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Brendgord

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[54] **ENCLOSURE STRUCTURE FOR MODULAR SYSTEM**

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[73] Assignee: **American Sterilizer Company,** Erie, Pa.

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[52] **U.S. Cl.** ..... **211/88,** 211/126, 220/97 F, 312/108

[51] **Int. Cl.** **A47b 87/00,** A47f 5/08

[58] **Field of Search** ..... 312/107, 108, 111, 128, 18; 220/42 A, 44 M, 82 A, 97 F; 211/88, 87, 126; 108/108, 110

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Primary Examiner—Casmir A. Nunberg

Attorney, Agent, or Firm—Raymond N. Baker; Shanley and O'Neil

[57] **ABSTRACT**

Unitary construction easy-access enclosure for handling, storing, transporting, and distributing articles throughout a modular system with self-seating and stabilizing interconnecting means for suspending the enclosure on an upright support, means for supporting the enclosure horizontally, and means for interlocked stable stacking of such enclosures. Means for dividing the enclosure internally and retaining carried articles, and dust cover means, are removably positioned by structural elements of the unitary-construction enclosures.

22 Claims, 19 Drawing Figures

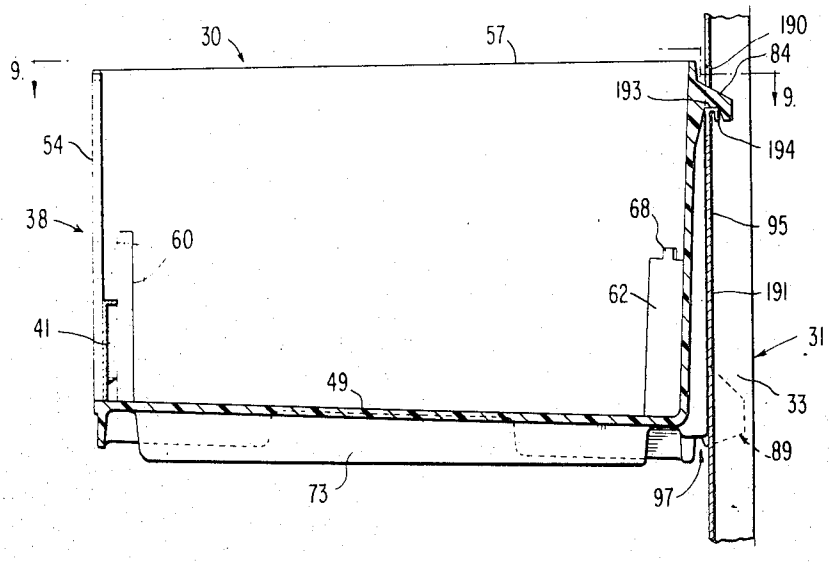
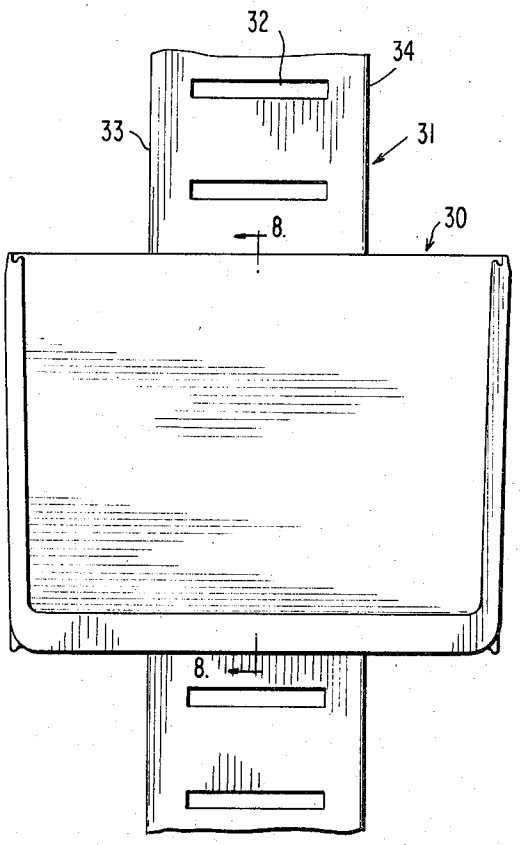


