United States Patent [19]

Whang

[11] **3,768,637**

[45] **Oct. 30, 1973**

[54] **MODULAR KNOCKDOWN DISPLAY**

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[22] Filed: **Dec. 27, 1971**

[21] Appl. No.: **212,144**

[52] **U.S. Cl.** ..... **206/44 R,** 211/177

[51] **Int. Cl.** **B65d 79/00,** A45f 5/10

[58] **Field of Search** ..... 206/44 R; 211/177

[56] **References Cited**

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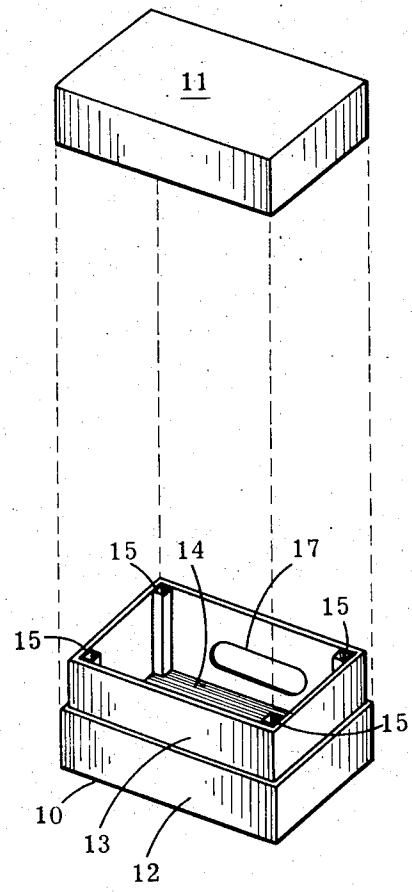
Primary Examiner—Leonard Summer

Attorney—M. Arthur Auslander

[57] **ABSTRACT**

A display is self-containable in a box, parts of which are used for the exhibition of the display. The same box can contain inventory and may have an opening for easy access of inventory. Modifications permit joining of displays and variations in the support and crosspieces.

