

[54] CONTAINER WITH A CATCH FOR  
PRESSING AND OPENING A LID

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229/34 HW

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[58] Field of Search..... 229/19, 20, 34 HW, 9, 11;  
206/45.14

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[57] ABSTRACT

This invention relates to a container. The said container comprises a hexahedronal outer case with its right side open and is provided with a cut-off portion at the right edge of its upper wall, and an inner case having a base plate, front and back walls, a left side wall and a compressible and deformable right wall in the shape of a quadrilateral three-dimensional body. When the top of the quadrilateral three-dimensional body is pressed and opened, that pressed body constitutes the catch for pressing and opening a lid. The said inner case is slidable within the said outer case.

1 Claim, 7 Drawing Figures

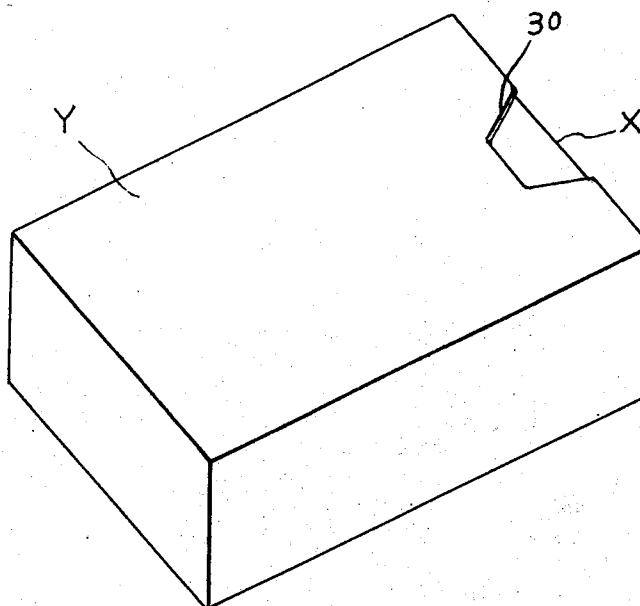


FIG. 1.

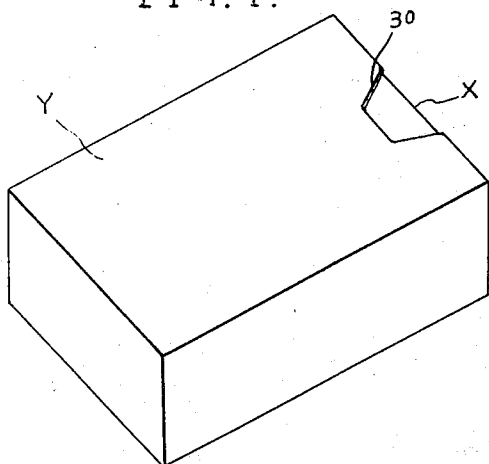


FIG. 2.

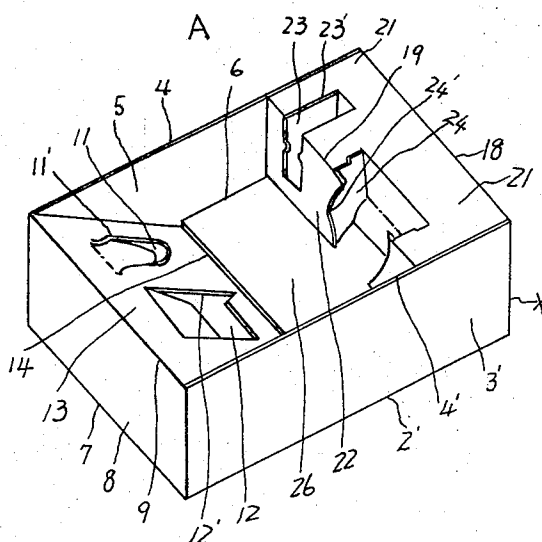


FIG. 3.