FIG.1



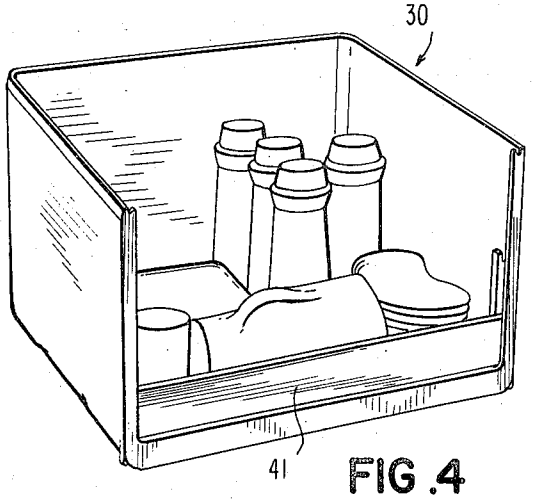


FIG.4

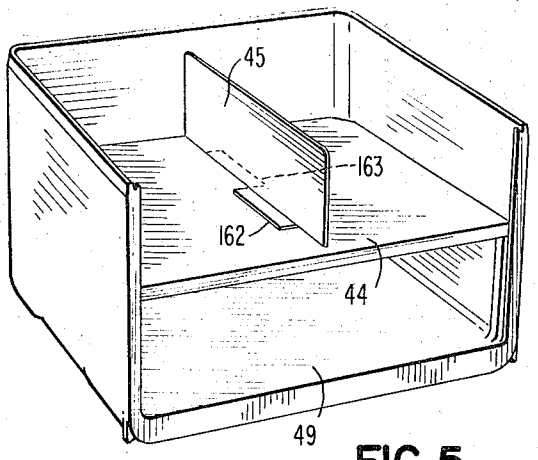


FIG.5

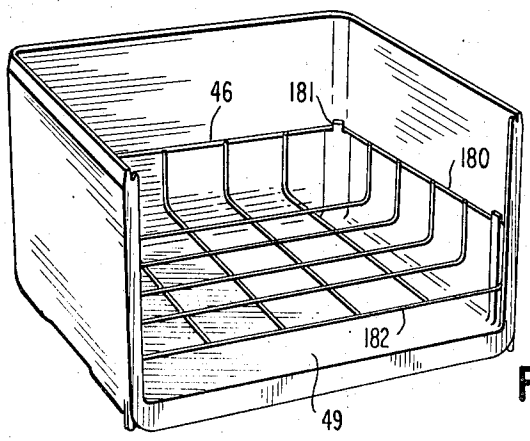


FIG.6

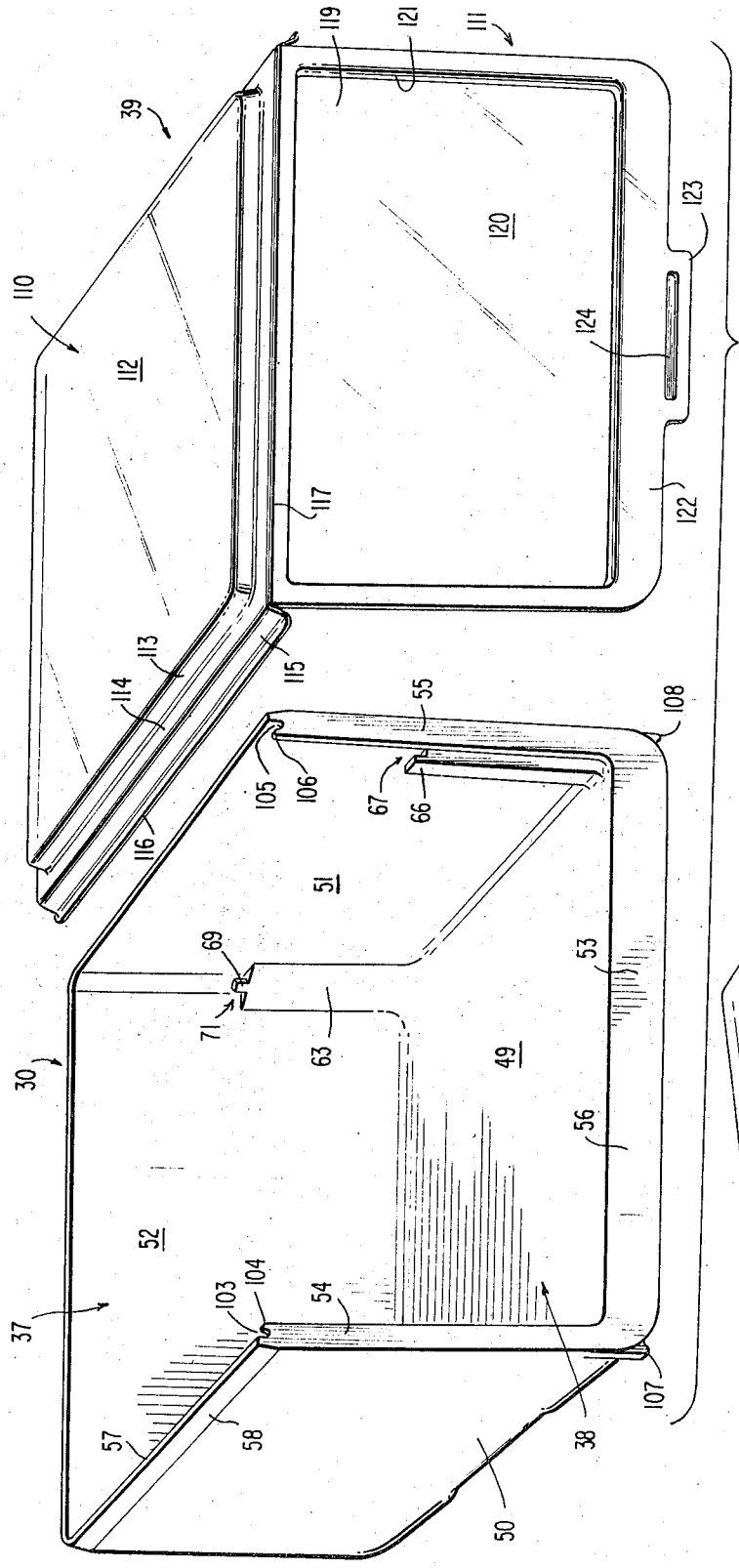

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FIG. 2

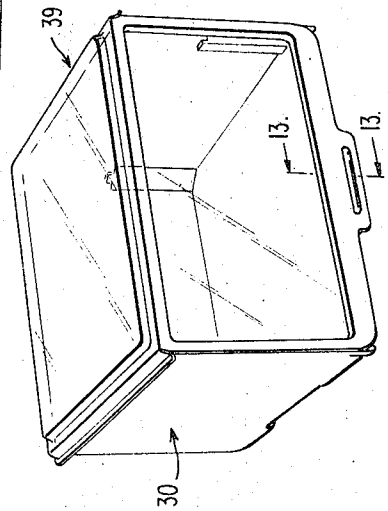
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FIG. 3

FIG.7

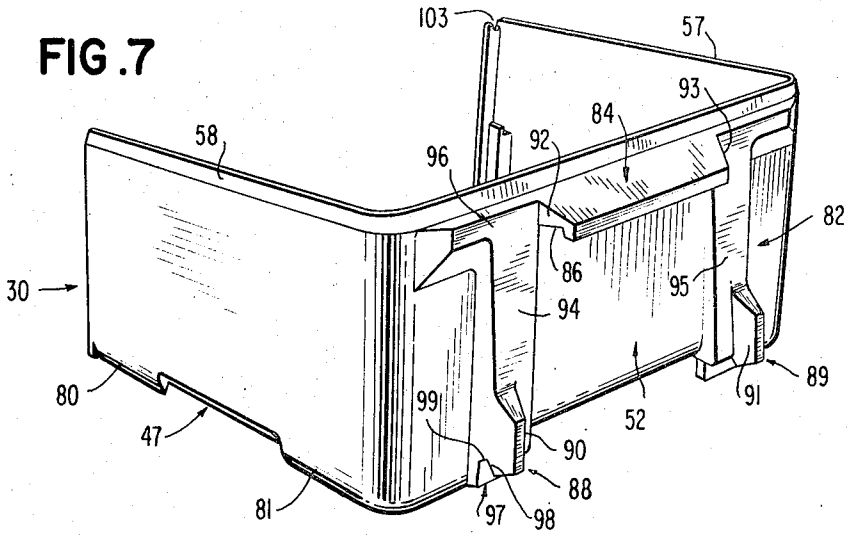
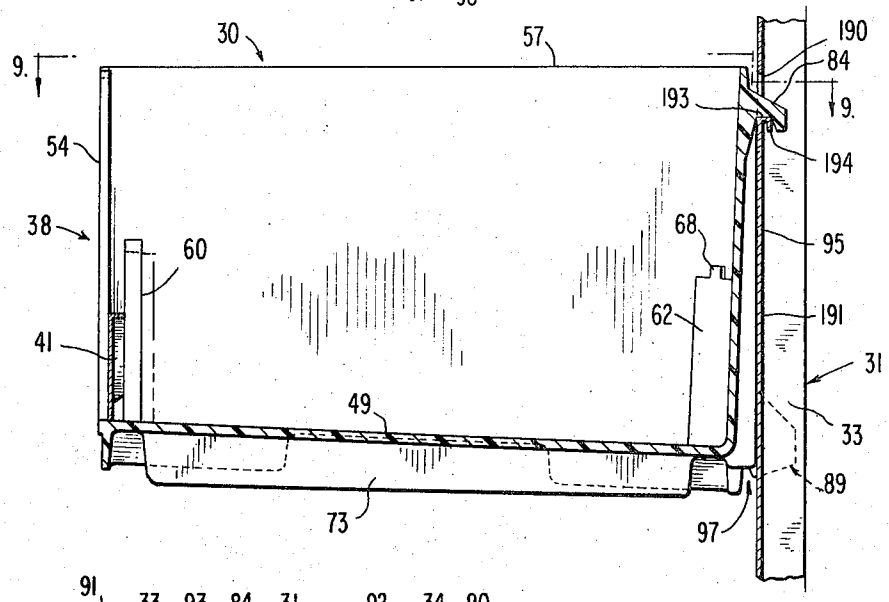


