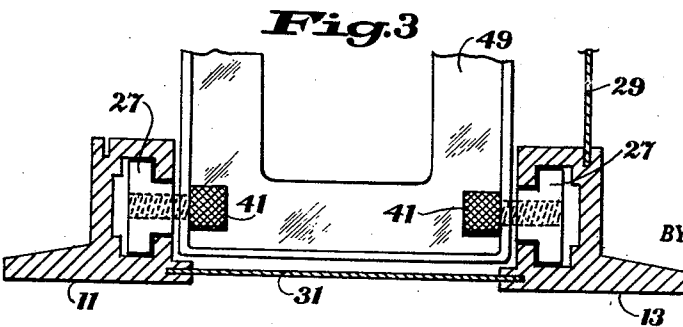
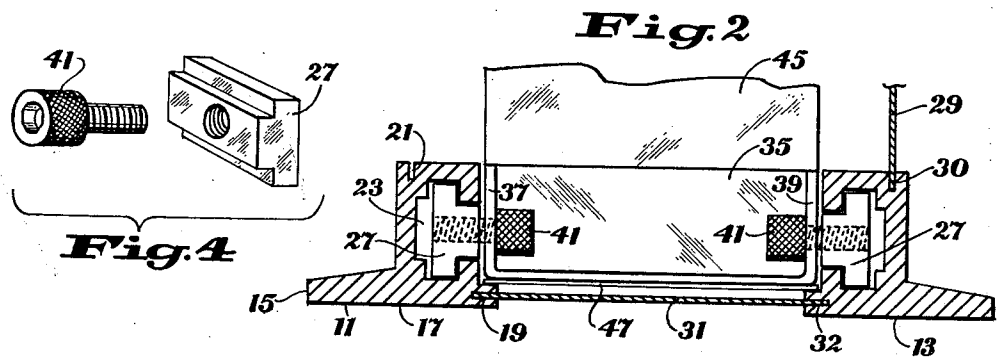
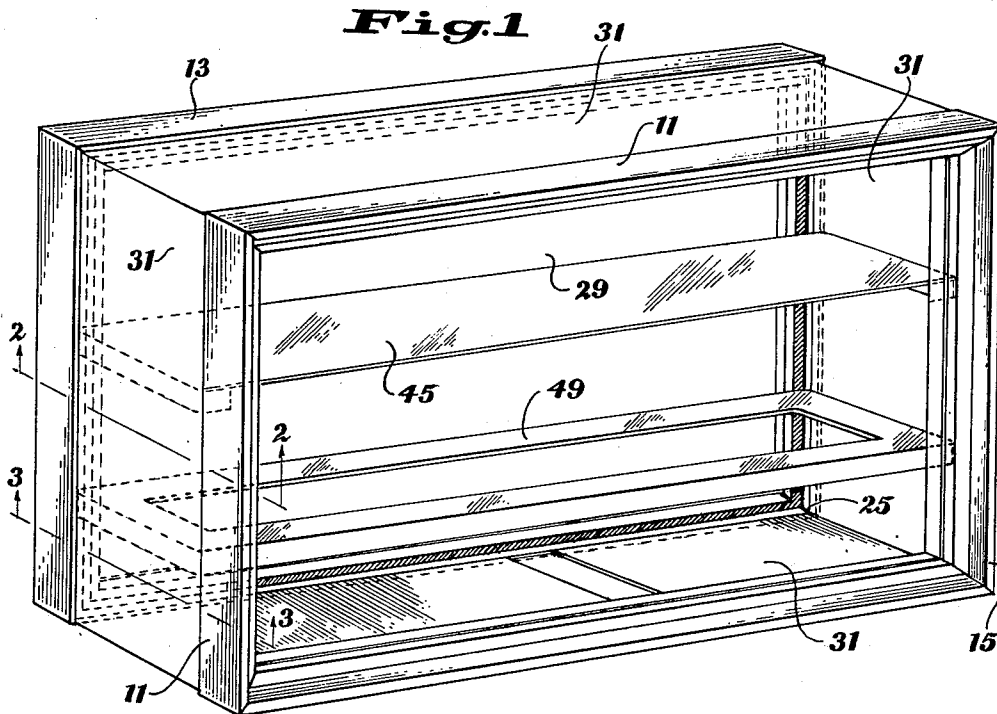


