Nov. 27, 1951 W. V. CLARK 2,576,750

COLLAPSIBLE CABINET

Filed Jan. 6, 1950 2 SHEETS—SHEET 1

Fig. 1.

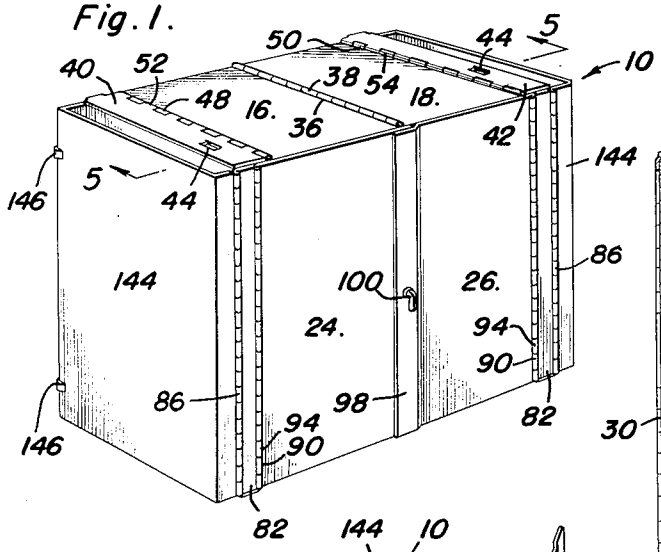


Fig. 2.

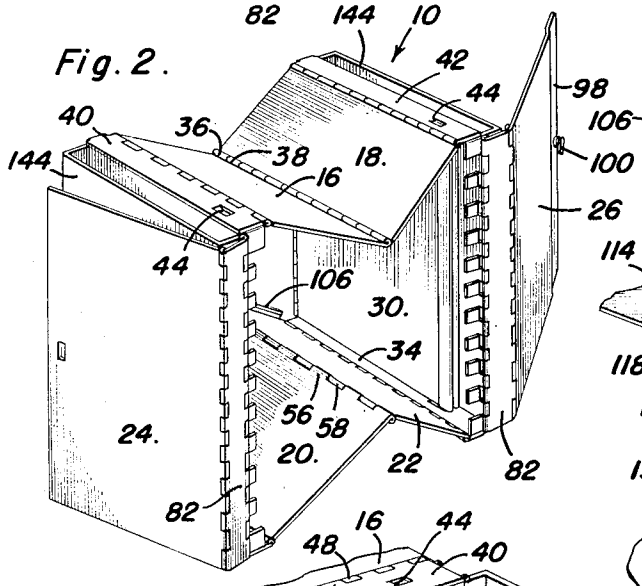


Fig. 7.

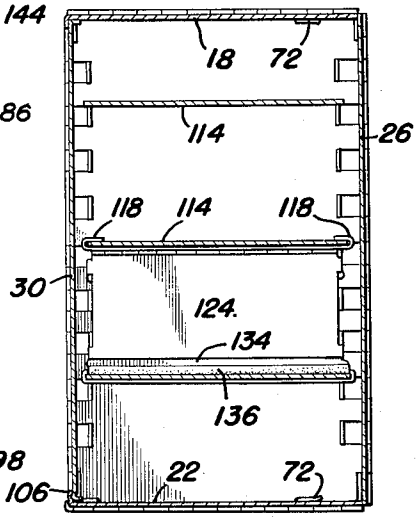


Fig. 12.

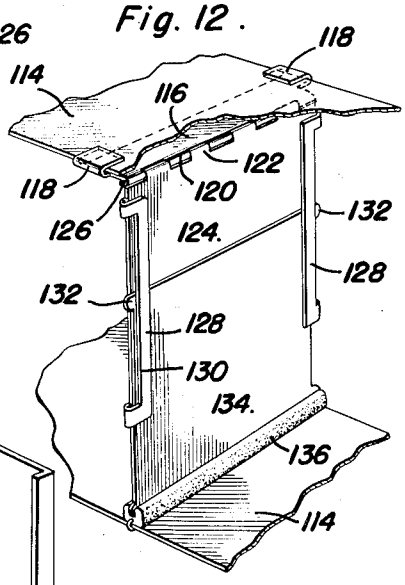


Fig. 11.

