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Description

This invention relates to packaging containers. More particularly the invention relates to containers for packaging eggs, fruit or the like relatively small articles.

It is known from British Patent Specification No. 1338353 to provide an egg box comprising two halves, the bottom half or base portion being formed of transparent plastics material and having depressions for reception of the eggs. The top half is formed of paper board and comprises a lid which is hinged to the base portion.

Another type of egg box is described in the specification of our European published Patent Application No. 0079757 and has a deep-drawn plastics base portion having egg receiving depressions and an internal height at least equal to the height of the eggs, and a flat paper board lid. In one embodiment described in Specification No. 0079757 the base portion has pillars providing retaining means for holding the lid on the base portion, the retaining means comprising at least one hollow projection moulded integrally with the respective pillar and being of hook-like configuration having an upright hollow stem merging into a hollow lug extending substantially perpendicularly thereto and adapted to pass through an aligned D-shaped aperture in the lid and overlie the upper surface of the lid. In another embodiment of Specification No. 0079757 a similar egg box is described in which the aperture is crescent shaped instead of D-shaped.

In French Patent Specification No. 2473295, there is described a further type of egg box in which a base portion and a lid portion are shrink wrapped together in transparent film material. The lid portion is not otherwise retained on the base portion.

An object of the invention is to provide a container for eggs, fruit or the like relatively small articles which omits a hinge joining the lid to the base portion and yet has means provided by the base portion and the lid portion to secure the lid portion thereon. The provision of a hinge is a disadvantage because it necessitates the step of attaching the lid to the base portion, conventionally by adhesive, to form the hinge.

According to the invention there is provided a packaging container for eggs, fruit or the like relatively small articles comprising a base portion formed of plastics material, and a lid portion of paper board or pulp, the lid portion providing at least part of the surrounding wall of the container, characterised in that the lid portion is separate from the base portion, interengaging retaining means are provided by the base portion and the lid portion to secure the lid portion on the base portion, the retaining means being readily releasable to separate the lid portion from the base portion, and that the base portion has upstanding pillars which at least partially support the lid portion.

A container having the characteristics set out in the first part of claim 1 is known from FR—A—2 318 081.

Preferably the base portion and the lid portion comprise two substantially equal halves.

It is also preferred that the lid portion nests with the base portion in a manner whereby the free edge of the lid portion is encompassed by the base portion.

The lid portion may be rectangular and have a peripheral edge which nests with the base portion on all four sides.

Preferably the base portion has an internal ledge engaged by the free edge of the lid portion, whereby the base portion is formed with a rim which locates the lid portion and prevents outward deflection of the lid portion. Also the base portion may have ribs or other projections which combine with the rim to form a groove or grooves for reception of the free edge of the lid portion and thereby at least restrict inward deflection of the lid portion.

Preferably the retaining means comprises at least one projection on the base portion which interengages with an aligned aperture in the lid portion.

In one embodiment the retaining means comprise a hollow projection upstanding from each of the pillars and aligned apertures in the lid portion through which the projections pass to overlie the upper surface of the lid portion.

In another embodiment the or each projection on the base portion interengages with an aligned aperture in the wall of the lid portion.

The or each projection of the retaining means is preferably hook-shaped.

Preferably the retaining means is at least one pair of projections on the base portion which interengage with respective aligned apertures in the lid portion, one projection of said pair of projections extending in a direction which is opposite to the direction in which the other projection of said pair of projections extends.

The base portion may have article receiving depressions.

The lid portion may initially be a flat blank of paper board having creases and/or cuts to allow edge portions to be bent downwardly to provide side and/or end walls. Alternatively the lid portion may be preformed to provide side and/or end walls.

Preferably the lid portion has a frusto-conical configuration.

The container is preferably an egg box but instead it may be suitable for packaging fruit or other articles. Alternatively, the container may have a base portion generally of open construction with a lid portion thereon.

