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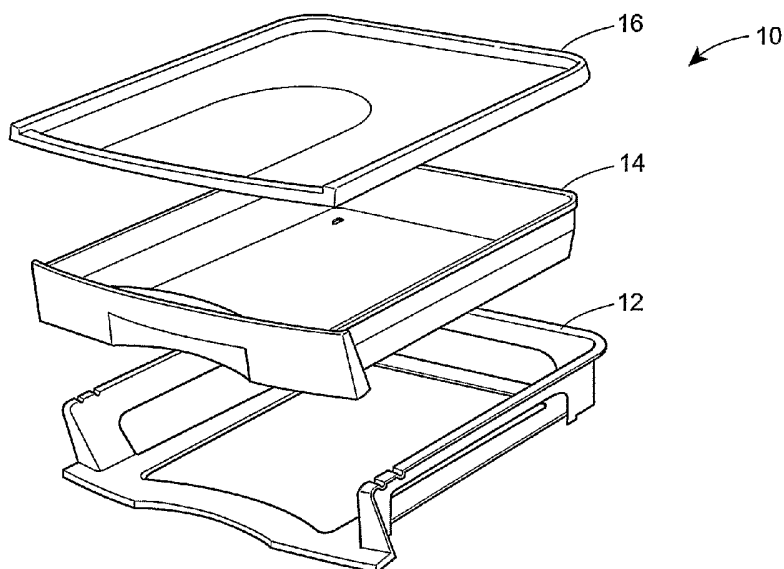
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(54) Title: TRAY AND DRAWER SYSTEM



(57) Abstract: A storage device (10) is described herein having a tray (12), a drawer (4) and a lid (16). The tray includes a bottom panel, a rear and side walls (22), each extending generally upwardly relative to a respective side edges of the tray bottom panel. A pair of lateral extensions (36) are formed near the forward edge of the tray bottom panel. The drawer includes a bottom panel (100) with two opposed drawer side walls (104) attached to respective side edges of the drawer bottom panel, a drawer rear wall (102) attached to a rear edge of the drawer bottom panel and disposed between the drawer side walls, and a drawer front faceplate (110) removably attached to the drawer side walls and generally opposed to the drawer rear wall. The lid includes a panel (146) and a raised inverted gutter (148) extending outward from the front edge, the rear edge and the side edges of the panel forming an inverted channel adapted to receive the upper edges of the tray side walls and an upper edge of the tray rear wall.

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## TRAY AND DRAWER SYSTEM

### RELATED APPLICATIONS

[0001] This application is a continuation-in-part of U.S. design patent application no. 29/232,344, filed on June 17, 2005, the entire specification of which is hereby incorporated by reference herein.

### BACKGROUND

#### Field of the Invention

[0002] The present disclosure is generally directed to storage devices, and more particularly to nestable tray and drawer systems.

#### Related Technology

[0003] Organization and storage trays are known in the art. These storage trays are intended either for stand alone use or for being vertically stacked with identical storage trays for multi-level use. However, such trays are often shipped and displayed in individual form or in the in-use stacked condition. Consequently, these known storage trays take up relatively large amounts of retail shelf space and also a significant amount of space during shipment.

[0004] The consumption of relatively large amounts of retail shelf space by plastic storage trays is problematic, as retail shelf space is extremely valuable and manufacturers compete vigorously for adequate shelf space to display their products. Any inefficient use of retail shelf space can lead to a manufacturer's products not being adequately displayed, as well as a reduction in the number of different products a manufacturer may be allowed to display in a given retail store. Further, because molded plastic document trays are relatively inexpensive items, efficient use of shelf space to display these items can lead to greater profit for the retailer.

[0005] Further, because the profit margin for these items can be relatively small, a means for packaging these items in a compact manner is important for reducing shipment and handling costs.

[0006] Typical storage trays are not nestable with more than one identical tray. To stack a pair of trays, one tray must be inverted and rotated 180 degrees relative to another. The two trays can then be nested on top of one another, but no other trays can be nested with the two.

[0007] Often, it is desirable to sell such storage trays in groups of more than two to provide more than two levels of storage for use by more than one person. One solution to the

problems discussed above is addressed by U.S. Patent Application No. 11/098,060, filed on April 4, 2005, and assigned to the Rubbermaid Corporation, which is expressly incorporated by reference herein. Although the previously identified patent application addresses many of the problems discussed above, storage is generally limited to documents, files and the like.

[0008] Storage of other objects, especially round or cylindrical objects is problematic because these types of objects simply roll off the front end of the storage tray. Additionally, at least the top tray in a stack does not protect documents or other items stored therein. Still further, the contents of such documents are not concealed in any way, which may present problems for sensitive information, such as personnel files, personal medical or financial information, or research and development projects.

### **SUMMARY OF THE DISCLOSURE**

[0009] A document storage device is described herein having a tray, a drawer and a lid. The tray includes a panel having a rear edge, a forward edge, a pair of opposed side edges, and a tray rear wall extending upwardly near a back edge of a tray bottom panel. Additionally, the tray has a pair of opposed tray side walls, each extending generally upwardly relative to a respective one of two side edges of the tray bottom panel. A storage space defined above the tray bottom panel, forward of the tray rear wall, and between the tray side walls. A pair of lateral extensions, each formed near a forward edge of the tray bottom panel extend outwardly beyond the side edges of the tray bottom panel. The drawer includes a bottom panel with two opposed drawer side walls attached to respective side edges of the drawer bottom panel, a drawer rear wall attached to a rear edge of the drawer bottom panel and disposed between the drawer side walls, and a drawer front faceplate removably attached to the drawer side walls and generally opposed to the drawer rear wall. The drawer front wall extends outward beyond the drawer side walls at least as far as the lateral extensions of the tray extend beyond the tray side walls. The lid includes a generally flat portion having a front edge, a back edge, two opposed side edges and a raised inverted gutter portion extending outward from the front edge, the rear edge and the side edges forming an inverted channel adapted to receive the upper edges of the tray side walls and an upper edge of the tray rear wall.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

[0010] Objects, features, and advantages of the present invention will become apparent upon reading the following description in conjunction with the drawing figures, in which:

[0011] FIG. 1 is an exploded perspective view of one example of a tray and drawer system constructed according to the teachings of the disclosure;

[0012] FIG. 2 is a top perspective view of the tray element of the tray and drawer system of FIG. 1;

[0013] FIG. 3 is a bottom perspective view of the tray element of the tray and drawer system of FIG. 1;

[0014] FIG. 4 is a top plan view of the tray element of the tray and drawer system of FIG. 1;