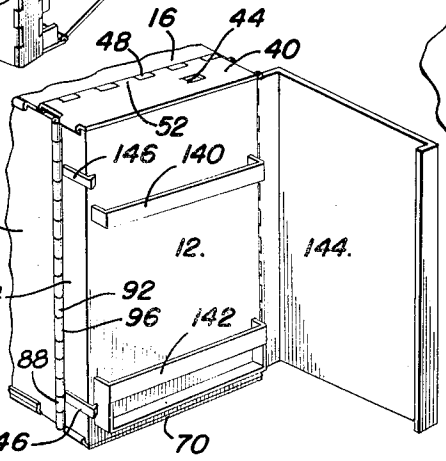
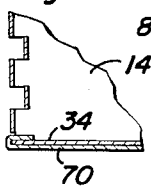


Fig. 14.



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COLLAPSIBLE CABINET

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Fig. 5.

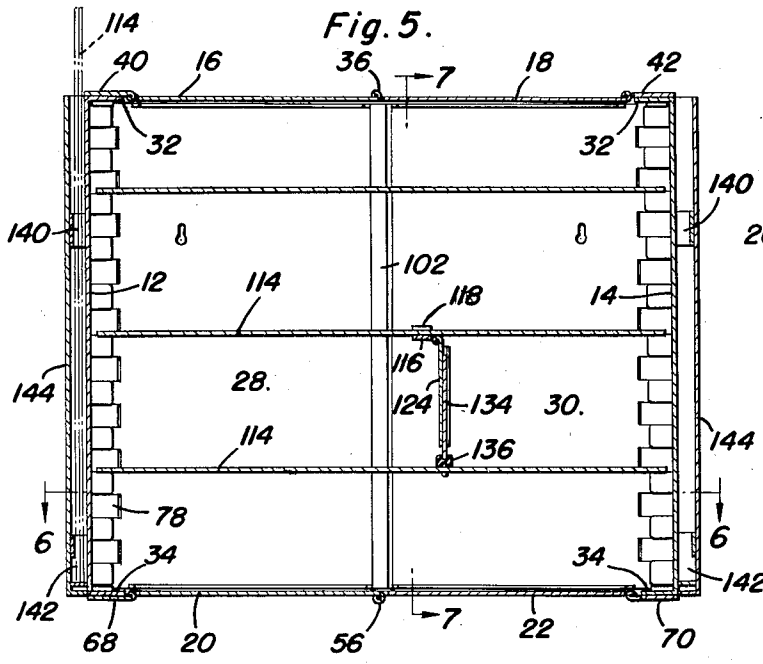


Fig. 3.

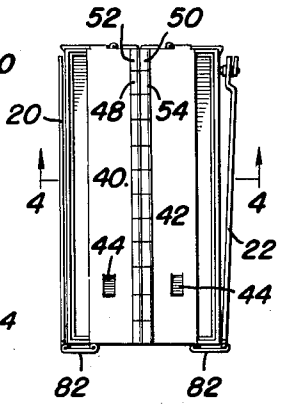


Fig. 4.

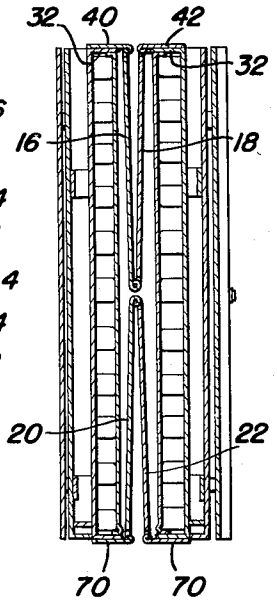


Fig. 6.

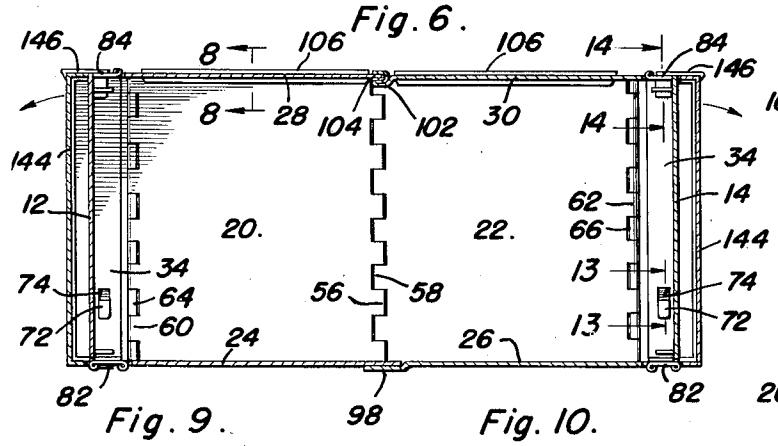


Fig. 9.

