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S. GREATMAN

3,258,186

CONTAINER WITH CAM-LATCHING TOP

Filed April 13, 1964

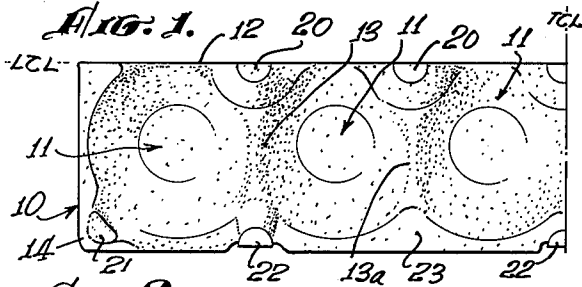


Fig. 2.

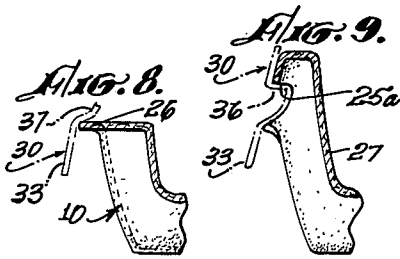
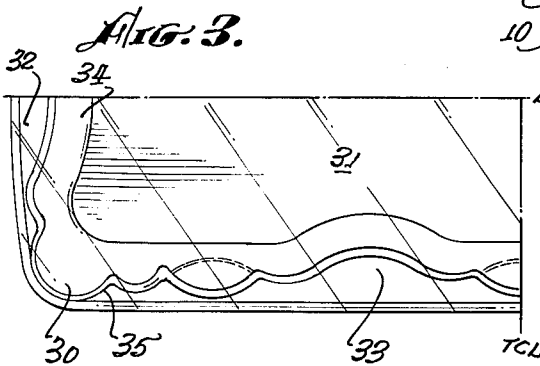
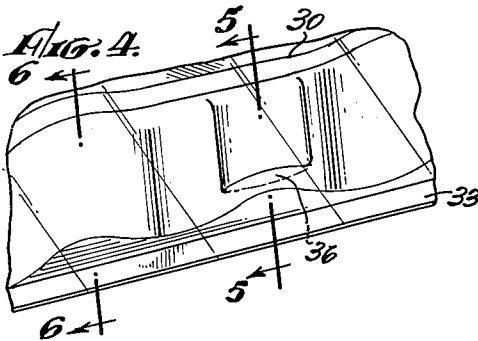
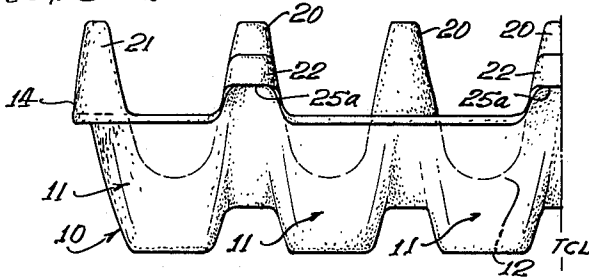


Fig. 9.

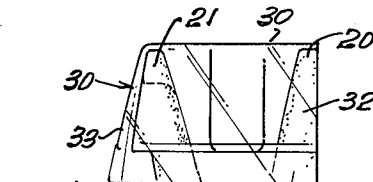
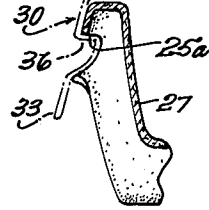


Fig. 5.

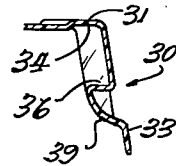
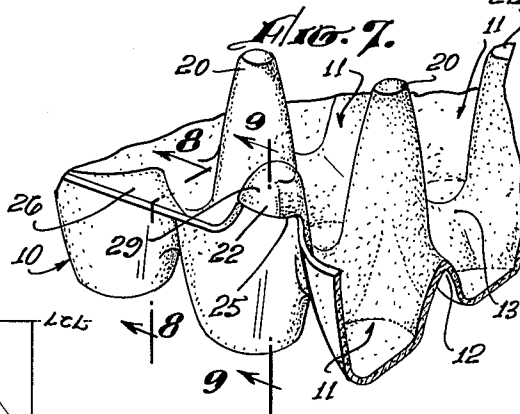
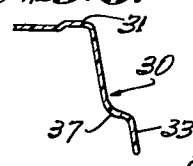


Fig. 6.