[0015] FIG. 5 is a front elevational view of the tray element of the tray and drawer system of FIG. 1;

[0016] FIG. 6 is a side elevational view of the tray element of the tray and drawer system of FIG. 1;

[0017] FIG. 7 is a side elevational view of a plurality of tray elements of the tray and drawer system of FIG. 1 in a nested configuration;

[0018] FIG. 8 is a perspective view of the drawer of the tray and drawer system of FIG. 1;

[0019] FIG. 9 is a top plan view of the drawer of the tray and drawer system of FIG. 1 with a front faceplate removed;

[0020] FIG. 10A is a side elevational view of the drawer of the tray and drawer system of FIG. 1 and partially cut-away in the upper left corner portion of the drawer;

[0021] FIG. 10B is a cut-away side view of a portion of the side wall of the drawer of the tray and drawer system of FIG. 10A, near the top and front edge thereof;

[0022] FIG. 11A is a front cut-away view of the drawer of the tray and drawer system of FIG. 1;

[0023] FIG. 11B is a close up front cut away view of the drawer guides of the drawer of FIG. 11A;

[0024] FIG. 12A is a front perspective view of the front faceplate of the drawer of the tray and drawer system of FIG. 1;

[0025] FIG. 12B is a rear perspective view of the front faceplate of the drawer of the tray and drawer system of FIG. 1;

- [0026] FIG. 12C is a top plan view of the front faceplate of the drawer of the tray and drawer system of FIG. 1;
- [0027] FIG. 12D is a close up cut-away side view of the handle region of the front faceplate of the drawer of the tray and drawer system of FIG. 1;
- [0028] FIG. 12E a cross-sectional view of the upper front corner of the drawer of FIG. 10B with the drawer front faceplate attached thereto;
- [0029] FIG. 13 is a perspective view of the lid element of the tray and drawer system of FIG. 1;
- [0030] FIG. 14 is a perspective view of the tray and drawer system of FIG. 1 stacked with a document storage tray;
- [0031] FIG. 15 is a perspective view of the tray and drawer system of FIG. 1 stacked with a second like tray and drawer system and a document storage tray;
- [0032] FIG. 16 is a perspective view of the tray and drawer system of FIG. 1 stacked with a like tray and drawer system; and
- [0033] FIG. 17 is a perspective view of the tray and drawer system of FIG. 1 stacked with two like tray and drawer systems and a document storage tray.

#### DETAILED DESCRIPTION

[0034] A storage tray and drawer system, hereinafter described as a storage system, for storing papers, files, documents, pencils, pens, erasers, other small objects and the like is shown and described. The storage system includes a tray, a drawer and a lid. The storage system may be stacked with like storage systems during use to provide multiple storage levels. Alternatively, each of the disclosed trays and drawers can nest with other like trays and drawers in an alternative stacked and nested configuration to reduce the amount of retail display shelf space and shipping space that is required of a large number of the storage systems. Further, the storage systems may be stacked in a cascaded or staggered orientation so that the forward edge of the tray of a first storage system is horizontally offset from the forward edge of a tray of a second storage system disposed above or below the first storage system.

[0035] FIG. 1 shows a storage system 10 constructed according to the teachings of this disclosure. In this example, the storage system 10 has a depth that is greater than its width. As will be evident to those having ordinary skill in the art, the disclosed storage system 10

can be alternatively configured to be greater in width than in depth, or of equal width and depth. The storage system includes three major components, namely a tray 12, a drawer 14 and a lid 16. The drawer 14 is generally received within a storage space of the tray 12 and the lid 16 generally cooperates with a top portion of the tray 12 to protect and secure items stored within the drawer 14.

[0036] FIG. 2 illustrates a top perspective view of the tray 12. The tray 12 includes a generally horizontally oriented tray base panel 20 and a tray back wall 22, having a bottom edge 24 that is coupled to and extends generally upward from a back edge 26 of the base panel 20. The tray 12 also has a pair of spaced apart and opposed side walls 28 with bottom edges 32 that are coupled to respective side edges 34 of the base panel 20. The side walls 28 extend generally forward from respective side edges or corners 36 formed at the junction between the back wall 22 and the side walls 28 and extend generally upward from the side edges 34 of the base panel 20.

[0037] In this example, a storage receptacle or space 40 is defined by the space above the base panel 20, forward of the back wall 22, and between the side walls 28. A front opening 42 is formed between the exposed front ends 36 of the side walls 28 and above a forward edge 46 of the base panel 20. The front opening 42 permits forward insertion and removal of the drawer 14 in the storage space 40. Additionally, a rim 48 extends laterally outward near the top edge 50 of the back wall 22 and top edges 52 of the side walls 28 forming a continuous lip. The rim 48 adds strength and rigidity to the tray structure and can provide additional functions and features as described below.

[0038] The forward edge 46 of the base panel 20 extends forward beyond the front ends 44 of the side walls 28 forming lateral extensions 54. The lateral extensions 54 also extend laterally outward beyond the side edges 34 of the base panel 20 and slightly beyond the exterior perimeter edge 56 of the rim 54. Structural support for the lateral extensions 54 is provided by a corresponding pair of laterally extending and vertically oriented buttresses 60 that project outward from the front ends 44 of the side walls 28 and upward from the lateral extensions 54. Additionally, a lip 62 protrudes downwardly from the front edge 46 of the base panel 20. Further, the downwardly protruding lip 62 includes a pair of notches 64.

[0039] In the disclosed example, the side walls 28 diverge slightly away from one another in two dimensions. First, the side walls 28 diverge from one another from back to front, or from near the back wall 22 to near the front edge 46 of the base panel 20. Thus, the storage

space 40 becomes wider towards the front edge 46 of the base panel 20. Additionally, the storage space 40 is wider near the tops of the side walls 28 than near the bottoms of the side walls 28.

[0040] Each side of the rim 48 has a pair of receptacles or notches 66, 68 in the upper surface 72 thereof near the respective front edges 44 of the side walls 28. Each pair of notches 66, 68 in the upper surface 72 of the rim 48 includes a front notch 66 and a rear notch 68 recessed downwardly into the upper surface 72 of the rim 48. The notches 66, 68 are oriented at a slight angle relative to a transverse axis of the tray 12. Furthermore, each notch 66, 68 includes a central ridge 70. The central ridge is sized and shaped to be received in a notch 64 in the downwardly protruding lip 62 when like trays are stacked for use. The notches 66, 68 also receive a portion of the downwardly protruding lip 62 when the trays are stacked for use.