By way of example, specific embodiments in accordance with the invention will be described with reference to the accompanying drawings in which:—

Figure 1 is an exploded perspective view of a container for packaging six eggs;

Figure 2 is a section along line 2—2 in Figure 1;

Figure 3 is a detail of the lid retaining means;

Figure 4 illustrates an alternative lid for the container of Figure 1;

Figure 5 is an exploded perspective view of a container for packaging twelve eggs; and

Figure 6 is a vertical section through one of the lid portion retaining means of the container of Figure 5.

With reference to Figure 1, a container for packaging six eggs comprises a bottom half or base portion 10 formed of transparent plastics material having six egg receiving depressions 11. Upstanding from the base portion are two integrally moulded pillars 12 for partially supporting a top half or lid portion 13 of paper board or pulp on which may be printed desired information regarding the eggs to be packaged in the container.

In this embodiment the lid 13 is preformed from paper board to have a frusto-conical configuration and side and end walls 14, 15 respectively whose edges locate a ledge 22 internally of a peripheral rim 16 of the base portion, the rim preventing outward deflection of the lid walls. Ribs 17 are also provided on the base portion which define grooves for reception of the edges of the side walls 14 (see Figure 2) and prevent the side walls being deflected inwardly into contact with the eggs, which movement might result in breaking one or more of the eggs.

To retain the lid 13 on the base portion 10, hollow hook-like projections 18 of the type described in published European Patent Application No. 0079757 are provided. These projections extend upwardly from the pillars 12 through aligned D-shaped apertures 19 in the lid and interengage with the lid. Each projection 18 is moulded integrally with the respective pillar 12 and is formed with a hollow stem 20 merging into a hollow lug 21 extending substantially perpendicularly thereto (see Figure 3). In this embodiment the lugs 21 of the two projections 18 face away from each other and, when the lid 13 is placed thereon, the lugs overlie the upper surface of the lid.

In another embodiment the lugs 21 of the projections 18 face each other. Alternatively, in the case of an egg box for twelve eggs in a 3 × 4 formation having four pillars 12, the lugs of each projection 18 may extend towards the adjacent side of the box, or all four lugs may extend inwardly either longitudinally or transversely of the box. If desired, the apertures 19 may be crescent shaped in a manner described in published European Patent Application No. 0079757.

Figure 4 illustrates an alternative lid portion 30 which may be provided initially in the form of a flat blank having creases 31 defining side walls 32 which may be folded downwardly for location of their edges between the rim 16 and the ribs 17 of the base portion. The ends of the lid are thus open.

Alternatively, the initial lid blank may be shaped to provide end walls only or both side and end walls. At least in the former case an appropriate rib 17 would be provided at each end of the base portion.

In a further embodiment the lid may be preformed in the manner of the lid of Figure 1 but provide side walls or end walls only, or a combination which leaves one side or end open or partly open, for example, for easy viewing of the eggs inside the container.

If desired, the egg box of Figure 1 may be for ten eggs, or twelve eggs in 2 × 6 formation, or any desired number of eggs. Alternatively the base portions may be moulded in pairs in known manner with an intervening line of perforations to allow the boxes to be separated.

An embodiment of an egg box for twelve eggs in 3 × 4 formation is shown in Figure 5. The base portion 40 again has egg receiving depressions 41 and upstanding pillars 42, and a rim 43 for restricting outward deflection of the lid portion 44. However, in this embodiment, the retaining means for holding the lid onto the base portion are hollow, hook-like projections 45 built into the surrounding wall of the base portion instead of the lid support pillars. Each projection 45 projects outwardly from a stub pillar 46 disposed between adjacent egg receiving depressions 41 and has an undercut radius 47 for interengagement with an aligned aperture 48 in the respective end wall 49 of the lid.

Inward deflection of the lid walls is prevented by the stub pillars 46 at the ends of the box and by upwardly extending projections 50 at the sides of the box forming a channel with the rim 43 for reception of the adjacent edge of the lid.

