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Nowak

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[54] **STORAGE UNIT**

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[73] Assignee: **Tucker Manufacturing Corporation,** Columbus, Ind.

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[21] Appl. No.: **427,924**

[52] **U.S. Cl.** **312/108,** 108/111, 108/157, 211/148, 312/277

[51] **Int. Cl.** **A47b 87/00**

[58] **Field of Search** 312/108, 111, 107, 277; 108/60, 101, 111, 157; 211/148; 206/509

[56] **References Cited**

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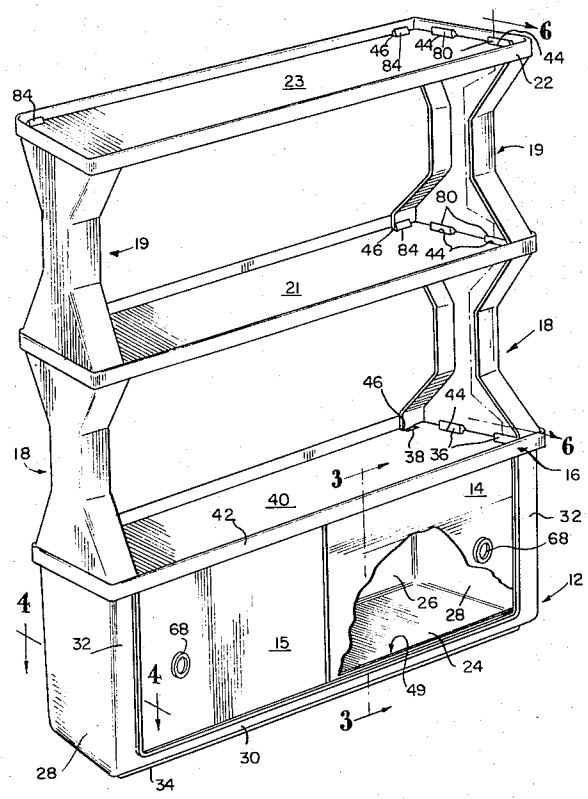
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Primary Examiner—James C. Mitchell
Attorney, Agent, or Firm—Trask, Jenkins & Hanley

[57] **ABSTRACT**

A storage unit having a cabinet with closed bottom, rear, and side walls, and a cabinet shelf connected to the top of said cabinet to form a supporting surface thereon. Lower and upper tracks are formed in vertical alignment along the front face of said cabinet on the bottom wall thereof and on the underside of said cabinet shelf, respectively, and sliding doors are carried in said tracks for sliding movement across the front face of said cabinet. A second shelf is retained in spaced relation above said cabinet shelf by a pair of end panels lockingly engageable therebetween, and additional pairs of end panels and shelves are mountable on said second and subsequent shelves.