[0041] FIGS. 3 and 4 illustrate a bottom perspective view and a top plan view of the tray 12 of FIG. 2. As shown in both FIGS. 3 and 4, the base panel 20 is generally flat, though it need not be perfectly flat or planar. In the present example, the base panel 20 includes a cut-out portion 76 which reduces the weight and material cost of the tray 12. The cut-out portion 76 may be omitted in favor of a solid base panel 22 or a smaller cut-out portion 76. Regardless, the base panel 20 also may include an optional scalloped front edge 80. This scalloped edge 80, which is generally concave with respect to the front edge 46 of the base panel 20, adds rigidity and strength to the base panel 20. Of course, the scalloped edge 80 may be convex with respect to the front edge 46 of the base panel 20 or be omitted altogether. Additionally, the scalloped edge 80 may be raised or recessed vertically and may vary in width.

[0042] The base panel 20 may optionally be provided with ribs or other structures (not shown), formations or the like on both or either of its upper or lower surface. Such ribs or other formations may add structural rigidity and strength to the otherwise flat base panel 20. The ribs or other formations, when disposed on the upper surface of the base panel 20, may assist in elevating the drawer 14 above the base panel 20. These features may be included to create a gap between the base panel 20 and the drawer 14 so that the drawer may be easily grasped and pulled from the storage space 40.

[0043] The back wall 22 of this example includes an optional window or opening 82. The side walls 28 are also shown to include optional openings or windows 84. Though each wall



of the tray 12 is shown having a window 82 or 84, one or more of the walls need not have any windows 82, 84 or can have more than one window 82, 84 if desired. The number size, shape and location of the windows 82, 84 can vary considerably to provide a desired function and/or aesthetic appearance, and still fall within the spirit and scope of this disclosure.

[0044] In the disclosed examples, each of the windows 82, 84 extends across a portion of a width of each respective wall 22, 28 and part way, but not completely, toward the top edges 52 of the side walls and top edge 50 of the back wall. However, the window 82 extends completely to the back edge 26 of the base panel 20 and the windows 84 extend to the side edges 34 of the base panel 20. If desired, each window 82, 84 can also extend partly into the respective edge of the base panel 20 to create a scallop or inwardly recessed edge. The one or more windows 82, 84 may be optionally provided to create a desired aesthetic appearance, as noted above. However, the windows 82, 84 can also be provided to reduce weight of the tray 12, to provide a view into the storage receptacle 40, to provide a handhold for carrying the tray, and/or to reduce the cost per unit based on material reduction. Furthermore, as will be further discussed hereinafter, the base panel 20 may include enlarged corners 86 for receiving drawer feet during assembly of the storage system 10.

[0045] FIG. 5 is a front elevational view of the tray 12 of FIG. 2. The upward divergence of the side walls 28 is clearly seen in this view. The base panel 20 includes an optional scooped portion 90 proximate the front edge thereof. This optional scooped portion 90 may strengthen and provide additional rigidity to the base panel 20. The buttresses 60 extend generally outward from the front ends 44 of the side walls 28 and generally upward from the base panel 20 to provide additional support for the side walls 28 and the lateral extensions 54.

[0046] FIG. 6 is a side plan view of the tray 12 of FIG. 2. The back wall 22 leans slightly forward toward the forward edge 46 of the base panel 20. However, the back wall 22 can alternatively lean rearward, away from the forward edge 46 of the base panel 20, or not lean either forward or rearward. The forward lean of the back wall 22 forms an acute angle with the base panel that is preferably in the range from about 83 degrees to about 89 degrees, but the angle may vary. The front ends 44 of the side walls 28 may similarly lean slightly forwardly at the same angle as the back wall 22, as in this example, also relative the forward edge 46 of the base panel 20.

[0047] Rear receptacles 92 are provided in the upper surface 72 of the rim 48. Alternatively, a single rear receptacle 92 may be used. The rear receptacles 92 are through-

openings in the rim 48. The base panel 20 includes rear legs 94 extending from the bottom surface of the base panel 20 proximate the rear wall 22. The rear legs 94 are positioned, sized and shaped to be received in the rear receptacles 92 when a plurality of trays 12 are stacked together. Alternatively, the rear legs 94 may rest on a top surface of the base panel 20 of a like tray thereby preventing the trays from becoming frictionally locked in a stack 96 of trays 12 as shown in FIG. 7. The trays 12 are stacked and nested relative to one another to produce the compact, stable stack 96 of trays 12 for shipping, storage or display. The side walls 28 and back wall 22 of a first tray 12a are received and nested within the storage area 40 of a second lower tray 12b. The buttresses 60 of the first tray 12a are positioned forward, offset upward, and adjacent the buttresses 60 of the second lower tray 12b and the forward extensions 54 of the base panel 20 of the first tray 12a rest neatly on the forward extension 54 of the second lower tray 12b.

[0048] FIG. 8 is a perspective view of the drawer 14. The drawer includes a drawer base panel 100, a drawer rear wall 102 extending upward from the base panel 100 at a rear edge thereof, two drawer side walls 104 spaced apart from one another and extending generally upward from side edges 106 of the drawer base panel 100, and a front faceplate 110 removably attached to the drawer side walls 104 and generally spanning between the front edges of the drawer side walls 104 and extending outward beyond the side edges of the drawer side walls 104. In a manner similar to the tray, the drawer side walls 104 generally diverge away from one another in two dimensions, from front to back and from bottom to top as seen in FIG. 9. Additionally, the drawer rear wall 102 may angle slightly forward relative to the front edge of the drawer base panel 100. This configuration allows the drawer 14 to nest with similar drawers 14 when the front faceplate 110 is removed, similar to nesting the trays 12. The drawer base panel 100 also includes two guide holes 112 which will be discussed further hereinafter.

[0049] Of course, the front faceplate 110 does not have to be removable and may be fixed to the drawer side walls 104. In this case, the front faceplate 110 may angle outwardly, away from the drawer rear wall 102 moving away from the drawer base panel 100. Alternatively, the front faceplate 110 may be fixed to the drawer side walls 104 in an orientation that is substantially perpendicular to the drawer base panel 100. Regardless, if the front faceplate 110 is fixed to the drawer side walls 104 (i.e., the front faceplate 110 is not removable), the drawer 14 remains nestable with like drawers 14.