If desired the stub pillars 46 and the projections 50 may be interchanged so that the lid retaining means are provided at the sides of the box instead of at its ends.

Also the lid 44 may have side or end walls only, as in the case of the lid of Figure 4.

The invention is not restricted to the specific details of the embodiments described above. For example, the lid retaining means of the egg box of Figure 5 may readily be applied to the box of Figure 1, and vice versa.

Also the invention may be applied to a container for packaging fruit or other articles instead of eggs. Indeed the invention may be applied to a container having a base portion which does not have individual article receiving depressions but which is generally of open construction with a lid thereon.

With particular, but not exclusive, regard to the packaging of eggs, fruit or other articles, it will be appreciated that the packaging container described above represents a new concept between one conventional type of packaging in which the base and lid are both formed of plastics material or paper pulp, or plastics material and paper board respectively, and hinged together as a unit, and another conventional type of packaging in which the base is a deep-walled container which carries a separate but flat lid.

Compared with the first type of conventional packaging, the present packaging retains a lid of paper board or pulp for facilitating the printing of information thereon without the step of joining

the lid to the base.

Also the fact that the lid forms at least part of the surrounding wall, preferably half the depth of the surrounding wall, means that the base may be formed of thinner material than in the case of the conventional type of deep-walled container. The present packaging may thus be cheaper.

Claims

1. A packaging container for eggs, fruit or the like relatively small articles comprising a base portion (10; 40) formed of plastics material, and a lid portion (13; 44) of paper board or pulp, the lid portion providing at least part of the surrounding wall of the container, characterised in that the lid portion (13; 44) is separate from the base portion (10; 40), interengaging retaining means (18, 19; 45, 48) are provided by the base portion and the lid portion to secure the lid portion on the base portion, the retaining means being readily releasable to separate the lid portion from the base portion, and that the base portion (10) has upstanding pillars (12) which at least partially support the lid portion 13.

2. A container as claimed in Claim 1, characterised in that the base portion (10; 40) and the lid portion (13; 44) comprise two substantially equal halves.

3. A container as claimed in Claim 1 or Claim 2, characterised in that the lid portion (13; 44) nests with the base portion (10; 40) in a manner whereby the free edge of the lid portion is encompassed by the base portion.

4. A container as claimed in any one of the preceding claims, characterised in that the lid portion (13; 44) is rectangular and has a peripheral edge which nests with the base portion (10; 40) on all four sides.

5. A container as claimed in any one of the preceding claims, characterised in that the base portion (10; 40) has an internal ledge (22) engaged by the free edge of the lid portion (13; 44), whereby the base portion is formed with a rim (16; 43) which locates the lid portion and prevents outward deflection of the lid portion.

6. A container as claimed in Claim 5, characterised in that the base portion (10; 40) has ribs (17) or other projections (46, 50) which combine with the rim to form a groove or grooves for reception of the free edge of the lid portion (13; 44) and thereby at least restrict inward deflection of the lid portion.

7. A container as claimed in any one of the preceding claims, characterised in that the retaining means comprises at least one projection (18; 45) on the base portion (10; 40) which interengages with an aligned aperture (19; 48) in the lid portion (13; 44).

8. A container as claimed in Claim 7, characterised in that the retaining means comprise a hollow projection (18) upstanding from each of the pillars and aligned apertures (19) in the lid portion through which the projections pass to overlie the upper surface of the lid portion.

9. A container as claimed in Claim 7, wherein the or each projection (45) on the base portion (40) interengages with an aligned aperture (48) in the wall of the lid portion.

10. A container as claimed in any one of Claims 7 to 9, characterised in that the or each projection (18; 45) of the retaining means is hook-shaped.

