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**Punched cardboard element for keeping and showing sweets and the like.**

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## Description

The present invention relates to an element for holding and presenting confectionery products, particularly chocolates and the like, which is adapted to define a plurality of seats for the products, comprising a flat sheet of card or similar material having a plurality of four-sided punchings each defined by punched lines and, within the punched lines being provided with slits, whereby said punched lines define a plurality of holes in the sheet when the flaps defined between the slits and the punched lines are bent, and comprising an auxiliary sheet arranged beneath the flat sheet and having a plurality of holes.

An element of the above type is disclosed by DE-U-89 07 594, in which the holes in the auxiliary sheet present the same dimension and form of the holes of the upper sheet in order to limit the bending of flaps. In this solution all the flaps are "floating", and in order to make the element or box more stiff it is necessary to connect the auxiliary sheet and the bottom of the box with an auxiliary bent flap glued to the bottom of the box.

The object of the present invention is to provide an element of the type specified above which is stiff and reliable without using glue or similar.

According to the invention, this object is achieved by virtue of the fact that the position of the holes on the auxiliary sheet coincide with the position of at least two opposite sides of the punchings and in which at least two corresponding opposite flaps obtained by bending said punched lines are inserted in order to keep them in an opened-out position.

By virtue of these characteristics, the card element can fulfil the same function as a thermoformed cellular element of known type, providing considerable advantages in terms of cost and environmental impact. Moreover the flaps can be snap-engaged in the holes of the auxiliary sheet, obtaining a dimensionally stable and stiff element.

Further advantages and characteristics of the holding and presentation element according to the invention will become clear from the detailed description which follows, with reference to the appended drawings, in which:

Figure 1 is a perspective view of a holding and presentation element according to the invention,  
Figure 2 is a perspective view of the element of Figure 1 from below,

Figure 3 is a section taken on the line III-III of Figure 1,

Figure 4 is a plan view of the punched sheet from which the element of Figure 1 is made,

Figure 5 is a perspective view of a first embodiment of the element of Figure 1,

Figure 6 is a section taken on the line VI-VI of Figure 5,

Figure 7 is a plan view of the punched sheet from

which the element of Figure 5 is made,

Figure 8 is a perspective view of a variant of the embodiment of Figure 5,

Figure 9 is a cross-section of the element of Figure 8 in a closed configuration,

Figure 10 is a perspective view of a third embodiment of the element according to the invention,

Figure 11 is a perspective view of an element of Figure 8 from below,

Figure 12 is a section taken on the line XII-XII of Figure 10,

Figure 13 is a plan view of the punched sheet from which the element of Figure 10 is made,

Figure 14 is a perspective view of a fourth embodiment of the element according to the invention,

Figure 15 is a perspective view of the element of Figure 14 from below,

Figure 16 is a section taken on the line XIV-XIV of Figure 14,

Figure 17 is a view of an upper, flat punched element from which the element of Figure 14 is made,

Figure 18 is a view of a lower, flat punched sheet from which the element of Figure 14 is made,

With reference to the drawings, an element for holding and presenting confectionery products is generally indicated 10 and comprises a flat punched sheet of card 12 with straight punched lines 12a and a plurality of annular punched lines 12b. These punched lines, which define lines of bending, are of the so-called half-cut type, that is, they are formed by cutting through half the thickness of the sheet 12.

With particular reference to the embodiment shown in Figures 1-4, the punched sheet 12 has a first rectangular portion A bounded by the straight punched lines 12a which are adapted to define lateral glueing flaps 14, and a second portion B which is joined to the first in correspondence with a straight punched line 15 broken by substantially U-shaped slits 16. The second portion B of the punched sheet 12 also has straight punched lines 12a adapted to define lateral glueing flaps 17 for cooperating with the lateral flaps 14 in known manner.

The annular punched lines 12b are substantially rectangular with rounded corners and are arranged in an ordered array in the first portion A of the punched sheet 12. Slits 18 are provided within each annular punched line 12b and comprise one I-shaped central portions 18a whose stems are parallel to and equidistant from the longer sides of the respective rectangular punched lines 12b, and four connecting portions 18b between the tips of the ends of the I-shaped central portions 18a and the rounded corners V of the punched lines 12b. The slits 18 and the annular punched line 12b thus define two resilient flaps 20 of card in the form of isosceles trapezia and two support flaps 22 having portions which are also in the form of

isosceles trapezia and the shorter bases of which extend to form rectangular portions, indicated 22a in the drawings.

The second portion B of the punched card sheet 12 has a plurality of rectangular holes 24 arranged in positions such that, when the element 10 is assembled, they correspond to the longer sides of the rectangular punched lines 12b to which the support flaps 22 are articulated. Adjacent rectangular holes 24 are joined by shorter central portions so are generally to define substantially double-T-shaped holes 25.

When the element 10 is assembled, the second portion B of the punched sheet 12 is bent underneath the first portion A along the straight punched line 12a joining the first and second portions and along the punched line 15. During this bending, the slits 16 define support portions 27 which project downwardly so as to keep the first portion A of the sheet 12 at a constant distance from a support plane, for example, the bottom of a box. After the second portion B has been bent relative to the first portion A and the lateral flaps 14 and 17 have been glued together, the support flaps 22 and the resilient flaps 20 are bent so as to form a plurality of holes 28 in the first portion A of the punched sheet 12 defining, with the bent flaps 20 and 22, a plurality of seats S for substantially parallelepipedal products. When the support flaps 22 are bent, their rectangular ends 22a are fitted into respective rectangular holes 24 so as to project below the plane of the second portion B of the punched sheet 12 (Figures 2 and 3) and have the function of forming a support on the bottom of the box. The rectangular end portions 22a of the support flaps 22 are therefore situated in the plane defined by the bent and glued flaps 14 and the support portions 27 so as to keep the frames C defined by the holes 28 in the punched sheet 12 at a predetermined distance from the lower support plane constituted, for example, by the bottom of a box.

The resilient flaps 20 "float" and, by virtue of the resilient force biasing them towards a configuration in which they are coplanar with the frames C, help to keep the products in position by eliminating the clearance between the products and the seats S. The support flaps 22, on the other hand, are kept apart by virtue of their engagement in the holes 24 in the punched sheet 12.

The embodiment shown in Figures 5-7, in which the same reference numerals are retained for similar elements, includes a third portion D of the punched sheet 12 which, in the assembled configuration, is adapted to constitute the bottom of the box. In this embodiment, therefore, the element 10 for holding and presenting the products can be used as the base of a box which can be completed by a suitable lid E, shown in broken outline in Figure 6.

Alternatively, a finished box can be produced by the superposition of two elements 10, in which one

glued lateral flap 21 can be used as a hinge. In this variant, shown in Figures 8 and 9, both the base and the lid of the box have cells for the improved restraint and protection of the products.

For confectionery products of rounded shape, the variant shown in Figures 10-13 may be used to advantage. In this variant, the first portion A of the punched sheet 12 has annular punched lines 30 which are substantially square with curved sides 30a connected by rounded corners 30b. Within each punched line 30, two slits 32 arranged along the diagonals of the punched outline and a central square hole 33 define four, substantially-triangular support flaps 34 which, when the element 10 is assembled, are adapted to be inserted in corresponding holes 35 provided in the second portion B below the first portion A of the punched element 12 and arranged in correspondence with the curved sides 30a of the punched line 30. The curved lines of bending in correspondence with the punched sides 30a give the upper frame wall C of the element 10 a wavy appearance, as shown in Figure 10. Moreover, in their opened-out configuration, the flaps 34 form curved vertical walls which are adapted to fit the rounded products perfectly. The free appendages of the flaps 34 below the portion B of the punched sheet 12 act as feet and as supports for the upper frame wall C. To advantage, the element 10 of the variant of Figures 10-13 can be inserted in the bottom of a box or can be used as the base of a box if a third portion of the punched sheet is included, as described in connection with the variants shown in Figures 5-7 or 8-9.