9 Claims, 7 Drawing Figures



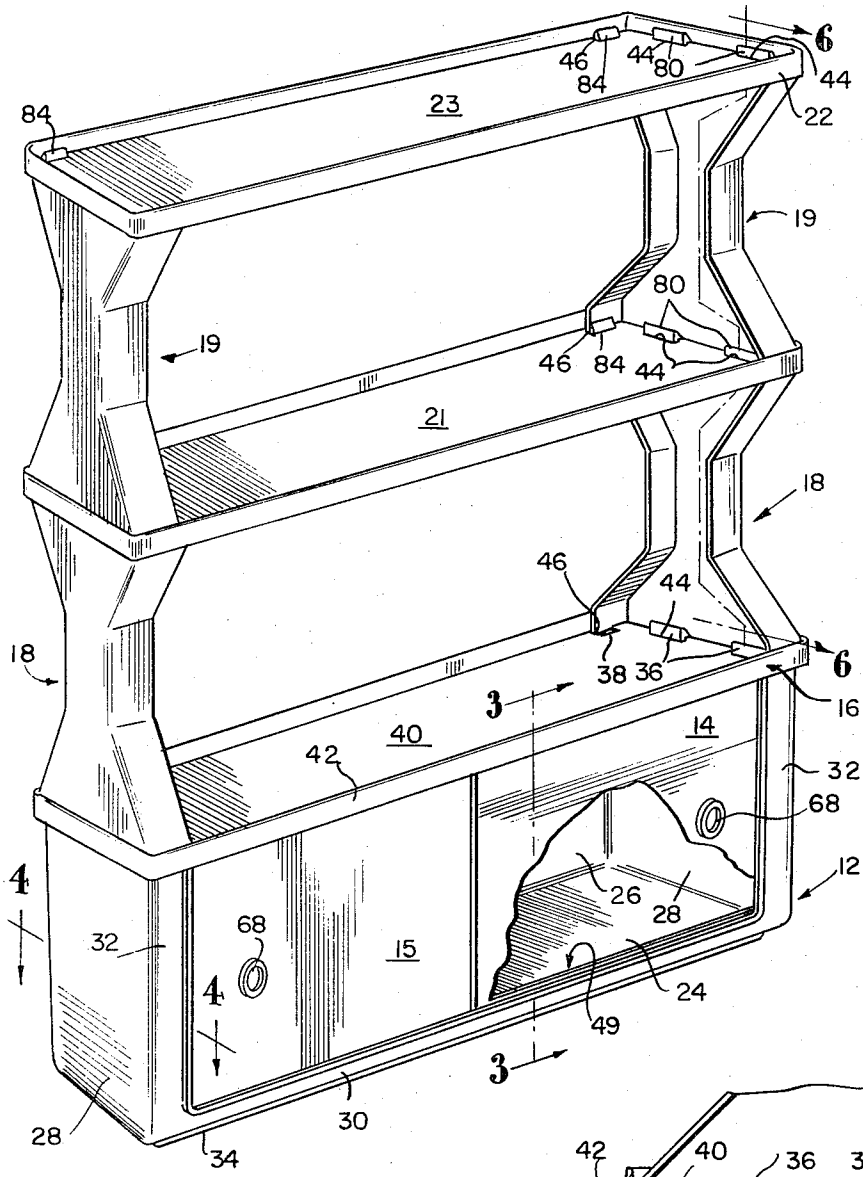


Fig.1

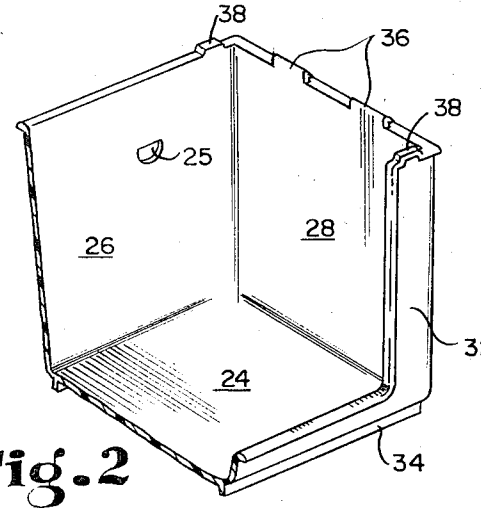


Fig.2