FIG.8



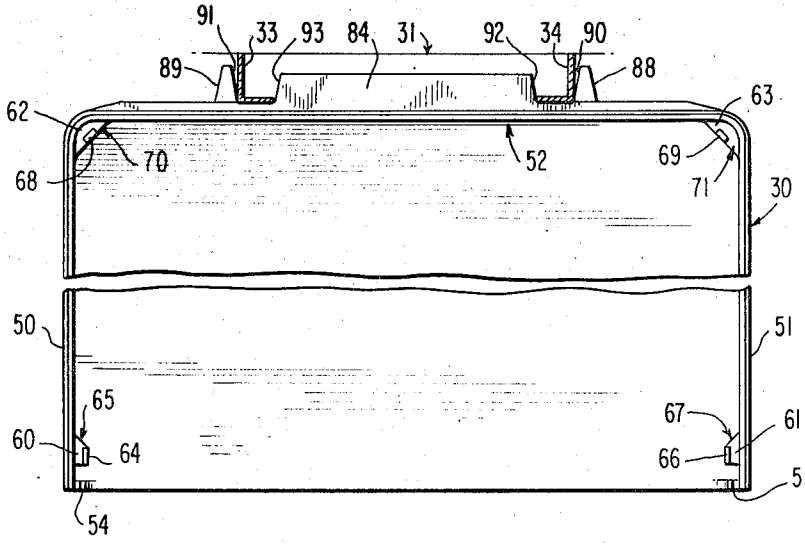


FIG.9

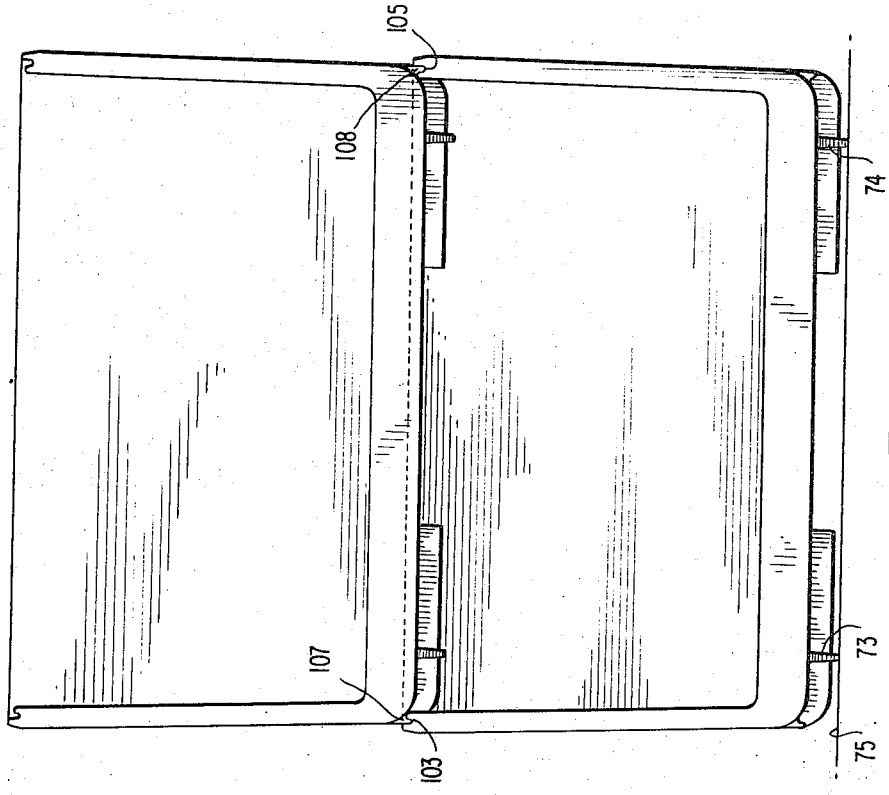


FIG. 11

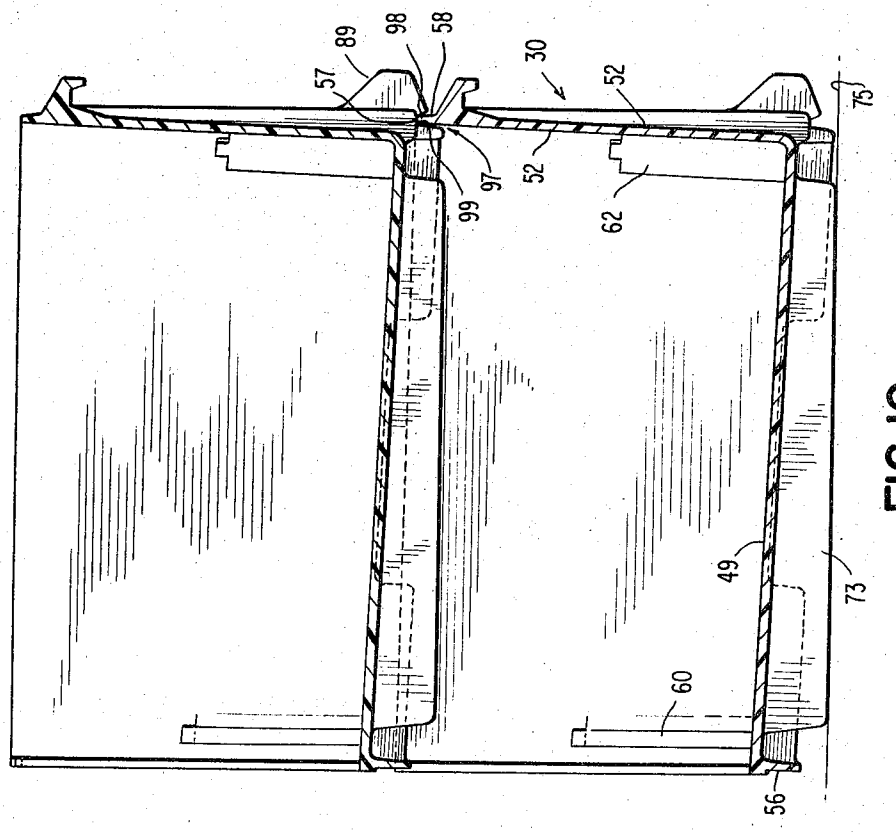
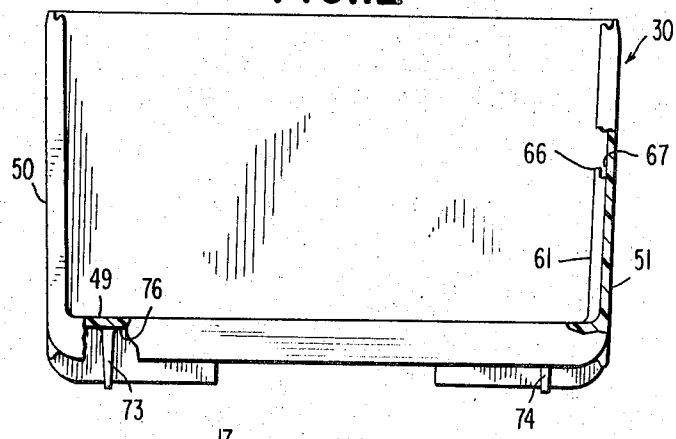