11. A container as claimed in any one of the preceding claims, wherein the retaining means is at least one pair of projections (18) on the base portion (10) which interengage with respective aligned apertures (19) in the lid portion (13), one projection of said pair of projections extending in a direction which is opposite to the direction in which the other projection of said pair of projections extends.

12. A container as claimed in any one of the preceding claims, characterised in that the base portion (10; 40) has article receiving depressions (11; 41).

13. A container as claimed in any one of Claims 1 to 12, characterised in that the lid portion (13; 44) is preformed to provide side and/or end walls.

14. A container as claimed in any one of the preceding claims, characterised in that the lid portion (13; 44) has a frusto-conical configuration.

15. A container as claimed in any one of the preceding claims, characterised in that the container is an egg box.

Patentansprüche

1. Verpackungsbehälter für Eier, Früchte oder ähnliche verhältnismäßig kleine Gegenstände, der einen aus Kunststoffmaterial gebildeten Grundteil (10; 40) und einen Deckelteil (13; 44) aus Pappe oder Zellstoff aufweist, wobei der Deckelteil wenigstens einen Teil der umgebenen Wand des Behälters bildet, dadurch gekennzeichnet, daß der Deckelteil (13; 44) vom Grundteil (10; 40) getrennt ist, daß ineinandereingreifende Befestigungsmittel (18, 19; 45, 48) durch den Grundteil und den Deckelteil gebildet werden, um den Deckelteil auf dem Grundteil zu befestigen, wobei die Befestigungsmittel leicht lösbar sind, um den Deckelteil vom Grundteil zu lösen, und daß der Grundteil (10) aufrechtstehende Stützen (12) aufweist, die wenigstens teilweise den Deckelteil 13 tragen.

2. Behälter nach Anspruch 1, dadurch gekennzeichnet, daß der Grundteil (10; 40) und der Deckelteil (13; 44) zwei im wesentlichen gleiche Hälften aufweisen.

3. Behälter nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß der Deckelteil (13; 44) derart mit dem Grundteil (10; 40) verschachtelt ist, daß die freie Kante des Deckelteils vom Grundteil umfaßt ist.

4. Behälter nach einem der vorangehenden Ansprüche, dadurch gekennzeichnet, daß der Deckelteil (13; 44) rechtwinklig ist und einen Umfangsrad hat, der mit dem Grundteil (10; 40) aur allen vier Seiten verschachtelt ist.

5. Behälter nach einem der vorangehenden Ansprüche, dadurch gekennzeichnet, daß der

Grundteil (10; 40) einen inneren Absatz (22) aufweist, mit dem die freie Kante des Deckelteils (13; 44) in Eingriff kommt, wobei der Grundteil mit einem Rand (16; 43) ausgebildet ist, der den Deckelteil in Stellung hält und ein Nachaußenbiegen des Deckelteiles verhindert.

6. Behälter nach Anspruch 5, dadurch gekennzeichnet, daß der Grundteil (10; 40) Rippen (17) oder andere Vorsprünge (46, 50) aufweist, die zusammen mit dem Rand eine Nute oder Nuten zum Aufnehmen der freien Kante des Deckelteiles (13; 44) bilden und dadurch wenigstens ein Nachinnenbiegen des Deckelteiles einschränken.

7. Behälter nach einem der vorangehenden Ansprüche, dadurch gekennzeichnet, daß die Befestigungsmittel wenigstens einen Vorsprung (18; 45) auf dem Grundteil (10; 40) aufweisen, der mit einer ausgerichteten Öffnung (18; 48) im Deckelteil (13; 44) in wechselseitigen Eingriff kommt.

8. Behälter nach Anspruch 7, dadurch gekennzeichnet, daß die Befestigungsmittel einen hohlen Vorsprung (18), der von jeder der Stützen hochsteht, und ausgerichtete Öffnungen (19) im Deckelteil aufweist, durch die die Vorsprünge hindurch führen, um über der oberen Oberfläche des Deckelteils zu liegen.

