extending around said compartment, said contour variation being arranged for spacing a portion of said film cover from said flange between said attachment surface and said compartment so that the spaced portion of said film can be readily severed, said cover film inwardly from the spaced portion thereof being freely separable from said flange and said compartment.

2. The combination of claim 1 in which said contour variation consists of an upwardly-projecting bead around the top of said compartment.

3. The combination of claim 1 in which said contour variation consists of a depression in said flange around the top of said compartment.

4. In a soft plastic food package having an open-topped compartment and a soft plastic food body within said compartment, a flange about the top of said compartment, a plastic liner about the food body within said compartment and extending over the top edges of said compartment onto said flange and secured thereto around said compartment, a plastic film cover over the top of said

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compartment extending outwardly over said flange and the liner portion thereon, said film cover being sealed to said liner around said compartment at a spaced distance from the top edges of said compartment, a portion of said film cover inwardly from its sealing engagement with said liner being spaced from a portion of said flange around said compartment so that the spaced portion of said film cover can be readily severed, said cover film inwardly from the spaced portion thereof being freely separable from said liner, said flange, and said compartment.

5. In a soft plastic food package having a plurality of open-topped compartments and a soft plastic food body within the compartments, flange separators between said compartments about the tops thereof having central portions providing attachment surfaces around said compartments and lying at spaced distances from the top edges thereof, a plastic film cover extending over the tops of said compartments and over said attachment surfaces therebetween, said film cover being secured to said attachment surfaces around each of said compartments to separately seal said compartments, said film cover being spaced about the top of each compartment from said flange between said attachment surfaces and the top edges of said compartments so that the spaced portions of said film cover can be readily severed, the portions of said cover film extending over each of said pockets between the attachment surface therearound being freely separable from said flange and said compartment.

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