The variant shown in Figures 14-18, although substantially similar to the solution shown in Figures 1-3, differs therefrom in that the punched element 12 does not have a second portion which can be bent but is assembled with an auxiliary sheet 40 which is glued or heat-sealed in correspondence with bent edges 42 and in correspondence with bent lateral flaps 43 of the punched sheet 12. The auxiliary sheet 40 also has a plurality of rectangular holes 44 for cooperating with support flaps 22 defined by the annular punched lines 12b and by the shaped slits 18.

The above description shows clearly the advantages of the holding and presentation element according to the invention which, by virtue of its particular characteristics, can be used not only as an accessory for a box but as an integral and structural part of the box itself.

## Claims

1. An element for holding and presenting confectionery products, particularly chocolates and the like, which is adapted to define a plurality of seats for the products, comprising a flat sheet (12) of card or similar material having a plurality of four-

sided punchings (12b, 30) each defined by punched lines and, within the punched lines (12b, 30) being provided with slits (18, 32), whereby said punched lines define a plurality of holes (28) in the sheet (12) when the flaps (20, 22, 34) defined between the slits (18, 32) and the punched lines (12b, 30) are bent; and comprising an auxiliary sheet (12 B') arranged beneath the flat sheet (12 A) and having a plurality of holes (24) characterised in that the position of the holes (24, 35) on the auxiliary sheet (12 B) coincide with the position of at least two opposite sides of the punching and in which at least two corresponding opposite flaps obtained by bending said punched lines (22, 34) are inserted in order to keep them in an opened-out position.

2. An element according to Claim 1, characterised in that the flat sheet (12 A) has an integral base sheet (12 D) which is adapted to be bent beneath the auxiliary sheet (12 B') and against which the flap (22, 34) inserted in the holes (25, 35) of the auxiliary sheet (12 B) bear in the assembled condition of the element (10).
3. An element according to Claim 2, characterised in that each punching (12b) is substantially rectangular and in that the slits (18) within each punching (12b) have an I-shaped central portion (18a) arranged with its stem equidistant from and parallel to the longer sides of the punched line (12b) and four connecting portions (18b) between the tips of the ends of the I-shaped central portion (18a) and the corners (V) of the punched line (12b), whereby there are defined two resilient trapezoidal flaps (20), in correspondence with the shorter sides of the punching (12b) and two support flaps (22), inserted in the corresponding holes (25) of the auxiliary sheet (12 B), each having a trapezoidal portion adjacent to the edge of the punching (12b) and a rectangular portion (22a) connected to the trapezoidal portion.
4. An element according to Claim 3, characterised in that the auxiliary sheet (12 B) is glued or heat-sealed to bent side flaps (43) of the flat sheet (12 A) at a predetermined distance therefrom.
5. An element according to Claim 3, characterised in that it has a lateral flap (21) glued or heat-sealed to a similar element (10) so as to define a hinge between a base and a lid, both provided with seats for products.
6. An element according to Claim 1, characterised in that each punching (30) is substantially square with curved sides (30a) connected by rounded corners (30b), and in that the slits (32) within

each punched line (30) are arranged diagonally so as to define substantially triangular flaps (34).

## Patentansprüche

1. Element zur Aufnahme und Schaustellung von Süßwarenprodukten, insbesondere Schokoladen und ähnliches, welches eine Vielzahl von Aufnahmen für die Produkte definiert, umfassend ein flaches Blatt (12) aus Karton oder ähnlichem Material mit einer Vielzahl von vierseitigen Stanzungen (12b, 30), wobei jede von eingestanzten Linien begrenzt ist und innerhalb der eingestanzten Linien (12b, 30) Schlitz (18, 32) vorgesehen sind, und wobei die genannten eingestanzten Linien eine Vielzahl von Öffnungen (28) im Blatt (12) begrenzen, wenn die von den Schlitz (18, 32) und den eingestanzten Linien (12b, 30) definierten Laschen (20, 22, 34) gebogen sind; weiters umfassend ein unter dem flachen Blatt (12 A) angeordnetes und mit einer Vielzahl von Löchern (24) versehenes Hilfsblatt (12 B), dadurch gekennzeichnet, daß die Anordnung der Löcher (24, 35) im Hilfsblatt (12 B) mit der Anordnung von mindestens zwei gegenüberliegenden Seiten der Stanzungen übereinstimmt, in welche Löcher mindestens zwei entsprechende gegenüberliegende, durch Biegen der eingestanzten Linien entstehende Laschen (22, 34) eingeführt werden, um diese in einer geöffneten Stellung zu halten.
2. Element nach Anspruch 1, dadurch gekennzeichnet, daß das flache Blatt (12 A) ein Basisblatt (12 D) umfaßt, das unter das Hilfsblatt (12 B) biegebar ist und an dem die in die Löcher (25, 35) des Hilfsblattes (12 B) eingeführten Laschen (22, 34) im zusammengebauten Zustand des Elements (10) anliegen.
3. Element nach Anspruch 2, dadurch gekennzeichnet, daß jede Stanzung (12b) im wesentlichen rechteckig ist und daß die Schlitz (18) innerhalb jeder Stanzung (12b) einen I-förmigen, mittleren Abschnitt (18a), der mit seinem Längsbalken im gleichen Abstand von und parallel zu den längeren Seiten der eingestanzten Linien (12b) liegt, und vier Verbindungsabschnitte (18b) zwischen den äußersten Enden des I-förmigen, mittleren Abschnittes (18a) und den Ecken (V) der eingestanzten Linien (12b) aufweisen, wodurch zwei elastische, trapezförmige Laschen (20) entsprechend den kürzeren Seiten der Stanzung (12b) und zwei Stützlaschen (22) definiert sind, die in die entsprechenden Löcher (25) des Hilfsblattes (12 B) eingeführt sind und jeweils einen trapezförmigen, an den Rand der Stanzung (12b) an-

grenzenden Abschnitt und einen rechteckigen, mit dem trapezförmigen Abschnitt verbundenen Abschnitt (22a) aufweisen.

4. Element nach Anspruch 3, dadurch gekennzeichnet, daß das Hilfsblatt (12 B) mit den gebogenen Seitenlaschen (43) des flachen Blattes (12 A) in einem bestimmten Abstand dazu verklebt oder heißversiegelt ist.
5. Element nach Anspruch 3, dadurch gekennzeichnet, daß dieses eine Seitenklappe (21) aufweist, die an ein ähnliches Element (10) geklebt oder mit diesem heißversiegelt ist, um zwischen einem Boden und einem Deckel, die jeweils mit Aufnahmen für Produkte versehen sind, ein Scharnier zu bilden.
6. Element nach Anspruch 1, dadurch gekennzeichnet, daß jede Stanzung (30) im wesentlichen quadratisch ist und gebogene, durch abgerundete Ecken (30b) verbundene Seiten (30a) hat, und daß die Schlitz (32) innerhalb jeder eingestanzten Linie (30) diagonal angeordnet sind und so im wesentlichen dreieckige Laschen (34) bilden.