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CONTAINER WITH CAM-LATCHING TOP

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7 Claims. (Cl. 229-2.5)

This invention relates generally to display cartons of the type in which the upper half of the packaged object is enclosed in a transparent plastic top, while the lower half is supported in a relatively thick-walled protective bottom made of a molded fiber material. A multi-celled egg carton is the most common application for such a carton design, but its utility is not restricted to eggs or to food, since it may be useful in retail selling of any fragile object, particularly those which are sold in several units per package.

More particularly, the invention is concerned with such a carton combination in which the bottom is provided with upwardly projecting latch-hook posts in opposing pairs on opposite sides of the carton, and the top is formed with inwardly projecting abutments, in pairs on opposite sides of the interior of the top, which provide cam guidance into latching engagement with said latch-hook posts.

In its preferred form, the latch-hooks are formed as upwardly converging conical tubular members. Also, in a preferred embodiment, firm locking engagement of the pair of latches is aided by an adjacent pair of mating shoulders on top and bottom, which face oppositely to the corresponding surfaces at which the latch engagement occurs, and which are vertically spaced from the latch engaging plane.

It has become standard practice in almost all types of egg packaging to employ cellular egg trays molded of paper pulp. Such egg trays have proven themselves to be better protection for the eggs than the various cellular egg cartons constructed of cut and folded carboard, etc.

The display requirements of self-service grocery retailing, through which most food is sold in retail, has caused the development in recent years of various forms of display cartons for containing a dozen eggs in a molded paper pulp bottom, covered by a transparent plastic top, through which the customer may appraise for himself the size, color, and condition of the eggs, as well as making it possible to determine readily whether or not the carton contains a full dozen count.

The display carton combining the molded paper bottom with the transparent plastic top has found the widest marketed acceptance when formed of two approximately equal-dimensioned halves, which mate with each other at an equatorial mating plane. In such a carton, the entire upper half of the egg may be inspected, not only from above but from the sides.

Unfortunately, there are a number of points of conflict in design requirements for a carton for eggs or the like, constructed for housing the bottom half of the packaged objects in a molded paper pulp bottom, having substantial thickness and rigidity, while housing their upper half in a transparent plastic cover, which provides good visibility of the packaged objects, but has proven difficult to mate satisfactorily with the bottom.

For example, many prior egg cartons have been made entirely of molded paper pulp so that top and bottom could be formed in a single operation as a single unit, and joined entirely along one side with a paper pulp hinge. Closure means was provided by any of a variety of paper cover retainer constructions well known to those familiar with the design of paper cartons. However, when a transparent plastic cover is used, top and bottom

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must be formed entirely separately, and subsequently assembled one to the other.

The molded paper pulp bottom material and the transparent formed plastic top material have radically different material properties. The molded pulp can be formed with many variations in thickness, so as to provide reinforcement in zones of stress. It is suited to the formation of cones, hollow posts, double-walled partitions, but it is not well adapted to thin walls which are subjected to repeated flexing. Indeed, the molded paper carton functions best as a rigid unit in which no part is intended to be deflected in normal use, since deflection will normally result in tearing of the fibers, weakening of the pulp structure, and deterioration of the piece. On the other hand, a molded pulp bottom employing double walls throughout most of its construction and designed for use in which no part undergoes any substantial bending or deflection, exhibits amazing strength and durability during repeated handling, and provides excellent protection for lightweight fragile objects such as eggs.

The transparent plastic is elastically resilient. It may be manually deformed with ease, but is toughly resistant to tearing and will snap back into its original shape when a deforming force is removed. The plastic cover can be scalloped or corrugated around the side walls to provide it with a certain amount of crushing resistance to forces imposed from the top, but, in general, it is the molded paper bottom which must be relied on for protection of the eggs.