11 Claims, 14 Drawing Figures



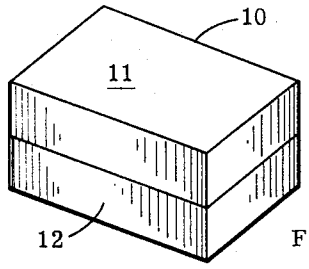


FIG. 1

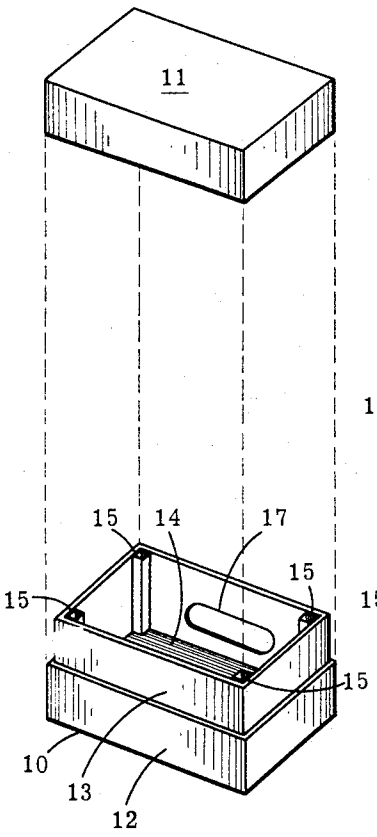


FIG. 2

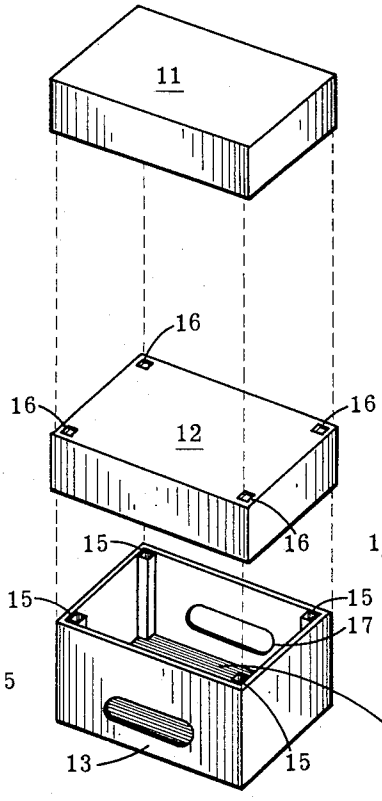


FIG. 3

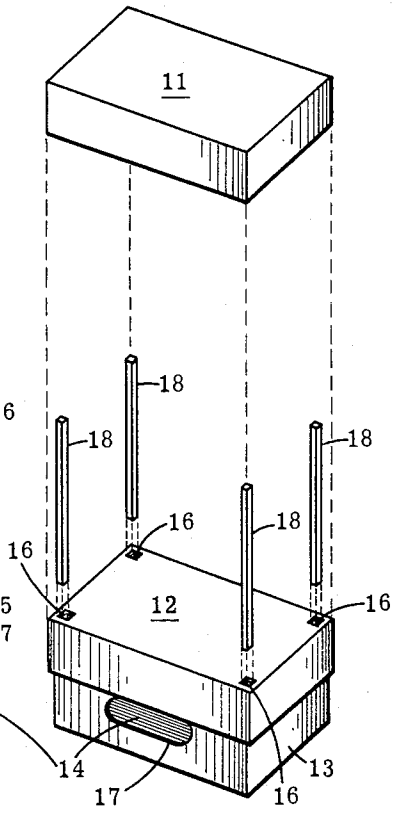


FIG. 4

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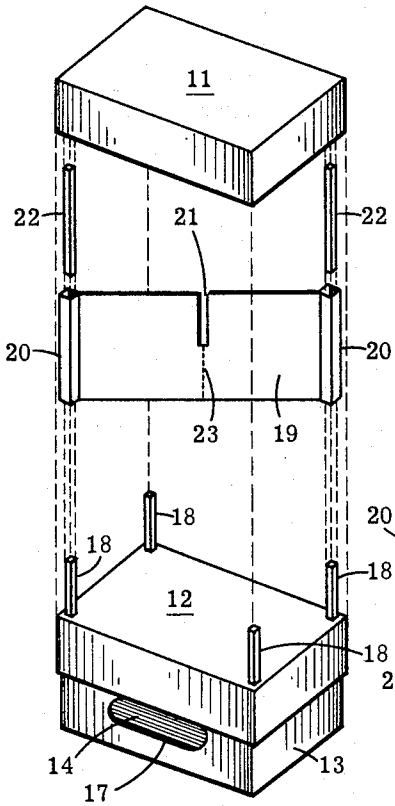


