

[54] **BOX FOR CONTAINING AND DISPLAYING
ARTICLES OF MERCHANDISE**

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[51] Int. Cl.² .. B65D 5/04; B65D 5/50; B65D 85/62[58] Field of Search..... 206/45.14, 45.31, 502,
206/516, 499; 229/39 R, 34 HW, 14 C[56] **References Cited****UNITED STATES PATENTS**

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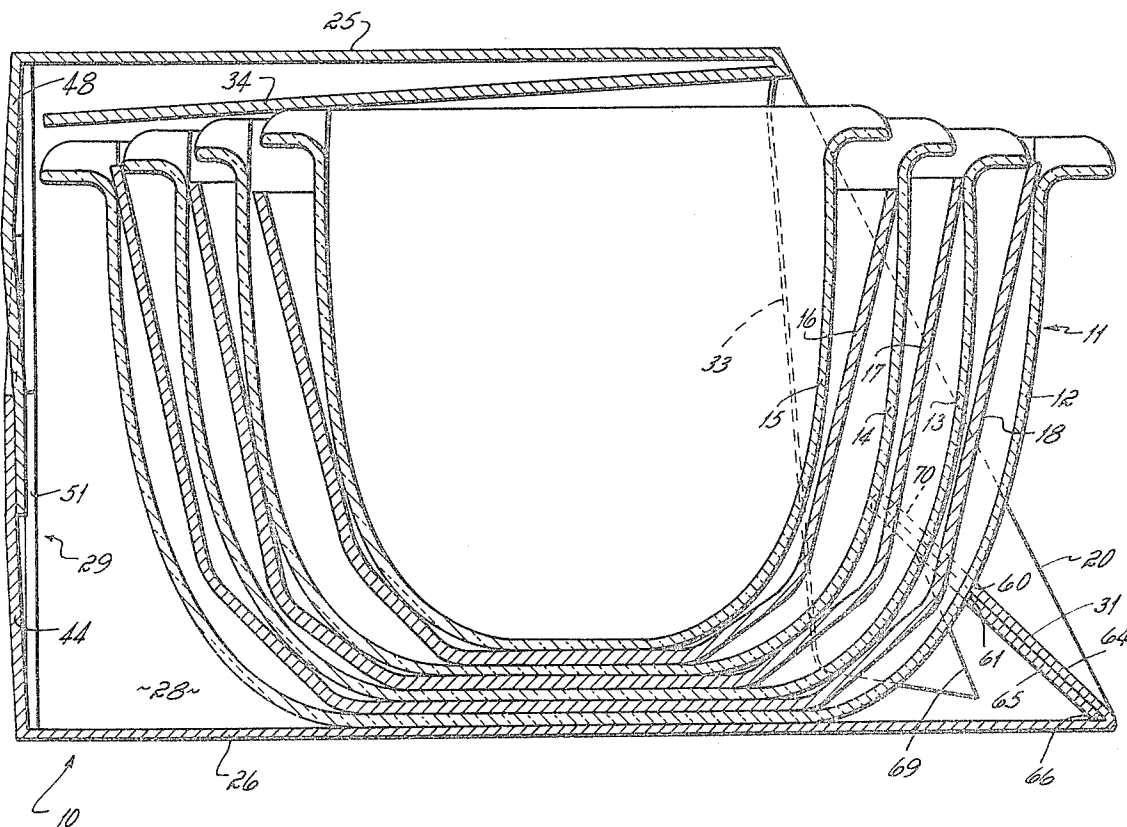
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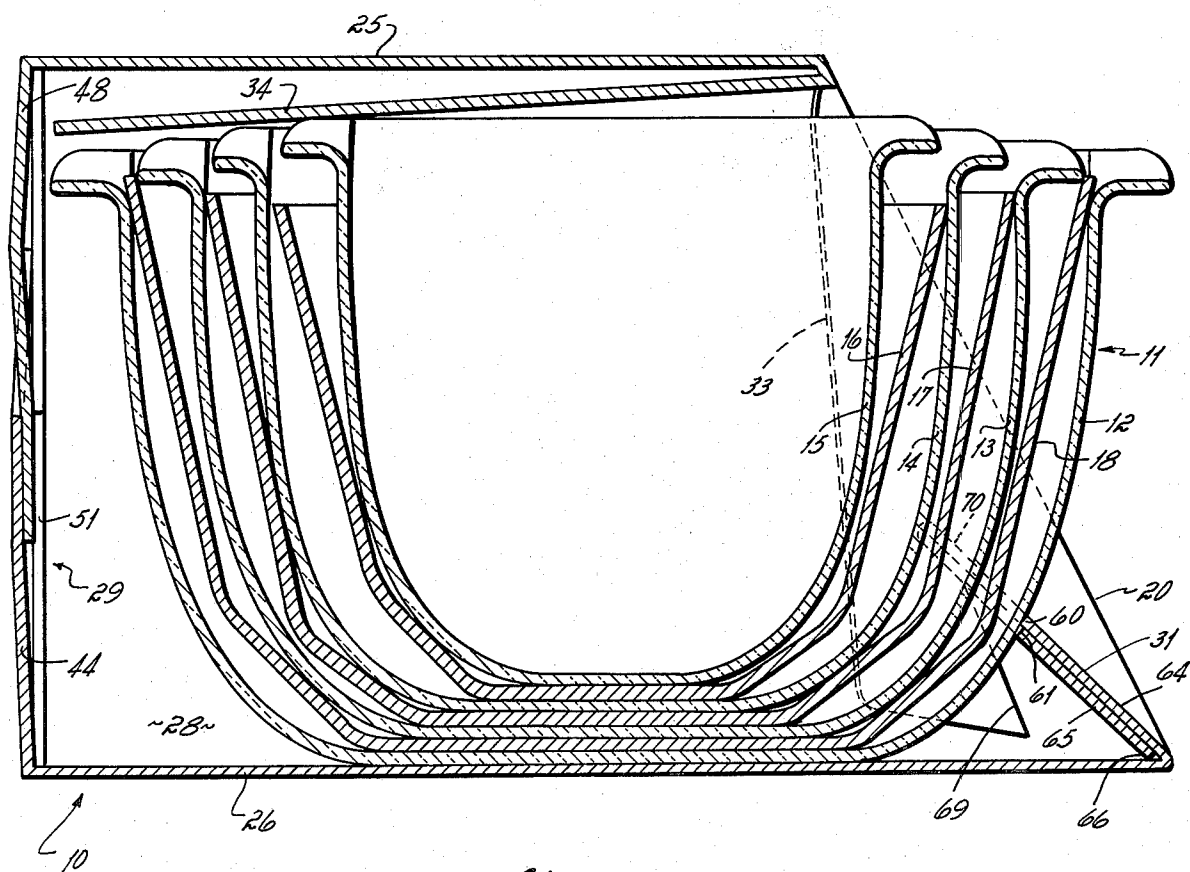
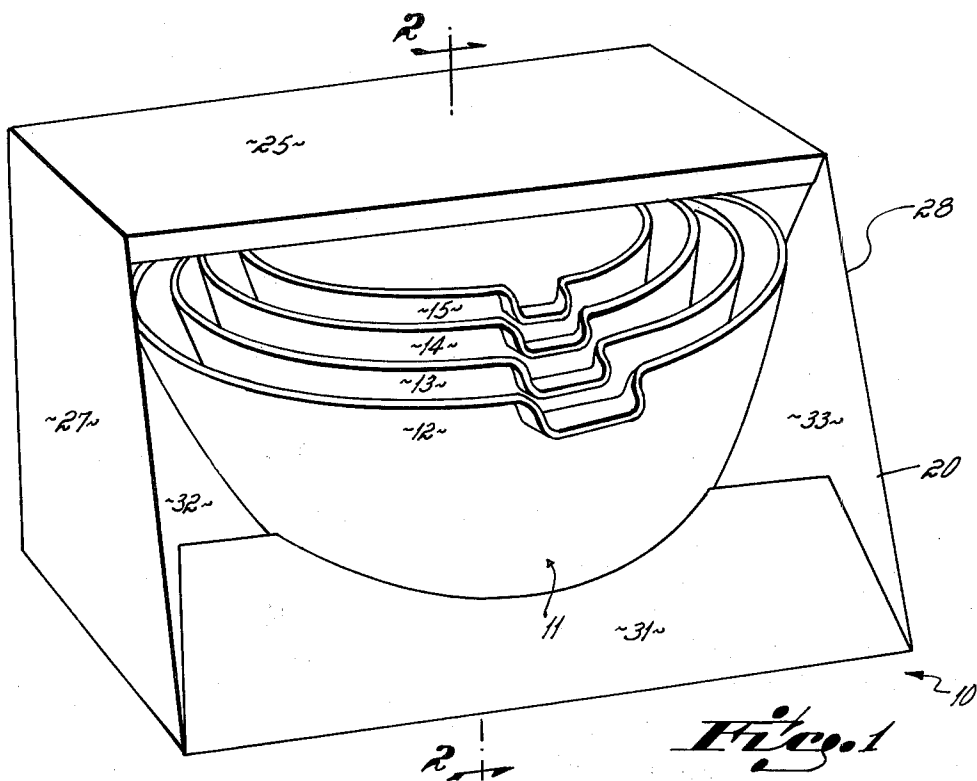
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[57] **ABSTRACT**