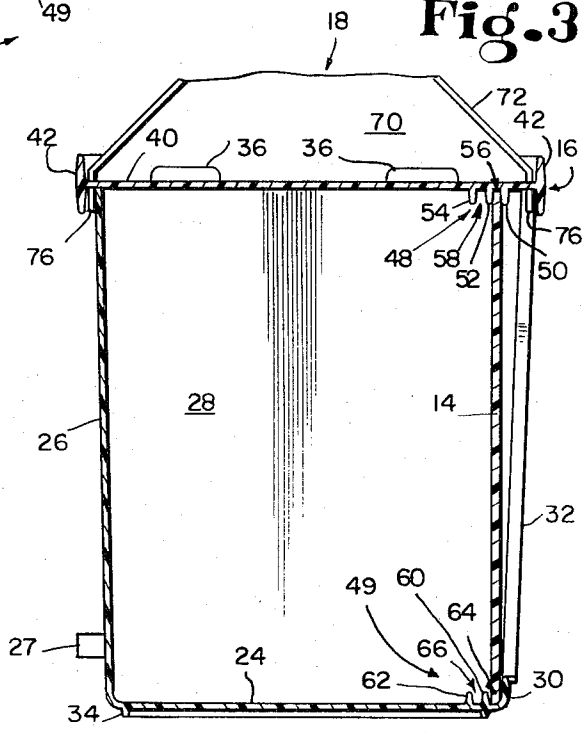


Fig.3

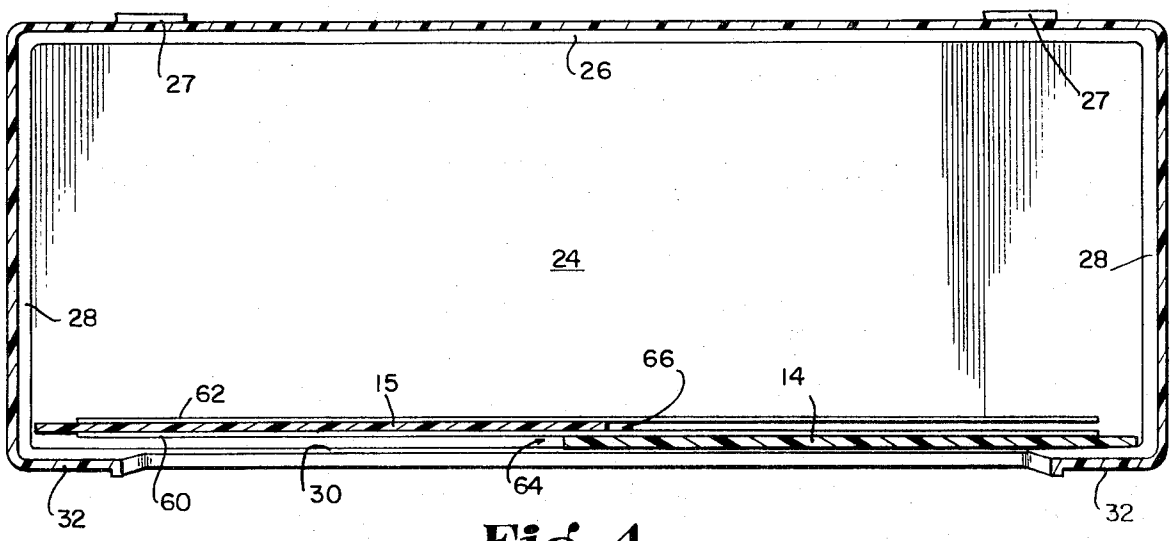
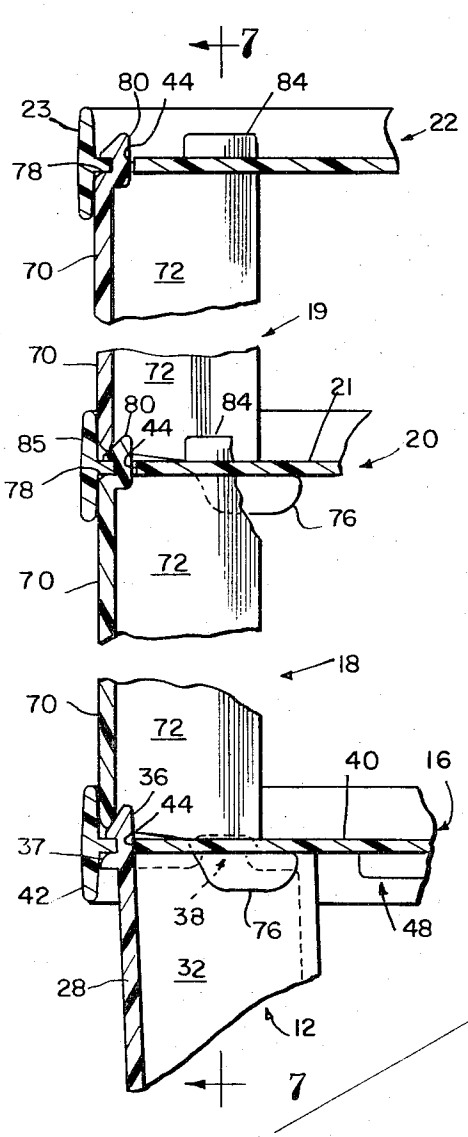


