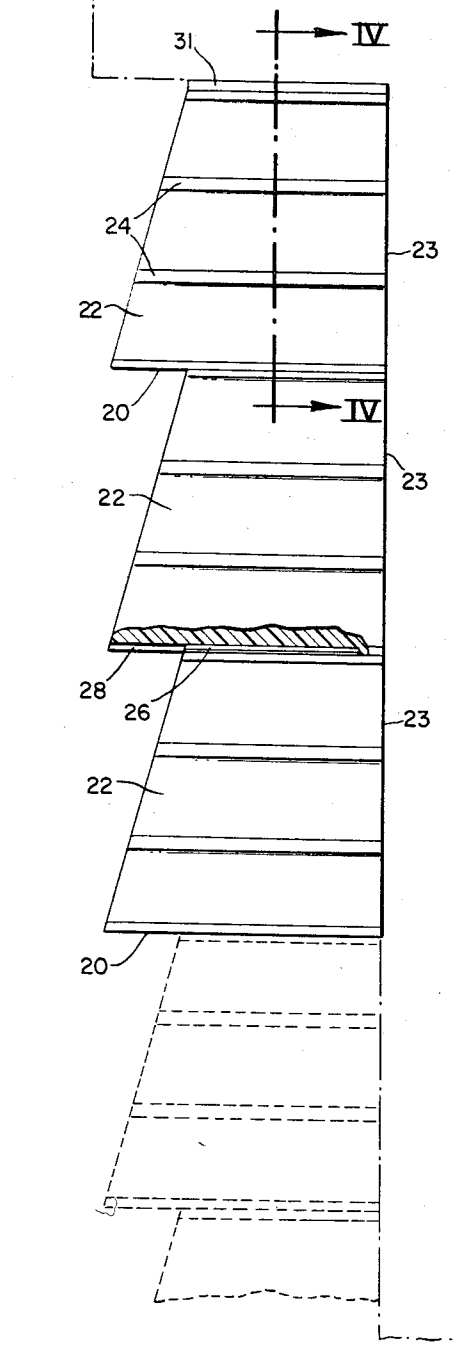
Sept. 17, 1968 S. O. FENKEL 3,401,993

SECTIONAL CABINET

Filed Jan. 18, 1967 3 Sheets-Sheet 1

Fig. 2



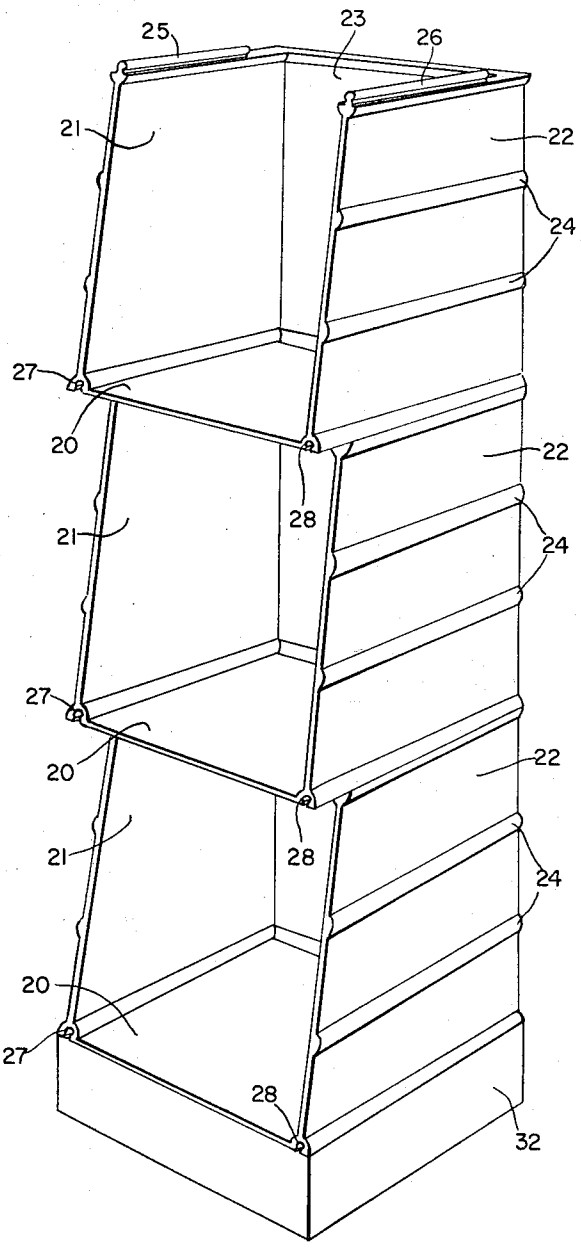


Fig. 1

INVENTOR.
STANLEY O. FENKEL

BY

Paul & Paul
ATTORNEYS.