## Revendications

1. Elément pour contenir et présenter des produits de confiserie, notamment des chocolats et équivalents, qui est adapté pour définir une pluralité de logements pour ces produits comprenant une feuille plate (12) de carton ou de matière similaire comportant une pluralité de perforations quadrilatérales (12b, 30) définies chacune par des lignes de perforation et étant munie, à l'intérieur des lignes de perforation (12b 30), de fentes (18, 32), de telle manière que lesdites lignes de perforation définissent une pluralité de trous (28) dans la feuille (12) lorsque les rabats (20, 22, 34) définis entre les fentes (18, 32) et les lignes de perforation (12b, 30) sont repliés et comprenant une feuille supplémentaire (12B) disposée sous la feuille plate (12A) et comportant une pluralité de trous (24), caractérisé en ce que la position des trous (24, 35) sur la feuille supplémentaire (12B) coïncide avec la position d'au moins deux côtés opposés de la perforation et au moins deux rabats (22, 34) opposés, correspondants, obtenus en repliant lesdites lignes de perforation, sont insérés dans ces trous de manière à les maintenir dans une position d'ouverture.
2. Elément selon la revendication 1, caractérisé en ce que la feuille plate (12A) comporte une feuille de base intégrante (12D) qui est adaptée pour être repliée sous la feuille supplémentaire (12B)

et contre laquelle portent les rabats (22, 34) insérés dans les trous (25, 35) de la feuille supplémentaire (12B), dans l'état assemblé de l'élément (10).

3. Elément selon la revendication 2, caractérisé en ce que chaque perforation (12b) est sensiblement rectangulaire et en ce que les fentes (18) à l'intérieur de chaque perforation (12b) ont une partie centrale (18a) en forme de I dont la tige est équidistante et parallèle aux plus longs côtés de la ligne de perforation (12b) et quatre parties de liaison (18b) entre les bouts des extrémités de la partie centrale (18a) en forme de I et les coins (V) de la ligne de perforation (12b), de telle manière que sont définis deux rabats trapézoïdaux élastiques (20) correspondant aux plus petits côtés de la perforation (12b) et deux rabats de support (22), insérés dans les trous correspondants (25) de la feuille supplémentaire (12B), ayant chacun une partie trapézoïdale adjacente au bord de la perforation (12b) et une partie rectangulaire (22a) reliée à la partie trapézoïdale.
4. Elément selon la revendication 3, caractérisé en ce que la feuille supplémentaire (12B) est collée ou soudée à chaud à des rabats latéraux repliés (43) de la feuille plate (12A) à une distance prédéterminée de celle-ci.
5. Elément selon la revendication 3, caractérisé en ce qu'il comporte un rabat latéral (21) collé ou soudé à chaud à un élément similaire (10) de manière à définir une articulation à charnière entre une base et un couvercle, tous deux comportant des logements pour les produits.
6. Elément selon la revendication 1, caractérisé en ce que chaque perforation (30) est sensiblement carrée avec des côtés courbes (30a) reliés par des coins arrondis (30b), et en ce que les fentes (32) à l'intérieur de chaque ligne de perforation (30) sont disposées en diagonale de manière à définir des rabats (34) sensiblement triangulaires.