FIG. 5

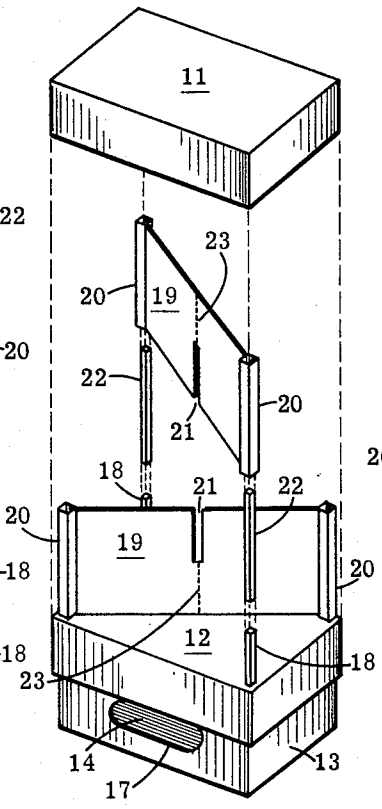


FIG. 6

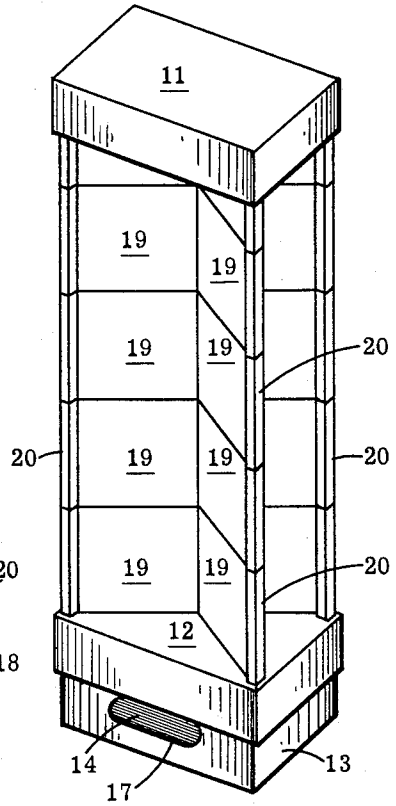


FIG. 7

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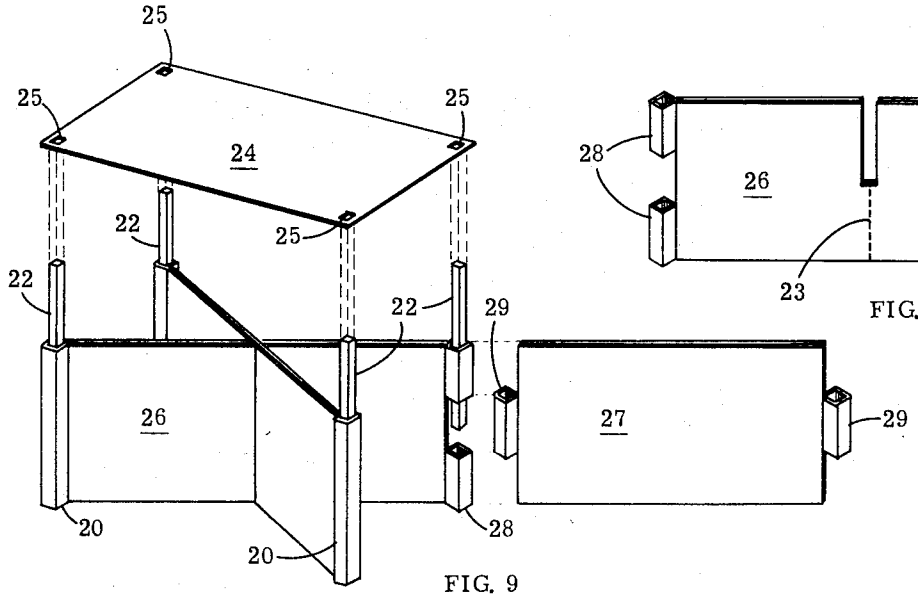