Sept. 17, 1968 S. O. FENKEL 3,401,993

SECTIONAL CABINET

Filed Jan. 18, 1967 3 Sheets-Sheet 2

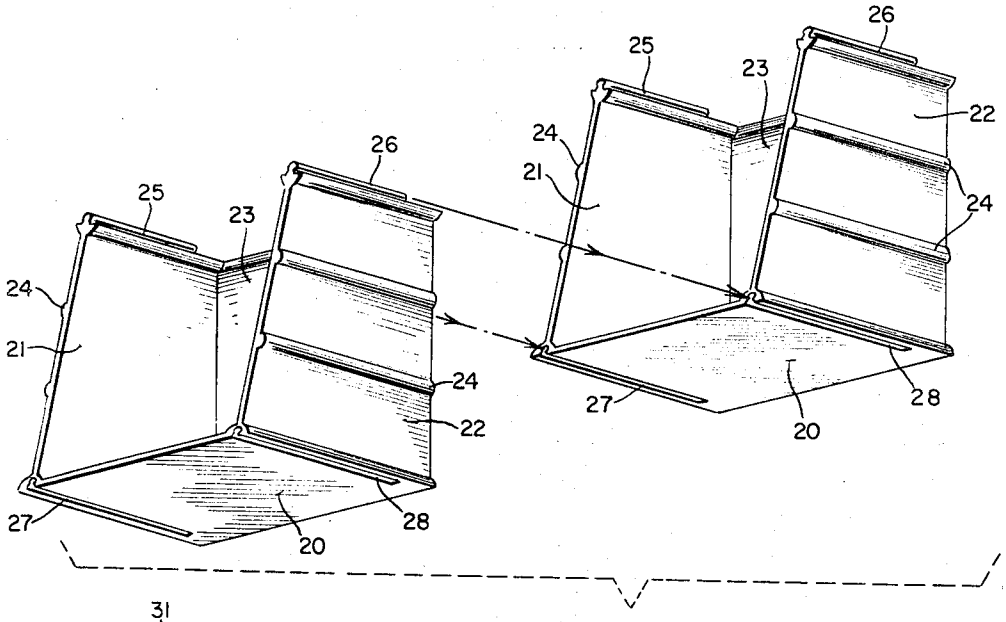


Fig. 3

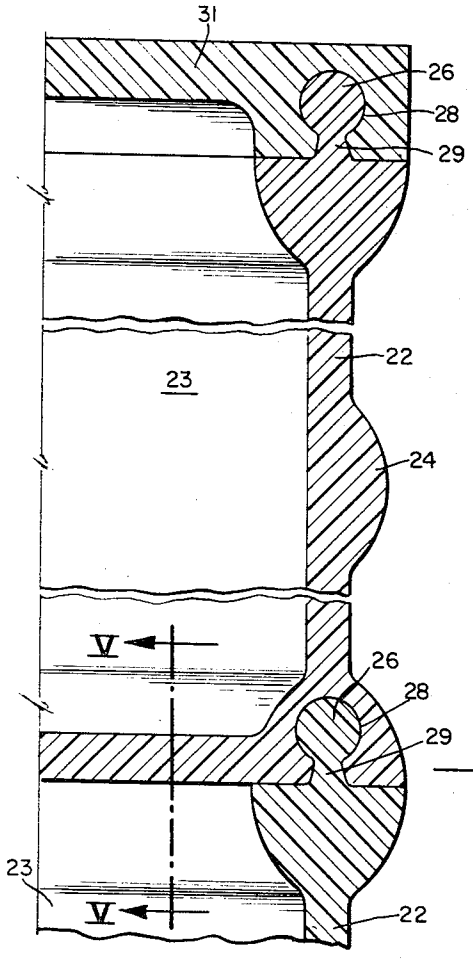


Fig. 4

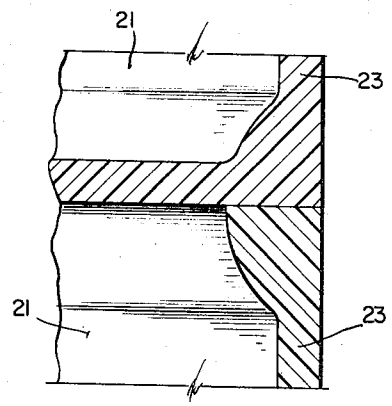


Fig. 5

INVENTOR.
STANLEY O. FENKEL

BY

Paul & Paul
ATTORNEYS.