Fig.4



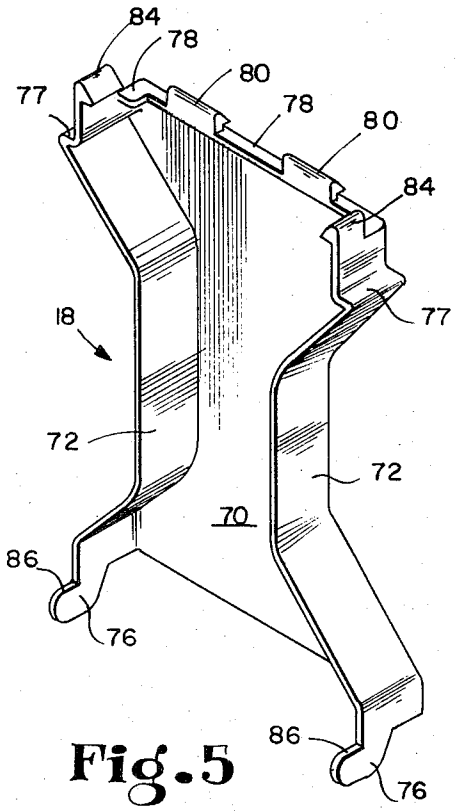


Fig.5

Fig.6

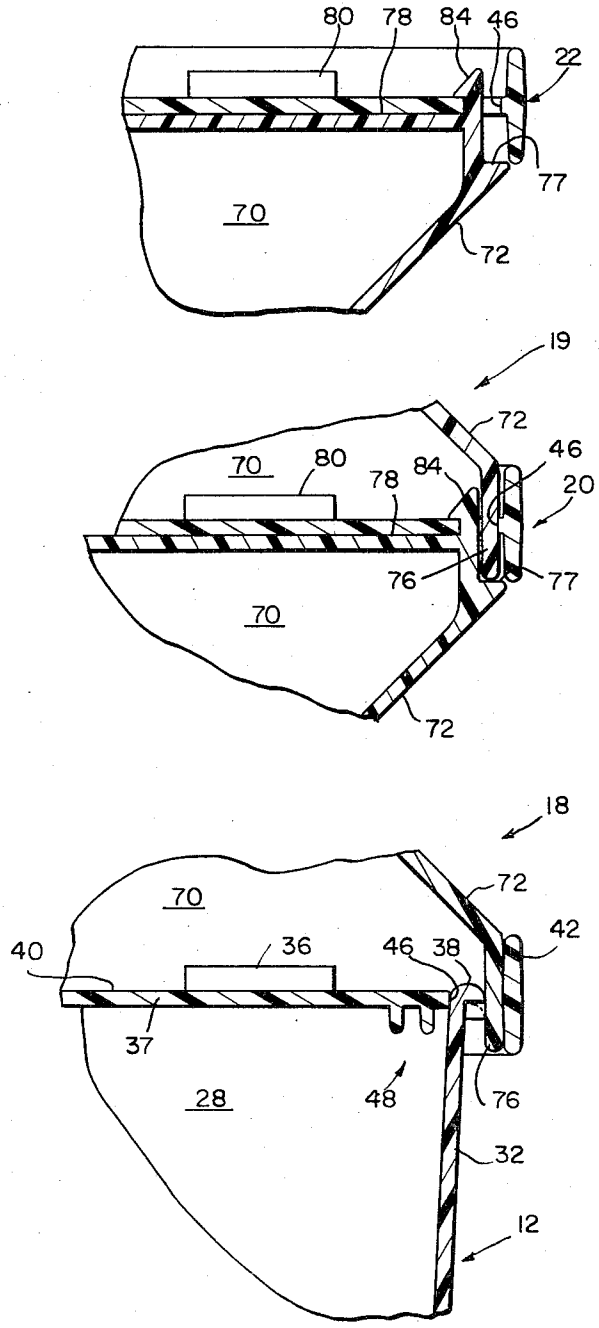

80
78
84
46
22
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70
72
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70
80
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84
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77
70
72
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42
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28
48
76
32
12