A combination of paper pulp bottom and transparent plastic top has presented an entire set of attachment problems. At first, the two components were formed with mating hinge means along one side and were then manually assembled. Since such cartons must be fabricated in the millions and at a cost of only a few pennies per carton, at most, even a small amount of manual labor on each carton makes its cost prohibitive. In addition, none of the hinge means found in the prior art have proven satisfactory in use. A variety of attachment means have been attempted. Most of these involved an evolutionary development of the attachment means used in paper cartons or in all plastic cartons. For example, millions of units have been sold with small molded plastic hooks adapted to project through holes in the molded paper carton. The difficulty with this type of construction has been that the molded paper pulp material does not wear well when subjected to the abrasive action of a hook on the sidewalls of a hole through the molded paper material. After only a relatively few uses, sometimes only one or two, the pulp material around the hole is so damaged that secure attachment is no longer possible.

A similar difficulty has been encountered by those who attempted to simply snap over the edges of a flange around the pulp carton at the plane of mating between bottom and cover. The flange edges merely disintegrated after a few uses, leaving the cover substantially unattached.

Naturally, the presence of any moisture substantially weakens the pulp, although it has no effect on the plastic. Many designs of the prior art have attempted a variety of means of attachment by holes in the plastic, or by metal attachment means, or by adhesives. All have proven unsatisfactory for use in display cartons such as the egg carton described. Holes in the plastic, or use of metal attaching means, result in tearing of the plastic, despite its toughness, and the loosening of the attachment. Adhesives lose their adhesive quality after two or three uses.

Indeed, no satisfactory carton has been produced in which both top and bottom were complete upon being formed, did not require any further assembly, were readily snapped into attachment with each other without the use

of any holes in either top or bottom, and which could be opened and closed repeatedly without destructive wear and tear, and without losing the security of attachment upon closure.

The present invention meets and overcomes all these difficulties, and has in addition many heretofore unknown advantages in cheapness of manufacture, strength of construction, security of attachment, and reliability of attachment through many repeated openings and closings.

As in the previous designs, the present invention houses approximately the lower half of the packaged objects in a molded paper pulp carton or the like, having substantial thickness and rigidity, although rigidity is greatly increased in the design of the invention by the use of double-walled construction throughout, including even in the interlocking attachment means.

Also, the contents of the carton are entirely visible because the upper halves of the packaged objects are housed in a transparent plastic cover, which is formed all in one piece, free of holes, free of structurally weak projections, yet relying on the resilience of the plastic cover structure itself to provide a secure and reusable locking means.

It is a major object of the present invention to provide a combination molded fiber or pulp bottom and plastic top in which security of attachment is so great that the cover is usually retained even on a carton of eggs which is thrown with such violence as to break the contained eggs.

It is a further object of the invention to achieve such security of attachment without the employment of any holes whatever in either top or bottom, and without employing any structurally weak projections, hinges, or manually assembled sub-components.

It is another object of the invention to provide the foregoing advantages in a cover and bottom combination which may be repeatedly opened and closed by unskilled and careless persons without delay or difficulty, and without deterioration in the attachment structure. A related object is to provide a carton in which the attachment parts of the paper pulp bottom are shielded from contact with the hands of the person who is removing or replacing the cover. Thus, the paper pulp structure, which is extremely vulnerable to moisture, is not weakened in those parts upon which the carton relies for security of attachment.

Still another object of the invention is to provide a combination as described in which the protective strength of the transparent plastic top, which is necessarily somewhat inferior to that of the molded pulp bottom, is reinforced by supporting posts included in the bottom structure, and by strengthening ridges in the plastic itself. The foregoing and other objects and advantages of the invention will be understood from the following description of one specific embodiment of the invention, taken in connection with the accompanying drawing, in which:

FIGURE 1 is a plan view of one quarter of a carton bottom constructed in accordance with the invention;

FIGURE 2 is a front elevational view of the portion of a carton bottom which was illustrated in FIGURE 1;

FIGURE 3 is a plan view of the "southwest" quarter of a cover mating over and symmetrical with both longitudinal and transverse center lines;