A box for containing and displaying a product. Top, bottom, and sidewalls form a sleeve which is closed at the back end. The open end presents an inclined front face and includes a retaining flap hinged to the bottom wall, the retaining flap projecting into the sleeve to engage the product. Side flaps are hinged to the sidewalls and also project inwardly into the sleeve, the side flaps being slotted to receive and hold the retaining flap at the proper angle for engagement with the product. A top flap extends into the sleeve, lies against the top wall and engages the top surface of the product.

4 Claims, 7 Drawing Figures



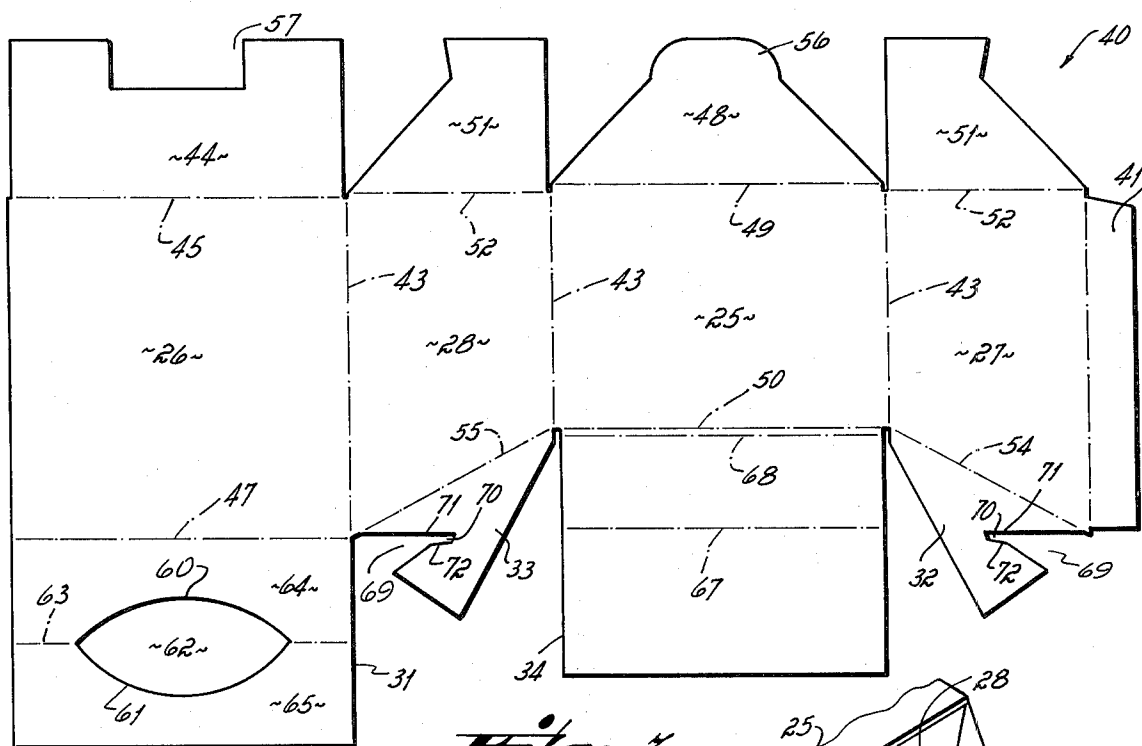


Fig. 3

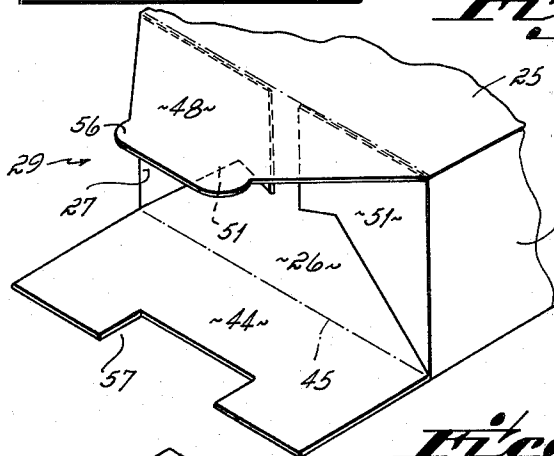


Fig. 4

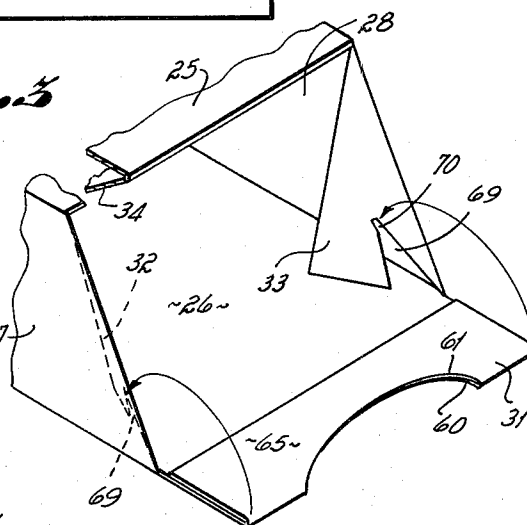


Fig. 6

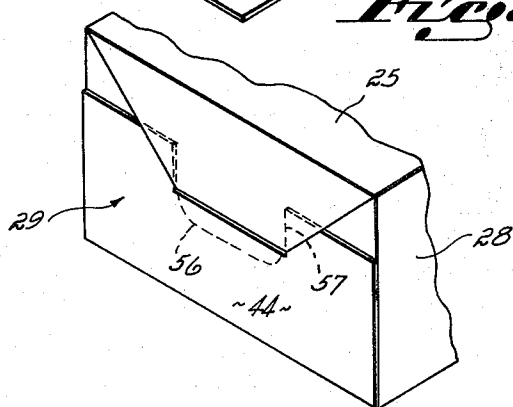


Fig. 5

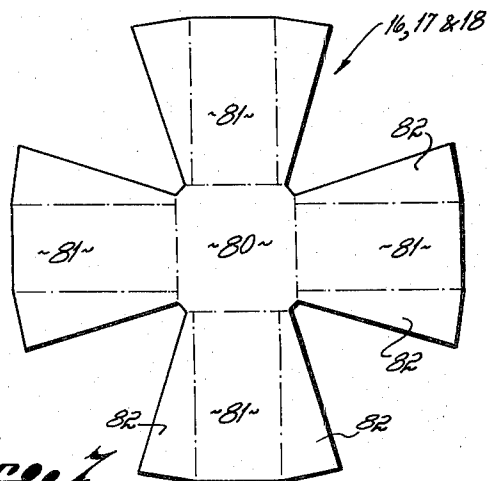


Fig. 1

BOX FOR CONTAINING AND DISPLAYING ARTICLES OF MERCHANDISE

This invention relates to a container and particularly to a box for containing and displaying a product.