FIG. 10

FIG.12



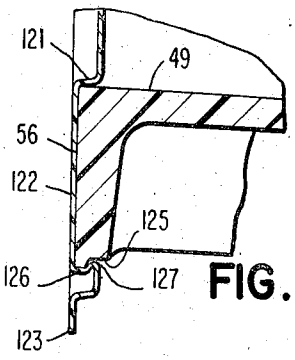


FIG.13

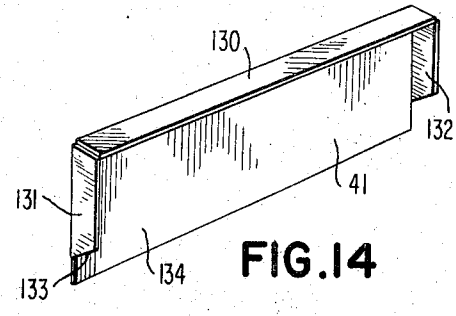


FIG.14

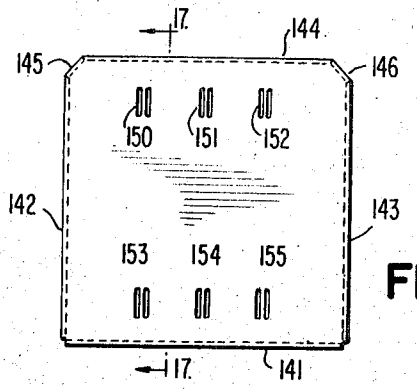
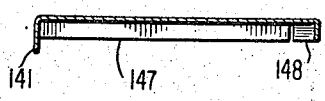


FIG.15

FIG.17



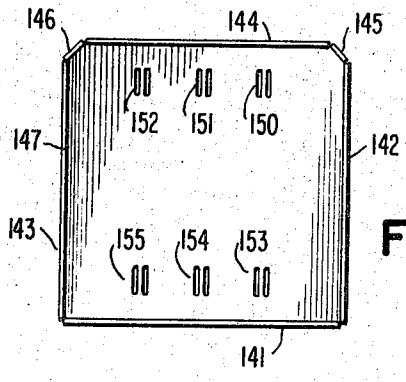


FIG.16

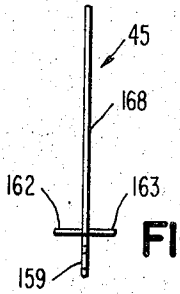
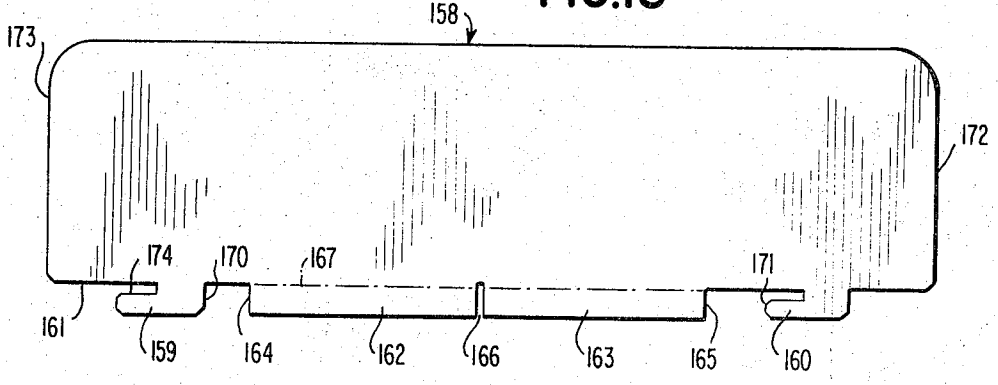


FIG.19

FIG.18



ENCLOSURE STRUCTURE FOR MODULAR SYSTEM

This invention relates to an enclosure for handling, storing, transporting, and distributing articles throughout a modular system. A specific aspect of the invention relates to a container module of unitary construction with interconnecting means for cantilever suspension of the module. An easy-access container module is provided with internal support for articles being handled and enclosure cover means to maintain such articles dust-free.

In commercial establishments requiring handling of numerous small items, for example in hospitals, a need has existed for more efficient and more economic handling of supplies. A modular system for such need is described in applicant's copending application entitled "Modular Storage, Transfer Handling, and Retrieval System," Ser. No. 278,360 filed Aug. 7, 1972. Important to a modular system as conceived by applicant is a container module providing easy access, ease of stable mounting in vertical orientation, means for level disposition on horizontal surfaces, stable stacking capabilities, light-weight, high carrying capacity with partitioning means for separation and holding of articles in fixed and distinct relationship, ease of washing and cleaning, easily operable cover means for protecting container contents, and economy in manufacture and use.

As a part of the inventive concept, a container module for use in a modular system should be capable of being readily suspended on vertically oriented support means by movement of the container module with article carrying surfaces horizontally oriented without need for tilting in any direction. Interconnecting means for coacting with the vertical support means should be located on the container module so as not to interfere with handling of such articles and to unobtrusively occupy a minimum amount of space; in other words, to maximize on carrying capacity and present no protrusions likely to interfere with handling of the container module or to break easily. Moreover, the interconnecting means should provide self-seating characteristics without need for manipulation of fastening or securing means to obtain stable mounting. The module should also provide for ease of application of cover means capable of maintaining enclosed articles in dust-free condition, means for stably positioning internal partition means, and stacking capabilities to enable container modules to be stably stacked independent of support structure while occupying minimum space.