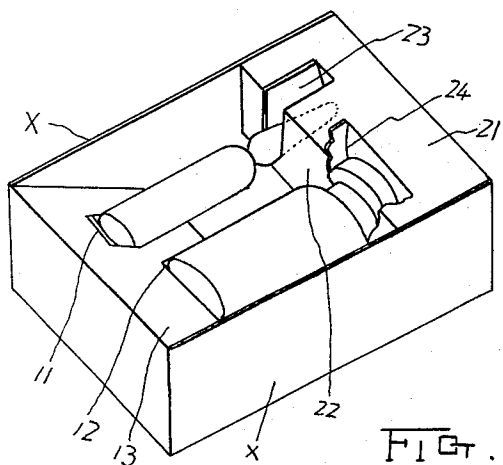
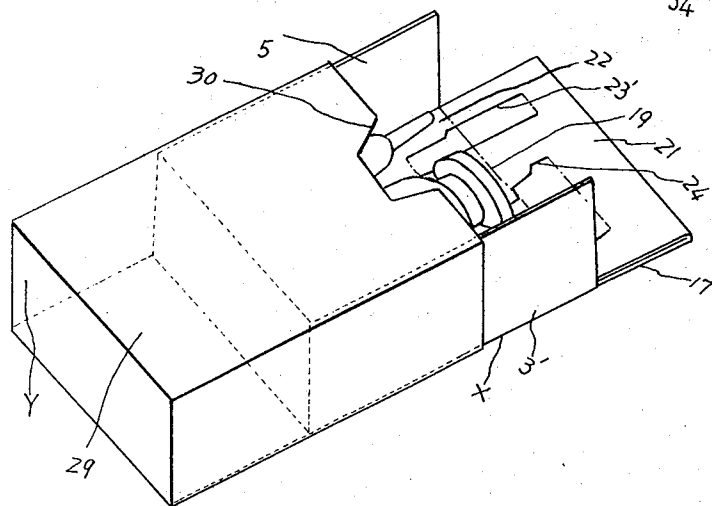


FIG. 4.



B

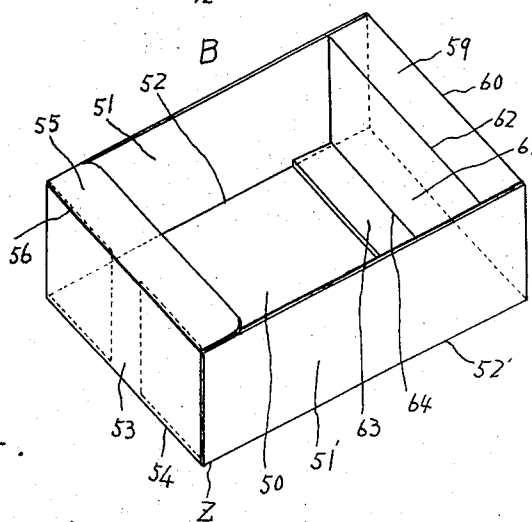


FIG. 5.

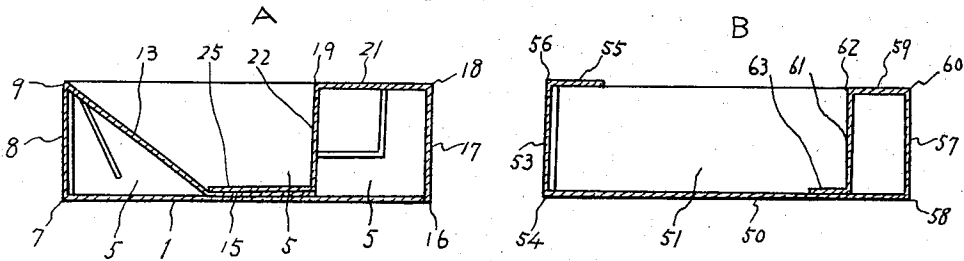


FIG. 6.