While the container may be used to display a wide variety of products, it is particularly useful in the containing and displaying of rather heavy products such as a group of nested mixing bowls.

An objective of the invention has been to provide a container adapted to retain a product with satisfactory integrity while permitting a substantial portion of the product to be displayed beyond the forward face of the container. The invention is particularly concerned with the containing of heavy articles within a box so as to prevent substantial shifting of the articles within the box and to maintain the display area of the box as attractive as possible by framing the article with the printed outer surface of the box and concealing all unsightly edges of the box. The latter is particularly important in view of the fact that the preferred structural material for the box is double-face corrugated board. The cut edges of the board, whether cut transversely or parallel to the flutes, tend to be unsightly.

The objective of the invention is achieved by providing a container having an inclined, open front face, the inclined face permitting the product to project beyond the plane of the front face so that a substantial portion of the product can be viewed by the consumer. The box is constituted by top, bottom and side walls which form a sleeve, rear flaps which close the back end of the sleeve, and inwardly turned forward flaps attached to the front edges of each of the walls. By inwardly turning each of the four front flaps, the cut edges of the double-face corrugated board are concealed, thereby contributing to the attractiveness of the package.

Further, each flap contributes additionally to the integrity of the package. The bottom wall flap is inturned and upwardly inclined to become a retaining flap to engage the forward surface of the product, thereby sandwiching the product between the retaining flap and back flaps.

The side flaps are inwardly turned and cooperate with the bottom flap to lock the bottom flap into its position of engagement with the product. Further, the side flaps are angulated slightly away from the sidewalls, thereby providing with the bottom flap a mitered corner effect which attractively frames the product.

The top flap projects inwardly and lies against the top wall to engage the top of the product to sandwich it against the bottom wall.

Another objective of the invention has been to provide a secure lock between the retaining flap and side flaps to hold the retaining flap rigidly in its position of engagement with the product.

Another objective of the invention has been to aperture and fold the retaining flap in such a manner that two edges of the aperture in the retaining flap engage the product to provide additional assurance of proper containment of the product within the box.

Another objective of the invention has been to provide a creased top flap of greater dimension than the distance between the top and bottom walls, the crease in the flap permitting the flap to be thrust into the box to lie against substantially the full extent of the top wall.

These and other objectives of the present invention will become more readily apparent from the following

detailed description taken in conjunction with the accompanying drawings in which:

FIG. 1 is a perspective view of the invention;

FIG. 2 is a cross-sectional view taken along lines 2—2 of FIG. 1;

FIG. 3 is a plan view of a box blank from which the package is formed;

FIG. 4 is a perspective view of the rear end of the box with the rear flaps in partially closed condition;

FIG. 5 is a view similar to that of FIG. 4 showing the flaps in fully closed condition;

FIG. 6 is a perspective view of the front of the box with the flaps in partially closed condition.

FIG. 7 is a plan view of a cruciform divider to be inserted between the products disposed within the container.

Referring to FIG. 1, the invention comprises a container or box 10 within which a product 11 is securely held, the product 11 in the illustrated embodiment consisting of four bowls 12, 13, 14 and 15 disposed in the box in nested relation. The bowls are separated from each other by cruciform dividers 16, 17 and 18 which will be described hereafter.

The box presents an inclined front face 20 which permits the product to project a substantial distance beyond the plane of the front face so as to be viewed directly by the consumer.