FIG. 9

FIG. 8

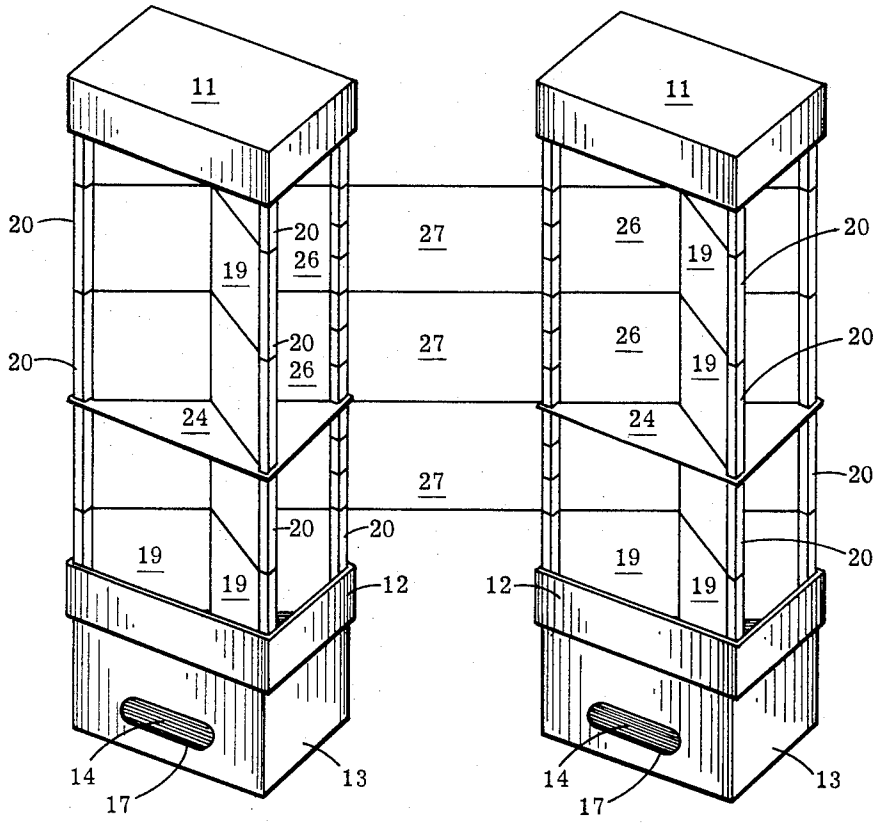


FIG. 10

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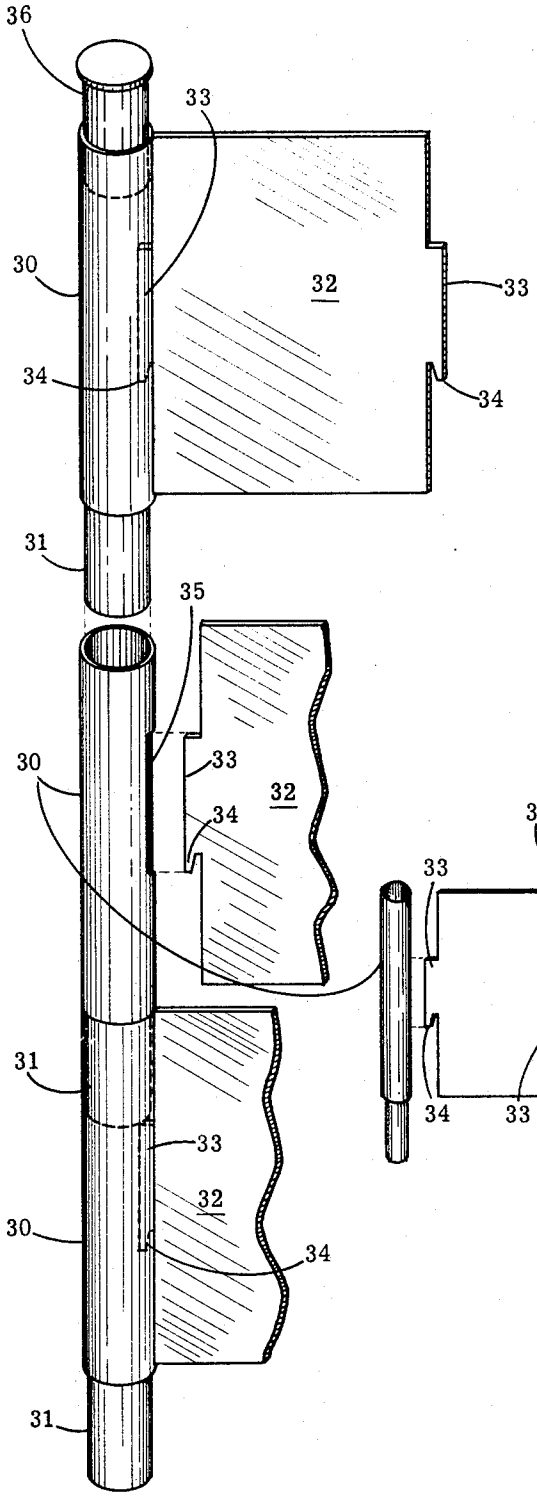