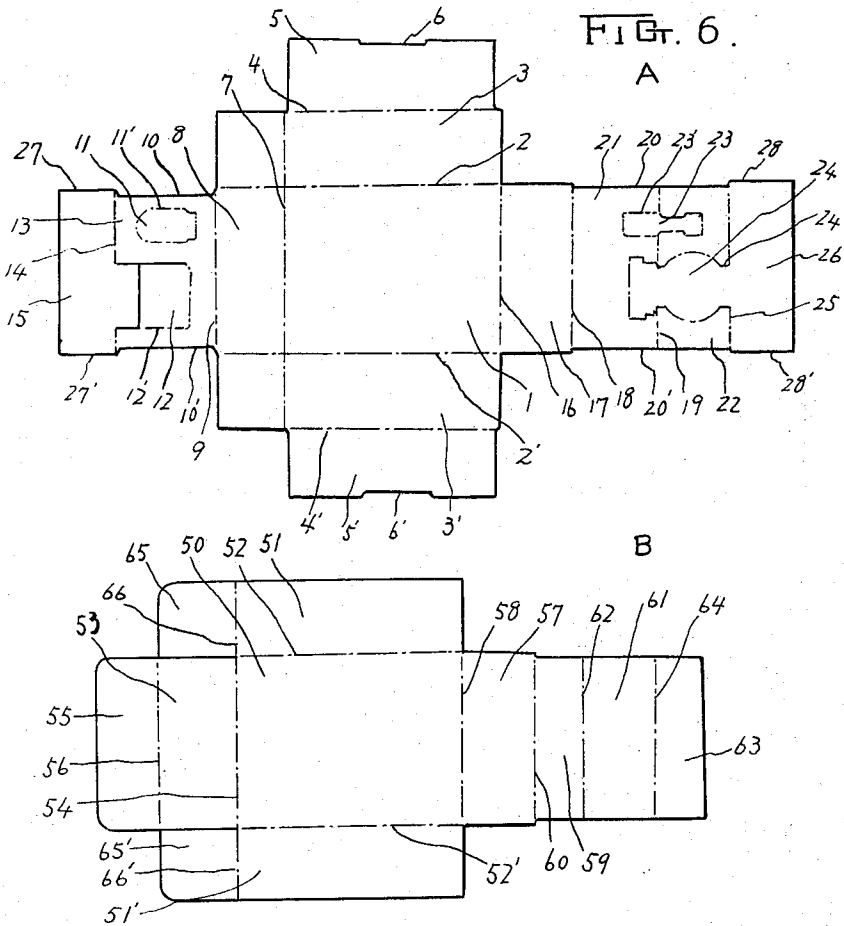
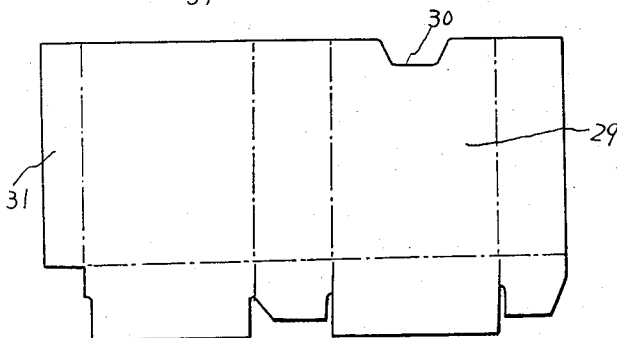


FIG. 7.



# CONTAINER WITH A CATCH FOR PRESSING AND OPENING A LID

An important object of the present invention is to provide a container the contents of which can be easily removed from the inner case by pressing and pushing the top of the quadrilateral hollow three-dimensional body at the right end of the inner case and by taking the inner case out of the outer case.

Another object of the present invention is to provide a container which is capable of holding rather long and fragile articles such as ampules for injection and safely retaining them without allowing them to come into contact with each other and break.

Still another object of the present invention is to provide a container which is capable of displaying its contents in shop windows when its inner case is allowed to be partially removed from the outer case.

Still a further object of the present invention is to provide a container which is capable of being manufactured by machinery on a mass production basis with a marked decrease in the number of cumbersome pasting processes in assembling it.

In order to make containers for holding long and fragile articles such as ampules, it has hitherto been necessary for one to provide the body of a case with no top, to provide a partition therein for insertion of the contents and to provide a lid on the top. In making such containers, various delicate operations such as pasting the body and the lid, the formation of the body and of the partition, and the insertion and adjustment of those things are required. Thus, they are unsuitable for mass production by machinery.

What is more, such containers have a complicated construction and are very expensive. Besides, it has a further defect in that it is difficult to insert or withdraw such contents as ampules.

On the other hand, the containers of the present invention are not only suitable for mass production at low cost in simple mechanical manufacturing processes, but are also capable of safely retaining fragile and long articles.

The present invention will now be described in detail by way of example with reference to the accompanying drawings in which:

FIG. 1 is a perspective view of the container as a whole.

FIG. 2 is a perspective view of the inner case. The letter A indicates a basic type and B a variation thereof.

FIG. 3 is a perspective view of the inner case of the basic type with the contents held therein.

FIG. 4 is a perspective view of the container with its lid open, its inner case being of the basic type.

FIG. 5 is a center longitudinal sectional view of the inner case. The letter A indicates a basic type and B a variation thereof.