FIG. 1

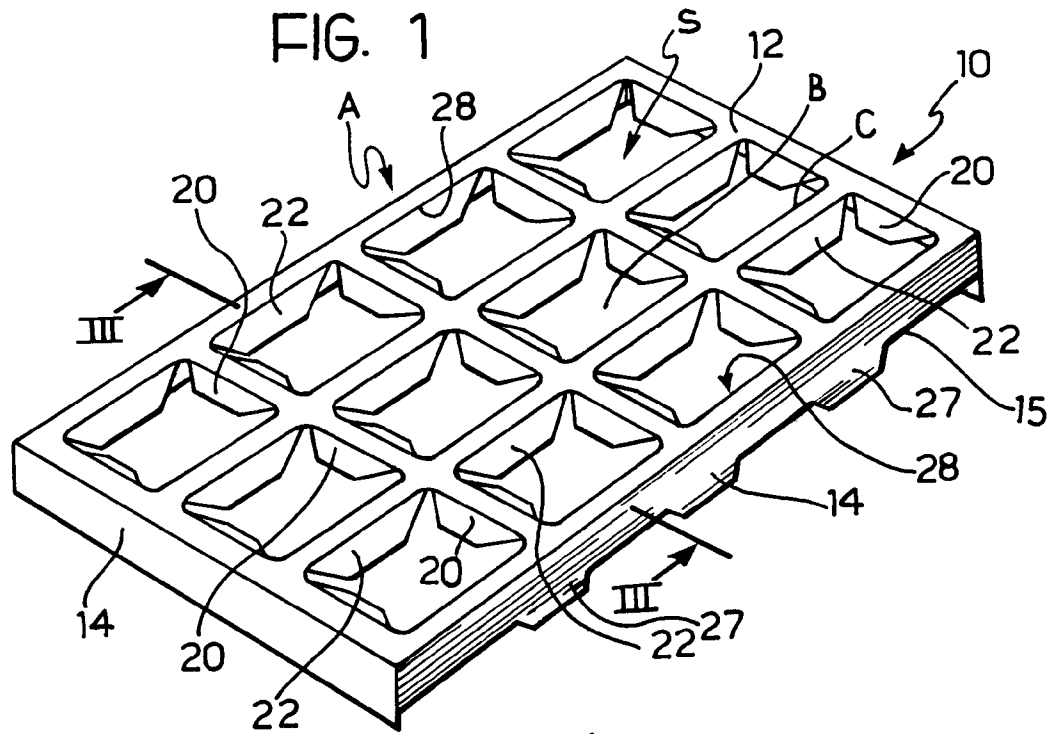


FIG. 2

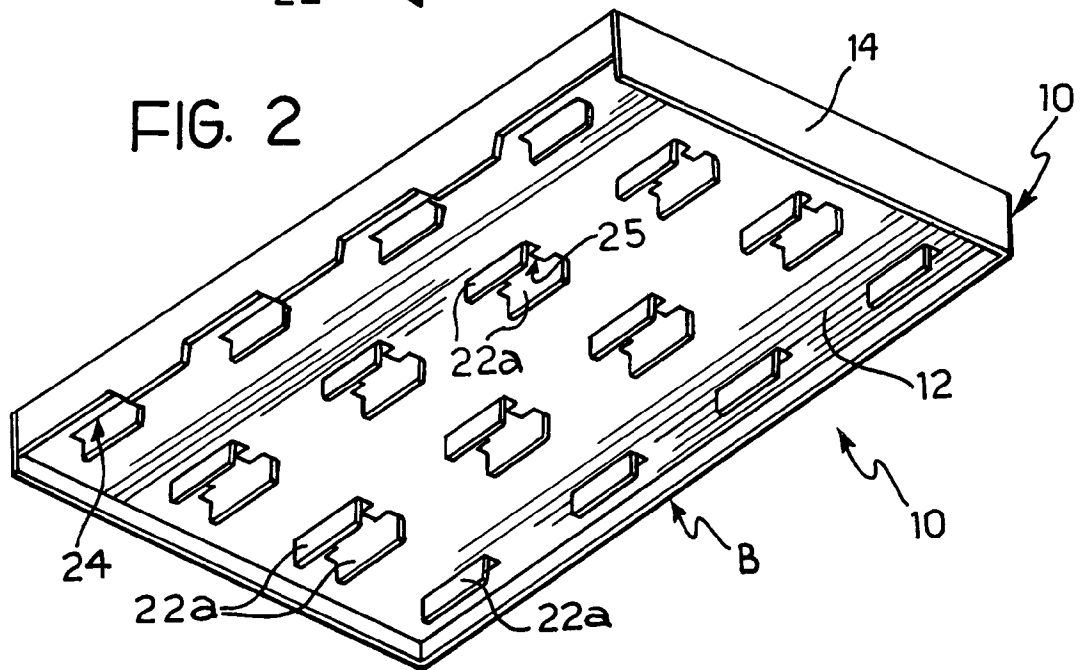


FIG. 3

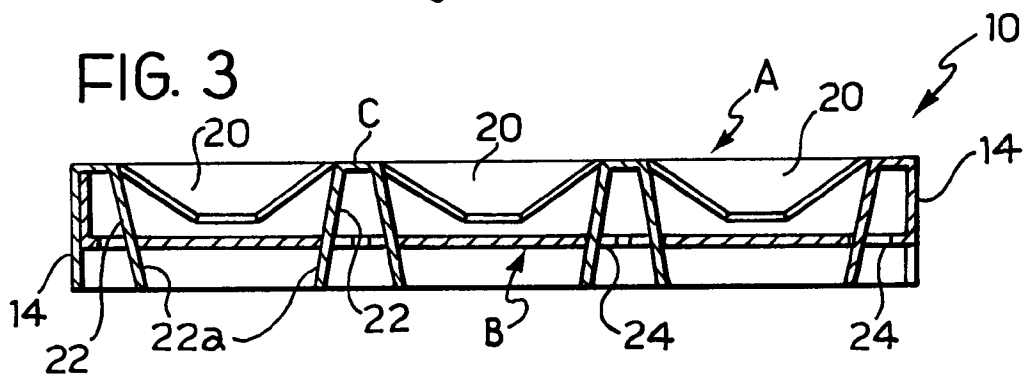


FIG. 4

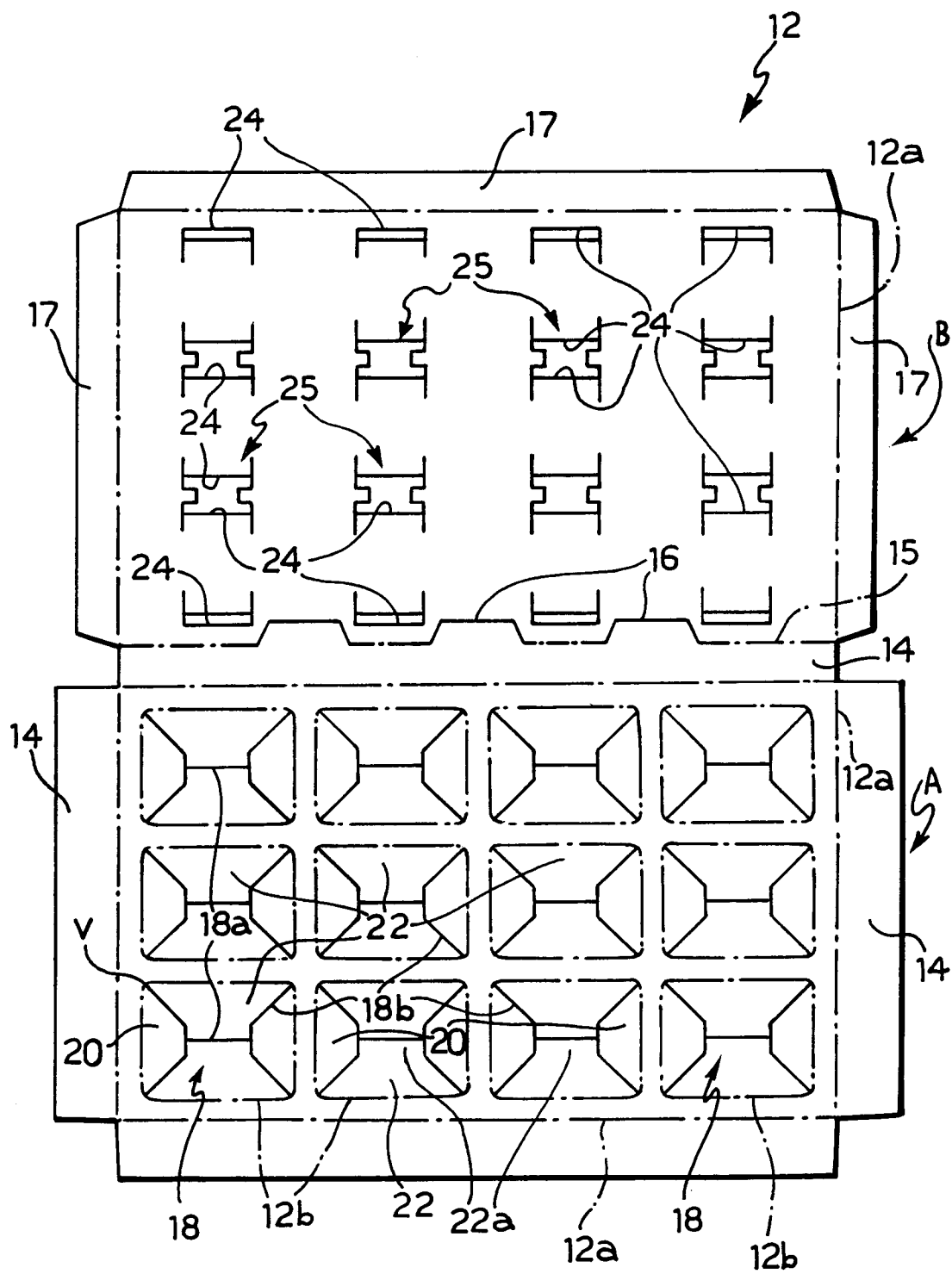