May 12, 1964

R. M. VIGNA
CABINETS STRUCTURE
Filed March 26, 1962

3,132,910



Ralph M. Vigna
INVENTOR.
BY R. Frank Smith
Paul W. Holman
ATTORNEYS

1

2

3,132,910

CABINETRY STRUCTURE

Ralph M. Vigna, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Mar. 26, 1962, Ser. No. 182,266

9 Claims. (Cl. 312-264)

This invention relates to cabinetry and more particularly to a cabinetry structure utilizing load supporting frames and non-load-bearing panels.

The novel frame and panel construction of the present invention has been devised to simplify the assembly of cabinetry structures and comprises a pair of spaced rigid frames for supporting the internal and external loads which are received by the opposed frame members and substantially enclose the cabinetry structure. The cabinetry structure also comprises a novel means for interconnecting the opposed frames to form a rigid structure and to provide a support for the loads within the structure which are to be carried by the frames.

The primary object of the present invention is therefore to provide an improved cabinetry structure.

Another object of the present invention is to provide a cabinetry structure formed of spaced load-bearing frames and non-load-bearing panels.

Another object of the present invention is to provide a cabinetry structure having spaced opposed frames which are interconnected to form a rigid structure by a member which also provides support for internal loads carried within the structure.

Still another object of the present invention is to provide a cabinetry structure in which spaced opposed frames are formed of extruded channel members having slots for receiving non-load-bearing panels to enclose the structure and other slots adapted to receive slidable blocks through which the opposed frame members are interconnected in abutting relation to the panels to form a rigid cabinetry structure.

Another object of the present invention is to provide a cabinetry structure in which load supporting shelves can be mounted on the opposed frames of the structure at any desired position within the structure.

Yet another object of the present invention is to provide a novel cabinetry structure which is formed of relatively inexpensive, readily available materials and which can be quickly and easily assembled.

Still other objects and advantages of the present invention will become readily apparent to those skilled in the art from the following description with reference to the drawings in which like characters denote like parts and wherein:

FIG. 1 is a perspective view showing the cabinetry structure of the present invention;

FIG. 2 is a section view taken along lines 2-2 of FIG. 1;

FIG. 3 is a section view taken along lines 3-3 of FIG. 1; and

FIG. 4 is an exploded perspective view showing a slidable block and thumb screw such as utilized for assembling the cabinetry structure of the present invention.

Referring to FIG. 1, the cabinetry structure of the present invention comprises two spaced frames designated by the numerals 11 and 13, respectively. According to the preferred embodiment of the invention, these frames are formed with extruded metal channels which are identical in every respect and form the facing edges of the cabinetry structure. Thus the surface 15 on frame 11 forms the front facing edge of the cabinetry structure and the surface 17 forms the side, bottom, and top facing edges of the cabinetry structure. The corresponding surfaces on the

rear frame 13 form corresponding facing edges at the rear of the cabinetry structure. Frame 11 has two panel receiving slots 19 and 21 and an undercut slot which is designated by the numeral 23. Each of these slots extend all the way around the frame. Rear frame 13 has corresponding identical slots. The preferred method of assembling the frames for use in a given cabinetry structure is to cut the extruded channels to the desired lengths and to weld these lengths together on the inside corners thereof as indicated, for example, at 25. Thus the exterior appearance of the frames is not affected by the welds. Before making these welds it is necessary to insert the predetermined required number of T-shaped blocks 27 into the channel 23, so that they will be available during assembly of the cabinet structure for tying the frames together, as hereinafter described. If the frame is to extend across the bottom of the structure, as it is shown in FIG. 1, then rear panel 29 must be located in panel slot 30 in frame 13 prior to welding the bottom portion of the frame in place. If, on the other hand, the frame is not to extend across the bottom of the structure, the positioning of blocks 27 in the slot 23 and of panel 29 in slot 30 need not be done until after completion of the corner welds.