Sept. 17, 1968 S. O. FENKEL 3,401,993

SECTIONAL CABINET

Filed Jan. 18, 1967 3 Sheets-Sheet 3

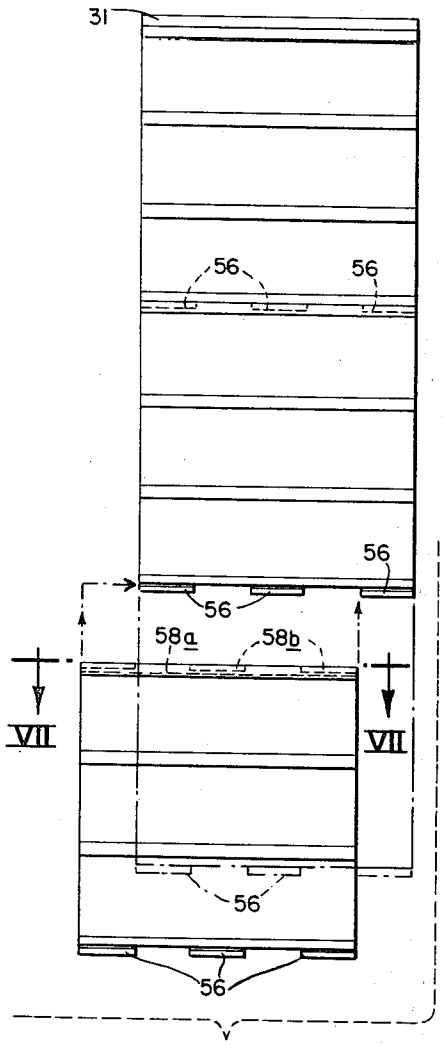


Fig. 6

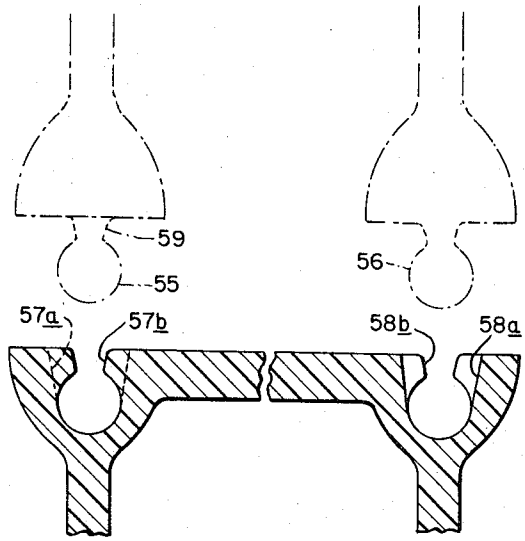


Fig. 8

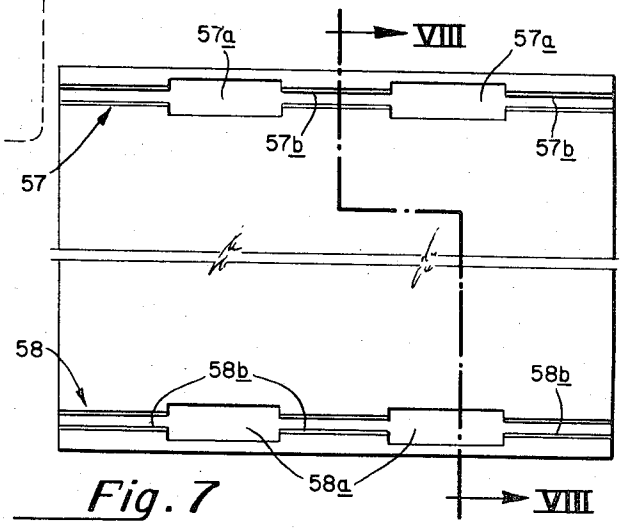


Fig. 7

INVENTOR.
STANLEY O. FENKEL

BY

Paul & Paul
ATTORNEYS.

United States Patent Office 3,401,993
Patented Sept. 17, 1968

3,401,993

SECTIONAL CABINET

Stanley Overs Fenkel, 4721 Walnut St., Philadelphia, Pa. 19139

Filed Jan. 18, 1967, Ser. No. 610,054
3 Claims. (Cl. 312—111)

ABSTRACT OF THE DISCLOSURE

Molded plastic interlocking sectional cabinets are provided having grooves along one pair of edges and locking rods along the other. The locking rods of one cabinet are slidingly received and interlocked into the grooves of another adjoining cabinet. In the preferred form, the rods are interrupted, rather than continuous, forming alternate lengths of rod and of open sections.

This invention relates to a molded plastic sectional cabinet which may be removably interlocked with one or more identical additional cabinets to form a cabinet assembly of desired size.

The molded interlocking sectional cabinet of the present invention may preferably be made of high impact polystyrene of pleasing decorator color or other suitable plastic material, and is preferably produced as an integral unit by the injection molding process.

The invention is directed particularly to means for interlocking the cabinet sections.

The purpose then of the present invention is to provide a molded plastic sectional cabinet, adapted for production by standard molding techniques, and having an integral part thereof interlocking means for interlocking the cabinet with other identical cabinets to provide cabinet assemblies of varied size and formation according to the desires of the user.