The container module should be capable of use with, on, or in association with any structure — wall, floor, or ceiling, i.e. horizontal or vertical surface area, or with apparatus such as carts, retrieval racks, elevators, and the like. In brief, a standardized article carrying module, universally usable throughout the modular system without need for selection as to size, shape, or support.

The accompanying drawings present features for describing more specifically the inventive aspects and advantages of the invention. In these drawings:

FIG. 1 is a front elevational view of a container module mounted on vertically-oriented support means in accordance with the invention;

FIG. 2 is an exploded perspective view of the novel container module of FIG. 1 and cover means for the container module in side-by-side relationship;

FIG. 3 is a perspective view of the structure of FIG. 2 with the cover means in dust sealing position on the container module;

FIG. 4 is a perspective view showing the container module of FIG. 1 with front retaining bar means;

FIG. 5 is a perspective view of the container module of FIG. 1 with shelf and partition means;

FIG. 6 is a perspective view of the container module of FIG. 1 with wire basket means;

FIG. 7 is a perspective rear view of the container module of FIG. 1;

FIG. 8 is a view in section taken along line 8—8 of FIG. 1;

FIG. 9 is a partial sectional view taken along line 9—9 of FIG. 8;

FIG. 10 is a sectional view in side elevation corresponding to FIG. 8 and showing the manner in which the container modules of this invention can be stacked one on the other;

FIG. 11 is a front elevational view of the arrangement of FIG. 10.

FIG. 12 is a front view in elevation of the container module of FIG. 1 with portions broken away to show additional details;

FIG. 13 is an enlarged view in section taken along line 13—13 of FIG. 3;

FIG. 14 is a perspective view of a front retainer bar in accordance with the invention;

FIG. 15 is a top plan view of a shelf means in accordance with the invention;

FIG. 16 is a bottom plan view of the shelf means of FIG. 15;

FIG. 17 is a view in section taken along line 17—17 of FIG. 15;

FIG. 18 is a side view of a partition means removably mountable on the shelf of FIG. 15 in accordance with the invention, and

FIG. 19 is an end view of the partition of FIG. 18.

Container module 30 of FIG. 1 is mounted on support means 31. Such support means is vertically oriented and includes elongated horizontally-oriented slot means, such as 33, spaced longitudinally along the support means as described more particularly in applicant's copending application Ser. No. 278,360, filed Aug. 7, 1972 entitled "Modular Storage, Transfer Handling and Retrieval System." Support means 31 includes lateral side edge means 33, 34, e.g. lateral sidewalls.

Various features of and accessories for the container module of the invention are shown in general arrangement perspectives in FIGS. 2 through 7. As shown in FIG. 2, container 30 is generally rectilinear in configuration, defining a substantially right-angled hexahedron enclosure, with full-open access upper portion 37 and full-open front portion 38. Also shown in FIG. 2 is a transparent one-piece cover 39 which seats on container 30 in the manner shown in FIG. 3 and seals the container against entry of dust as described in more detail in applicant's copending application Ser. No. 278,361, filed Aug. 7, 1972 entitled "Self-Seating Container Module Cover." In FIG. 4 a vertically-oriented retainer bar means 41 is positioned at the front of the container module to prevent articles on the bottom of the enclosure from rolling or sliding out. In FIG. 5 a

horizontal shelf means **44**, which can be provided with one or more vertical partition means, such as **45** is positioned within the container module. In place of the removable horizontal shelf means **44**, the module can be provided with an open framework means, such as bottle rack **46**, as shown in FIG. **6**. Either the shelf means or open framework means can be used with a front retainer means.

FIG. **7** shows novel interface structure for stable cantilever suspension of the container on an upright support and one of the handgrip openings centrally located along the sides of the container module so that the module can be easily grasped and lifted from a planar horizontal surface.

THE CONTAINER MODULE

As shown in FIG. **2**, container module **30** has bottom wall means **49**, upright side wall means **50** and **51**, and rear wall means **52** defining in combination an enclosure with open-access from above and front. At the front edge of bottom wall means **49**, flange means **53** depends downwardly defining a vertically-oriented planar surface extending between lateral sides of the module. Side wall means **50, 51** include inwardly directed flanges **54** and **55**, respectively. Each of these flanges has a substantially planar vertically-oriented surface; these flange surfaces are coplanar and define the front face of the container module. Such front face lies in a substantially vertical plane when container module **30** is mounted on a support (FIG. **1**) as well as when the container module is placed on a horizontal surface (FIG. **10**).

A narrow surface is defined by the upper top edges of side wall means **50, 51** and rear wall means **52**. This surface is generally horizontal when the container module is in its normal upright position. These edge surfaces are coplanar around the top of the side and rear walls. An exterior surface along each top edge of the walls **50, 51, 52** is chamfered; e.g. contiguous to top edge **57** of side wall means **50** chamfered surface **58** slopes outwardly from the narrow width top edge surface **57** to the full thickness of the side wall.

Four support posts **60, 61, 62, 63**, seen in plan view in FIG. **9** and in various side views in FIGS. **8, 10** and **12**, are distributed at respective interior corners of container module **30**. These are provided for support of shelf means **44** or open framework means **46**. Support post **61** at the front of the enclosure extends vertically on upright wall means **51** in contiguous relationship with upright flange **55**. Preferably, spacing between support posts **61** and upright flange **55** is provided for supporting retainer bar means **41**. Post **60** on the opposite side wall means can be similarly spaced from flange **54** on side wall means **50**. Support posts **62** and **63** are located respectively at the rear corner junctions on the interior of the enclosure.

In accordance with the invention each of the support posts have means integrally formed on their upper ends for retaining, as well as supporting, shelf means **44**, open framework means **46**, or other similar structure. Projection **64** on post **60** and projection **66** on post **61** extend upwardly to define slot means **65** and **67**, respectively, which extend in a direction parallel to the side walls. The rear corner posts **62** and **63** nave retaining projections **68** and **69**, respectively, which extend in angled relationship to the side walls to define curvilinear slot means **70** and **71** at these rear corner support stations.

The bottom wall means **49** of container module **30** includes contact surface means to position the container module in accordance with the invention when disposed on a horizontal surface. As shown in FIGS. **10** through **12**, in the unitary construction provided, this means takes the form of a pair of support and reinforcing ribs **73, 74** which support the container module on horizontal surface **75**. Each rib is elongated and originates at a location adjacent to front flange **56** and terminates at a location contiguous to rear wall **52**. Ribs **73, 74** are preferably spaced from the front-to-rear (longitudinal) centerline of the container module to provide stability but disposed inwardly of the respective side walls **50** and **51**. In addition to providing a stable support surface, these ribs provide structural stength for the bottom wall means while reducing the material and weight requirements of such means.