FIG. 11

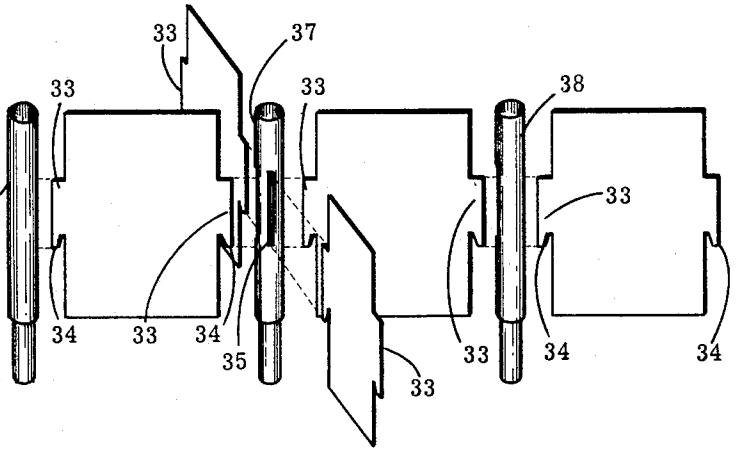


FIG. 12

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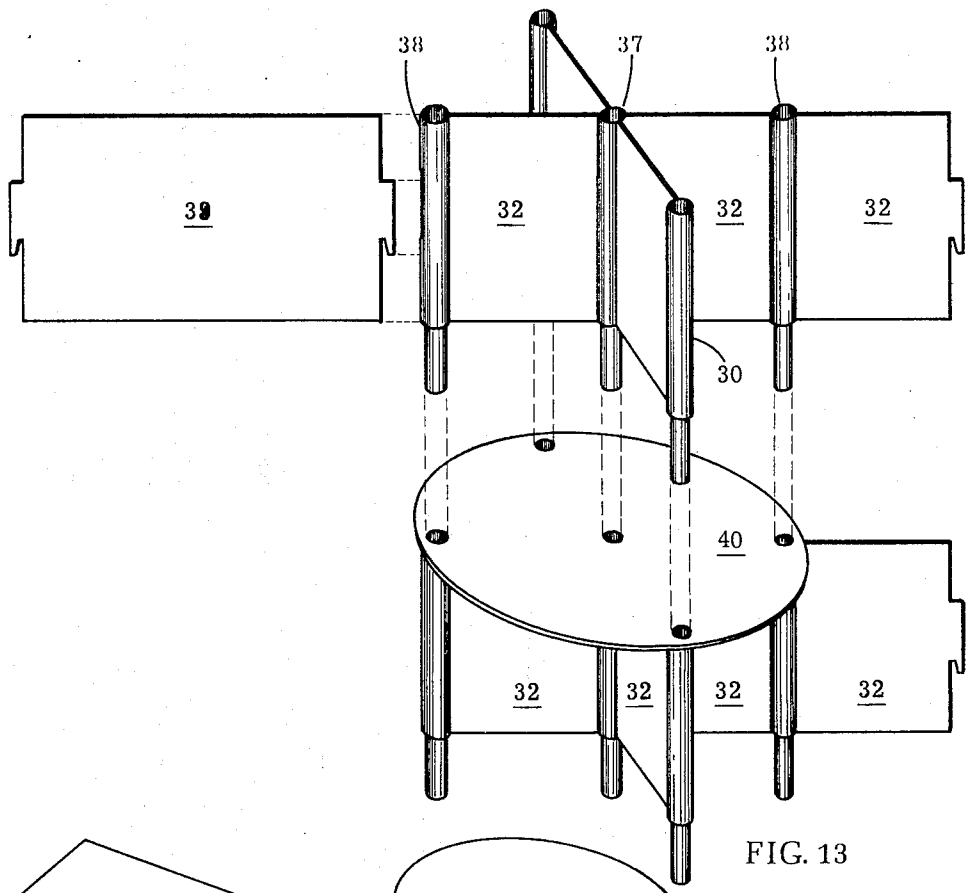


FIG. 13

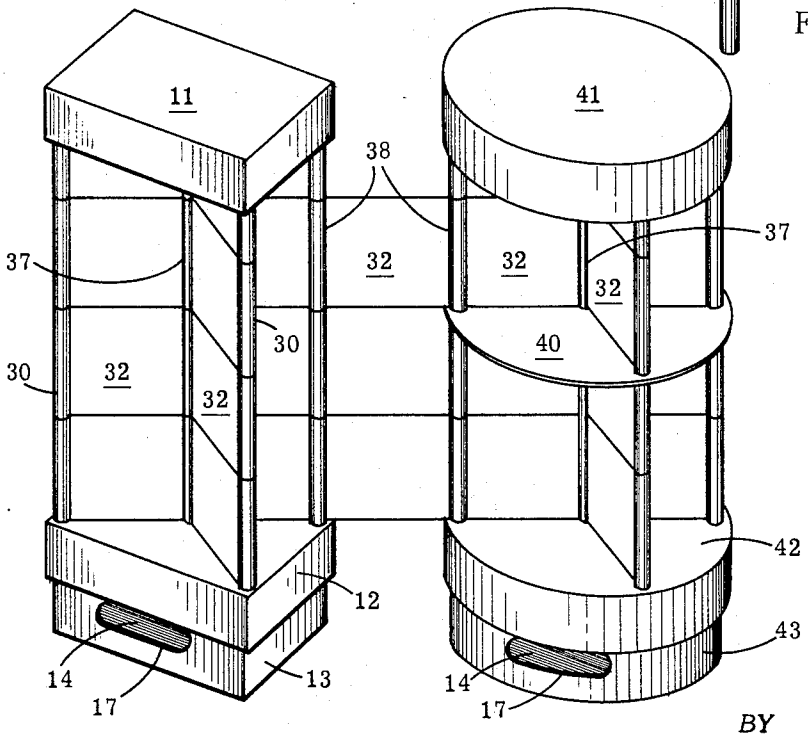


FIG. 14

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MODULAR KNOCKDOWN DISPLAY

The present invention relates to a modular knockdown commercial display.