FIG. 5

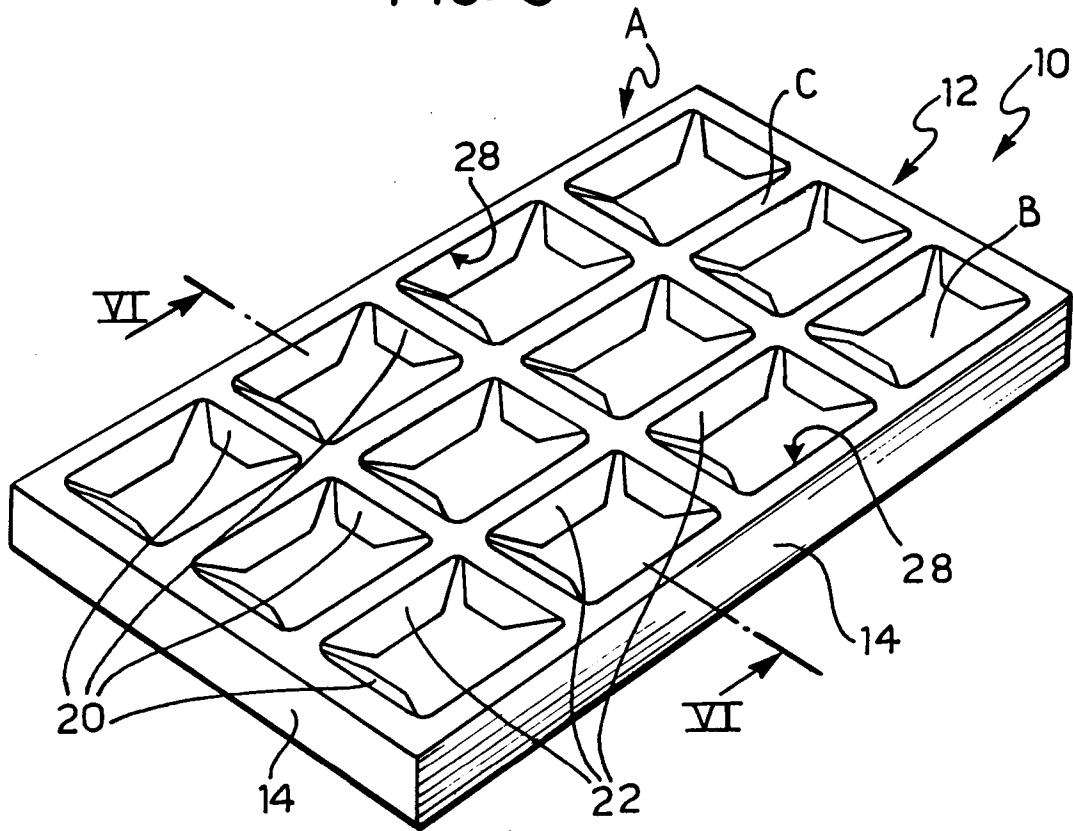


FIG. 6

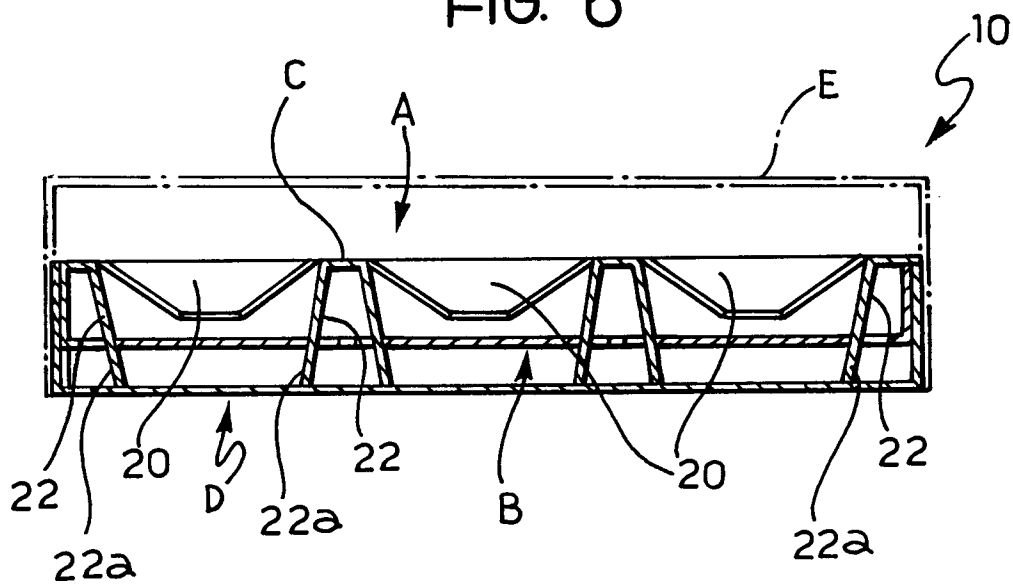




FIG. 7

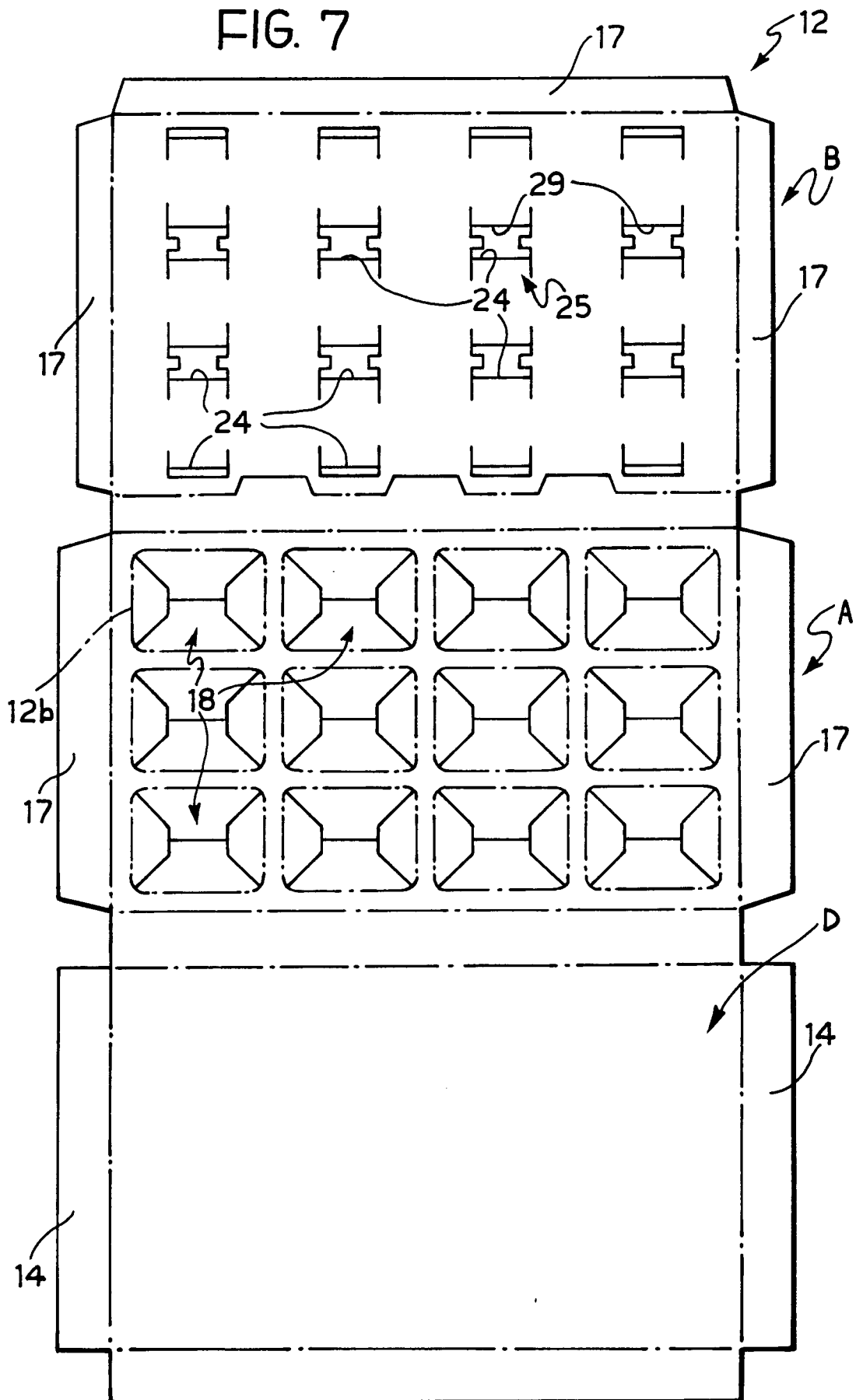


FIG. 8

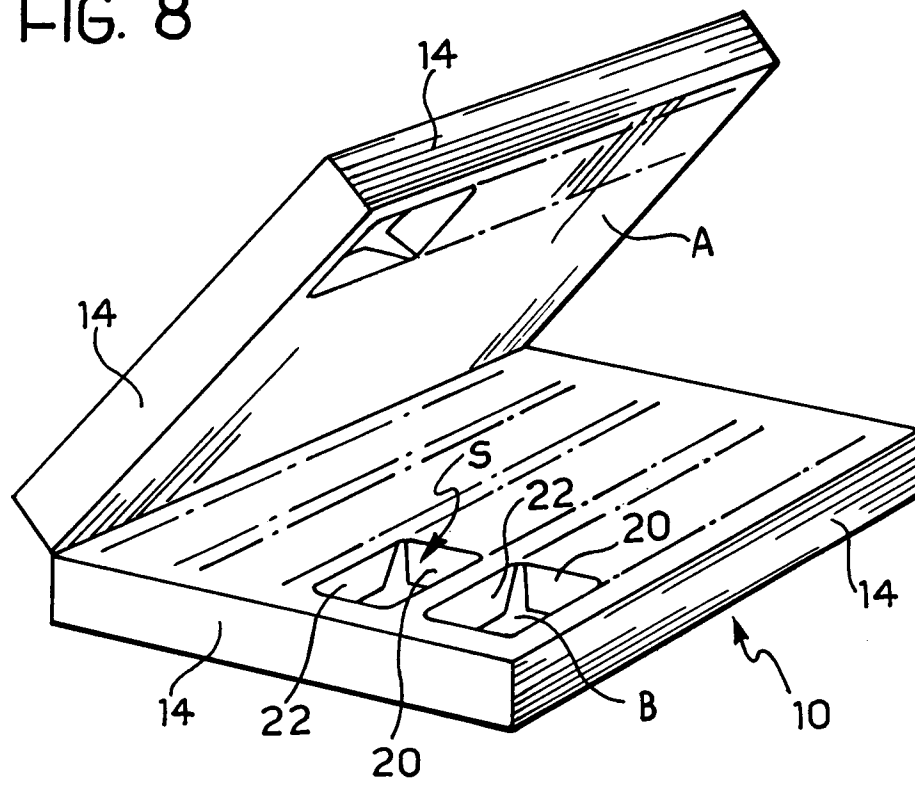