The other exposed surfaces of the cabinetry structure can be formed from a single panel 31 bent to the desired shape so as to fit in panel slots 19 and 32 of frames 11 and 13, respectively. Since the panels 29 and 31 do not carry structural or internal loads in the disclosed cabinetry structure, they can be of relatively thin gauge metal. The edges of the panel 31 are received in the slots 19 and 32 and extend all the way around the cabinetry structure thereby forming the sides, top and bottom walls of the structure. As shown in FIG. 1, panel 31 does not quite close the bottom of the cabinetry structure, but if this feature is necessary or desirable, the panel could be made slightly longer and the edges overlapped or welded together. If the frames 11 and 13 did not extend across the bottom of the structure, panel 31 would usually be shaped to form the top and side walls only of the structure, leaving the bottom completely open.

Metal angles such as that designated by the numeral 35 are used to tie together the opposed frame members 11 and 13. The ends 37 and 39 of the angles are drilled so that thumb screws 41 pass freely therethrough for threading into the blocks 27. It will be seen that upon tightening the thumb screws that the frames 11 and 13 and panel 31 will be drawn tightly together to form a rigid unit. Besides reinforcing and tying together the cabinetry structure, the angles 35 are adapted to support a shelf such as indicated by the numeral 45. As shown in FIG. 2, shelf 45 has an end 47, which is formed over at right angles to the rest of the shelf so as to extend down in back of angle 35 and thus hold the shelf in position within the cabinetry structure. If required, the longitudinal edges of the shelf can be bent over at right angles to the rest of the shelf to further strengthen the shelf throughout its length.

Instead of utilizing the metal angles 35 to support shelves or other load-bearing members within the cabinetry structure, it is sometimes more desirable to attach a support member (or shelf) such as indicated by the numeral 49 directly to the frames 11 and 13. This is accomplished by means of the thumb screws 41 which pass through holes formed in the side edges of the support 49 and are threaded into the blocks 27. This latter feature is illustrated in FIG. 3 of the drawing.

Several important advantages resulting from the cabinetry structure of the present invention should now be readily apparent to those skilled in the art. First, it will be realized that the blocks 27 being slidable in the undercut grooves 23 allow the metal angles 35 or support mem-

bers 49, as the case may be, to be positioned at any convenient location within the cabinetry structure. Thus the cabinetry structure can accommodate different sized loads. In addition, of course, vertical partitions or separators, not shown, can also be attached to the frames 11 and 13 by utilizing additional blocks 27 and thumb screws 41. If desired, such vertical partitions can be fixed to one of the horizontal shelves, or if none, to the portion of the frames which extend across the bottom of the structure. While for economy's sake the disclosed cabinetry structure of the present invention utilizes identical frames 11 and 13, it is obvious that frames having different profiles could be utilized for the front and rear of the structure without departing from the novel concept of the present invention. Thus, for example, it might be desired to have the rear frame 13 formed with a plain flat surface on its rear facing edge. This would permit the cabinetry structure to be placed flush against a partition or wall and might eliminate the need for rear panel 29. Also, of course, the exterior shape of the front frame 11 and rear frame 13 can be varied as desired, in order to fit in with the design characteristics of the locale in which the cabinetry structure is to be placed. It will be seen that the frame 11, as shown in the drawing, is sufficiently large to receive and support either swinging or sliding doors for closing the front of the structure. Such doors have not been shown in the drawings, but it is believed that their installations could be easily accomplished by one skilled in the art, and that such showing is not necessary for the present invention to be completely understood.

