

SECTIONAL WALL CABINET STRUCTURE FOR RELIGIOUS PURPOSE ✓

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a sectional wall cabinet structure for religious purpose, and more particularly to a wall cabinet which is assembled from different units firmly connected together by corresponding lugs and grooves and pins.

2. Description of the Prior Art

Most of the conventional wall cabinets for religious purpose are constructed from panels connected together by means of structural mortises and tenons or by nails. Cabinets formed in the former way are can be easily assembled and disassembled but are less structural strong and therefore not suitable for use as repositories which are usually superposed on one another and require to be capable of bearing higher loads. On the other hand, cabinets formed in the latter way can be customized and have better structural strength to adapt to superposition, they are, however, labor and money consuming either in their production or transportation and are therefore not economical and practical.

It is therefore tried by the inventor to develop a sectional wall cabinet structure for religious purpose to eliminate the drawbacks existed in the conventional ones.

SUMMARY OF THE INVENTION

It is a primary object of the present invention to provide a sectional wall cabinet structure for religious purpose which can be easily formed from side panels and end panels assembled by means of corresponded lugs and grooves, so that at least one open cabinet can be firmly formed.

Another object of the present invention is to provide a sectional wall cabinet structure for religious purpose which allows two and more cabinets so formed to firmly connect with one another in a lateral direction.

A further object of the present invention is to provide a sectional wall cabinet structure for religious purpose which can be provided at a backside with differently shaped hangers so that the assembled cabinets can be hung on racks fixed to a wall surface to impart some of the loads to the racks, allowing multiple layers of such cabinets to be superposed on one another.

BRIEF DESCRIPTION OF THE DRAWINGS

The detailed structure, the applied principles, and the functions of the present invention can be best understood from the following detailed description of the preferred embodiments and the accompanying drawings, wherein

Fig. 1 is an exploded perspective of one unit of the cabinet according to the present invention;

Fig. 2 illustrates the manner in which one unit of the cabinet assembles with a decorative front panel;

Fig. 3 illustrates the manner in which differently shaped hangers is attached to the backside of the assembled cabinet;

Fig. 4 is an exploded perspective of the decorative front panel;

Fig. 5 illustrates the manner in which multiple units of the cabinets assemble with the decorative front panels;

Fig. 6 illustrates the manner in which multiple units of the assembled cabinets are hung on racks by means of differently shaped hangers attached to the backside of the cabinets;

Fig. 7 is a side sectional view showing the manner in which multiple units of the assembled cabinets are hung on the racks by means of the hangers;

Fig. 8 illustrates one embodiment of the present invention in an assembled condition;

Fig. 9 illustrates another embodiment of the decorative front panel of the present invention;

Fig. 10 illustrates the manner in which one unit of the assembled cabinet of the present invention assembles with the decorative front panel shown in Fig. 9;

Fig. 11 illustrates the manner in which multiple units of the assembled cabinets of the present invention assemble with the decorative front panels of Fig. 9; and

Fig. 12 illustrates another embodiment of the present invention according to Fig. 11 in an assembled condition.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Please refer to Figs. 1, 2, and 3 at the same time. The present invention relates to a sectional wall cabinet structure for religious purpose. Each unit of the cabinet mainly includes two side panels 1, a back panel 2, two end panels 3, a plurality of hanger kits 4, and a decorative front panel 5.

The side panel 1 each is provided at an inner surface with a receiving channel 11 extending along a little inside of a top, a rear and a bottom edge thereof. The side panel 1 has a forward projected front edge 14 and two cuts 111 formed on a sideward and inward projected stopper extending from top to bottom of the side panel 1 near the front edge 14 thereof. Several groups of locating holes 141 are provided on the front edge 14 corresponding to the cuts 111.

As shown in Fig. 3, the back panel 2 is provided at a rear surface with a plurality of locating seats 22 for the hangers 4. Each back panel 2 is formed at all four edges with flanges 21. A plurality of slightly protruded ribs 211 are formed on a backside of the flanges 21.

The end panel 3 each is provided at a front edge with a front flange 34, at a rear edge with an engaging channel 33, and at two lateral edges each with sideward projected strips 32. The front flange 34 is further formed with a wiring groove 341 with its opening facing outward. The engaging channel 33 has an opening facing inward. A plurality of slightly protruded ribs 321 are arranged on an outer surface of each of the strips 32 in parallel to the front and the rear edges of the end panel 3.