The invention will be clear from a consideration of the following description and from the drawing in which:

FIG. 1 is a diagrammatic perspective illustration of three interlocked sectional cabinets embodying one form of the present invention and showing the cabinets resting on a base on the floor.

FIG. 2 is a diagrammatic side elevational view of three cabinets generally similar to those of FIG. 1 but showing in phantom how the cabinet assembly may be suspended from a plate **31** secured to the ceiling beams;

FIG. 3 is a perspective illustration showing how one section of the form of cabinet shown in FIGS. 1 and 2 is fitted into another to produce two interlocked cabinet sections;

FIG. 4 is an enlarged view, in section, along the line IV—IV of FIG. 2 looking in the direction of the arrow and showing the details of the interlock of the top-most cabinet to the ceiling plate and to the cabinet below;

FIG. 5 is an enlarged view, in section, along the line V—V of FIG. 4 looking in the direction of the arrow showing the junction at the rear edge of the superposed interfitted cabinets;

FIG. 6 is a side elevational view of three cabinets showing an alternate and presently preferred form of interlock;

FIG. 7 is a view looking down along the line VII—VII of FIG. 6 showing the locking grooves, characterized by alternate wide and narrow neck portions;

FIG. 8 is a view, in section, along the line VIII—VIII of FIG. 7, showing in section the wide and narrow neck groove portions.