[0050] FIGS. 10A and 10 B are side views of the drawer 14 partially cut away at the upper front edge of the drawer side wall 104. A drawer rim 118 includes a downwardly projecting finger 114 attached to a bottom surface of the drawer rim 118. The finger 114 includes a through bore 116 generally parallel to the drawer base panel 100. The through bore 116 receives a pin extending from a brace on the front faceplate 110 of the drawer 14. This interaction will be discussed further hereinafter. The downwardly projecting finger 114 extends from a bottom surface of the drawer rim 118, generally perpendicular to a lower surface of the drawer rim 118 and the drawer bottom panel 100. The through bore 116 is generally parallel to the lower surface of the drawer rim 118 and the drawer bottom panel 100.

[0051] FIGS. 11A and 11B show cutaway front views of the drawer 14. Two feet 120 extend downward from the bottom surface of the drawer base panel 100. The feet 120 are generally "L" shaped defining a guide area 122 between a bottom portion of the foot 120 and the bottom surface of the base panel 100. The guide area 122 receives a portion of the tray base panel 20 thereby maintaining proper orientation and range of operation for the drawer 14 when the drawer 14 is installed in the tray 12. The feet 120 extend generally downward from the bottom surface of the drawer bottom panel 100 and terminate in a generally horizontal portion 124. The guide area 122 between the horizontal portion 124 and the bottom surface of the bottom panel 100 is slightly larger than the thickness of the tray base panel 20. A portion of the tray base panel 20 is partially received within the guide area 122. Thus, the feet 120 act as drawer guides stabilizing the drawer 14 within the tray 12 and preventing lateral or vertical movement of the drawer 14 while allowing the drawer 14 to freely move toward and away from the tray rear wall 22.

[0052] During assembly of the tray and drawer system 10, the drawer 14 is inserted into the storage space 40 of the tray 12. A user may use the two guide holes 112 to visually locate the enlarged corners 86 of the tray 12 and insert the feet 120 through the enlarged corners 86 of the tray 12, thereby slidably securing the drawer 14 to the tray 12.

[0053] FIGS. 12A and B are front and rear perspective views, respectively, of the front faceplate 110. The front faceplate 110 is a generally elongate panel having a recessed portion 126 disposed in one side thereof. The recessed portion 126 has a lip or grasping surface 130 to enable a user to grasp the front faceplate 110 of the drawer 14 and pull it outward, away from the rear wall 22 of the tray 12. Additionally, the front faceplate 110 includes two extended portions 132, one at either end thereof which generally overlie the buttresses 60

when the drawer 14 is installed in the tray 12. Each extended portion 132 has a slotted rib 134 projecting inwardly from a rear side 136 of the front faceplate 110. The slotted rib 134 additionally includes a post or projection 140 extending from a rear side thereof. The slotted rib 134 cooperates with the side wall 104 of the drawer 14 in a snap-fit type arrangement to secure the front faceplate 110 on the drawer 14.

[0054] FIG. 12C is a top view of the front faceplate 110. The slotted rib 134 receives a portion of the drawer rim 118 within a shoulder region 142 of the slotted rib 134. The post 140 extends outward away from the slotted rib 134 sufficiently to engage the bore 73 of the downward projecting finger 114 when mounting the front faceplate 110 to the drawer side walls 104.

[0055] FIG. 12D is a cross-section of the front faceplate 110 taken along line 14D-14D of FIG. 14C. The front faceplate 110 includes a convex recessed portion 144 and a grasping lip 146. The recessed portion 144 is large enough to allow a user to insert his/her fingers into the recessed portion 144 and behind the grasping lip 146, thereby giving the user a surface by which the drawer 14 may be pulled outward from the tray 12 exposing the storage space within the drawer.

[0056] FIG. 12E is a cross-sectional view of the upper front corner of the drawer 14 (as shown in FIG. 12), when the drawer front faceplate 110 is mounted to the drawer side walls 104. The drawer front faceplate 110 extends slightly above the top of the drawer rim 118. However, the front faceplate 110 may be flush with or lower than the top of the drawer rim 118 if desired. The slotted rib 134 is generally parallel to and spaced apart from the rear side of the front faceplate 110. The post 140 extends partially through the bore 116 in a snap-fit configuration, thus removably locking the front faceplate 110 to the drawer side walls 104.

[0057] FIG. 13 is a perspective view of the lid 16. The lid 16 includes a generally flat panel 146 and an inverted gutter 148 that extends around the sides and rear of the lid. This gutter 148 receives the top edges of the tray 12 thereby enclosing the storage area 40 when the lid 16 is mounted on the tray 12. Furthermore, the gutter 148 may include one or more openings 152 therein that receive rear legs 94 of the tray when trays 12 are stacked on the lid 16. Still further, the gutter 148 includes one or more slots 154 which receive the downwardly protruding lip 62 of a tray 12 when the tray 12 is stacked on the lid 16. Thus, each storage space 40 in a stack of trays 12 and lids 16 may be individually covered by a respective lid 16.

[0058] FIGS. 14-17 show the tray and drawer system stacked with various combinations of like tray and drawer systems and stand alone trays.

[0059] While the disclosed embodiments are generally manufactured from molded plastic, the tray and drawer system can be constructed from virtually any suitable material. For example, the tray and drawer system may be constructed from polystyrene, polypropylene, polycarbonate, engineering grade plastic, ABS, TPE, thermoplastics, metal, wood, organic materials, laminates, leather, glass and/or combination thereof.

[0060] The disclosed tray and drawer system improves upon maximizing retail shelf space, accommodates variable shelf space and configurations, and enhances product nesting for shipping, stock storage, and display for sale. Product nesting is accomplished by stacking each tray, drawer and lid vertically upward relative to its preceding tray, drawer and lid. The stacked trays, drawers and lids can be displayed and shipped without damage to the product due to scuffing, scratching, and the like because the products are tightly nested. Additional packing between adjacent trays, drawers and lids can be negated.

[0061] Additionally, freight cube size can be optimized and significantly reduced utilizing the disclosed tray and drawer system. Products shipped in bulk can be directly unloaded from the master carton or shipping box onto a shelf. No additional reorientation of the product is necessary, making the merchandiser's handling of the product easier. The tray and drawer system also assists in retaining the displayed trays, drawers and lids on a retail shelf space. The trays, drawers and lids also look more organized when nested as disclosed herein. This reduces the amount of work required by both customers and merchandisers to maintain the shelf displays in a neat and organized fashion. An organized shelf space may effect the perception of the consumer and influence his or her decision to buy the displayed products.

[0062] Further, because more product can be displayed for sale in a given amount of shelf space, less restocking time and stocking space is necessary for the retailer. Having more product available and on display for sale at any one time reduces the frequency of an item appearing to be out of stock, which can prevent a consumer from leaving the establishment to go elsewhere to find the desired product.