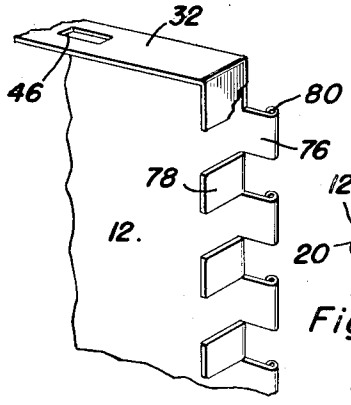


Fig. 10.

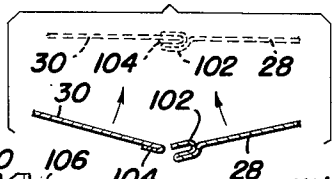


Fig. 8.

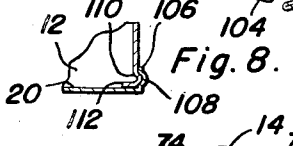
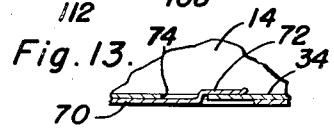


Fig. 13.



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COLLAPSIBLE CABINET

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Application January 6, 1950, Serial No. 137,184

5 Claims. (Cl. 312—259)

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This invention relates to new and useful improvements in cabinets and the primary object of the present invention is to provide a cabinet including a pair of adjacent walls having spaced sleeves along their edges and with the material of one of the walls between the sleeves bent at 90° to form supporting brackets for shelves.

Another important object of the present invention is to provide a cabinet composed of a plurality of parts that are quickly and readily assembled or disassembled in a convenient manner and which may be utilized as a screen as well as a cabinet.

Yet another object of the present invention is to provide a collapsible cabinet having shelves mounted therein and embodying novel and improved means for partitioning the space between adjacent shelves.

Another object of the present invention is the provision of a cabinet of relatively low gauge metal so constructed as to provide a large storage space and a strong joint between adjacent walls.

A further object of the present invention is to provide a collapsible cabinet wherein the end walls are formed with hinge sleeves and shelf supporting brackets in a single operation to reduce to a minimum the time and labor required for constructing the cabinet and to utilize material, for bracketing, that is ordinarily discarded.

A still further aim of the present invention is to provide a collapsible cabinet that is simple and practical in construction, strong and reliable in use, small and compact in structure, neat and attractive in appearance, extremely inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the present cabinet assembled for use;

Figure 2 is a perspective view showing the manner in which the cabinet is collapsed;

Figure 3 is a plan view of the cabinet collapsed;

Figure 4 is a sectional view taken substantially on the plane of section line 4—4 of Figure 3;

Figure 5 is a longitudinal vertical sectional view taken substantially on the plane of section line 5—5 of Figure 1;

Figure 6 is a longitudinal horizontal sectional view taken substantially on the plane of section line 6—6 of Figure 5;

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Figure 7 is a transverse vertical sectional view taken substantially on the plane of section line 7—7 of Figure 5;

Figure 8 is an enlarged detail view taken substantially on the plane of section line 8—8 of Figure 6;

Figure 9 is a fragmentary perspective view of one of the end walls to show the manner in which the hinge sleeves and shelf brackets are formed;

Figure 10 is a detail sectional view showing the manner in which the rear wall sections are joined;

Figure 11 is a fragmentary perspective view of one end of the cabinet and showing the means for supporting auxiliary or unused shelves;

Figure 12 is a fragmentary perspective view showing the partition means applied between adjacent shelves;

Figure 13 is an enlarged detail sectional view taken substantially on the plane of section line 13—13 of Figure 6; and

Figure 14 is an enlarged detail sectional view taken substantially on the plane of section line 14—14 of Figure 6.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention. The cabinet is constructed from sheet metal and is designated generally by the numeral 10 and includes end walls 12 and 14, a pair of upper wall sections 16 and 18, a pair of lower wall sections 20 and 22, a pair of forward wall sections 24 and 26, and a pair of rear wall sections 28 and 30.