FIG. 6 is an expansion view of the inner case. The letter A indicates a basic type and B a variation thereof.

FIG. 7 is an expansion view of the outer case.

Referring now to the drawings and specifically to FIGS. 1, 2, 5 and 6 the letter X designates an inner case. Outer front and back walls 3 and 3' are integrally connected at fold lines 2 and 2' on the front and back of the base plate 1 of the said inner case X to the base plate 1. Inner front and back walls 5 and 5', which are

slightly narrower than the outer front and back walls, are integrally connected at fold lines 4 and 4' to the outer front and back walls. In the middle of the edges of the inner front and back walls 5 and 5' are provided slits 6 and 6', which are twice as high as the thickness of the material for the inner case. A left side wall 8 is integrally connected at a fold line 7 to the left edge of the base plate 1. There is also integrally formed a slanting left side wall 13 having any number of cut-off portions 11 and 12 for partition having fold lines 11' and 12'. Side wall 13 is made slightly narrower than the width of the base plate 1 by allowing both side edges 10 and 10' of the wall 13 to be cut off from a fold line 9. An inner case left portion fixing wall 15 is integrally connected to the edge of the slanting left side wall 13 at a fold line 14, the wall 15 being approximately as wide as the base plate 1. A right side wall 17 is integrally connected to the right end of the base plate 1 at a fold line 16. To the right side wall 17 are integrally connected a lid 21 and an inner lid 22 in turn, the widths of which are made narrower than that of the base plate 1 by allowing their both side edges 20 and 20' to be cut at fold lines 18 and 19 in turn.

Extending through said lid 21 to said inner lid 22 are provided fold lines 23' and 24' which form cut-off portions 23 and 24 corresponding in number to the number of cut-off portions 11 and 12 of the slanting left side wall 13. To the right edge of the inner lid 22 is integrally connected an inner case lid fixing wall 26 at a fold line 25, the wall 26 being approximately as wide as the base plate 1.

The assembling of the inner case is just as has been described above. The outer front and back walls 3 and 3' are allowed to rise and bend at the fold lines 2 and 2'. The fold lines 7, 9, and 14 are bent and then the lugs 27 and 27' of an inner case left portion fixing wall 15 are inserted into and fixed in the slits 6 and 6' cut in the inner front and back walls 5 and 5' folded along the inside of the outer front and back walls 3 and 3' at the fold lines 4 and 4'. Similarly, the fold lines 18, 19 and 25 are folded to form a quadrilateral hollow three-dimensional body, and then lugs 28 and 28' on both sides of an inner case lid fixing wall 26 are inserted into and fixed in said slits 6 and 6' to form the inner case X with its top open.

Next, referring to FIGS. 1, 2, 3'A, 4, 5A, and 6, an outer case Y is constructed as follows: A cut-off portion 30 is provided at the right edge of an upper wall 29, and a pasting portion 31 of front and back walls is pasted; and the right side is opened while the remaining five sides are closed to form the outer case Y. Then, the inner case X is slidably inserted into the outer case Y. Since any desired number of cut-off portions 11 and 12, and 23 and 24 are provided at corresponding locations on the slanting left side wall 13, and the lid 21 and the inner lid 22; the contents such as a pair of injection bottles or of ink eraser bottles, as shown in FIG. 3, will not be damaged by colliding with each other in transit.

In opening the lid, just push and press the lid 21 appearing in an arched shape under the cut-off portion 30 at the right edge of the upper wall 29 of the outer case X, as shown in FIG. 1, with a finger until it becomes more or less flat, and slide the inner case X out of the outer case Y. Thus, the contents can be removed by a simple operations.

Although the inner case X has a very complicated construction when completed, it can be made from a single sheet of cardboard by one stamping-out operation with a mold blade, and can be assembled three-dimensionally by folding the resulting fold lines without the necessity of pasting any single area. The inner cases are suitable for mass production, and can be produced inexpensively, and so the effects of the invention is remarkable.

The shape and number of the cut-off portions 11 and 12, 23 and 24 provided in the slanting left side wall 13 and the lid 21 and the inner lid 22 may be designed and made according to the type and shape of the contents.