FIG. 9

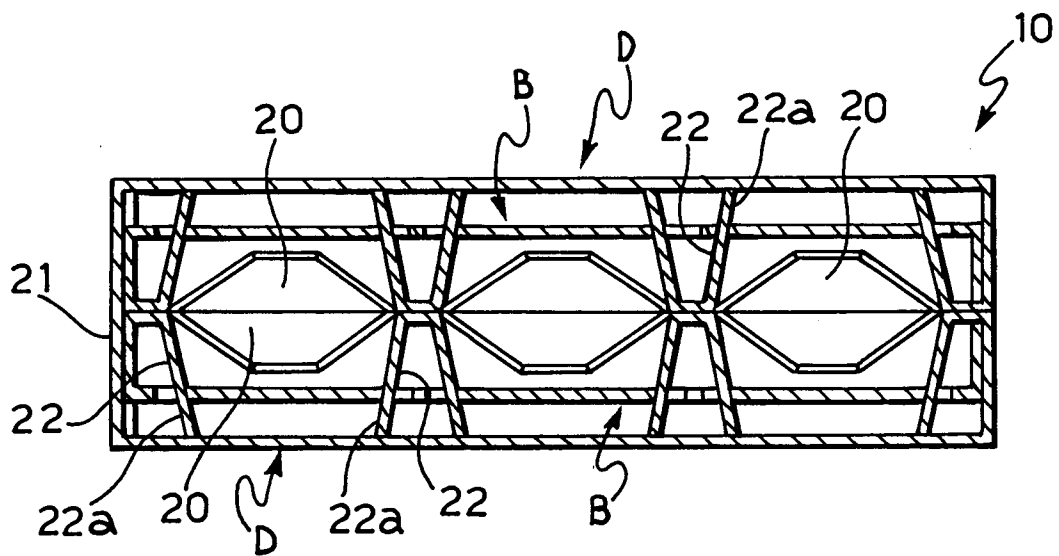


FIG. 10

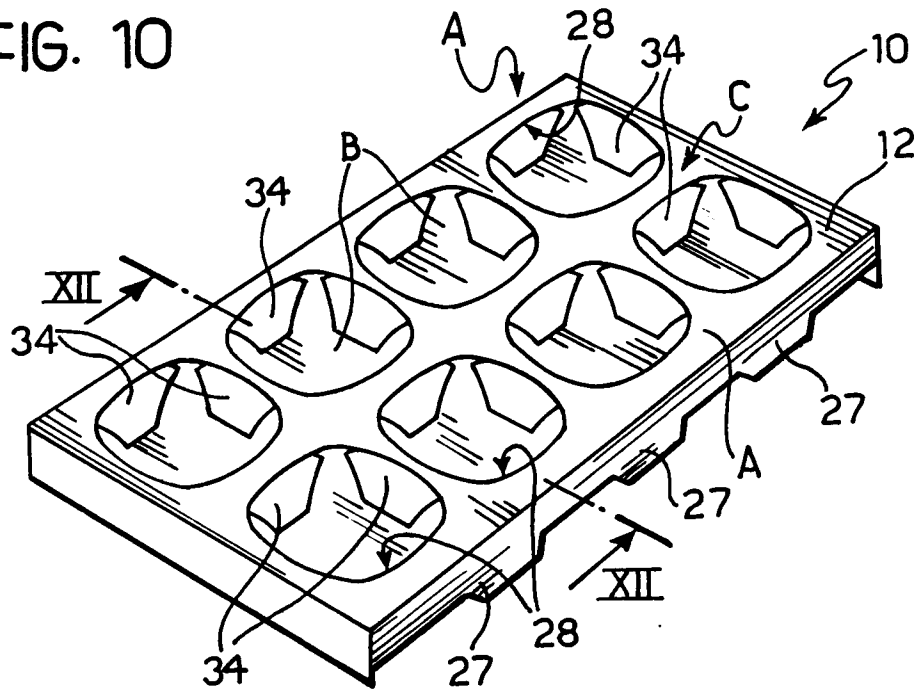


FIG. 11

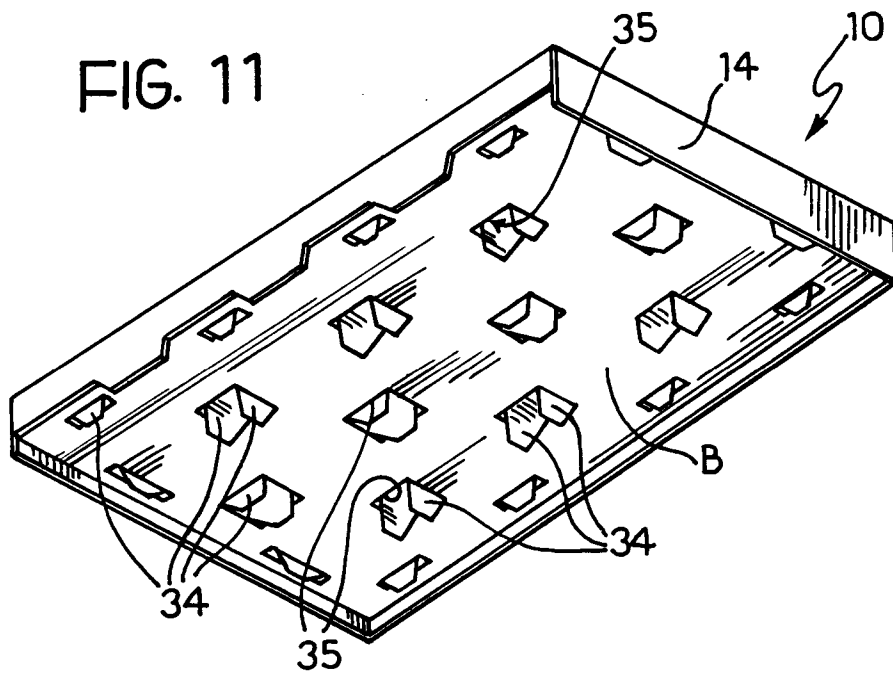
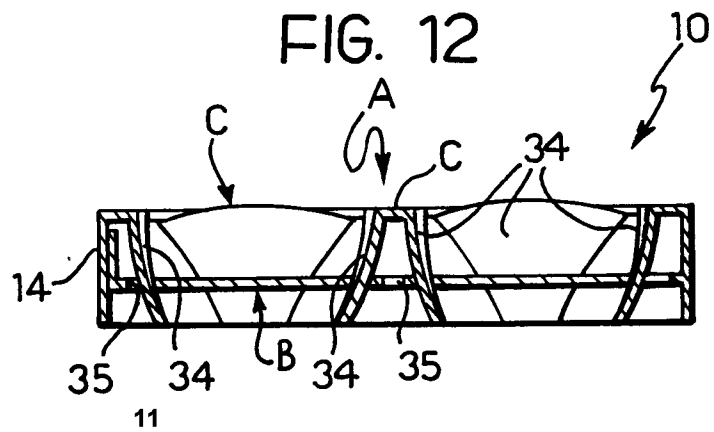