[0063] Although certain tray and drawer systems that are nestable have been described herein in accordance with the teachings of the present disclosure, the scope of the appended claims is not limited thereto. On the contrary, the claims cover all embodiments of the teachings of this disclosure that fairly fall within the scope of permissible equivalents.

**What Is Claimed Is:**

1. A storage device comprising:

a tray comprising:

a tray bottom panel having a rear edge, a forward edge, and a pair of opposed side edges;

a tray rear wall extending upwardly from the rear edge of the tray bottom panel;

a pair of opposed tray side walls, each extending upwardly from respective side edges of the tray bottom panel;

a storage space defined above the tray bottom panel, forward of the tray rear wall, and between the tray side walls; and

a pair of lateral extensions each formed near the forward edge of the tray bottom panel extending outwardly beyond the tray side walls;

a drawer comprising:

a drawer bottom panel having two opposed drawer side walls attached to respective side edges of the drawer bottom panel, a drawer rear wall attached to a rear edge of the drawer bottom panel and disposed between the drawer side walls, and a drawer front faceplate disposed at a front of each of the drawer side walls and generally opposed to the drawer rear wall,

wherein the drawer front faceplate extends outward beyond the drawer side walls at least as far as the lateral extensions of the tray extend beyond the tray side walls; and

a lid comprising:

a lid panel having a front edge, a back edge, two opposed side edges; and

a raised inverted gutter extending outward from the front edge, the rear edge and the side edges of the lid panel forming an inverted channel adapted to receive upper edges of the tray side walls and an upper edge of the tray rear wall.

2. The storage device of claim 1, wherein a window is located on at least one of the tray side walls and the tray rear wall.

3. The storage device of claim 1, wherein the tray rear wall leans slightly creating an acute angle between the tray bottom panel and the tray rear wall.
4. The storage device of claim 3, wherein the acute angle is in the range of approximately 83° to approximately 89°.
5. The storage device of claim 1, wherein a rim extends outwardly from top edges of the rear tray wall and the tray side walls.
6. The storage device of claim 5, further including a receptacle in the rim proximate the front edge of each tray side wall.
7. The storage device of claim 6, wherein the front edge of the tray bottom panel terminates in a downwardly protruding lip.
8. The storage device of claim 7, wherein the downwardly protruding lip includes a notch.
9. The storage device of claim 5, wherein the receptacle includes a ridge sized to engage the notch of a like document storage device when two or more like document storage devices are stacked with one another.
10. The storage device of claim 5, further including a pair of receptacles on the rim and at least a downwardly depending rib disposed on the tray bottom panel proximate bottom edges of the tray side walls, wherein the a lip cooperates with the receptacles when two or more like document storage devices are stacked with one another.

11. The storage device of claim 5, further including a rear receptacle disposed on the rim above the tray rear wall and a rear leg extending generally downward from a bottom surface of the tray bottom panel.
12. The storage device of claim 1, wherein the tray bottom panel includes a cut out portion.
13. The storage device of claim 12, wherein the cut out portion includes an enlarged corner proximate the tray rear wall.
14. The storage device of claim 13, wherein the drawer bottom panel includes at least one foot extending from a bottom surface thereof.
15. The storage device of claim 14, wherein the enlarged corner is adapted to receive the at least one foot.
16. The storage device of claim 15, wherein the at least one leg includes an upper portion and a lower portion extending outwardly from the upper portion toward the drawer side wall generally forming an "L" shape.
17. The document storage device of claim 16, wherein the lower leg portion and the bottom surface of the drawer bottom panel define a guide area.
18. The storage device of claim 17, wherein a portion of the tray bottom panel is partially received within the guide area, and wherein the guide area restricts lateral and vertical movement of the drawer relative to the tray while allowing the drawer to freely move parallel to the bottom tray panel and towards and away from the tray rear wall.



19. The storage device of claim 1, wherein the drawer front faceplate includes a slotted rib and a post and wherein each of the drawer side walls includes a finger having a through-bore that receives the post in a snap-fit arrangement.

20. The storage device of claim 19, wherein the projection extends downward from the continuous lip and includes a bore sized to receive the post.

21. The document storage device of claim 1, wherein the drawer side walls diverge away from one another from proximate the drawer base panel to proximate top edges of the drawer side walls.

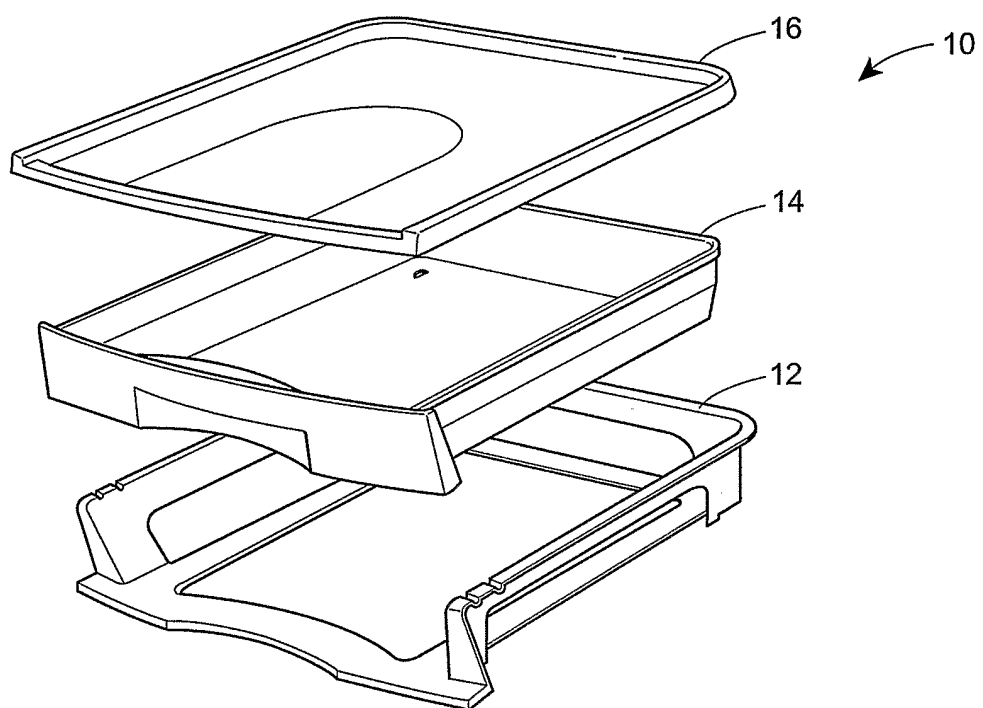
22. The document storage device of claim 1, wherein the faceplate is removably attached to the front of each of the drawer sidewalls.