FIGURE 4 is a perspective view of a fragmentary portion of the transparent plastic cover;

FIGURES 5 and 6 are vertical sectional views through the plastic cover as viewed at the vertical planes indicated by the arrows 5—5 and 6—6, respectively, in FIGURE 4;

FIGURE 7 is a perspective view of a fragment of one side wall of the molded bottom of FIGURES 1 and 2;

FIGURES 8 and 9 are vertical sectional views through the bottom as viewed in sections located at the vertical planes indicated in FIGURE 7 by the arrows 8—8 and 9—9, respectively;

FIGURE 10 is an elevational view of one end of the carton, with the transparent cover assembled over the molded paper bottom, but only the half of the carton to the left of a longitudinal vertical central plane is illustrated, since the right half is symmetrical and identical.

In viewing FIGURE 1, it will be understood that only one-fourth of an entire plan view of a bottom adapted to accommodate one dozen eggs is shown. Since the bottom is symmetrical about both the longitudinal center line indicated by the symbol LCL, and the transverse center line indicated by the symbol TCL, a full plan view of two rows of cells, six cells in each row, may be visualized.

In FIGURE 1, the molded paper pulp bottom is indicated generally by the number 10, and is comprised of a rather intricately formed single molded piece without any holes and having no single-webbed projections. As will be explained hereinafter, projections are in the form of hollow conical posts of great strength and rigidity, considering the soft material from which they are formed.

When FIGURES 1 and 2 are viewed together, it is seen that the bottom 10 is molded into a series of cells 11 each of which accommodates a single egg. The individual cells 11 are formed by a single longitudinal partition 12, and five transverse partitions 13. One-quarter of the longitudinal partition 12 can be seen in plan in FIGURE 1, and an end view of it can be seen in FIGURE 10. The transverse partitions 13 are seen in plan in FIGURE 1, and in front elevation in FIGURE 2. Also, in FIGURE 10, one of the transverse partitions can be seen, for the half left of the longitudinal center line in dashed outline.

It will be seen that the bottom 10 encloses only the lower half of the eggs. The walls of cells 11 diverge upwardly in ovate shape, terminating at a horizontal plane indicated by the numeral 14, which is approximately an equatorial plane with respect to the packaged eggs. However, since plane 14 may be somewhat above or below the horizontal plane which divides the eggs into precisely equal parts, it would not be accurate to call it an equatorial plane, and it will therefore be referred to herein as the mating plane, since it is the plane at which the cover of the carton, to be described hereinafter, mates with the bottom 10 for closure at the peripheral edge of the portions of bottom 10 which terminate at the mating plane 14.

The bottom 10 has integrally molded into it three sets of upwardly projecting hollow posts. Disposed along the longitudinal center line, one at each intersection between longitudinal and transverse partitions, are the main cover supporting posts 20. It will be understood that these cover support posts extend upwards to an elevation above the top of the packaged egg.

There are four corner posts 21 which rise to the same elevation as the main supporting post 20 and like it serve to support a cover. Finally, there are the latching posts 22, which are somewhat shorter than cover support posts 20 and 21 since it is preferred that they not be relied upon directly for cover support, although in one variation such a construction could be used.

It will be understood that the latch posts 22 are provided in opposite pairs at each end of certain but not all of the transverse partitions 13. Thus, in the 12-egg carton illustrated, there would be three latch posts on each of the long sides of the elongated bottom 10.

Between pairs of latch posts 22, it will be seen in FIGURE 1 that one transverse partition, specially designated as 13a, has at its outer end a substantially horizontal triangular flange 23, lying approximately in the mating plane. Although it is only a single thickness, it is not vulnerable to bending or flexing since it is supported on three sides.

In FIGURE 3, there is illustrated in plan view one-quarter of a transparent cover 30, which is formed to fit over and mate with the bottom 10. As in the case of bottom 10, the cover 30 is symmetrical both about the

longitudinal center line and the transverse center line and a plan view of an entire cover may be visualized by simply picturing the quarter part illustrated in FIGURE 3 duplicated in the three quarters not illustrated.