Especially for selling, it is convenient to have portable, easily erectable sales displays which may be knocked down may also have storage space for merchandise, especially replacement merchandise to replace what is sold from the display.

There have been many modular knockdown units and displays in the past, even those that provide shelving for sales display or stackable sales, shelves, or even modular furniture, but the present invention in different ways provides advantages that were not provided in the past.

According to the present invention, a modular display unit is provided, easily erectable as a display which has a storage compartment which may be used for storage of replacement merchandise sold from the display and to store the parts of the knockdown unit.

While several variations of the present invention are available, each has the advantage of self storability.

Although such novel feature of features believed to be characteristic of the invention are pointed out in the claims, the invention and the manner in which it may be carried out may be further understood by reference to the description following and the accompanying drawings.

FIG. 1 is a basic storage box of the present invention.

FIG. 2 is the box of FIG. 1 with the cover exploded away.

FIG. 3 is the box of FIG. 2 with the box base exploded away.

FIG. 4 is the box of FIG. 3 showing preliminary parts of the display construction exploded away.

FIG. 5 is a successive step of construction of the display in FIG. 4 shown exploded away.

FIG. 6 is a further successive step of construction of the display of FIG. 5.

FIG. 7 is a completed modular knockdown display assembled.

FIG. 8 is a variant vertical piece of the present invention.

FIG. 9 is an exploded construction including the vertical piece of FIG. 8.

FIG. 10 is a complete construction of a display of the present invention including parts of FIG. 9.

FIG. 11 is an exploded view of a variant interlock of parts of the present invention.

FIG. 12 is a further exploded view of another interlock of parts of FIG. 11.

FIG. 13 is an exploded view of a partial construction of the parts of FIGS. 11 and 12.

FIG. 14 is a complete construction of a display of the present invention including the parts of FIGS. 11, 12 and 13.

Refering now to the figures in greater detail, where like reference numbers denote like parts in the various figures.

The display of the present invention is containable in a box 10 as shown in FIG. 1 having a cover 11 and box frame cover 12.

As shown in FIG. 2, the box 10 with the cover 11 off, exposes a box frame 13 which is preferably provided with a bottom 14 and square support tubes 15. The box frame cover 12, as shown in FIG. 3 may be removed and placed over the box frame 13 with openings 16 coinciding with the openings in the tubes 15 as shown in FIG. 4.

As shown in FIG. 5, supports 18 of wood or other preferably strong and light material are inserted through the opening 16 and into the tubes 15, where they are firmly held and protrude as shown in FIG. 5.

Vertical pieces 19 including tube portion 20, preferably at the extension of the vertical pieces 19, and a slot 21 fit over the supports 18 which extends approximately half the width of the tube 20, thus, as can be seen in FIG. 6, another vertical piece 19, inverted, can be interlocked, co-acting with the first vertical cross piece 19 and engaged on the support 18 forming a first level of the display.

By use of additional supports 22, about equal in length to the width of the vertical pieces 19 can be put into the tubes 20 to build additional layers of the display of the present invention, as can be seen in FIG. 7. The cover 11 caps the completed display.

When completed, the box frame 13, with its opening 17 may be used to store and hold merchandise for ready use.

The vertical pieces 19 have a score 23 which acts as a hinge means. Thus, when the display of the present invention has served its purpose, the vertical pieces 19 may be bent and placed in the box frame 13 with the supports 18, 22 and any other merchandise or other articles desired.

Variations in the display of the present invention may be achieved such as the interposition of shelves 24 between the vertical pieces 19 as shown in FIGS. 9 and 10. The shelves 24 must have openings 25 through which the supports 22 may pass.

With the use of vertical pieces 26, 27, as shown in FIGS. 8 and 9, display units of the present invention may be joined in tandem, the double portion 28 interfits with the shortened tube portion 29 of vertical piece 27 fitting into the void space between the tubes 28, and is held by the support 22.

It should be noted that the box frame cover 12 may only be supported by the box frame 13 and no tubes 15 need be in the box frame 13. What is more, without the tube 15 in the box frame 13 the shelf 24, either scored folded, or flat, may fit into the box frame 13. The box frame 13 still serves its function as a storage area.