23. A stackable storage system comprising:  
a plurality of tray members, each including  
a tray bottom panel having a rear edge, a forward edge, and a pair of  
opposed side edges;  
a tray rear wall extending upwardly from the rear edge of the tray  
bottom panel; and  
a pair of opposed tray side walls extending upward from respective  
side edges of the tray bottom panel;  
a plurality of lid panels, each adapted to be received on an upper edge of each  
of the tray side walls and of the tray rear wall of one of the plurality of tray members; and  
a plurality of drawers, each adapted to be received in a storage space defined  
between one of the plurality of tray members and one of the plurality of lid panels,  
each of the plurality of tray members being nestable with another such that the  
tray bottom panel of one of the tray members is in close proximity to the tray bottom panel of  
another of the tray members when stacked in the absence of any intervening drawer members  
and lid panels.

24. The stackable storage system of claim 23, wherein one of the plurality of tray members is received on one of the plurality of lid panels received on the upper edge of each of the tray sidewalls and of the tray rear wall of another of the plurality of tray members.

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**FIG. 1**

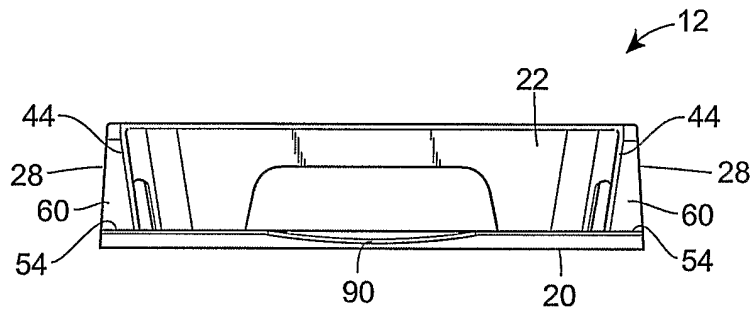




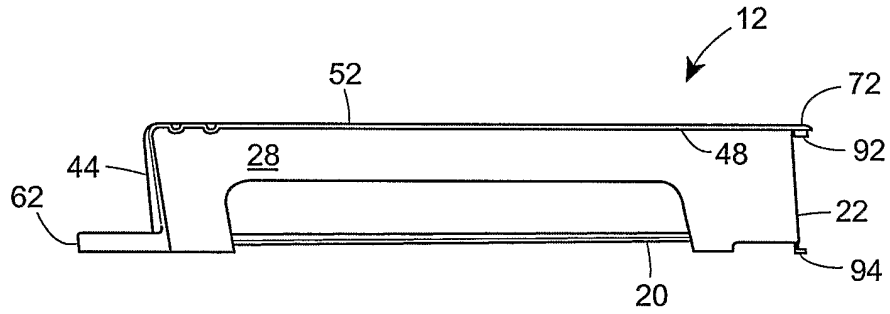


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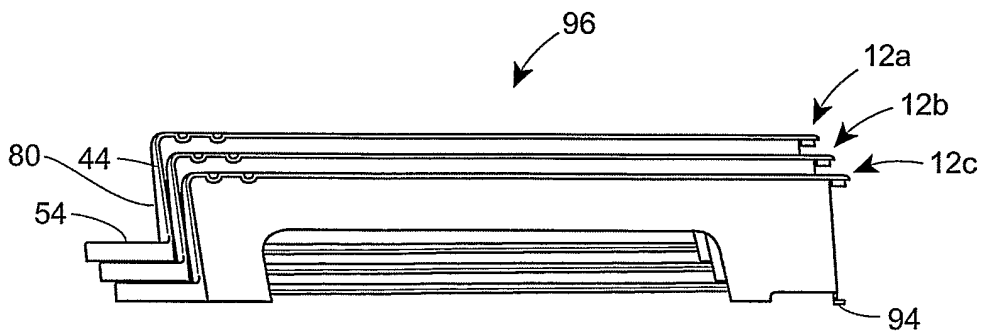
**FIG. 5**



**FIG. 6**

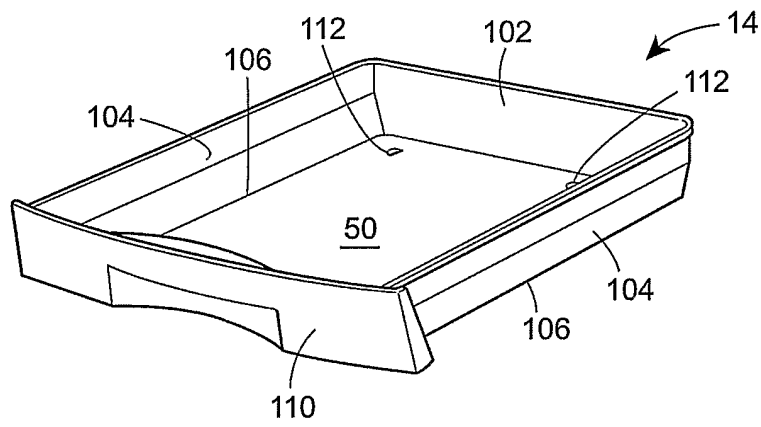


**FIG. 7**

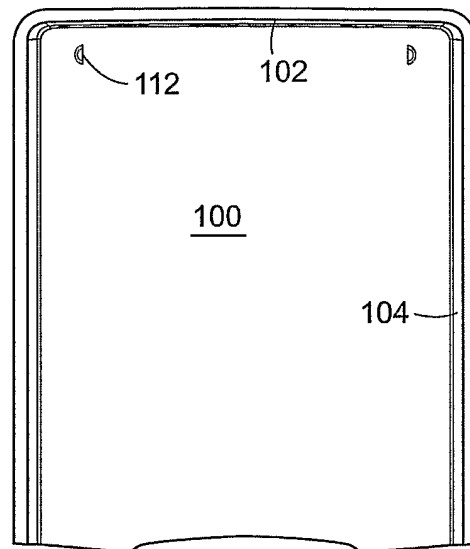


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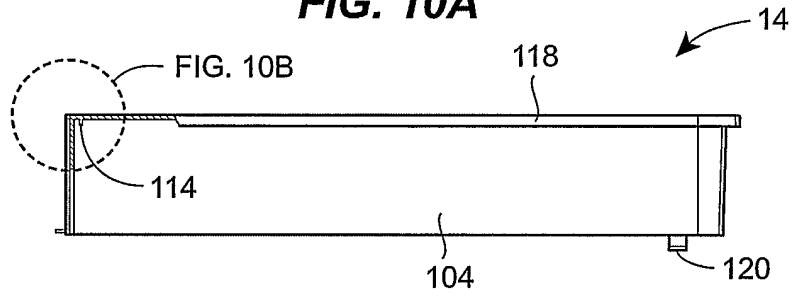
**FIG. 8**