To assemble the panels 1, 2, and 3 to form a unit of the cabinet of the present invention, first insert a top and a bottom flanges 21 of the back panel 2 into the engaging channels 33 of an upper end panel 3 and a lower end panel 3. Then, insert left projected strips 32 of the top and the bottom end panels 3 and the left flange 21 of the back panel 2 into the receiving channel 11 extending along three edges of the side panel 1 to the left. With the same manner, the right projected strips 32 of the end panels 3 and the right flange 21 of the back panel 2 are inserted into the receiving channel 11 of the side panel 1 to the right. At this point, a primary cabinet with an opening facing forward is formed. What to be noted is the slightly protruded ribs 211 and 321 on the flanges 21 and the projected strips 32, respectively, shall cause a tight fit between the flanges 21 and the strips 32 and the receiving channels 11 and the engaging channels 33 while proper air clearances are left between the ribs 211, 321 to facilitate disassembling of the cabinet. No vacuum suction shall exist when the panel edges are inserted into the channels and causes difficulty in disassembling the cabinet.

The hanger kits 4 include differently shaped members, including simple hangers 41, longitudinal hangers 42, transverse hangers 43, and intersection hangers 44. The simple hanger 41 each has a central fixing hole 411 and a downward and outward extended hooking plate 412. The longitudinal hanger 42 each has two fixing holes 321 separately located near an upper and a lower end of the hanger 42 and a hooking plate 422 downward and outward extended from a lower end of the hanger 42. The transverse hanger 43 each has two fixing holes 431 separately located near a right and a left end of the hanger 43 and a hooking plate 432 downward and outward extended from a lower end of the hanger 43. The intersection hanger 44 each has four fixing holes 441 separately located near a corner of the hanger 44 and a hooking plate 442 downward and outward extended from a lower edge thereof.

As shown in Fig. 4, the decorative front panel 5 includes two side frames 51, a top frame 52, a bottom frame 53, and a plurality of connecting members 54. The side frame 51 each has a top and a bottom end having an arcuated outer surface 511. Two pairs of parallel lugs 512 backward project from the arcuated top and bottom ends 511. Through pin holes 513 are formed on the lugs 512. Each side frame 51 is formed at a backside with a vertical clamping channel 515 extending between the two pairs of lugs 512. The top frame 52 has a forward projected portion 521 with two lateral ends thereof rearward indented to form two stepped surfaces 524. A first horizontal clamping channel 522 is formed behind the forward projected portion 521. Two notches 523 are provided

slightly below two outer ends of the horizontal clamping channel 522. The bottom frame 53 also has two outer ends with stepped surfaces 532 and a second horizontal clamping channel 531 behind the bottom frame 53. The connecting member 54 each is formed at a top and a bottom surfaces with a vertically projected arcuated flange 541 each and at two sides with two cuts 542. The cuts 542 have a depth the same as that of the stepped ends 524 and 532.

To assemble the decorative front panel 5, first attach the connecting members 54 to the outer ends of the top and the bottom frames 52 and 53 with the cuts 542 of the connecting members 54 engaging with the stepped surfaces 524 and 532. Then, attach the side frames 51 to the connecting members 54 by engaging the arcuated top and bottom ends 511 of the side frames 51 with an outer periphery of the arcuated flanges 541 of the connecting members 54, forming an assembled front panel 5 as shown in Fig. 2.

To assemble the primary cabinet formed from the side panels 1, the back panel 2 and the end panels 3 with the front panel 5, first insert the front flanges 34 of the top and the bottom end panels 3 into the first and the second horizontal clamping channels 522, 531 of the front panel 5 and the front edges 14 of the side panels 1 into the vertical clamping channels 515 of the front panel 5. Align the through pin holes 513 on the lugs 512 of the front panel 5 with the locating holes 141 on the side panels 1. Side covers 15 each having inward projected pins 151 and a locating hole 152 corresponding to each group of the

locating holes 141 of the side panels are separately inserted into each group of the locating holes 141 with the locating holes 152 aligning with the through pin holes 513 on the lugs 512. Then, fixing pins 514 are threaded through the aligned pin holes 513 and locating holes 141 and 152, connecting the front panel 5 to the primary cabinet to form one unit of the wall cabinet of the present invention.