FIG. 12



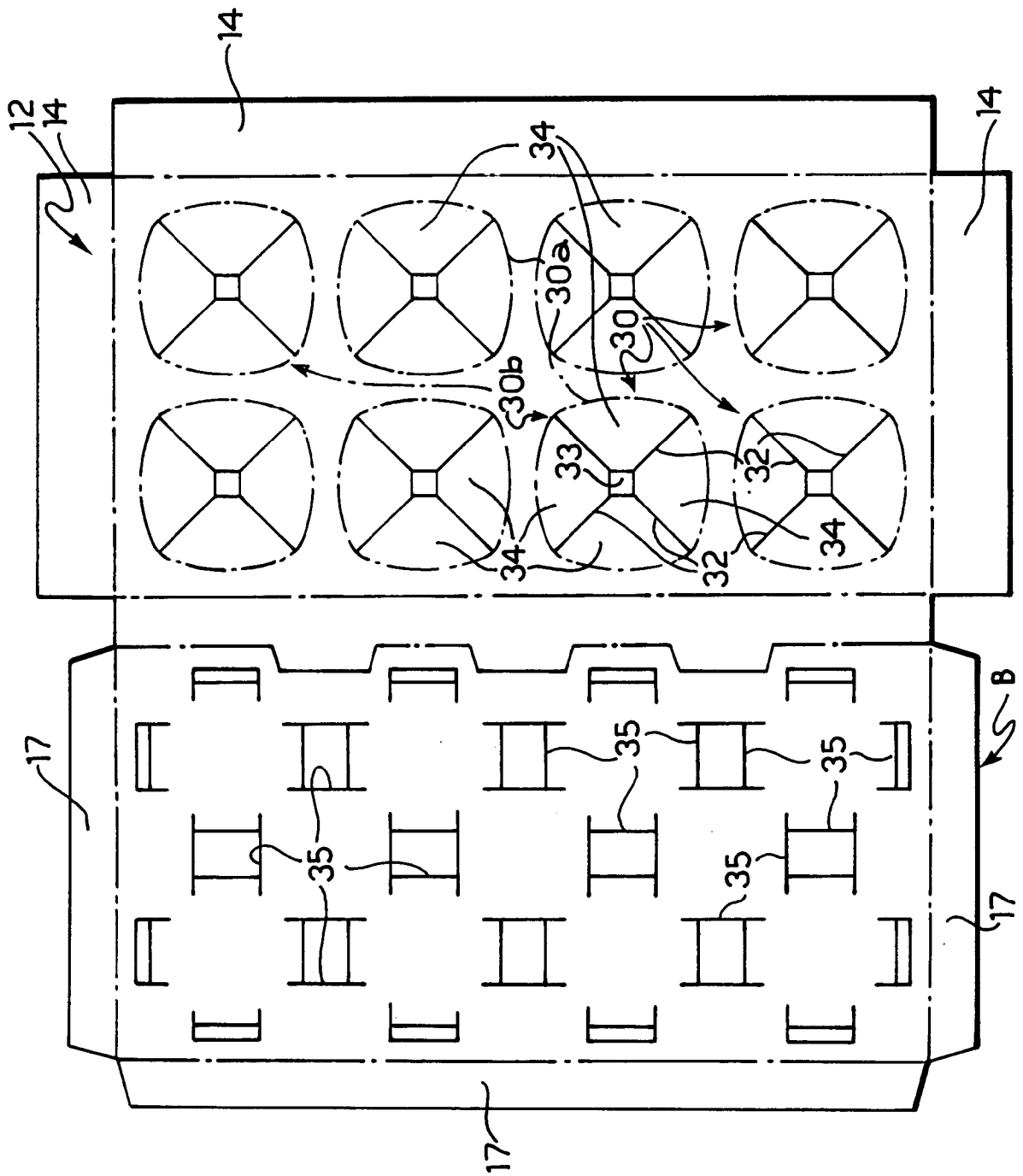


FIG. 13

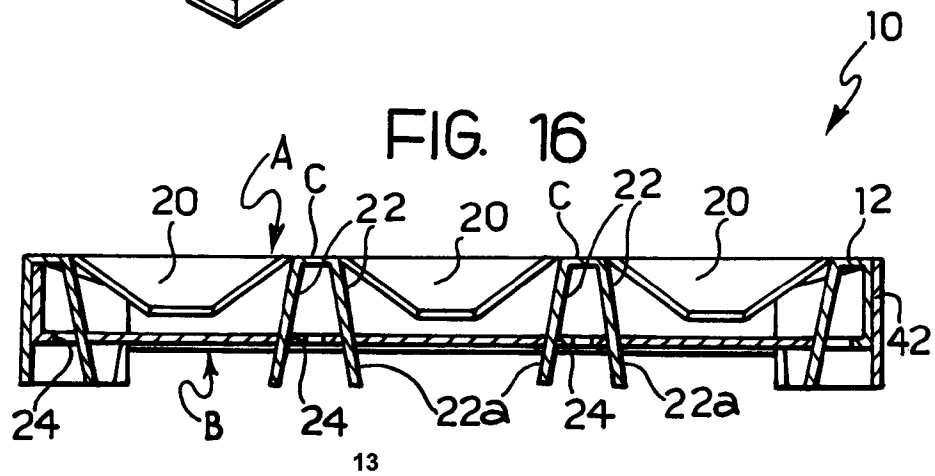