Additionally, a bottom skirt means is provided for the container module. As best seen in FIG. **7** the skirt means includes a front portion **80** and a rear portion **81** which extends around the curvilinear junction of the side and rear wall means and terminates contiguous to a rearwardly projecting stabilizing means to be described in detail later. The bottom skirt is interrupted along each side wall by a recess handgrip opening such as **47**.

An important aspect of the present invention for operating with a modular system is the ability to readily suspend a container module in upright position on a container support. The interconnecting means provided should not interfere with the full-open access features of the invention nor with means for lifting or handling the container module. Further advantages provided by the present invention are self-seating characteristics which enable the container module to be moved horizontally while in an upright position, that is without tilting, toward a support means and to be stably suspended by merely placing the container module on the support means without manipulation of any fastening or securing means. The container module should be readily removable from the upright support in a similar manner, that is without tilting to disengage or move away from the support rail means.

Details of interconnecting means **82** formed integrally with the container module are shown in the rear view of FIG. **7**. The interconnecting means **82** includes a plurality of predeterminedly spaced elements which act to support the container module and stabilize the module against inadvertent dislodgement or lateral tilting when is suspended position.

The interconnecting means **82** includes elongated hanger means **84** extending horizontally across back wall means **52** at a location, selected for better stability to be above the lateral centerline, and preferably, contiguous to the chamfered edge of rear wall means **52**. The elongated hanger means includes flange means **85** spaced from the rear wall means **52** by load support surface **86**.

Stabilizing elements **88, 89** are in horizontally spaced locations selected to be below the lateral centerline for better stability, and preferably contiguous to the lower extremity of rear wall means **52**.

Spacing between stabilizing elements **88, 89** is a distance greater than the length of the elongated hanger means **84** measured between internal confronting sur-

faces 90 and 91 which diverge in projecting outwardly from the rear container wall means 52. Stabilizing elements 88 and 89 project in the same direction as the elongated hanger means 84 from the rear wall means 52. This horizontal spacing between the inward ends of the stabilizing elements, at a location contiguous to rear wall means 52, is substantially equal to the distance between the lateral edges 32 and 34 of upright support means 31 shown in FIG. 1.

These stabilizing elements prevent lateral tilting of the container module. Further lateral stability is added by the elongated hanger means 84 in that side walls 92 and 93 of such hanger means, at a location contiguous to the rear wall means 52, are spaced substantially the same as side edges of the horizontally extended support slot means. Sides of the elongated hanger means 92, 93 taper toward each other in projecting outwardly from the rear wall means 52 to provide ease of insertion and, along with the stabilizing elements confronting surfaces 90, 91 help provide self-seating characteristics.

Rear wall means 52 includes reinforcing and surface contact means intermediate the hanger means 84 and stabilizing elements 88 and 89. These take the form of upright ribs 94 and 95 and lateral rib 96. These elements present coplanar surfaces for contacting the vertical upright support means so as to properly position the container module 31 in suspended position. As best seen in FIG. 8, the contact surface of reinforcing leg 95 contacts the upright support 31 so that the container module 30 is suspended in substantially upright position. The preferable construction of the container module when so positioned is to have the interior surface of bottom wall means 49 inclined slightly downwardly in approaching the rear wall means 52. Preferably the angle of inclination is about 2 ½° and extends from a location contiguous to the forward side of the container module to the rear wall.

The reinforcing leg means 73, 74 forming part of the bottom wall means are disposed to have their contact surfaces act in a similar manner when the container means is set on a horizontal surface, that is the interior surface of the bottom wall is inclined downwardly in approaching the rear of the container module.

Another important contribution of the invention results from the stable stacking features available with container modules as described. These include lateral and longitudinal stability stacking means. The stabilizing elements 88 and 89 of the unitary construction shown in FIG. 7 provide an interlocking feature for stability in the direction leading from front to back of the container module. For this purpose an inverted U-shaped recess, such as 97 on stabilizing element 88, is provided at the base of each stabilizing element. The recess formed in each base of the stabilizing elements has an outwardly sloping rear surface 98 and a load bearing surface 99. The outwardly sloping surface 98 coacts with the chamfered surface on the top periphery of each container module and provides self-seating characteristics.

For lateral stability, stacking grooves are provided at the forward upper edges of the container module. Stacking grooves 103 and 105 are best seen in FIG. 11. Projections 107 and 108 at the lower forward edge of a standard container module interfit with slots 103 and 105, respectively. These slots and projections are formed to have conforming configurations and self-seating characteristics.

Container module 30 is of unitary construction and is molded or cast from a plastic material such as structural foam. High density polyethylene, high-impact polystyrene, and polypropylene are suitable examples. A specific example is the NORYL type of structural foam available from General Electric Company, Plastics Department, Selkirk, New York. NORYL FN 215 is preferred for its fire safety chracteristics. The plastic material is selected to have a high softening temperature so it can be cleaned and/or at least toxic gas sterilized without deteriorating. Corner junctions of the enclosure are rounded to avoid sharp inside and outside corners for ease of cleaning.

The rear wall means 52 of the container module 30 has excellent beam strength as a result of vertical ribs 94, 95 which project from rear wall means 52. Such rib means provide the required strength while saving material and weight by permitting reduced wall thickness intermediate such ribs. The bottom wall means 49 is strengthened and made more rigid as a result of the beam strength obtained from support and reinforcing ribs 73, 74.

THE COVER

Cover means 39, shown in FIGS. 2 and 3 is formed from a single sheet of transparent vinyl or polystyrene, of about 25 mil thickness to provide required flexibility by known vacuum forming techniques. Cover means 39 includes a generally rectangular upper portion 110 and a generally rectangular front portion 111. Upper portion 110 includes a flat panel 112 bordered by a rib wall 113 in angled relation to panel 112. Located peripherally to rib wall 113 is narrow-width horizontally-disposed surface 114 extending around the full periphery of upper cover portion 110. Depending from the peripheral horizontal surface 114, along side wall and rear wall portions, is downwardly inclined skirt means 115. This skirt means extends around side wall and rear edges of upper cover portion 110. A beading 116 can be added to the bottom edge of skirt 115 to add strength to the skirt means.

Front cover portion 111 is joined to upper cover portion 110 along unitary hinge juncture 117. The front cover portion 111 includes peripheral flange 118 which extends around recessed portion 119. The recess portion 119 includes panel wall 120 joined to flange 118 by an inwardly projecting rib wall 121.

Centrally located along the lower flange portion 122 of the front cover means 111 is lift tab means 123 including an elongated rectilinear recess 124. As shown in FIG. 13, the lower extremity of flange 56 of container module 30 is provided with an inverted L-shaped notch 125. On the cover means 39 the upper wall 126 of tab recess 124 has a projecting bead 127 at its inner end which snap locks into the inverted L-shaped recess 125.