Please now refer to Figs. 5, 6, 7, and 8 at the same time. Fig. 5 illustrates the manner in which two units of the primary cabinets are horizontally connected. As shown in the drawing, the front edges 14 of two abutted side panels 1 of the two adjacent units of primary cabinets are inserted into the same vertical clamping channel 515 of a side frame 51 of the front panel 5 in front of the primary cabinets. Then, fixing pins 514 are used to thread through the pin holes 513 on the lugs 512 and the corresponding locating holes 141 on the side panels 1, causing the two adjacent primary cabinets and the front panel 5 to be firmly bound together.

Fig. 6 illustrates the manner in which the hanger kits 4 are used to bind multiple units of assembled cabinets of the present invention together. The simple hangers 41 are suitable for screwing to the endmost corners of continuously connected cabinets. The longitudinal hangers 42 are suitable for screwing to joints of every two vertically superposed cabinets at the horizontally endmost positions. The transverse hangers 43 are suitable for screwing to joints of every two horizontally abutted cabinets at the

vertically endmost positions. And, the intersection hangers 44 are suitable for screwing to joints of every four vertically and horizontally abutted cabinets. These hangers are fixed to the backside of the assembled cabinets by aligning their respective fixing holes 411, 421, 431, 441 with the corresponding locating seats 22 on the back panels 2 and being tightened thereto by means of screws. To hang the entire assembled cabinets on a wall surface, rail-like racks 45 can be horizontally fixedly mounted on the wall surface in advance to correspond to positions of the hangers 4 screwed to each row of the cabinets. The rack 45 each has a base part and a front part 451 projecting from the base part, so that a hooking channel is formed between the two parts for the downward extended hooking plates 412, 422, 432, 442 of the hangers 41, 42, 43, 44, respectively, to locate therein. Fig. 7 illustrates in more details the manner in which the assembled cabinets are hung on the racks 45 on a wall surface.

Fig. 8 shows from a front side some assembled cabinets of the present invention are hung on the racks 45. As shown, multiple units of primary cabinets can be connected and assembled with the front panels 5 with the connecting members 54 covered to every joints of the side frames 51 and the top and the bottom frames 52, 53 of the front panels 5. More cabinets can be added to the existed ones in either vertical or horizontal direction as necessary.

Figs. 9, 10 and 11 illustrate another embodiment of the front panel of the present invention. In this embodiment,

the front panel mainly includes a top frame 60, two side frames 70, and a bottom frame 80. The top frame 60 is provided at a backside with a first transverse receiving channel 61. Above and below two outer ends of the receiving channel 61, flanges 62 and 63 are provided, respectively. The side frame 70 each is provided at a backside with a longitudinal receiving channel 71. Two substantially semicircular recesses 72 are separately formed at a top and a bottom ends of each receiving channel 71. Two pairs of laterally parallel lugs 73 with a pin hole 74 each are provided to two ends of each longitudinal receiving channel 71 with each lug at one side of the channel 71. The bottom frame 80 each is provided at a backside with a second transverse receiving channel 81. Flanges 82 are provided above two outer ends of the second transverse receiving channel 81.

To assemble the front panel in the second embodiment, first locate the bottom flanges 63 of two laterally adjacent top frames 60 into the same top recess 72 of the common side frame 70 of the two adjacent top frames 60. Then, in similar way, the flanges 82 of the two laterally adjacent bottom frames 80 are located into the same bottom recess 72 of the common side frame 70 thereof. An assembled primary cabinet 90 is assembled with the front panel by inserting front edges 91 of a top and a bottom panels and front edges 92 of two side panels of the cabinet separately into the first and the second transverse receiving channels 61, 81 and the longitudinal receiving channels 71 of the two side frames 70. When more primary cabinets 90 are to be added to

two sides of the existed ones, more top and bottom frames 60, 80 can be connected to the endmost side frames 70 by engaging the bottom flanges 63 of the top frames 60 and top flanges 82 of the bottom frames 80 with the top and the bottom recesses 72 of the endmost side frames 70, respectively, and by inserting the abutted front edges 92 of the endmost cabinets and the added cabinet together into the endmost longitudinal receiving channels 71. Then, fixing pins 75 are used to thread into the pin holes 74 of the upper and the lower lug pairs 73 of the side frames 70 and locating holes 93 provided near a top and a bottom of the cabinets 90. Since the longitudinal receiving channel 71 each has a width just to receive two abutted side panels of the cabinets 90, it is necessary to insert side covers 94 into the locating holes 93 of the endmost cabinets 90 to which no more cabinets 90 will be connected to prevent the endmost cabinets 90 from loosely attaching to the front panels.