The upper and lower edges of the end walls 12 and 14 are folded inwardly to provide upper and lower horizontal flanges 32 and 34. The inner edge of the upper wall section 16 is provided with a plurality of longitudinally spaced sleeves 36 that are interdigitated with further longitudinally spaced sleeves 38 at the inner edge of the upper wall section 18. A suitable hinge pin is extended through the interdigitated sleeves 36 and 38.

Attaching strips 40 and 42 overlie the upper horizontal flanges 32 of the end walls 12 and 14. The attaching strips 40 and 42 are detachably secured to the flanges 32 through the medium of tongues 44 that are struck from the strips 40 and 42 and which enter slots or openings 46 formed in the flanges 32. The tongues 44 yieldingly bear against the undersurface of the flanges 32 as shown best in Figure 3 of the drawings.

Longitudinally spaced sleeves 48 and 50 are provided at the outer side edges of the upper wall

sections 16 and 18. These sleeves (48, 50) are interdigitated with further longitudinally spaced sleeves 52 and 54 formed at the inner side edges of the attaching strips 40 and 42. Suitable hinge pins are extended through the sleeves 48, 52 and 50, 54.

The inner edges of the lower wall sections 20 and 22 are provided with longitudinally spaced sleeves 56 and 58 respectively. The sleeves 56 are interdigitated with the sleeves 58 and a hinge pin is extended through the sleeves 56 and 58. The outer side edges of the lower wall sections 20 and 22 are also provided with longitudinally spaced sleeves 60 and 62 that are interdigitated with longitudinally spaced sleeves 64 and 66 at the inner edges of lower attaching strips 68 and 70. Additionally hinge pins are extended through the sleeves 60, 64 and 62, 66.

The lower attaching strips 68 and 70 underlie the lower flanges 34 and tongues 72 struck from the attaching strips 68 and 70 enter slots or openings 74 provided in the lower flanges 34. The tongues 72 yieldingly bear against the inner or upper faces of the flanges 34 in order to retain the end wall sections 20 and 22 detachably secured to the end walls 12 and 14.

The forward and rear vertical edges of the end walls 12 and 14 are provided with vertically spaced horizontal slits that are equally spaced to define groups of tongues or arms 76. Alternate tongues, 78, of the groups of tongues 76 are bent inwardly at 90° to form shelf supports whereas the outer edges of the tongues 76 are rolled upon themselves to provide sleeves 80.

Forward and rear pairs of hinge strips 82 and 84 are associated with the end walls 12 and 14. Longitudinally spaced sleeves 86 and 88 are provided at the outer edges of the hinge strips 82 and 84. Hinge pins are extended into the sleeves 80, 86 and 80, 88 to connect the hinge strips 82 and 84 to the end walls. Longitudinally spaced sleeves 90 and 92 are also provided at the inner edges of the hinge strips 82 and 84. These latest sleeves (90, 92) are interdigitated with longitudinally spaced sleeves 94 and 96 at the outer edges of the forward and rear wall sections 24, 26 and 28, 30. Hinge pins are extended into the sleeves 90, 94 and 92, 96 to retain the forward and rear wall sections 24, 26 and 28, 30 relative to the end walls 12 and 14.

The inner vertical edge of the forward wall section 26 is provided with an offset 98 that will overlie the inner vertical edge of the forward wall section 24 when the forward wall sections are moved to their closed position. The forward wall sections are retained closed and locked together by a suitable latch 100.

The inner vertical edge of the rear wall section 28 is bent to form a vertical channel 102. The inner vertical edge of the rear wall section 30 is folded upon itself to form a double thickness edge 104 that is frictionally fitted into the channel 102 to retain the rear wall sections locked together. By pressing inwardly and forwardly upon the inner joined edges of the rear wall sections, the edge 104 will snap out of the channel 102 as shown best in Figure 10 of the drawings.

Atention is directed to Figure 8 wherein there is disclosed the preferred method for reinforcing the connection between the rear wall sections and the bottom wall sections. The rear edges of the bottom wall sections are turned upwardly to provide vertical flanges 106. Channels 108 are pressed in the flanges 106 and yieldingly receive ribs 110 pressed from the rear wall sections.