The coaction of cover means 39 and container module 30 in closing and sealing the access openings are described in detail in applicant's copending application entitled "Self-Seating Container Module Cover." However briefly, a double seal arrangement is provided around all peripheries with horizontally disposed peripheral border 114 contacting the upper horizontal surface 57 of the container module and the skirt means 115 contacting the chamfered surface 58 extending around the upper periphery of the container module. On the front cover portion 111 of cover means 39 the

planar border around side and bottom edges contacts the flanges **53, 54,** and **55** around the front end of the container module. Rib wall **121** contacts an inwardly inclined edge along the side walls **54** and **55** and across the front of the bottom wall means **49.**

To close container module **30** with cover means **39** it is merely necessary to seat the upper cover portion **110** with self-seating characteristics being provided by the skirt means **115.** When the front cover portion **111** is lowered and snapped into position a double seal is provided around all peripheries of the fully-open accesses to the enclosure. The rib walls **113** and **121** add rigidity to the cover means but other reinforcing lines can be used across the planar panel means without departing from the teachings of the invention.

THE RETAINING BAR

The removable retaining means **41** of FIG. **4** is shown in greater detail in FIG. **14.** Retaining means **41** in effect acts as a front partition and can be molded or cast in plastic. Preferably, retainer means **41** is fabricated from a single piece of sheet metal bent to provide a top wall **130** and side walls **131** and **132.** Bottom edges of side walls **131, 132** are spaced above the lower extremity of the retainer means **41.** As shown, bottom edge **133** of side wall **131** is inclined downwardly in approaching front wall **134** and facilitates insertion of the retainer means.

Top wall **130** projects from front wall **134** the same distance as side walls **131** and **132;** these walls project a distance slightly less than the distance between the rear surfaces of flanges **54** and **55** (FIG. **8**) and a front surface of front posts **60** and **61.** This permits retaining means **41** to slide between flanges **54, 55** and posts **60** and **61** into the position shown at FIG. **8** and to be held firmly in upright position. FIGS. **4** and **8** also show that the retaining bar **41** has a vertical height less than the height of the shelf support posts. Shelf or basket means can be positioned above the retainer means **41.**

SHELF AND PARTITION ARRANGEMENT

The removable shelf means **44** of FIG. **5,** is shown in greater detail in FIGS. **15** through **17.** Shelf means **44** is molded or cast from suitable plastic material or fabricated from a single sheet of sheet metal to provide a top wall **140,** a front wall **141,** side walls **142** and **143,** a rear wall **144,** and rear corner tabs **145** and **146.** These walls and tabs each project perpendicularly from the edges of top wall **140.** Tabs **145** and **146** are angled, at approximately 45°, between rear wall **144** and side walls **142, 143,** respectively. Tabs **145** and **146** interlock with the slots **70, 71** (FIG. **9**) formed by projections **68, 69,** on the rear corner support posts **62, 63.** Side walls **142, 143** of the shelf means **44** interlock with slots **65, 67** formed by projections **64, 66** on the front cover support posts **60, 61.** The height of each wall and tab of the shelf means **46** is substantially the same as the height of the corner post projections so that the shelf will be firmly supported by the slots and the projections at each of the support posts **60–63.** The shelf means **44,** when in place, is locked against both longitudinal (rear to front) movement and lateral movement.

As shown in FIG. **17,** front wall **141** is slightly longer vertically than the side walls and provides additional longitudinal stability through contact with flanges **54, 55** of the container module side wall means. All walls depend without forming enclosures to facilitate cleaning. Six pairs of spaced openings **150** through **155** (FIG. **15**) provide a plurality of partitioning arrangements, e.g. in halves or thirds. Each opening is elongated in a direction parallel to side walls **142, 143** and extends completely through the shelf means. The openings of the respective pairs **150, 151, 152** are offset toward rear wall **144** and the openings **153, 154, 155** are offset toward front wall **141.** The respective openings of each pair are aligned with each other in a fore and aft direction on the shelf.

The blank from which partition means **45** is formed is shown in FIG. **18.** Blank **158** is generally rectangular and has a pair of locking tabs **159** and **160** which project downwardly from a bottom edge **161** of the partition. Locking tabs **159** and **160** have the same height as stabilizing legs **162** and **163.** Stabilizing legs **162** and **163** each have their respective end edges **164** and **165** in spaced relation to the tabs. Stabilizing legs **162** and **163** are separated by a rectangular slot **166.** Stabilizing leg **162** is bent laterally along bend line **167** while stabilizing leg **163** is bent laterally in an opposite direction along bend line **167.** This provides the partition structure shown in FIGS. **5** and **19** where leg **162** extends to the left of body **168** and perpendicular to the plane of the body and leg **163** extends to the right of body **168.**

The length of each of the latch tabs **159** and **160** where unitary with the main body portion of blank **168** is slightly less than the length of each shelf opening. The distance between a rear edge **170** of tab **159** to the tip **171** of tab **160** is slightly greater than the length of the shelf openings **156** so tabs **159** and **160** enter aligned shelf openings in angled relationship to the horizontal to mount the partition on the shelf. The partition is preferably mounted on the shelf with tabs **159** and **160** facing toward rear wall **144** of the shelf; the partition is dimensioned so that after the tabs are inserted through a selected pair of aligned openings, the partition is then moved in a direction toward rear wall **144** of the shelf. Rear edge **172** of the partition is flush with rear wall **144** of the shelf and contiguous to rear wall means **52** of the container means which prevents accidental dislodgement of the partition. The distance between a top edge **174** and blank edge **161** is approximately the same as the thickness of the sheet metal of shelf means **44** so that the partition is rigidly held on the shelf means against up and down movement. In addition, legs **162** and **163** extending in opposite directions to engage the upper surface of top wall **140** of the shelf means prevents tilting and adds vertical and horizontal stability.

The principle of the partition support can be used on an apertured partition support at the rear wall. Such partition support includes a flange means which is positioned in slot means **70, 71** at the rear support posts **62, 63** and is held by protrusions **68, 69.** Vertically oriented partitioning blank means, extending parallel to side walls are attached to the rear wall located partition support. Such dividers can extend either the full height or a portion of the height of the enclosure. Lock tabs and stabilizing legs are located on the rear vertical leg of the partitioning means rather than along a bottom leg as in the shelf supported partition of FIG. **18** but operate in a substantially identical manner with tabs inserted in the slots and supports.

Wire basket **46** of FIG. **6** has a top rim **180** which extends around three sides of the basket and which has a length along the respective walls of the container mod-

ule which is only slightly less than the inside dimensions of the enclosure so the basket can be supported in a manner similar to shelf means 44. Corner portions of the basket are open as shown in FIG. 6 to enable seating in the slots of the cover support posts.