A fragmentary portion of the middle part of the long side of cover 30 is seen in perspective in FIGURE 4. Also, an end elevational view (left half only) of transparent plastic cover 30 is seen in FIGURE 10, where cover 30 has been assembled to closure on bottom 10.

From FIGURES 3, 4, and 10, it is seen that cover 30 has a flat top 31, which rests on support posts 20, and from which depends downwardly flaring sidewalls comprised of end wall 32 and long side walls 33. The end wall 32 and long side walls 33 are undulating and appear scalloped in plan in FIGURE 3; they thus provide a series of reinforcing valleys and ridges. These may be referred to or described as substantially vertically disposed, despite the fact that they converge upwardly to a moderate degree in the preferred specific embodiment illustrated, since their ridge or valley axes lie in vertical planes normal to the plastic surface. It will be understood that the entire plastic cover 30 is preferably of substantially uniform sheet thickness throughout, simply because that is the way it is cheapest and most customary to fabricate transparent plastic covers, and the hills and ridges are formed by undulations in the sheet of plastic rather than by variations in its thickness. The undulating character of the side walls 32 and 33 provides the cover 30 with resistance to vertical crushing. Also, as will be described hereinafter the long side walls 33 are designed to resiliently flex outward or inward for unlatching and latching, respectively, with the bottom 10, and the vertical disposition of the undulations does not interfere with this necessary flexing.

A further but not necessary refinement is the strengthening of the upper periphery of cover 30 by means of peripheral ridge 34.

It will be seen from the plan view of FIGURE 3 and the assembly in elevation of FIGURE 10 that the corners of cover 30 are formed to provide corner post recesses 35, which wrap around and closely receive the corner posts 21, cooperating with them to provide maximum strength at corners of the carton.

Also, it is much preferred that the carton be elongated, that is, that end walls 32 be relatively short and resistant to outward flexing, whereas long side walls 33 should be long and relatively receptive to manual outward deformation of said walls, since this outward flexing is relied upon for unlatching in the present invention.

An important feature of the present invention is that the outwardly flexible long side walls 33 are formed so as to provide inwardly projecting catch shoulders 36, seen in perspective in FIGURE 4 and in cross section in FIGURE 5.

A fragmentary perspective view of part of the bottom 10, seen in FIGURE 7, gives the best view of one of the outwardly overhanging hook portions 25 of the upstanding hollow latch posts 22. The catch shoulders 36 of top 30 snap resiliently into position under the lid 25a of the latch hook part 25 of the latch post 22, as seen in FIGURE 9. Some positive latching would be achieved simply by co-action between the latching engagement illustrated in cross section in FIGURE 9, and the support of cover 30 on the upstanding support posts 20 and corner posts 21. However, it is much preferred to augment this locking arrangement with the provision of additional locking between downwardly-facing mating-plane shoulders 37, on the cover 30, as seen in FIGURE 6, and mating plane flanges 26, on bottom 10, as seen in FIGURES 7 and 8. It is an important feature of the preferred specific embodiment illustrated that the flange 26 is supported on two sides of a triangle, on all sides but one.

It will be evident that the latching engagement is best achieved on the long sides of an elongated carton, and that the latching arrangements should be spaced away

from the end corners, and nearer the center portion of the cover 30, in order that resilient outward flexing of cover sides 33 will provide sufficient latching and unlatching movement.

An important preferred feature of the specific embodiment illustrated is a strategic arrangement of alternate latch posts 22 and mating plane flanges 26, located at the ends of alternate transverse partitions 13. This arrangement imparts great strength to both the posts 22 and the flanges 26 in the molded construction of the bottom 10.

Another refinement observed in the specific embodiment illustrated is the peripheral skirt 38 which encircles the entire bottom edge of cover 30, thus shielding the carton from entrance of dust or moisture at the mating plane 14.

It will also be understood that security of latching is promoted by establishing a relatively snug fit between cover 30 and bottom 10 at the mating plane 14, the latching plane through latch lips 25a, and the plane of the top 31 of cover 30, and the tops of support posts 20 of bottom 10. Thus the vertical dimensions between catch shoulder 36 and mating plane shoulder 37 tend to prevent any disengagement of cover 30 from bottom 10, except by flexing outwards of long sides 33 so as to release the latching engagement.