Fig.7

STORAGE UNIT

SUMMARY OF THE INVENTION

In accordance with the present invention, a storage unit is provided comprising a cabinet having closed bottom, rear, and side walls. Each side wall has a pair of hooks at its upper end lockingly connecting said cabinet to a shelf which forms a top wall for the cabinet and a supporting surface on top of the cabinet. An upper track extends along the underside of the shelf near the front thereof to provide a pair of downwardly open, longitudinally extending grooves, and a lower track extends along the cabinet bottom wall near the front thereof to provide a pair of upwardly open, longitudinally extending grooves which are disposed in vertical alignment with the upper track grooves. A pair of doors have their upper and lower edges respectively carried in the upper and lower grooves and are each slidable across the front face of the cabinet to permit easy access to the cabinet interior.

A pair of end panels are provided at the opposed ends of the unit. Each of said panels has a pair of downwardly projecting fingers at its lower edge lockingly received in openings in the shelf mounted on top of the cabinet for mounting said panels thereon. A pair of hooks project upwardly from each of said panels and are received in openings in a second shelf whereby said panels support said second shelf in vertically spaced relation above the cabinet shelf.

Additional pairs of end panels are lockingly engageable with the second and subsequent shelves by their downwardly projecting fingers and upwardly projecting hooks to form a storage unit having an indeterminate number of shelves spaced in vertical relation above the cabinet.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings illustrate the invention. In such drawings:

FIG. **1** is a perspective view of a storage unit embodying the invention;

FIG. **2** is a fragmentary perspective view of one end of the cabinet of the storage unit shown in FIG. **1**;

FIG. **3** is an enlarged vertical section taken along the line **3—3** of FIG. **1**;

FIG. **4** is an enlarged horizontal section taken along the line **4—4** of FIG. **1**;

FIG. **5** is an enlarged perspective view of an end panel shown in FIG. **1**;

FIG. **6** is an enlarged fragmentary vertical section taken along the line **6—6** of FIG. **1**, with portions thereof being broken away; and

FIG. **7** is a fragmentary vertical section taken along the line **7—7** of FIG. **6**.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A storage unit embodying this invention is shown in FIG. **1**, and generally comprises a lower cabinet **12** having an opening across the front thereof which is closable by slidable doors **14** and **15**. A cabinet shelf **16** is lockingly connected to the top of the cabinet **12**, and a pair of end panels **18** are lockingly coupled to the cabinet shelf **16** and to a second shelf **20** to retain the shelves **16** and **20** in parallel, vertically spaced relation. Additional pairs of end panels **19** can be connected to the second shelf **20** and to subsequent shelves **22** to form a storage unit having any desired number of parallel shelves mounted above the cabinet **12**.

The cabinet **12** is formed as a molded plastic unit having interconnected bottom, rear, and side walls **24, 26,** and **28**. The front and top faces of the cabinet **12** are substantially open. The front face, however, includes a lip **30** extending upwardly a short distance from the bottom wall **24**, and front panels **32** project laterally inwardly a short distance from the side walls **28** to help locate the sliding doors **14** and **15**, as will be hereafter described in greater detail. One or more hanger holes **25** are formed through the rear wall **26**, as shown in FIG. **2**, to permit the cabinet to be mounted on a vertical surface such as a wall, and if desired, rearwardly projecting spacers **27** shown in FIGS. **3** and **4** can be formed on the back side of said rear wall **26** to assure that the unit will hang vertically with respect to the wall. A downwardly projecting pair of ribs **34** are also formed on the underside of the bottom wall **24** to support the cabinet **12** in a level position on a horizontal surface.