When more primary cabinets 90 are to be added to two vertical ends of the existed cabinets, first engage the lower recesses 72 of two additional side frames 70 with the top flanges 62 of the uppermost top frames 60. Then, add another top frame 60 to the two additional side frames 70 by engaging the bottom flanges 63 of the top frame 60 with the upper recesses 72 of the new side frames 70. Finally, connect an additional assembled primary cabinet 70 to the added front panel by inserting the front edges 91 into the first transverse receiving channel 61 of the top frame 60 and the second transverse receiving channel 81 of the bottom

frame 80, and the front edges 92 into the longitudinal receiving channels 71 of the side frames 70. In the same manner, multiple cabinets can be additionally connected to the existed ones in either vertical or horizontal direction. After all the additional cabinets are connected to the additional front panels, fixing pins 75 are used to firmly lock them in place. Fig. 12 illustrates a front view of the assembled cabinets of the present invention according to the second embodiment.

What is claimed is:



1. A sectional wall cabinet structure for religious purpose, comprising at least:

two side panels each of which is provided at an inner surface with a receiving channel extending along a little inside of a top, a rear, and a bottom edge thereof, and a sideward and inward projected stopper extending from top to bottom of a front edge of said side panel, two cuts being formed on said stopper, and two groups of multiple locating holes being provided on said side panel near said two cuts;

a back panel being formed at all four edges with flanges;

two end panels each of which is provided at a rear edge with an engaging channel and at two lateral edges with sideward projected strips; and

a decorative front panel;

whereby a unit of wall cabinet can be formed by inserting a top and a bottom edges of said back panel into said engaging channel of said end panels and two lateral edges of said back panel and said two projected strips of said two end panels into said receiving channels of said two side panels, and by engaging said front panel with said assembled side, back, and end panels.

2. A sectional wall cabinet structure for religious purpose



as claimed in claim 1, wherein said back panel is provided at a rear surface with a plurality of locating seats for differently shaped hangers to attached thereto.

3. A sectional wall cabinet structure for religious purpose as claimed in claim 1, wherein said decorative front panel is provided at a backside with two vertical and two horizontal clamping channels, and at a top and a bottom end of said vertical clamping channels with two pairs of laterally parallel lugs which each having a through pin hole corresponding to one of said locating holes on said side panels, whereby binding means are allowed to thread therethrough when said pin holes of said lugs are aligned with said locating holes of said side panels.

4. A sectional wall cabinet structure for religious purpose as claimed in claim 1, wherein said flanges of said back panel are provided with a plurality of slightly protruded ribs.

5. A sectional wall cabinet structure for religious purpose as claimed in claim 1, wherein said sideward projected strips of said end panels are provided with a plurality of slightly protruded ribs.

6. A sectional wall cabinet structure for religious purpose as claimed in claim 2, wherein said hangers include simple hangers, longitudinal hangers, transverse hangers, and intersection hangers.



7. A sectional wall cabinet structure for religious purpose as claimed in claim 6, wherein said simple hanger each has a central fixing hole and a downward and outward extended hooking plate, said simple hangers being suitable for screwing to endmost corners of continuously connected cabinets.

8. A sectional wall cabinet structure for religious purpose as claimed in claim 6, wherein said longitudinal hanger each has two fixing holes separately located near an upper and a lower end thereof and a hooking plate downward and outward extended from a lower end thereof, said longitudinal hangers being suitable for screwing to joints of every two vertically superposed cabinets at horizontally endmost positions.

9. A sectional wall cabinet structure for religious purpose as claimed in claim 6, wherein said transverse hanger each has two fixing holes separately located near a right and a left end thereof and a hooking plate downward and outward extended from a lower end thereof, said transverse hangers being suitable for screwing to joints of every two horizontally abutted cabinets at vertically endmost positions.