The box is formed by a top wall 25, a bottom wall 26, sidewalls 27 and 28. The back end is closed by rear flaps 29 and the front face of the box is formed by a retaining flap 31, side flaps 32 and 33, and a top flap 34. Preferably, the box is made of double-face corrugated board, the outer or exposed liner of which is attractively printed.

Referring to FIG. 3, the box is formed of a blank 40 having connected in serial fashion the bottom wall 26, the sidewall 28, the top wall 25, the sidewall 27, and a glue flap 41. The walls are hinged to each other along lines 43 and are adapted to be erected into a rectangular form with the glue flap 41 being glued to the inside of the bottom wall 26.

A bottom rear flap 44 is hinged along line 45 to the bottom wall 26 and at the other end of bottom wall 26 the retaining flap 31 is hinged along line 47. A top rear flap 48 is hinged along line 49 to the top wall 25 and at the other end of the top wall the top flap 34 is hinged along line 50.

Rear side flaps 51 are hinged along line 52 to the respective side flaps 27, 28. At the other end of the side walls, side flaps 32 and 33 are hinged along lines 54 and 55 to the sidewalls 27 and 28, respectively.

The rear end of the box is formed, as shown in FIGS. 4 and 5, by first folding the rear side flaps 51 across the back of the box, folding the rear bottom flaps 44 against the rear side flaps 51, and finally folding the rear top flap 48 partially over the rear bottom flap 44. A tab 56 on the top rear flap 48 is inserted into a notch 57 in the bottom rear flap 44 to close the back end of the carton.

The retaining flap 31 is cut along arcs 60 and 61 to form an aperture 62. The arc 61 has a smaller radius than the arc 60. The flap 31 is creased at 63 along a line intersecting the intersection of the two arcs, the line 63 dividing the flap into an inner section 64 and an outer section 65. The outer section 65 is of smaller width than the inner section 64 and is folded upon the inner section 64. The retaining flap 31 is then folded into the

container, as best shown in FIG. 2, so as to lie at an angle of approximately 45° with respect to the bottom wall 26. The differing radii of the arcs 60 and 61 forming the aperture provide a stepped relationship between the arcs as illustrated in FIG. 2, thereby providing a greater surface engagement of those edges with the front surface of the product 11. Further, the edge of the narrower section 65 lies up snugly in the apex formed between the bottom wall and the inner section 64 as indicated at 66.

The top flap 34 projects beyond the top wall by a dimension greater than the depth of the box, that is, the distance between the top wall and the bottom wall. The top flap 34 is transversely creased as at 67 so as to permit it to flex as it is thrust into the box to lie at an attitude shown in FIG. 2.

The flap is also creased at 68, the crease 68 being spaced from the hinge line 50 by about three-eighths of an inch and lying parallel thereto so as to provide a substantial flap portion at the front edge of the top wall and lying in the plane of the front of the box.

The side flaps 32 and 33 are notched as at 69, the inward portion of each notch 69 being formed by a slot 70 having slightly diverging edges 71, 72.

The side flaps 32, 33 are folded into the carton prior to the inward folding of the retaining flap 31, as illustrated in FIG. 6, and lie at an acute angle to their respective sidewalls. As the retaining flap 31 is folded in the direction of the arrows of FIG. 6, it causes the side flaps 32, 33 to flex inwardly, against the resilience of the material which urges them outwardly, until the side edges of the retaining flap 31 snap into the notches 69, thereby retaining the retaining flap in position against the product 11 as illustrated in FIG. 2. The cooperation between the flap 31 and flaps 32, 33 provides an attractive mitered corner effect which frames the product as illustrated in FIG. 1.

As indicated above, the mixing bowls 12-15 which constitute the product 11, are separated from each other by cushioning cruciform dividers 16, 17 and 18. The dividers are geometrically similar but are graduated in size with divider 16 being the smallest and divider 18 being the largest. The dividers are illustrated in FIG. 6 and include a central section 80 and four equi-angularly spaced wings 81 hinged to the central section 80. Each wing has two hinged flaps 82 which wrap around the bowl when the dividers are in place.