9. Behälter nach Anspruch 7, bei dem der oder jeder Vorsprung (45) des Grundteils (40) in wechselseitigem Eingriff mit einer ausgerichteten Öffnung (48) in der Wand des Deckelteiles steht.

10. Behälter nach einem der Ansprüche 7 bis 9, dadurch gekennzeichnet, daß der oder jeder Vorsprung (18; 45) der Befestigungsmittel hakenförmig ist.

11. Behälter nach einem der vorangehenden Ansprüche, bei dem die Befestigungsmittel wenigstens ein Paar von Vorsprüngen (18) auf dem Grundteil (10) sind, die in wechselseitigem Eingriff mit entsprechenden ausgerichteten Öffnungen (19) im Deckelteil (13) steht, wobei ein Vorsprung des Paares von Vorsprüngen sich in einer Richtung erstreckt, die entgegengesetzt ist zur Richtung, in der sich der andere Vorsprung des Paares von Vorsprüngen erstreckt.

12. Behälter nach einem der vorangehenden Ansprüche, dadurch gekennzeichnet, daß der Grundteil (10; 40) Gegenstände aufnehmende Vertiefungen (11; 41) aufweist.

13. Behälter nach einem der Ansprüche 1 bis 12, dadurch gekennzeichnet, daß der Deckelteil (13; 44) so vorgeformt ist, daß er Seiten- und/oder Endwände bildet.

14. Behälter nach einem der vorangehenden Ansprüche, dadurch gekennzeichnet, daß der Deckelteil (13; 44) kegelstumpfförmigen Aufbau hat.

15. Behälter nach einem der vorangehenden Ansprüche, dadurch gekennzeichnet, daß der Behälter eine Eierschachtel ist.

Revendications

1. Récipient d'emballage pour oeufs, fruits ou articles relativement petits analogues comprenant une partie-base (10; 40) façonnée en matière plastique et une partie-couvercle (13; 44) en carton ou pâte à papier, la partie-couvercle constituant au moins une partie de la paroi périphérique du récipient, caractérisé en ce que la partie-couvercle (13; 44) est séparée de la partie-base (10; 40), des moyens de retenue emboîtés les uns dans les autres (18, 19; 45, 48) sont prévus sur la partie-base et la partie-couvercle pour fixer la partie-couvercle sur la partie-base, les moyens de retenue étant faciles à détacher pour séparer la partie-couvercle de la partie-base, et que la partie-base (10) présente des piliers verticaux (12) qui supportent partiellement au moins la partie-couvercle (13).

2. Récipient selon la revendication 1, caractérisé en ce que la partie-base (10; 40) et la partie-couvercle (13; 44) sont constituées par deux moitiés sensiblement égales.

3. Récipient selon la revendication 1 ou la revendication 2, caractérisé en ce que la partie-couvercle (13; 44) s'emboîte dans la partie-base (10; 40) d'une manière telle que le bord libre de la partie-couvercle est entouré par la partie-base.

4. Récipient selon l'une quelconque des revendications précédentes, caractérisé en ce que la partie-couvercle (13; 44) est rectangulaire et présente un bord périphérique qui s'emboîte dans la partie-base (10; 40) sur chacun des quatre côtés.

5. Récipient selon l'une quelconque des revendications précédentes, caractérisé en ce que la partie-base (10; 40) présente une console interne (22) qui rencontre le bord libre de la partie-couvercle (13; 44), de sorte que la partie-base présente un rebord (16; 43) qui positionne la partie-couvercle et l'empêche de se déformer vers l'extérieur.

6. Récipient selon la revendication 5, caractérisé en ce que la partie-base (10; 40) présente des nervures (17) ou autres saillies (46, 50) qui se combinent avec le rebord pour définir une ou plusieurs rainures de réception du bord libre de la partie-couvercle (13; 44) et par là restreignent au moins la déformation vers l'intérieur de la partie-couvercle.