Another important preferred feature of the specific embodiment illustrated is the cam contoured shape 39 of the plastic surface below catch shoulder 36. This cam guide surface 39 plays its role during the action of closing the carton. As cover 30 is placed over bottom 10 and pushed downwardly toward closure at the mating plane 14, coming to rest in the closure position seen in FIGURE 10, the cam guide surfaces 39 ride along the outer upper surfaces 29 of latch posts 22, automatically producing the proper outward flexing of side walls 33. Indeed, it is a preferred form of the invention that the outer surface 29 of the upper end of latch post 22 be downwardly flaring and yet relatively flat, so as to promote efficient cam guided flexing, with a minimum of abrasion on the molded paper surface of the latch post 22.

It will also be seen from the perspective fragment of FIGURE 7 that the bottom 10 is formed with its partitions 12 and 13 as inverted double walled ridges, so as to provide the contained objects with the maximum security which can be obtained from a lightweight molded pulp bottom.

While I have described one preferred specific embodiment in great detail including even its best presently known application in the packaging of exactly one dozen eggs, it will be understood that the foregoing description, so far as its details are concerned is for the purpose of explaining the invention only, and not for the purpose of restricting the invention to the exact preferred embodiment illustrated. On the contrary, it is intended to claim as my invention all those variations, simplifications and modifications which fall within the scope of the following appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A display carton for eggs and like objects, wherein cover and bottom parts mate for closure at a mating line intermediate between the top and bottom of the packaged objects, which carton is comprised of:

a) an elongated bottom formed of relatively thick rigid material and including: upwardly extending sidewalls, a number of strengthening partitions forming a plurality of cells, upstanding hollow support posts for supporting a cover, substantially undeflectable upstanding hollow latch posts located in opposing pairs on opposite long sides of said elongated bottom, said latch posts being formed to provide outwardly overhanging hook means at a latching plane spaced above said mating plane;

and an elongated top fitting over said bottom and mating for closure with it at said mating plane, said top being formed of a relatively thin, imperforate sheet of transparent, resiliently flexible material, and including: downwardly extending sidewalls permitting the resilient flexing of the long sidewalls of said cover in a laterally outward direction, catch shoulders formed by inward undulations in the long sidewalls of said cover, and inwardly projecting in pairs at said latching plane to make locking engagement with said latch posts, whereby said top can be snapped into a tightly latched closed position by resilient outward deflection of its long sidewalls by sliding engagement with said latch posts as said cover is moved toward closure.

2. A display carton for eggs and like objects, wherein cover and bottom parts mate for closure at a substantially horizontal mating plane intermediate between the top and bottom of the packaged objects, which carton is comprised of:

an elongated bottom formed of relatively thick rigid material and including: upwardly flaring sidewalls, partitions forming a plurality of cells, each cell adapted to accommodate one of the packaged objects, upstanding hollow support posts for supporting a cover over the objects packaged in said cells, substantially undeflectable upstanding hollow latch posts located in opposing pairs on opposite long sides of said elongated bottom, said latch posts being formed to provide outwardly overhanging hook means at a latching plane spaced above said mating plane;

and an elongated top fitting over said bottom and mating for closure with it at said mating plane, said top being formed of a relatively thin, imperforate sheet of transparent and resiliently flexible material, and including: downwardly flaring sidewalls permitting the resilient flexing of the long sidewalls of said cover in a laterally outward direction, catch shoulders formed by inward undulations in the long sidewalls of said cover, and inwardly projecting in pairs at said latching plane to make locking engagement with said latch posts, and said latch posts and said catch shoulders being constructed with mating cam surfaces which produce resilient outward deflection of the long sidewalls by sliding engagement when said cover is moved toward closure.