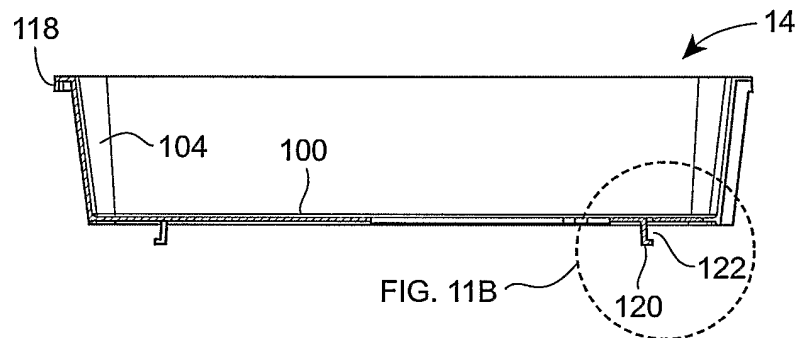
**FIG. 9**



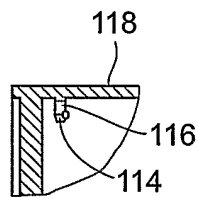
**FIG. 10A**



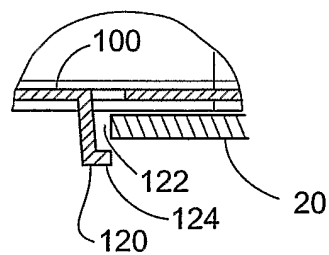
**FIG. 11A**



**FIG. 10B**



**FIG. 11B**





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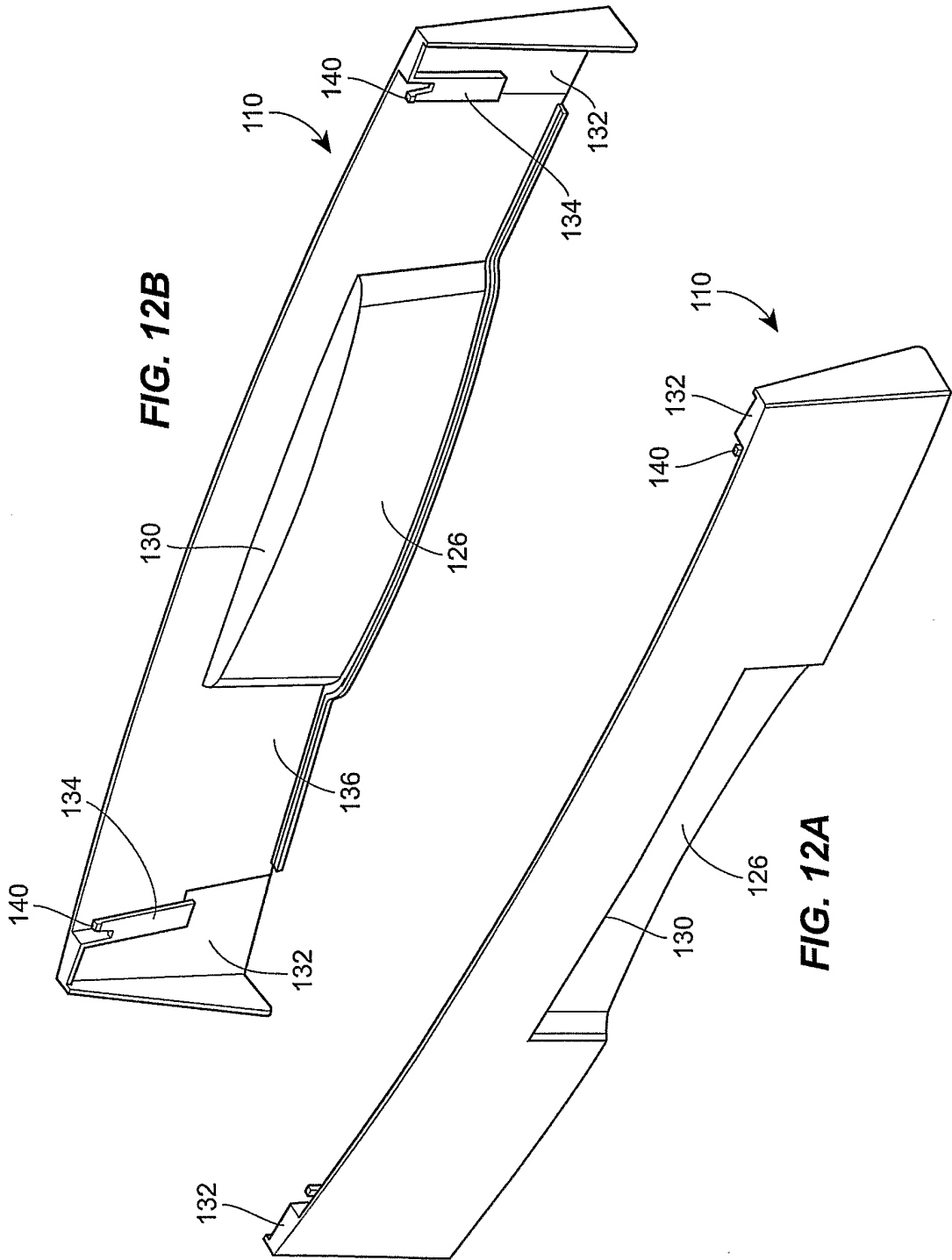