A second embodiment is shown in FIGS. 3B, 5B, and 6B. An outer case Y is the same as the outer case Y described above. An inner case Z is of a simplified construction relative to the inner case X described in Example 1. The numeral 50 indicates a base plate. The numerals 51 and 51' indicate front and back walls respectively. They are integrally connected to the back and front of the base plate 1 at fold lines 52 and 52' respectively. The numeral 53 indicates a left side wall, which is integrally connected to the left edge of the base plate 50 at a fold line 54. The numeral 55 indicates a folding wall, which is integrally connected to the edge of the left side wall 53 at a fold line 56. The numeral 57 indicates a right side wall, which is integrally connected to the right edge of the base plate 50 at a fold line 58. The numeral 59 indicates a lid, which is integrally connected to the right edge of the right side wall 57 at a fold line 60. The numeral 61 indicates an inner lid, which is integrally connected to the right edge of the lid 59 at a fold line 62. The numeral 63 indicates a pasting wall, which is integrally connected to the right edge of the inner lid 61 at a fold line 64 and is pasted to the base plate 50. The right side wall 57, the lid 59, the inner lid 61 and a part of the base plate 50 form a quadrilateral hollow three-dimensional body. The numerals 65 and 65' indicate folding walls, which are integrally connected to the left edges of the front and back walls 51 and 51' at fold lines 66 and 66' respectively.

The container is assembled as follows. The front and back walls 51 and 51', the folding walls 65 and 65', and the left side wall 53 of the inner case 2 are respectively folded at their respective fold lines 52 and 52', 66 and 66', and 54 so that they are respectively more or less at right angles to the base plate 50, and the folding wall 55 is folded at the folding line 56 at right angles to the left side wall 53, and then the inner case Z is inserted into the outer case Y from the left side wall 53.

In opening the lid of this container, just push and press the top of the quadrilateral hollow three-dimensional body of the inner case Z appeared under the cut-off portion 30 of the outer case Y with a finger until it becomes more or less flat, and slide the inner case Z out of the outer case Y. Thus, the contents can be taken out or displayed by such simple operations.

What is claimed is:

# 1. A container comprising:

a hexahedronal outer case having one open side and an upper wall (29) having a cut-off portion (30); and

an inner case capable of being slidably inserted into said outer case and having a base plate, and front, back, right and left walls, said front and back walls being comprised of respective outer walls (3) and (3') integrally connected at respective fold lines (2) and (2') to said base plate (1) and inner front and back walls (5) and (5') respectively integrally connected at fold lines (4) and (4') to said outer front and back walls (3) and (3'), said inner front and back walls (5) and (5') being slightly narrower than said outer front and back walls (3) and (3'); said inner front and back walls (5) and (5') having the slits (6) and (6') in the middle of their respective edges, slits (6) and (6') being twice as high as the thickness of the material for the inner case; a left side wall (8) integrally connected at a fold line (7) to the left edge of said base plate (1); a slanting left side wall (13) integrally connected at a fold line (9) to the said left side wall (8), said slanting wall (13) being slightly narrower than the base plate (1); a left fixing wall (15) connected at a fold line (14) to said slanting wall (13), the said fixing wall (15) being approximately as wide as the base plate (1); lugs (27) and (27') being respectively formed on each respective side of said fixing wall (15); a right side wall (17) integrally connected at a fold line (16) to the right edge of the base plate (1); a lid (21) integrally connected at a fold line (18) to said right side wall (17), and an inner lid (22) integrally connected at a fold line (19) to the lid (21), said lids (21) and (22) being slightly narrower than the base plate (1) and having apertures therein; an inner case lid fixing wall (26) integrally connected at a fold line (25) to the edge of the inner lid wall (22); lugs (28) and (28') formed on each respective side of the said fixing wall (26); said lugs (27) and (27') on each respective side of said fixing wall (15) being respectively insertable into said slits (6) and (6') and fixable therein, and said lugs (28) and (28') on each respective side of said wall (26) also being respectively insertable into said slits (6) and (6') and fixable therein to allow the right side wall (17), the inner lid (22), the lid (21) and part of the base plate (1) to form a quadrilateral hollow three-dimensional body capable of being pushed and pressed into various shapes hinged punch out portions (23) and (24) being provided in said quadrilateral hollow three-dimensional body adjacent said lid apertures and extending through lid (21) to inner lid (22); cut off portions (11) and (12) being provided in said left side wall (13) at locations corresponding to those of said cut off portions (23) and (24), whereby long objects may be inserted into the said two cut off portions for retention therein.

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