Referring now to FIGS. 1–5 of the drawings, the sectional cabinet is shown to have a pair of vertical substantially parallel sidewalls **21** and **22**, a vertical back

23, and at one end of the sidewalls (the lower end as illustrated) a horizontal shelf **20**. Although not shown in the illustrations, each cabinet may, if desired, be provided with interior side rails for receiving and supporting intermediate shelves insertable therein.

The sidewalls **21** and **22** may preferably (but not necessarily) be provided with exterior reinforcing ribs **24** to provide additional rigidity and strength. The sidewalls, back wall and shelf (a bottom shelf being illustrated) are molded as an integral unit. The reinforcing ribs (if used), and the interlocking rods referred to herebelow, are included in the integrally molded unit.

The sidewalls **21** and **22** are provided at their upper ends, in the embodiments illustrated in FIGS. 1–5, with integral interlocking rods **25** and **26**, respectively. At their lower ends the cabinets are provided with tubular recesses or grooves **27** and **28** for receiving the interlocking rods of an adjoining cabinet of similar construction. If desired, the relative positions of the rods and grooves may be reversed. That is, the rods may be integrally formed along the lower edges of the sidewalls, and the grooves provided along the upper edges.

As seen most clearly in FIG. 3, the grooves **27** and **28** extend from the front toward, but preferably not all the way to, the back of the cabinet. Similarly, the interlocking rods **25** and **26** extend from the front of the cabinet toward, but not all the way to, the rear. By terminating the interlocking grooves and rods short of the back wall of the cabinet, the cabinet is given additional rigidity and strength.

In FIGS. 1–3, the front edges of the sidewalls **21** and **22** are inclined inwardly upwardly, i.e., the sidewalls are longer at the bottom than at the top. This configuration allows somewhat more convenient access into the interior of the cabinet sections, and also provides an attractive overall appearance for the cabinet assembly, but this feature is not essential to the present invention.

FIGURE 3 illustrates how the integral rods of the lower cabinet may be inserted rearwardly into the grooves of the upper cabinet to form an interlocked cabinet assembly.

When two cabinets are interlocked, the interlock region is as illustrated in cross section in FIG. 4. As there shown, the sidewall of the molded cabinet has increased width or thickness just below the neck **29** which integrally joins the rod **26** to the sidewall **22**. Similarly, the sidewall in the region of the groove **28** is thickened, the edges of the thickened sidewalls of the male and female parts abutting against each other as seen in the cross-sectional showing of FIG. 4.

FIG. 5 is a cross-sectional illustration of a rear corner of the assembly as seen along the rear wall of the interfitted cabinets looking toward the sidewalls **21** of the upper and middle cabinets of FIG. 1. As previously indicated, the grooves, such as groove **27**, and the rods, such as rod **25**, do not extend all the way to the rear wall. The corner regions are preferably thickened, as illustrated in FIG. 5, but the rear surface of the cabinets is maintained flat, so that the cabinets may be pushed flush against the wall of the house or other building.

It is contemplated that the stack of interlocked sectional cabinets may be placed on a base **32** on the floor, as indicated in FIG. 1, or may be placed directly on the floor. The base **32** may be provided with interlocking rods corresponding to the rods **25** and **26**. If desired, the sectional assembly may be suspended from the ceiling, in which case a top plate, such as top plate **31**, indicated in FIG. 2, and shown in enlarged cross-section in FIG. 3, may be secured to the ceiling.