In use, the container is formed by erecting the walls 25-28 with respect to each other and gluing the flap 41 on the inside of the bottom wall. The rear flaps are closed as described above, thereby providing a sleeve closed at the back end.

The top flap 34 is flexed along the crease line 67 and thrust inwardly to lie against the top wall. The side flaps 32, 33 are folded inwardly along their hinge lines 54, 55 and then the product is inserted into the sleeve. Thereafter, the retaining flap has its outer section 65 folded upon the inner section 64 and then the retaining flap is folded inwardly on its hinge line 47 until it moves into snug engagement with the outer or front surface of the product 11. As it resiliently engages the front surface of the product 11, the side edges of the retaining flap snap into the notches 69 in the side flap, thereby securing the retaining flap in its proper angulated position. In that position, the retaining flap 31 sandwiches or clamps the product against the back flap, thereby se-

curely holding the product against shifting within the container.

I claim:

1. A box for containing and displaying a product comprising:

top, side and bottom walls forming a rectangular sleeve having a front and rear end;
end flaps connected to said walls to close the rear end of said sleeve;

a retaining flap hinged to the front end of said bottom wall and projecting at an acute angle to said bottom wall inwardly into said sleeve;

and side flaps hinged to the front end of said side walls, each projecting at an acute angle to said side walls and inwardly into said sleeve;

each said side flap having a slot which receives and locks a side edge portion of said retaining flap;
said product being retained by engagement between said end flaps and the inwardly projecting edge of said retaining flap.

2. A box for containing and displaying a product comprising:

top, side and bottom walls forming a rectangular sleeve having a front and rear end;
end flaps connected to said walls to close the rear end of said sleeve;

a retaining flap hinged to the front end of said bottom wall and projecting at an acute angle to said bottom wall inwardly into said sleeve;

and side flaps hinged to the front end of said side walls, each projecting at an acute angle to said side walls and inwardly into said sleeve and being in locking engagement with said retaining flap;

a top flap hinged to the front end of said top wall and folded inwardly to underlie said top wall;
said top flap being substantially coextensive with said top wall;

the front to rear dimension of said top flap being greater than the distance between said top and bottom walls;

said top flap being transversely creased to permit it to flex as it is thrust into said sleeve;

said product being retained by engagement between said end flaps, the inwardly projecting edge of said retaining flap and said top flap.

3. A box for containing and displaying a product comprising:

top, side and bottom walls forming a rectangular sleeve having a front and rear end;
end flaps connected to said walls to close the rear end of said sleeve;

a retaining flap hinged to the front end of said bottom wall and projecting at an acute angle to said bottom wall inwardly into said sleeve;

and side flaps hinged to the front end of said side walls, each projecting at an acute angle to said side walls and inwardly into said sleeve and being in locking engagement with said retaining flap;

said retaining flap having a generally elliptical central aperture;

said retaining flap having a transverse scoreline intersecting said aperture and dividing said aperture into an outer arc and an inner arc, the outer arc having a smaller radius than said inner arc;

said retaining flap being folded upon itself, said arcs presenting stepped product engaging edges to

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snugly engage the generally hemispherical surface of a bowl type product.
4. The combination of a plurality of nested bowls and a box for containing and displaying said bowls comprising:
top, side and bottom walls forming a rectangular sleeve having a front and rear end;
end flaps connected to said walls to close the rear end of said sleeve;
a retaining flap hinged to the front end of said bottom wall and projecting at an acute angle to said bottom wall inwardly into said sleeve;

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and side flaps hinged to the front end of said side walls, each projecting at an acute angle to said side walls and inwardly into said sleeve and being in locking engagement with said retaining flap;
a plurality of nested bowls within said sleeve, bowls being separated by cruciform dividers inserted between adjacent bowls;
said bowls being retained by engagement between said end flaps and the inwardly projecting edge of said retaining flap.

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