As best shown in FIG. **2**, each of the cabinet side walls **28** has a pair of laterally spaced hooks **36** which project upwardly and outwardly from its upper edge. Similarly, hook-like projections **38** project upwardly from the top of each of the front panels **32** and the top of the rear wall **26**. The projections **38** on the rear wall are disposed in alignment with the projections **38** on the front panels **32**. The hooks **36** and the projections **38** locate the cabinet shelf **16** in position atop the cabinet **12**, and lockingly interconnect said shelf and cabinet.

As shown in FIGS. **1** and **3**, the cabinet shelf **16** is conveniently formed as a plastic molding, and comprises a horizontally disposed supporting surface **40** having a border skirt **42** projecting equidistantly upwardly and downwardly from its periphery. A pair of laterally spaced end slots **44** and a pair of side slots **46** are formed in the shelf surface **40** at each end of the shelf. The slots **44** are positioned to receive the hooks **36** formed on each cabinet side wall **28**, and the side slots **46** are positioned to receive the projections **38** on the cabinet rear wall **26** and front panels **32**. To connect the shelf **16** to the cabinet **12**, the shelf is placed over the cabinet **12** with the slots **44** and **46** in alignment with the cabinet hooks **36** and projections **38**. The shelf is then pressed downwardly with the hooks **36** being received in the slots **44** and snapped against the upper face of the shelf surface **40**.

To accommodate the sliding doors **14** and **15**, an upper track **48** is formed on the underside of the shelf **16** and a lower track **49** is formed on the cabinet bottom wall **24**. As shown in FIG. **3**, the upper track **48** is comprised of a forward rib **50**, an intermediate rib **52**, and a rearward rib **54**, each of which projects downwardly from the underside of the cabinet shelf **16** and extends across the face of the cabinet near the front thereof. The ribs **50, 52,** and **54** thus define a forward groove **56** and a rearward groove **58** for slidably receiving the upper edges of the doors **14** and **15**, respectively. The lower track **49** comprises a forward rib **60** and a rearward rib **62** which project upwardly from the bottom wall **24** and extend across the face of the cabinet **12**, as shown in FIGS. **3** and **4**. The ribs **60** and **62**, together with the lower lip **30**, form a groove **64** and a rearward groove **66** for slidably receiving the lower

edges of the doors **14** and **15**, respectively. The grooves **64** and **66** of the lower track **49** are disposed in vertical alignment with the grooves **56** and **58** of the upper track **48** and act in combination therewith to slidably support the doors **14** and **15** across the frontal width of the cabinet.

The doors **14** and **15** are each slightly longer than one-half the frontal width of the unit so that when the doors are closed, they will slightly overlap near the center of the unit as seen in FIG. **1** to thereby cover and close the entire front face of the cabinet. If desired, handles **68** or the like can be mounted on each of the doors **14** and **15** to facilitate the easy opening and closing thereof.

One of the end panels **18** for interconnecting the cabinet shelf **16** and the second shelf **20** is shown in detail in FIG. **5**. Although only one end panel **18** is shown by way of example, the other end panel **18**, as well as the upper end panels **19**, are identical thereto. Conveniently, the end panel **18** is formed as plastic molding, and generally includes an end wall **70** bordered on each side by a side skirt **72** projecting inwardly at a right angle to the plane of the end wall **70**. The bottom edge of the end wall **70** is rectilinear, while the lower portion of each side skirt terminates in a downwardly projecting finger **76** extending laterally inwardly from said skirt.

Adjacent their upper ends, the skirts **72** are offset inwardly toward each other to define a pair of horizontally disposed ledges **77**. The upper edges of the end wall **70** and the portions of the skirts **72** adjacent thereto project inwardly for short distances from said end wall and skirts to form a horizontal supporting platform **78** parallel with the ledges **77**. A pair of hooks **80** project upwardly and laterally outwardly from the inner edge of platform **78** along the upper edge of the end wall **70**. Said hooks are identical both in general shape and spacing to the hooks **36** formed on the cabinet side walls **28**. Similarly, a hook **84** projects upwardly and inwardly from the platform **78** at the top of each skirt **72**.