Flanges 112 at the lower ends of the rear wall sections ride upon the bottom wall sections as the rear wall sections are folded inwardly and forwardly.

A plurality of horizontally disposed panels or shelves 114 are positioned within the cabinet and these shelves are supported on certain of the tongues 78 as shown in Figure 5. The shelves may be spaced from each other a predetermined distance, depending upon the type article or articles that are to be disposed between adjacent shelves.

Means is provided for dividing the space between adjacent partitions into two areas. This means consists of a base strip 116 that is disposed transversely of one of the shelves. The reduced end portions of the base strip 116 are bent to form hooks or channels 118 that slidably receive the side edges of one shelf. Longitudinally spaced sleeves 120 depend from one edge of the base strip 116 and are interdigitated with spaced sleeves 122 at the upper edge of an upper partition member 124. A hinge pin 126 is extended into the sleeves 120 and 122.

The side edges of the upper partition member 124 are folded inwardly to provide channels 128. Slots 130 are formed in the channels 128 and slidably receive lugs 132 at the side edges of a lower partition member 134.

The end portions of a half-round hollow rubber 136 are detachably and slidably secured to the edges of a shelf and the lower edge of the partition member 134 is forced against the rubber 136 to be yieldingly retained thereto as the rubber is depressed at its longitudinal center to receive the lower edge of the lower partition member 134.

The tongues 78, in addition to their function as shelving supports, will also limit the inward swinging movement of the strips 82 and 84. These tongues 78 function as stops as well as supports.

Since one of the outstanding features of the present invention is to provide a cabinet structure that is convenient to manufacture at low cost and which may be sold to the purchasing public at a low price, it is observed that the walls 12 and 14 are bent and rolled to form the flanges 32 and 34, the tongues 78, arms 76 and sleeves 80 in a single operation with conventional type of machinery familiar to the sheet metal industry.

One or both of the end walls 12 and 14 support upper and lower brackets or channels 140 and 142 on their outer faces for receiving and holding additional shelving or shelving not being used within the cabinet.

Closure members 144 are hinged to the strips 82 and are retained in juxtaposition to the walls 12 and 14, to guard and shield the shelving supported by the brackets 140 and 142, by suitable spring clips 146 mounted on the strips 84.

Having described the invention, what is claimed as new is:

1. In a cabinet including a pair of hingedly connected walls, one of said walls having a plurality of spaced parallel slits therein to define a plurality of tongues between adjacent slits, the outer edges of alternate tongues being bent upon themselves to provide hinge sleeves, and the remaining tongues being bent perpendicularly to said one of said end walls to form shelf supports.

2. A cabinet wall comprising an elongated sheet of bendable material having side edges, said

side edges having a plurality of spaced parallel slits therein to define a plurality of tongues between adjacent slits, certain of said tongues being bent perpendicular to said elongated sheet of material to form shelf support means and the outer edges of further of said tongues being bent upon themselves to provide hinge sleeves.

3. A collapsible cabinet comprising a pair of hingedly connected upper wall sections, a pair of hingedly connected lower wall sections, a pair of end walls, means detachably and hingedly securing the upper wall sections to the end walls, further means detachably and hingedly securing the lower wall sections to the end walls, a pair of forward wall sections, said end walls having forward and rear edges and a plurality of spaced parallel slits extending inwardly through said edges to define a plurality of tongues between adjacent slits, the outer edges of alternate tongues being bent upon themselves to provide hinge sleeves, and the remaining tongues being bent perpendicular to the end walls to form supports, means pivotally securing the forward wall sections to the hinge sleeves at the forward edges of said end walls, a pair of rear wall sections, means pivotally securing the rear wall sections

to the hinge sleeves at the rear edges of the end walls, and shelves supported on said support-forming tongues.

4. The combination of claim 3, wherein said first mentioned means includes attaching strips hinged to said upper wall sections, flanges at the upper ends of said end walls, said strips overlying said flanges, and interconnecting means between said flanges and said strips.

5. The combination of claim 4, wherein said interconnecting means includes resilient tongues on said strips, said flanges having openings receiving said tongues, said tongues yieldingly bearing against said flanges and retaining said flanges between said tongues and said strips.

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