UPRIGHT SUSPENSION

Vertical support means 31 on which container module 30 is suspended in cantilever fashion is formed from sheet metal and is hung in an upright position on walls or mobile carriers, or pole mounted. Details of this structure and mounting are covered in applicant's copending application entitled "Modular Storage, Transfer Handling and Retrieval System." However, support 31 is generally rectangular in cross section and presents a plurality of horizontally elongated vertically aligned and spaced hanger slots such as 190 of FIG. 8. Openings such as 190 are formed in a vertically elongated planar surface 191. Along the bottom edge of each opening is a rearwardly bent horizontal legde 193 terminating at a downwardly bent vertical wall 194. Upright support 31 also has side walls 33 and 34 (FIG. 9) along its lateral edges.

With container module 30 positioned on support 31 as shown in FIGS. 8 and 9, hanger bar 84 extends through opening 190 with flange 84 engaging rear vertical wall 194. Confronting faces 90, 91 of stabilizing projections 88, 89, respectively, are contiguous to the outside surfaces of the respective side walls 33 and 34 when the rear surface ribs 94 and 95 are flat against upright surface 191 of the support surface 31. Through the previously described interaction of hanger means 84 and stabilizing elements 88, 89, container module 30 is stably suspended on upright support 31 and held by gravity.

Changes in details of the container module or accessories described for the container for purposes of explaining the concept of the invention, and/or substitution of materials other than those specifically disclosed, can be resorted to without departing from the scope of this invention as defined in the appended claims.

What is claimed is:

1. Container module of unitary construction comprising
bottom wall means,
rear wall means, and
side wall means,
the bottom, rear, and side wall means defining a generally rectilinear configuration enclosure with full-open access across upper and front portions of the defined enclosure,
the bottom, rear, and side wall means each having an external surface and an internal surface relative to the defined enclosure,
the bottom wall means including means on its external surface for supporting the container module on a flat surface with sidewall means substantially vertical,
the rear wall means including interconnecting means on its external surface for cantilever suspension of the container module on a vertically-oriented support means with sidewall means of the enclosure substantially vertical when the defined enclosure is in its upright position,
the interconnecting means projecting rearwardly from the external surface of the rear wall means, and including
elongated hanger means and stabilizing means predeterminedly positioned on the rear wall means with the elongated hanger means being horizontally-oriented at a location spaced vertically from the stabilizing means,
such location for the hanger means being spaced upwardly from the stabilizing means when the container module is in its upright position,
the elongated hanger means including a downwardly depending flange means spaced from the external surface of the rear wall means by a downwardly facing load support surface,
the external surfaces of the rear and side wall means defining planes having a substantially right angled relationship.

2. The container module of claim 1 in which
the internal surface of the bottom wall means is substantially planar and is inclined downwardly over a major portion of its area in extending from a location contiguous to its front edge to the rear wall means,
such inclined downwardly disposition for the internal surface of the bottom wall means existing when the container module is disposed on a horizontal surface and when suspended on vertical support means.

3. The container module of claim 2 in which the angle of inclination of such internal surface with a horizontal plane is approximately 2 ½°.

4. The container module of claim 1 in which
the means on the external surface of the bottom wall means for supporting the container module on a flat surface comprises
reinforcing leg means extending in a direction parallel to the side wall means.

5. The container module of claim 4 in which
the reinforcing leg means are located inwardly of corner junctures between the side wall means and bottom wall means.

6. The container module of claim 5 further including
recessed handgrip means located contiguous to corner junctures between the side wall means and bottom wall means.

7. The container module of claim 1 in which
the bottom wall means includes downwardly depending flange means at its front edge defining a substantially planar, vertically-oriented, surface extending between the side wall means.

8. The container module of claim 1 in which
the elongated hanger means is a continuous hanger bar of predetermined length.

9. The container module of claim 1 in which
the elongated hanger means is a continuous hanger bar of predetermined length, and
the stabilizing means comprises a pair of projections predeterminedly spaced horizontally from each other.

10. The container module of claim 9 in which the pair of projections are spaced horizontally a distance greater than the horizontal length of the elongated hanger means.

11. The container module of claim 1 in which
the location of the hanger means is vertically above a horizontal centerline of the rear wall means and
the elongated hanger means is symmetrical with relation to a vertical centerline of the rear wall means.

12. The container module of claim 1 in which

the stabilizing means are located vertically below a horizontal centerline of the rear wall means.

13. The container module of claim 1 in which the stabilizing means comprises a pair of projections predeterminedly spaced horizontally from each other and, each of the pair of stabilizing projections include a confronting face defining a substantially planar vertically oriented surface,

such confronting face surfaces diverging with respect to each other in extending outwardly from the external surface of the rear wall means.

14. The container module of claim 10 including a pair of vertically oriented rib means on the rear wall means interconnecting the elongated hanger means and the pair of stabilizing projections and defining therebetween coplanar external surfaces lying in a substantially vertical plane.

15. The container module of claim 1 in which the external surfaces of the rear wall and side wall means include a chamfered surface contiguous to upper peripheral edges of such wall means.

16. The container module of claim 7 in which the side wall means include flange means defining inwardly directed substantially planar vertically oriented surfaces,

such surfaces being coplanar with the substantially planar vertically oriented surface defined by the downwardly depending flange means at the front edge of the bottom wall means.

17. The container module of claim 16 in which the side wall flange means define slot means opening upwardly and located at upper peripheral edges of the side wall flange means.

18. The container module of claim 17 in which downwardly depending projections are defined contiguous to corner junctions of the side wall flange means and the bottom wall flange means,

such downwardly directed projections coacting with the upwardly opening slot means at the upper end of the side wall flange means when two container modules are placed in stacked relationship.

19. The container module of claim 9 in which base portions of the pair of stabilizing projections on the rear wall means of the container module define downwardly opening slot means for coacting with upper edge means of another container module when two container modules are placed in stacked relationship.

20. The container module of claim 19 in which the support post means at the front of the defined enclosure are located on the internal surfaces of the side wall means adjacent to the flange means of the side wall means and spaced from such flange means in the direction of the rear wall means to define therebetween vertically oriented slot means for holding retaining wall means extending across the front access of the enclosure between the side wall means.

21. The container module of claim 9 in combination with vertically oriented support rail means having a channel configuration in horizontal cross section and defining a substantially planar frontal surface extending between rearwardly projecting lateral side walls,

the frontal surface of the vertically oriented support rail means defining a plurality of horizontally-oriented elongated slots which are predeterminedly spaced vertically along the frontal surface and vertically aligned,

the predetermined length of the elongated hanger bar means of the container module at a location contiguous to the external surface of the rear wall means is selected to be substantially equal to the horizontal length of the horizontally-oriented elongated slots defined by the frontal surface of the vertically-oriented support rail means.

22. The container module of claim 21 in which the horizontal distance between the pair of spaced stabilizing projections measured at a location contiguous to the external surface of the rear wall means is selected to be substantially equal to the horizontal distance between external surfaces of the lateral side walls of the vertically-oriented support rail means.

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