FIG. 12B

FIG. 12A

FIG. 12C

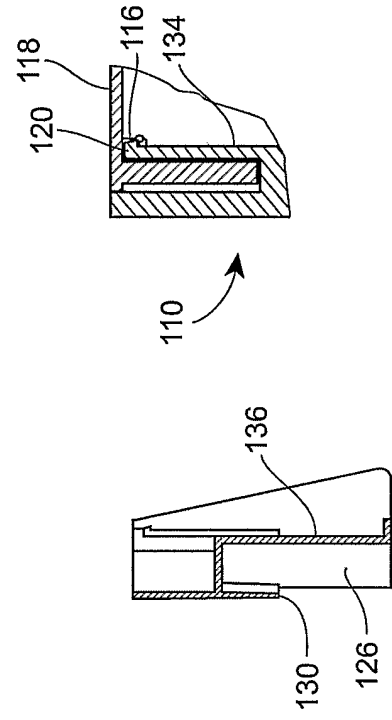
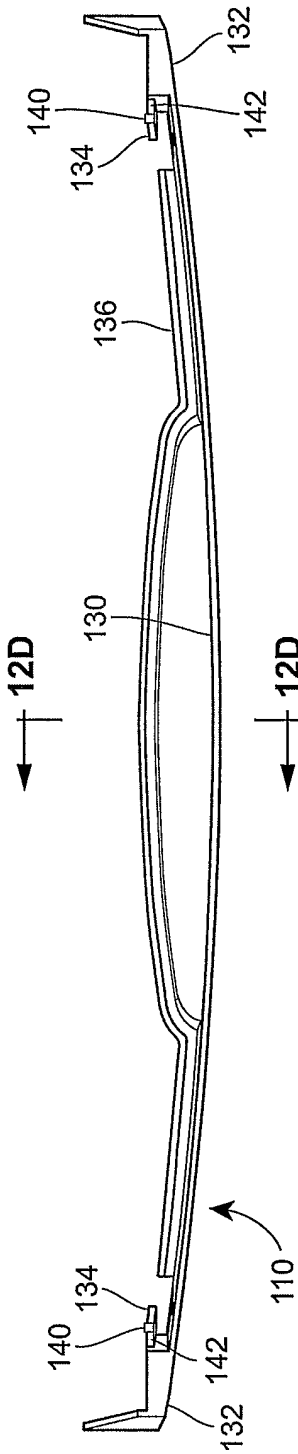
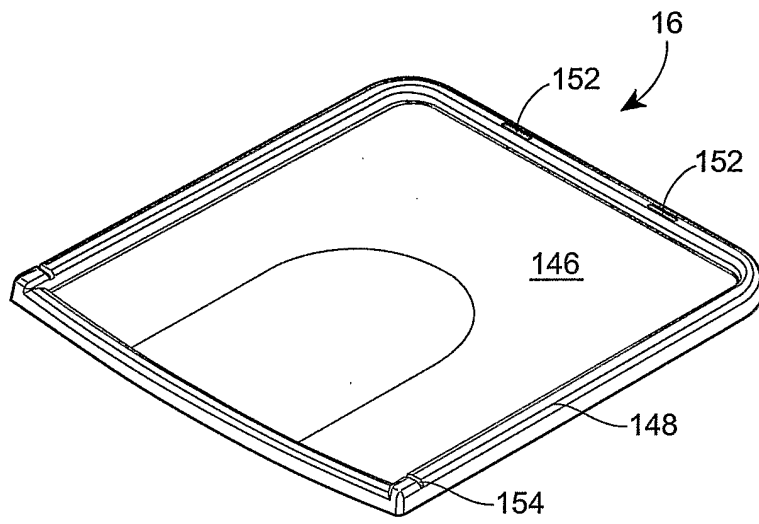


FIG. 12D

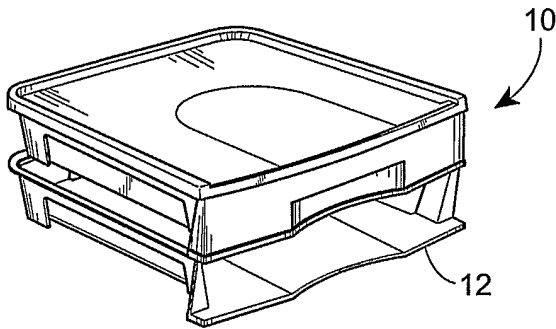
FIG. 12E

**FIG. 13**

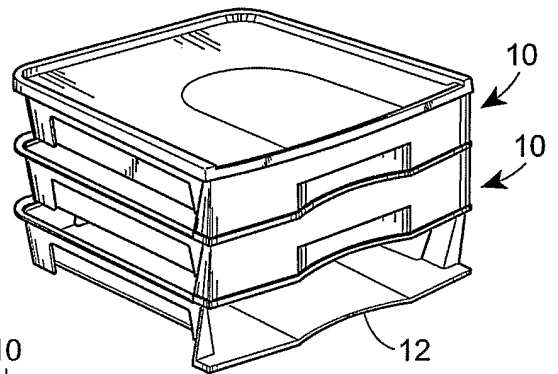


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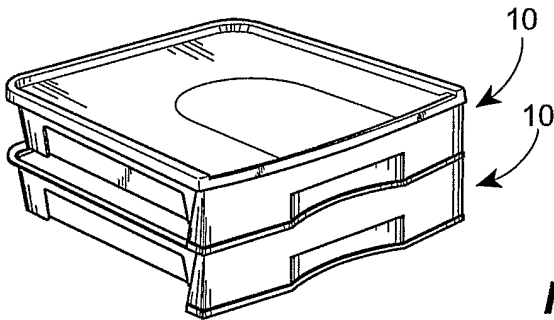
**FIG. 14**



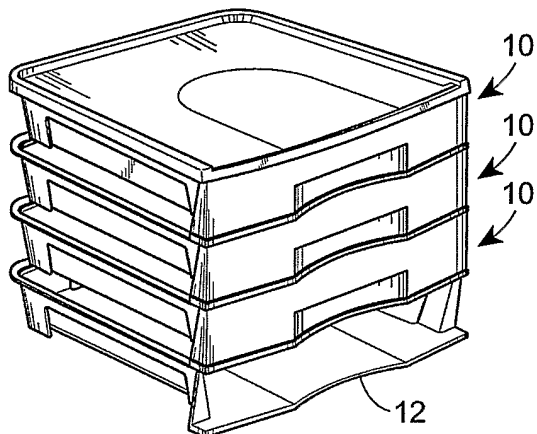
**FIG. 15**



**FIG. 16**



**FIG. 17**



## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/016431

A. CLASSIFICATION OF SUBJECT MATTER INV. B65D21/02 B42F7/12		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) A47B B42F B65D		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, PAJ, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 816 674 A (MANOS ET AL) 6 October 1998 (1998-10-06) column 2, line 27 - column 4, line 24; figures 1-8	1-24
X	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 05, 30 April 1998 (1998-04-30) -& JP 10 000120 A (MAGARA SEISAKUSHO:KK), 6 January 1998 (1998-01-06) abstract; figures 1-4	1-24
A	US 2 988 412 A (VANNICE MARVIN W) 13 June 1961 (1961-06-13) column 2, line 33 - column 4, line 30; figures 1-7	1-24
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents : *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family		
Date of the actual completion of the international search  30 August 2006		Date of mailing of the international search report  06/09/2006
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  Klintebäck, D

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/016431

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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