7. Récipient selon l'une quelconque des revendications précédentes, caractérisé en ce que les moyens de retenue sont constitués par au moins une saillie (18; 45) prévue sur la partie-base (10; 40) qui s'engage dans un trou aligné (19; 48) de la partie-couvercle (13; 44).

8. Récipient selon la revendication 7, caractérisé en ce que les moyens de retenue sont constitués par une saillie creuse (18) se dressant sur chacun des piliers et par des trous alignés (19) ménagés dans la partie-couvercle que les saillies traversent pour se superposer à la surface supérieure de la partie-couvercle.

9. Récipient selon la revendication 7, dans lequel la ou chaque saillie (45) de la partie-base (40) s'engage dans un trou aligné (48) de la paroi de la partie-couvercle.

10. Récipient selon l'une quelconque des revendications 7 à 9, caractérisé en ce que la ou chaque saillie (18; 45) des moyens de retenue est crochue.

11. Récipient selon l'une quelconque des revendications précédentes, dans lequel les moyens de

retenue sont au moins une paire de saillies (18) prévues sur la partie-base (10) qui s'engagent dans des trous alignés respectifs (19) de la partie-couvercle (18), une saillie de ladite paire de saillies s'étendant dans un sens opposé à celui dans lequel s'étend l'autre saillie de ladite paire de saillies.

12. Récipient selon l'une quelconque des revendications précédentes, caractérisé en ce que la partie-base (10; 40) présente des dépressions de réception d'article (11; 41).

13. Récipient selon l'une quelconque des revendications 1 à 12, caractérisé en ce que la partie-couvercle (13; 44) est préformée pour constituer des parois latérales et/ou d'extrémité.

14. Récipient selon l'une quelconque des revendications précédentes, caractérisé en ce que la partie-couvercle (13; 44) a une forme tronconique.

15. Récipient selon l'une quelconque des revendications précédentes, caractérisé en ce que le récipient est une boîte à oeufs.