3. A display carton for eggs and like objects, wherein cover and bottom parts mate for closure at a substantially horizontal mating plane intermediate between the top and bottom of the packaged objects, which carton is comprised of:

an elongated bottom formed of relatively thick rigid material and including: walls forming a plurality of cellular compartments for accommodating the lower parts of packaged objects, upstanding hollow support posts for supporting a cover over the objects packaged in said cellular compartments, a plurality of substantially undeflectable upstanding hollow latch posts located in opposing pairs at opposite long sides of said elongated bottom, said latch posts being provided at their outer faces with downwardly flaring guide surfaces, which surfaces terminate at a latching plane spaced above said mating plane, said latch posts being sharply recessed at said latch plane to form outwardly overhanging hook means;

and an elongated top fitting over said bottom and mating for closure with it at said mating plane, said top being formed of a relatively thin, imperforate sheet of transparent resiliently flexible material, and including: downwardly flaring sidewalls permitting the resilient flexing of the long sidewalls of said cover in a laterally outward direction, catch shoulders formed by inward undulations in the long sidewalls of said cover, and inwardly projecting in pairs at said latching plane to make locking engagement

with said latch posts, and upwardly converging cam guide walls formed in the inner surfaces of said long sidewalls of said cover under said catch shoulders to cooperate with said latch post guide surfaces to produce momentary outward deflection of said long sidewalls when said cover is pressed down on said bottom toward closure.

4. A display carton for eggs and like objects, wherein cover and bottom parts mate for closure at a substantially horizontal mating plane intermediate between the top and bottom of the packaged objects, which carton is comprised of:

an elongated bottom formed of relatively thick rigid material and including: walls forming a plurality of cellular compartments for accommodating the lower parts of packaged objects, upstanding hollow support posts for supporting a cover over the objects packaged in said cellular compartments, a plurality of substantially undeflectable upstanding hollow latch posts located in opposing pairs at opposite long sides of said elongated bottom, said latch posts being sharply recessed at a latching plane to form outwardly overhanging hook means spaced above said mating plane, and mating plane flanges located at said mating plane between said latch posts;

and an elongated top fitting over said bottom and mating for closure with it at said mating plane, said top being formed of a relatively thin, imperforate sheet of transparent and resiliently flexible material, and including: downwardly flaring sidewalls permitting the resilient flexing of the long sidewalls of said cover in a laterally outward direction, catch shoulders formed by inward undulations in the long sidewalls of said cover, and inwardly projecting in pairs at said latch plane, and in mating location to make locking engagement with said latch posts, and adapted to resiliently deflect said cover sidewalls outwardly by engagement with said latch posts' outer surfaces when said cover is pressed down on said bottom toward closure at said mating plane, until said catch shoulders spring inwardly into locking engagement under said hook means, and inwardly projecting shoulders in the sidewalls of said cover below said catch shoulders and adapted to mate with and seat on said mating plane flanges in said bottom, to provide positive location at full closure and latching.

5. A display carton for eggs and like objects, wherein cover and bottom parts mate for closure at a substantially horizontal mating plane intermediate between the top and bottom of the packaged objects, which carton is comprised of:

an elongated bottom formed of relatively thick rigid material and including: walls forming a plurality of cellular compartments for accommodating the lower parts of packaged objects, upstanding hollow support posts for supporting a cover over the objects packaged in said cellular compartments, a plurality of substantially undeflectable upstanding hollow latch posts located in opposing pairs along opposite long sides of said bottom, said latch posts being provided at their outer faces with downwardly diverging guide surfaces, which surfaces terminate at a latching plane spaced above said mating plane, said latch posts being sharply recessed at said latch plane to form outwardly overhanging hook means,

and an elongated top fitting over said bottom and mating for closure with it at said mating plane, said top being formed of a relatively thin, imperforate sheet of transparent and resiliently flexible material, and including: downwardly flaring sidewalls having long sidewalls resiliently flexible in a laterally outward direction, catch shoulders formed in the long sidewalls of said cover, by abrupt inward formations of said imperforate sheet at said latching plane, said catch shoulders being disposed in pairs at said latch

plane to make locking engagement with said latch posts, upwardly converging cam guide walls formed in the inner said imperforate sheet under said catch shoulders, and adapted to resiliently deflect said cover sidewalls outwardly by engagement with said diverging guide surfaces on said latch posts when said cover is pressed down on said bottom toward closure.