A presently preferred form of cabinet and cabinet interlock is illustrated in FIGS. 6–8. In the form shown in

FIGS. 6–8, alternate lengthwise portions of the grooves **57**, **58** have a wide and a narrow neck, as seen in FIG. 7 and in cross section in FIG. 8. In FIGS. 7 and 8, **57***a* and **58***a* identify the wide-neck portions of the grooves, and **57***b* and **58***b* identify the narrow-neck portions. The narrow-neck and wide-neck portions may preferably be of equal lengths. The frontmost and rearmost portions are preferably narrow-neck portions, as illustrated in FIG. 7. The narrow-neck portions are similar in cross-section to the grooves **27** and **28** of FIGS. 1–5. The wide-neck portions are fully open, adapted to receive the rod directly.

In the form shown in FIGS. 6–8, the rods **55** and **56** are not continuous in length like the rods **25**, **26** of FIGS. 1–5. In FIGS. 6–8, the rods are interrupted, forming alternate lengths of rods and of open sections in which the rod is omitted. The length of each section of rod is preferably just slightly less than the length of the wide-neck portions **57***a* and **58***a* of the grooves so that two sections of cabinet may be interlocked by inserting the rods into the wide-neck portions of the grooves and then sliding the one cabinet laterally, as indicated in FIG. 6, to move the rods **55**, **56** into the narow-neck portions **57***b*, **58***b* of the grooves. In the embodiment shown in FIGS. 6–8, the rods are shown projecting downwardly from the lower edge of the cabinet section, rather than upwardly from the upper edge as in FIGS. 1–5. It is apparent, however, that the rods in FIGS. 6–8 could project upwardly from the upper edges, the same as in FIGS. 1–5.

In FIGS. 6–8, the cabinets are illustrated as having three spaced-apart sections of rod along each side at the lower end, and three narrow-neck and two wide-neck groove portions along each side at the upper end.

FIG. 6 illustrates how the cabinets may be assembled. The upper two cabinets in FIG. 6 are already interlocked and suspended from the ceiling. The third cabinet is added by pushing it upward, so aligned with the second cabinet that the two foremost rod sections of the second cabinet enter the wide-neck groove portions of the third cabinet. The third cabinet is then slid rearwardly so that the three rod sections of the second cabinet enter the three narrow-neck groove portions of the third cabinet.

The form of interlock illustrated in FIGS. 6–8, employing interrupted locking rods and wide-neck and narrow-neck grooves is presently preferred because it lends itself more readily to present molding techniques and tolerances.

In the forms illustrated in the drawings, the rods and the grooves are shown as having circular cross-sections. While this is a preferable shape, other cross-sectional configurations could be used, as for example, oval, rectangular, triangular, etc.

While preferred embodiments of this invention have been described in some detail, it will be obvious to one skilled in the art that various modifications may be made without departing from the invention as hereinafter claimed.

What is claimed is:

1. An interlocking sectional cabinet comprising an integral molded plastic structure having two substantially vertical sidewalls and a substantially vertical backwall, one edge of each sidewall being provided with a lengthwise groove, alternate lengthwise sections of said groove having reduced neck dimensions, the other edge of each sidewall being provided lengthwise with spaced-apart sections of locking rod connected to the main portion of the sidewall by a reduced neck portion, each of said sections of rod having a length not greater than the sections of groove intermediate the narrow-neck sections.

2. An interlocking sectional cabinet as claimed in claim **1** characterized in that the narrow-neck sections of said groove and the intermediate sections of said groove are of substantially equal length.

3. An interlocking sectional cabinet as claimed in claim **2** characterized in that the foremost and rearmost section of said groove are reduced-neck sections.

References Cited

UNITED STATES PATENTS

873,496	12/1907	Bryant	312—111
1,862,609	6/1932	Shaw.	
3,013,692	12/1961	Chesley.	
3,047,157	7/1962	Bergman	220—97 XR
3,053,397	11/1962	Bliss	220—97
3,347,394	10/1967	Gould	211—126

BOBBY R. GAY, *Primary Examiner.*

J. L. KOHNEN, *Assistant Examiner.*