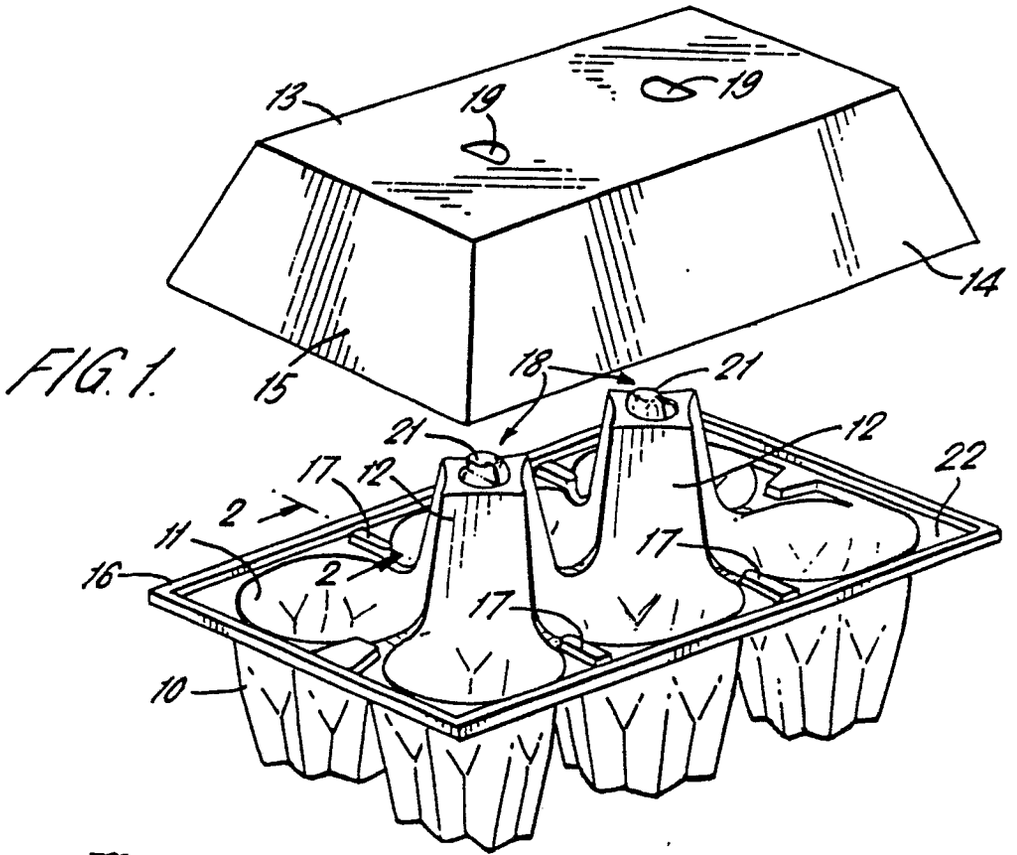


FIG. 1.

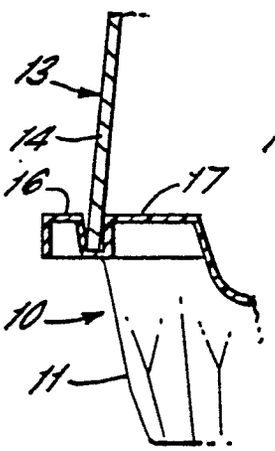


FIG. 2.

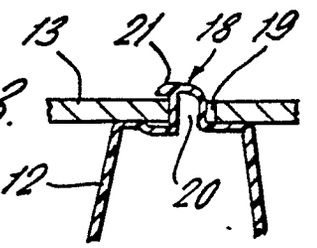


FIG. 3.

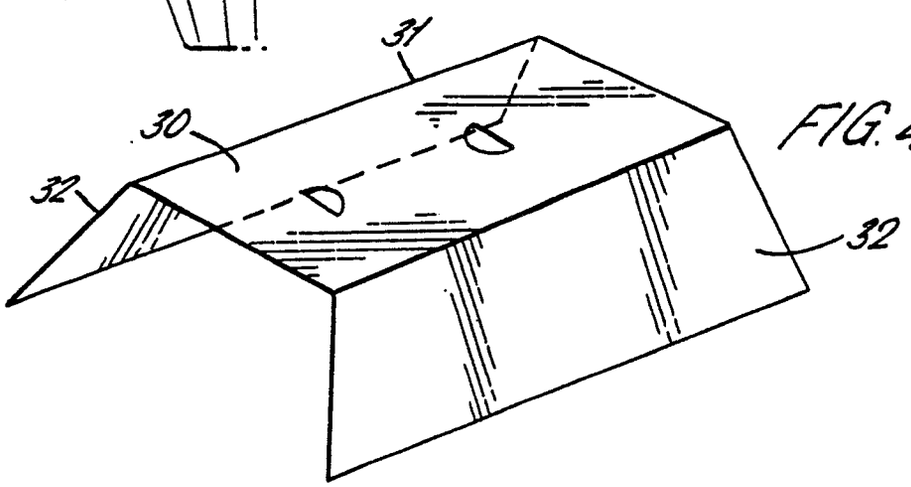


FIG. 4.

FIG. 5.