A further modular version of the display of the present invention may be seen in FIGS. 11 – 14. Instead of the prior construction, slotted outer tubes 30 having interfitting interlocking projections 31, as shown in FIG. 11, are assemblable to firmly hold vertical panels 32.

The ertical panels 32 each have tongues 33 with lips 34, together having the width of the slots 35 in the tubes 30. Thus, as shown in FIG. 11, a tongue may fit into the slot 35 after which the lip 34 engages the walls of the tube 30. The next tube 30, having its projection 31 inserted into the tube 30, extends to the end of the tongue 34 and holds it firmly against slipping.

The top of the display may have a cap 36 to hold the vertical panel 32 by the tongue 33, keeping the lip 34 engaged with the wall of the tube 30.

The reusability of the embodiment of the present invention as shown in FIGS. 11 – 14 can be seen as in FIG. 12 where slotted tubes 37, 38 have four slots 35 and two slots 35 respectively for accepting vertical panels 32 in a cross relationship or as an extension of the display as shown in FIG. 14.

In FIG. 13, a vertical panel 39 is shown joinable in a construction using a larger vertical panel 39 than the vertical panel 32. A shelf 40 is interposable as with the other embodiments.

In FIG. 14, a double display is shown where tubes 30, 33, 38 are used for desired effects and one section of the display employs a round cover 41, a round box frame cover 42 and a round box frame 43.

In use, the display of the present invention is preferably as a single unit in box 10, including merchandise to be displayed or inventory merchandise. The cover 11 and box frame cover 12 separate to reveal the box frame 13, so that the display can be erected from the parts.

Once the display is erected, it is important that access be had to the box frame 13. As shown in the figures, an opening 17 provides such access. Other access such as a flap might be satisfactory. The importance is to have access to merchandise at the point of sale at the display and also to have a compact container for the display.

Suitable arrangements may be made depending on the materials employed to have the display parts fit in the box. Scoring and folding the vertical pieces 19 when they are made of cardboard or other stiff substance allows the large pieces to easily fit into the box frame 13. Of course, hinges and other expedients could be employed.

The vertical panels 32, of course, fit inside the box frames 13, 43 with ease.

It should be apparent that slotting of the tubes 30, 37, 38 is a matter of option. All tubes could be uniformly slotted so that only a single modular tube need be used.

Using the vertical panels 32 with a tube of more than four slots would enable the use of more surface area and more vertical panels 32 in the display of the present invention.

Merchandise displayed on the display of the present invention may be mounted on the vertical pieces, the base portion or the shelves, or all of them.

The terms and expressions which are employed are used as terms of description; it is recognized, though, that various modifications are possible.

Having thus described certain forms of the invention in some detail, what is claimed is:

1. A knockdown commercial merchandise display comprising a box frame, a cover portion on said box frame, said cover portion shaped to surround said box frame, a plurality of openings in said cover portion, a plurality of supports, said supports optionally removeable, said supports extend through said openings in said cover portion and extend vertically above said cover, a plurality of vertical pieces, said vertical pieces including means at their extremities to receive said supports, said supports co-acting to support said vertical pieces from said cover portion erect for display, said supports and vertical pieces adapted to be disassembled and enclosed in said box frame.

2. The invention of claim 1 wherein said box frame includes a plurality of support receiving means, said cover support openings coinciding with said box frame support receiving means.

3. The invention of claim 2 including two covers having cover portions shaped to surround said box frame.

4. The invention of claim 3 wherein a plurality of vertical pieces are supported atop each other, supported by support pieces and capped by said second cover.

5. The invention of claim 1 wherein said vertical pieces' support receiving means are tubular.

6. The invention of claim 5 wherein said vertical supports include vertical slots and said vertical pieces include matching interfitting tongues and lips.

7. The invention of claim 1 including a shelf said shelf interfitted between stacking support vertical pieces, said shelf having means to receive said support means therethrough.

8. The invention of claim 1 wherein said support means are tubular, including at least one slot and a projection interfittable with other support means, said vertical pieces having tongue means adapted to be engaged in said slot.

9. The invention of claim 1 including at least one vertical piece extremity support receiving means including a void and at least one vertical piece's extremity support receiving means interfitting said other vertical piece's extremity void.

10. The invention of claim 9 wherein said void interfitting vertical piece includes another extremity interfitting another self containable knockdown display.

11. The invention of claim 1 wherein said box frame includes at least one opening in its outer wall.

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