6. A display carton for eggs and like objects, wherein cover and bottom parts mate for closure at a substantially horizontal mating plane intermediate between the top and bottom of the packaged objects, which carton is comprised of:

an elongated bottom formed of relatively thick rigid material and including: walls forming a plurality of cellular compartments, some of said walls being transverse partitions between opposite long sidewalls of said cover, upstanding hollow support posts at the intersections of said partitions for supporting a cover over the objects packaged in said cellular compartments, a plurality of substantially undeflectable upstanding hollow latch posts located in opposing pairs at the outer ends of some of alternate transverse partitions, said latch posts being formed as downwardly enlarging covers, said latch posts being sharply recessed at said latch plane to form outwardly overhanging hook means, upwardly facing mating plane flanges located at said mating plane at the outer ends of transverse partitions between the transverse partitions provided with said latch posts;

and an elongated top fitting over said bottom and mating for closure with it at said mating plane, said top being formed of a relatively thin, imperforate sheet of resiliently flexible material, and including: downwardly flaring sidewalls having long sidewalls resiliently flexible in a laterally outward direction, catch shoulders formed in the long sidewalls of said cover by inward displacement of a portion of said imperforate sheet, and inwardly projecting in pairs at said latch plane to make locking engagement with said latch posts, and inwardly projecting downwardly facing seating shoulders in the sidewalls of said cover between said catch shoulders and adapted to mate with and seat on said mating plane flanges in said bottom, with said latching and said spacing contact forming a closely received locked assembly upon closure.

7. A display carton for eggs and like objects, wherein cover and bottom parts mate for closure at a substantially horizontal mating plane intermediate between the top and bottom of the packaged objects, which carton is comprised of: an elongated bottom formed of relatively thick rigid material and including:

upwardly flaring sidewalls, a number of transverse partitions and a single longitudinal partition forming a plurality of cells, each cell adapted to accommodate one of the packaged objects, upstanding hollow support posts at the intersections of said partitions for supporting a cover over the objects packaged in said cells,

upstanding hollow corner support posts at each corner of said bottom,

upstanding hollow latch posts located in opposing pairs at the outer ends of each of alternate transverse partitions, said latch posts being lower than said support posts, and being provided at their outer faces with downwardly flaring guide surfaces, which surfaces terminate at a latching plane spaced above said mating plane, said latch posts being sharply recessed at said latch plane to form outwardly overhanging hook means,

mating plane flanges located at said mating plane at the outer ends of transverse partitions between the transverse partitions provided with said latch posts; and an elongated top fitting over said bottom and mating for closure with it at said mating plane, said top being formed of relatively thin, transparent, and resiliently flexible material, and including:

downwardly flaring sidewalls having reinforcing ridges and channels disposed substantially vertically to provide vertical rigidity, but permitting the resilient flexing of the long sidewalls of said cover in a laterally outward direction,

catch shoulders formed in the long sidewalls of said cover, and inwardly projecting in pairs at said latch plane to make locking engagement with said latch posts,

upwardly converging cam guide walls formed in the inner surfaces of said long sidewalls of said cover under said catch shoulders, and adapted to resiliently deflect said cover sidewalls outwardly by engagement with said latch posts' outer surfaces, when said cover is pressed down on said bottom toward closure at said mating plane,

inwardly projecting seating shoulders in the sidewalls of said cover between said catch shoulders and adapted to mate with and seat on said mating plane flanges in said bottom,

walls defining a mating recess in the inside of each corner of said cover for the close reception of one of said corner support posts,

and an outwardly flaring skirt flange projecting downwardly below said mating plane, whereby said top can be snapped into a tightly latched closed position by resilient outward deflection of its sidewalls by engagement between said cam guide walls and said latch posts as said cover is moved toward closure, said cover snapping into latching position as said catch shoulders engage under said hook means on the outer surfaces of said latch posts.

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GEORGE O. RALSTON, *Primary Examiner.*