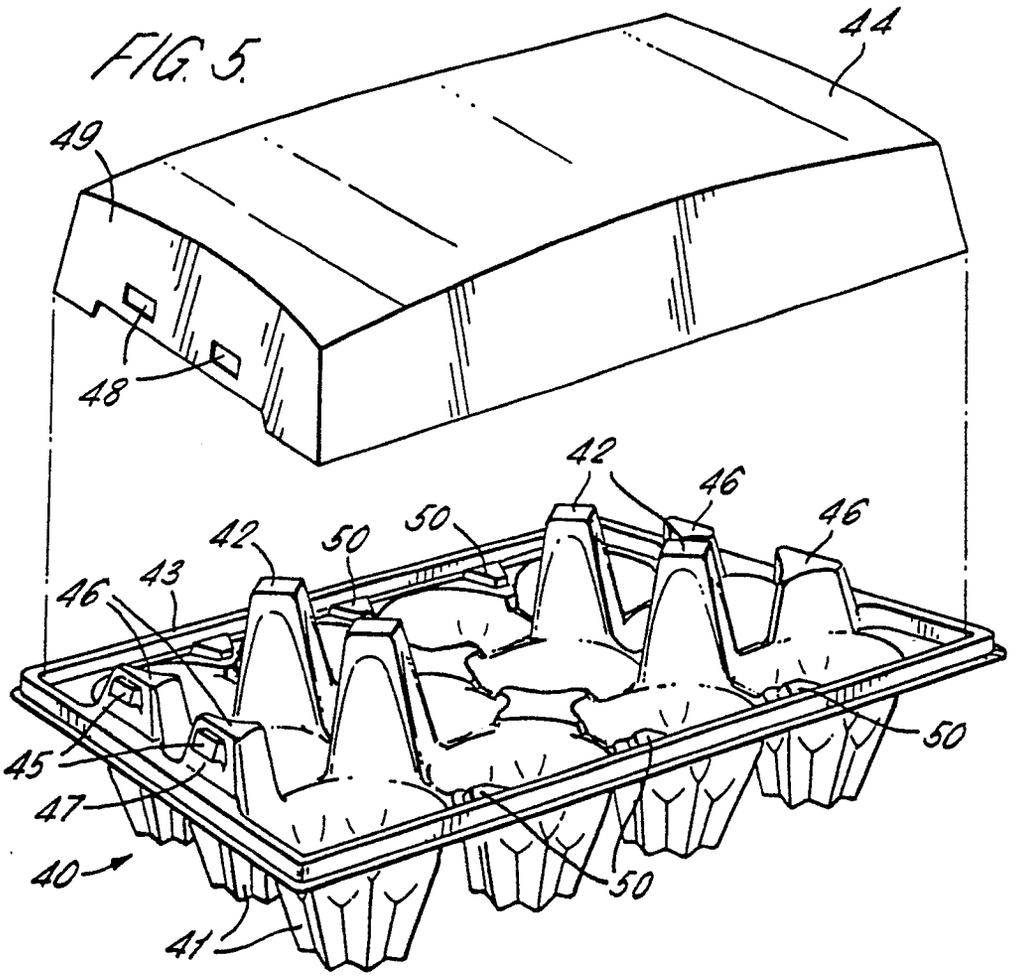
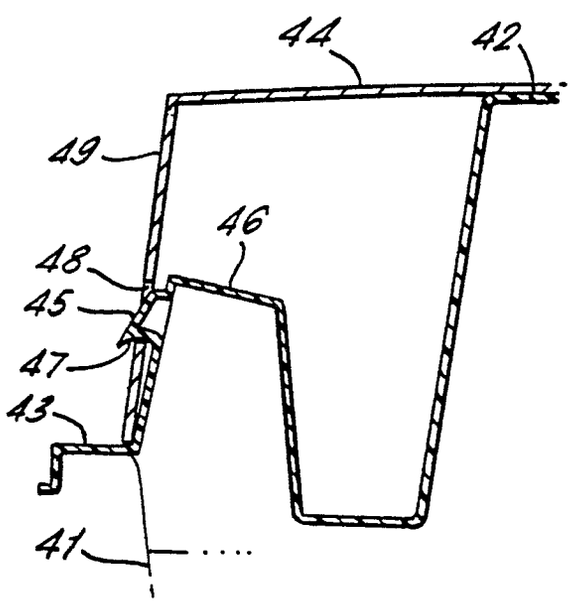

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FIG. 6.


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