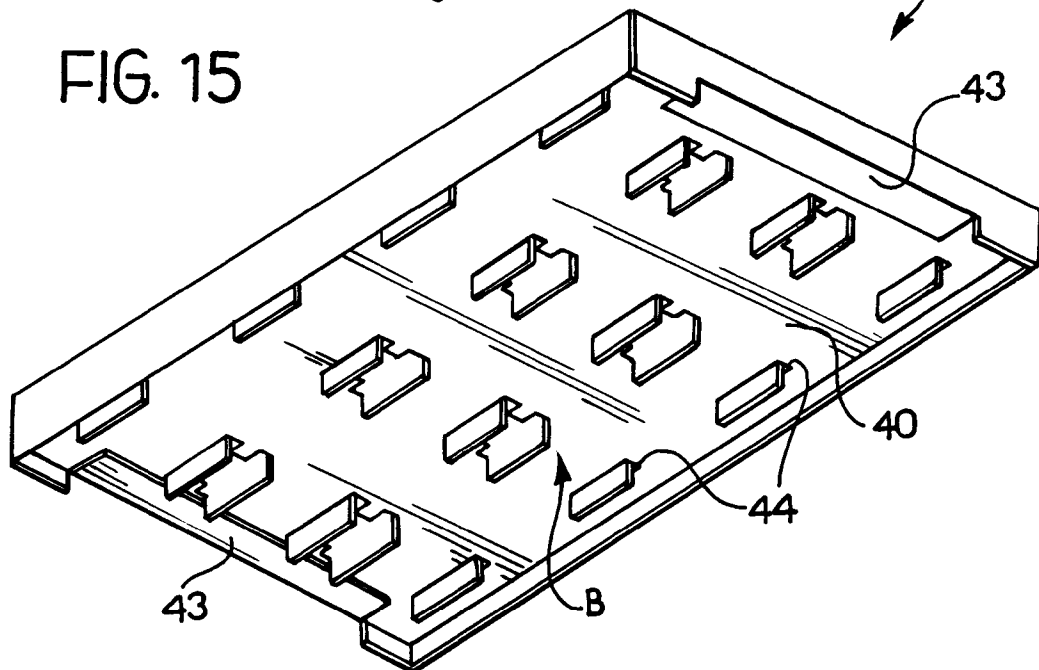
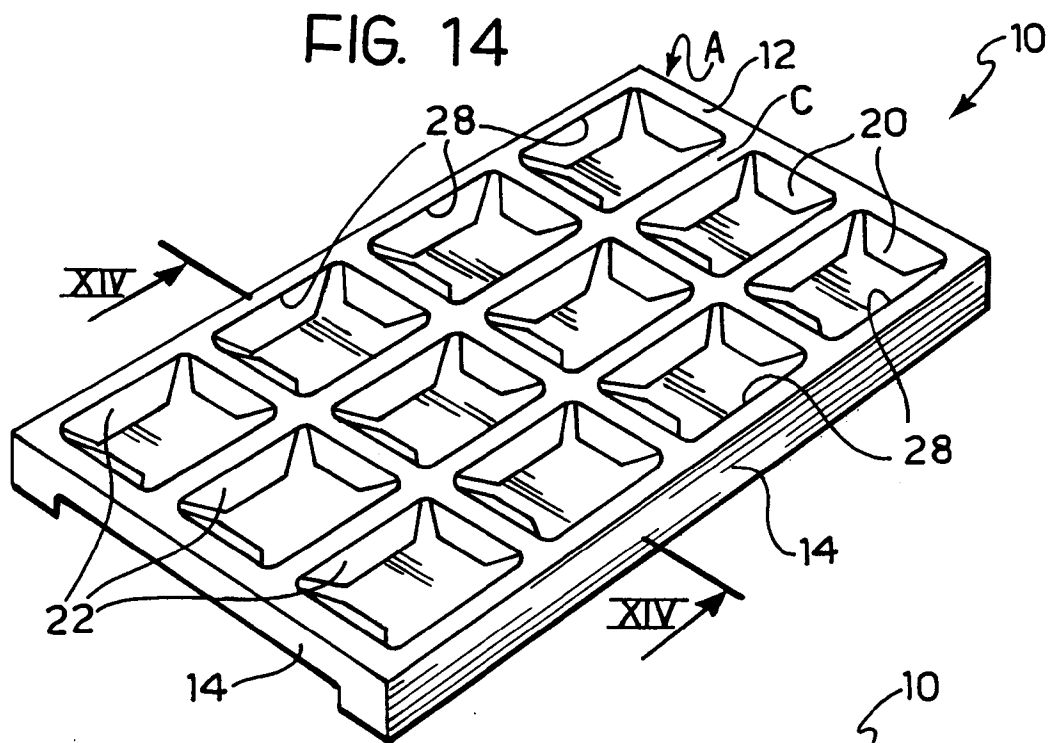


FIG. 17

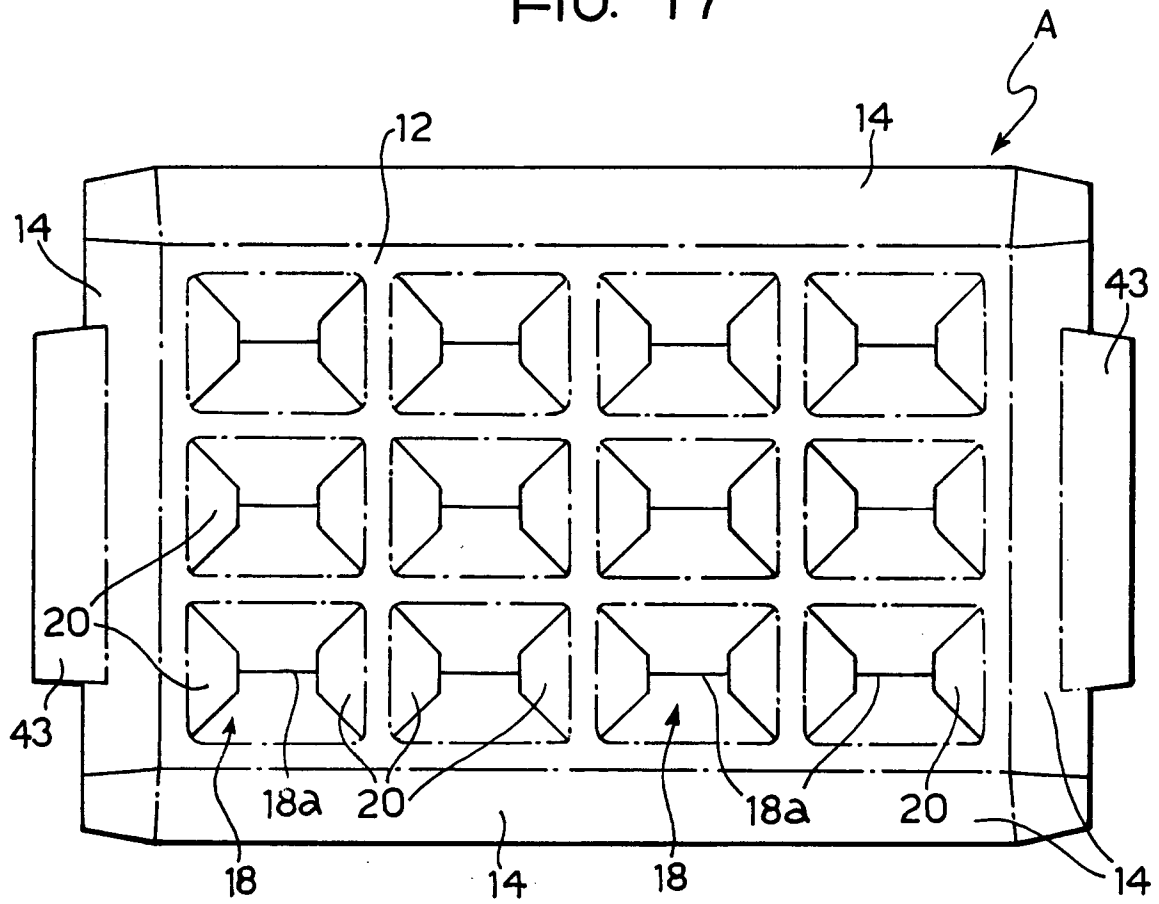


FIG. 18