Still other modifications of the cabinetry structure of the present invention might well be utilized. For example, the same novel features of the invention could be incorporated in other types of furniture, such as, for example, in desks, dressers, chests, or the like. Whether the cabinetry structure resulted in a vertical cabinet having horizontal shelves such as illustrated in FIG. 1 or a horizontal chest-type enclosure with or without shelves or partitions would be immaterial to the practice of the present invention. Castors or glides can be utilized on the bottom of the cabinetry structure to facilitate moving the structure from place to place. Such castors or glides would preferably be mounted on the load-bearing frames.

It will now be apparent that the cabinetry structure of the present invention is an improved unit which is easily assembled utilizing two opposed structural frames, a panel disposed between the frames and a convenient means for drawing the frames and panels together to form a rigid structural unit.

The invention has been described in detail with particular reference to preferred embodiments thereof, but it will be understood that variations and modifications can be effected within the spirit and scope of the invention as described hereinabove and as defined in the appended claims.

Having now particularly described my invention, what I desire to secure by Letters Patent of the United States and what I claim is:

1. A cabinetry structure comprising:
 - (A) panel means forming the top and side walls of the structure,
 - (B) first and second frame members forming the front and rear facing edges, respectively, along the top and sides of such structure, each frame member having:
 - (1) a panel retaining slot formed in the rear of the member opposite the facing edge thereof for receiving said panel means, and
 - (2) an undercut slot which is open on the same side of the member as the panel retaining slot and which parallels said panel retaining slot, and
 - (C) means retained by the undercut slot in each of said members for drawing the members together so

that the panel means is held in the panel retaining slot in abutting relation to said members.

2. A cabinetry structure in accordance with claim 1 and wherein said drawing means comprises:

- (1) opposed blocks which are retained in the undercut slots, respectively, of said members by the narrower portions of such slots, and
- (2) means including a support member for interconnecting said opposed blocks.

3. A cabinetry structure in accordance with claim 2 and wherein said support member is a shelf.

4. A cabinetry structure in accordance with claim 2 and wherein:

- (1) a plurality of said blocks are disposed in opposed relation in the undercut slots of the opposed frame members, respectively, for sliding movement in said undercut slots, and
- (2) each pair of opposed blocks is interconnected by means including a rigid support member, whereby the location of the support members can be changed within the structure.

5. A cabinetry structure in accordance with claim 2 and wherein said panel means comprises a single panel which substantially encloses the top, sides, and bottom of the structure.

6. A cabinetry structure in accordance with claim 5 and wherein:

- (1) said second frame member has a second panel slot which is disposed substantially at right angles to the first-mentioned panel slot therein, for receiving rear panel means, and
- (2) such structure further comprises rear panel means engaged in such second panel slot to form the rear wall of the structure.

7. A cabinetry structure in accordance with claim 6 and wherein:

- (1) a plurality of said blocks are disposed in opposed relation in the undercut slots of the opposed frame members, respectively, for sliding movement in the undercut slots, and
- (2) each pair of opposed blocks is interconnected by means including a rigid support member, whereby the location of the support members can be changed within the structure.

8. A cabinetry structure comprising:

(A) panel means forming an exterior wall of the structure,

(B) two opposed frame members forming the front and rear facing edges of said structure, each frame member having a panel retaining slot for receiving said panel means and an undercut slot, both of said slots being formed in the rear of such frame member opposite the facing edge thereof, and

(C) means retained by the undercut slots in said frame members for holding the frame members in abutting relation to said panel means in said panel retaining slots.

9. A cabinetry structure in accordance with claim 8 and wherein said holding means comprises:

- (1) at least two members which are slidably retained in the undercut slots of said frame members, respectively, by the narrower portions of said undercut slots, and
- (2) means for interconnecting the slidable members in spaced opposed relation and for preventing sliding movement thereof in the undercut slots.

References Cited in the file of this patent

UNITED STATES PATENTS

917,870	Jefferis	Apr. 13, 1909
2,715,794	Atkinson	Aug. 23, 1955
2,987,362	Bernath	June 6, 1961
3,059,983	Strom	Oct. 23, 1962