10. A sectional wall cabinet structure for religious purpose as claimed in claim 6, wherein said intersection hanger each has four fixing holes separately located near a corner thereof and a hook plate downward and outward extended from a lower edge thereof, said intersection hangers being



suitable for screwing to joints of every four vertically and horizontally abutted cabinets.

11. A sectional wall cabinet structure for religious purpose as claimed in claim 6, wherein said hangers are used to hang multiple units of continuously connected cabinets on a wall surface by engaging said hangers with racks fixedly mounted on said wall surface, said racks each having a base part and a front part forward projected from said base part so that a hooking channel is formed between said two parts for said hooking plates of said hangers to hook thereto.

12. A sectional wall cabinet structure for religious purpose as claimed in claim 1, wherein said front panel comprises two side frames, a top frame, a bottom frame, and a plurality of connecting members, said side frame each having a top and a bottom end having an arcuated outer surface, two pairs of parallel lugs backward projecting from said arcuated top and bottom ends, and a vertical clamping channel formed at a backside of said side frame and extending between said two pairs of lugs, said lugs each having a through pin hole thereon; both said top and said bottom frames being provided at a backside with a horizontal clamping channel each; said connecting member each being formed at a top and a bottom surfaces with a vertically projected arcuated flange for engaging with said arcuated top and bottom surfaces of said side frames and at two sides with two cuts for engaging with two lateral outer ends of said top and said bottom frames.



13. A sectional wall cabinet structure for religious purpose as claimed in claim 12, wherein said top frame of said front panel has two front outer ends which rearward indent to form two stepped surfaces against which said cuts of said connecting members can be pushed and be attached thereto.

14. A sectional wall cabinet structure for religious purpose as claimed in claim 12, wherein said top frame of said front panel further has two notches formed slightly below two outer ends of said top frame to receive one of said two parallel lugs therein.

15. A sectional wall cabinet structure for religious purpose as claimed in claim 12, wherein said clamping channels of said side frame, said top frame and said bottom frame have a width about twice of a thickness of said side panels and said end panels of said cabinet, such that two abutted panels of two adjacent cabinets can be inserted into said clamping channels to connect two adjacent cabinets together.

16. A sectional wall cabinet structure for religious purpose as claimed in claim 15, wherein side covers each having a locating hole can be inserted into said locating holes on said side panels so that said side covers can be inserted into said vertical clamping channels of said front panel along with said side panels to which said side covers are attached.

17. A sectional wall cabinet structure for religious purpose as claimed in claim 16, wherein said side cover each has a



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plurality of projected pins for inserting into said locating holes of said side panels, so that said locating hole on said side cover can be aligned with said locating holes on said side panels.

18. A sectional wall cabinet structure for religious purpose as claimed in claim 1, wherein said decorative front panel comprises at least:

two side frames each of which is provided at a backside with a longitudinal receiving channel, two arcuated recesses separately formed at a top and a bottom ends of said longitudinal receiving channel, and two pairs of laterally parallel and backward projected lugs, said lugs each having a pin hole;

a top frame which is provided at a backside with a first transverse receiving channel and at two upper and two lower outer ends of said first transverse receiving channel each with an arcuated flange; and

a bottom frame which is provided at a backside with a second transverse receiving channel and at two upper outer ends of said second transverse receiving channel each with an arcuated flange.

19. A sectional wall cabinet structure for religious purpose as claimed in claim 18, wherein said two pairs of lugs are separately located at said backside of said side frame near two ends thereof, and two lugs of each pair being located



near two outer sides of said longitudinal receiving channel.

20. A sectional wall cabinet structure for religious purpose as claimed in claim 18 or 19, wherein said receiving channels of said side frames, said top frame and said bottom frame have a width about twice of a thickness of said side panels and said end panels of said cabinet, such that two abutted panels of two adjacent cabinets can be inserted into said receiving channels to connect two adjacent cabinets together.

21. A sectional wall cabinet structure for religious purpose as claimed in claim 20, wherein side covers each having a locating hole can be inserted into said locating holes on said side panels so that said side covers can be inserted into said longitudinal receiving channels of said front panel along with said side panels to which said side covers are attached.

22. A sectional wall cabinet structure for religious purpose as claimed in claim 21, wherein said side cover each has a plurality of projected pins for inserting into said locating holes of said side panels, so that said locating hole on said side cover can be aligned with said locating holes on said side panels.