The end panels **18** are connected at their lower and upper ends between the shelves **16** and **20**, and in a like manner, the end panels **19** are connected between the shelves **20** and **22**. If desired, additional end panels may be connected to the shelf **22** in the same manner to support still a fourth shelf (not shown). In this manner, any number of shelves can be assembled onto and above the cabinet **12** in a vertically spaced parallel relationship.

As shown in FIGS. **6** and **7**, in assembling the shelves and end panels, the end panels **18** are connected at their lower ends to the opposed ends of the cabinet shelf **16** with their skirts **72** facing inwardly toward each other. The end wall **70** of each panel **18** is located between the upwardly projecting cabinet hooks **36** and the border skirt **42** at one end of the shelf **16**. The lower edge of said end wall **70** and the lower edges of the skirts **72** outside the extent of the fingers **76** rest on the shelf supporting surface **40** with said fingers projecting through the slots **46**. The fingers **76** are received in slots **46** outside the cabinet projections **38** with their upper edges **86** engaging the underside of the shelf **16** to thus connect the panels to said shelf.

The hooks **80** and **84** at the top of the panels **18** connect the shelf **20** to said panels and thus to the cabinet **12**. Said shelf, as well as shelf **22**, is identical to the cabinet shelf **16** with the exception that the track **48** can be omitted therefrom. Thus, as shown in FIGS. **6** and **7**, the central supporting surface **21** of the shelf **20** rests upon the platforms **78** of the panels **18**, and the hooks **80** and **84** are snap-fit into the end and side slots **44** and **46** for lockingly mounting said shelf on the panels **18**.

The end panels **19** and shelf **22** are connected to shelf **20** in the same manner that end panels **18** and shelf **20** are connected to shelf **16**. Thus, as shown in FIGS. **6** and **7**, the fingers **76** on panels **19** are received in the side slots **46** in shelf **20** with their upper edges **86** abutting the underside of the shelf supporting surface **21**, and the lower edges of the end wall **70** and the portions of the skirts **72** outside the extent of said fingers resting on the supporting surface **21** immediately inwardly from the shelf skirt **85**. As shown, the fingers **76** are received in the slots **46** on shelf **20** outwardly from the hooks **84** on panels **18** with their lower edges engaging the ledges **77** on the panels **18**.

The upper ends of the panels **19** have their hooks **80** and **84** inserted through and snap-fit in the end and side slots **44** and **46** in the supporting surface **23** of shelf **22**. Thus, with the underside of its supporting surface **23** resting on the platforms **78** on the panels **19** and the hooks **80** and **84** engaging the top face of said surface, the shelf **22** will be lockingly retained on said panels.

I claim:

1. A storage unit, comprising a cabinet having interconnected bottom, rear, and side walls, a lower track on said bottom wall adjacent the front thereof, a plurality of first hooks on said rear and side walls, a first shelf having a plurality of first slots in which said first hooks are received for mounting said first shelf on the top of said cabinet, an upper track on said first shelf adjacent the front thereof, a pair of doors slidably carried in said upper and lower tracks, a pair of end panels at the opposite ends of said first shelf and projecting upwardly therefrom, each of said end panels having a pair of fingers lockingly received in a pair of said first slots for mounting said end panels on said first shelf, a plurality of second hooks on the upper end of each of said end panels, and a second shelf carried on the upper ends of said end panels, said second shelf having a plurality of second slots formed therein in which said second hooks are received for connecting said second shelf to said end panels.

2. A storage unit, comprising a cabinet having interconnected bottom, rear, and side walls, a plurality of first hooks on said rear and side walls, a first shelf having a plurality of first slots in which said first hooks are received for mounting said first shelf on the top of said cabinet, a pair of end panels at the opposite ends of said first shelf and projecting upwardly therefrom, each of said end panels having a pair of fingers lockingly received in a pair of said first slots for mounting said end panels on said first shelf, a plurality of second hooks on the upper end of each of said end panels, and a second shelf carried on the upper ends of said end panels, said second shelf having a plurality of second slots formed therein in which said second hooks are received for connecting said second shelf to said end panels.

3. A storage unit as set forth in claim **2** in which each of said first and second shelves comprises a supporting surface having a vertically extending peripheral skirt extending therearound, the skirt on said first shelf ex-

tending downwardly around the upper edges of said cabinet rear and side walls, and said cabinet rear wall has a pair of openings formed therein and a pair of spacers projecting rearwardly therefrom below said openings.

4. A storage unit as set forth in claim **2** in which each of said end panels comprises an end wall having a pair of side skirts projecting inwardly therefrom, and said fingers project downwardly from said side skirts and said second hooks project upwardly from said end wall and skirts.

5. A storage unit as set forth in claim **2** in which each of said end panels comprises an end wall having a pair of side skirts projecting inwardly therefrom, a platform projecting inwardly from the upper edges of said end wall and side skirts upon which said second shelf rests, and said fingers project downwardly from said side skirts and said second hooks project upwardly from said platform.

6. A storage unit as set forth in claim **2** in which each of said first and second shelves comprises a supporting surface having a vertically extending peripheral skirt extending therearound, and each of said end panels comprises an end wall having a pair of side skirts projecting inwardly therefrom, a platform projecting inwardly from the upper edges of said end wall and side skirts upon which said supporting surface on said second shelf rests, and said fingers project downwardly from said side skirts and said second hooks project upwardly from said platform, the lower ends of said end walls being supported on the supporting surface of said first shelf between the peripheral skirt thereon and said first hooks.

7. A storage unit, comprising a cabinet having interconnected bottom, rear, and side walls, a first shelf extending over the top of said cabinet, and having a plurality of slots formed therein, first locking means on said rear and side walls lockingly received in said slots for mounting said first shelf on said cabinet, a pair of panels extending upwardly from the opposite ends of said first shelf, second locking means on the lower ends of said panels lockingly received in said slots in said first shelf for mounting said panels thereon, a second shelf having a plurality of slots formed therein, and third locking means on the upper ends of said panels lockingly received in the slots on said second shelf for mounting said second shelf on said panels in parallelism with said first shelf.

8. A storage unit, comprising a cabinet having interconnected bottom, rear, and side walls; first, second, and third shelves each including a supporting surface having a plurality of slots formed therein and a vertically extending peripheral skirt; a plurality of first hooks on said rear and side walls received in the slots in said first shelf for mounting said first shelf on the top of said cabinet; a first pair of end panels interconnecting said first and second shelves and a second pair of end panels interconnecting said second and third shelves; each end panel in each pair having an end wall with a pair of side skirts projecting inwardly therefrom; a platform projecting inwardly from the upper edges of said end wall and said side skirts, with the platforms on said first and second pairs of end panels abutting the supporting surfaces on said second and third shelves respectively; a plurality of second hooks projecting upwardly from said platforms with said second hooks on said first and second pairs of end panels being received in the slots in said second and third shelves respectively; fingers projecting downwardly from said side skirts, with the fingers on said first and second pairs of end panels being received in the slots in said first and second shelves respectively; and offsets in said side skirts adjacent the upper ends thereof forming horizontal ledges parallel to said platforms, with the fingers on said second pair of end panels being received in the slots on said second shelf and abutting the ledges on said first pair of end panels.

9. A storage unit, comprising a cabinet having interconnected bottom, rear, and side walls, a lip projecting upwardly from said bottom wall and extending thereacross, a pair of front panels extending inwardly from the front edges of said side walls at the opposite sides of said cabinet, a lower track on said bottom wall extending across the front of said cabinet, a first shelf having an upper track mounted thereon in alignment with said lower track, means on said rear and side walls lockingly mounting said first shelf on the upper ends of said rear and side walls, a pair of doors slidably carried in said upper and lower tracks immediately rearwardly of said lip and front panels, a pair of end panels at the opposite ends of said first shelf and projecting upwardly therefrom, means on the lower ends of said end panels for connecting them to said first shelf, a second shelf carried on the upper ends of said end panels, and means on the upper ends of said end panels for lockingly mounting said second shelf thereon.

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