July 19, 1960 G. E. SCHAEFER 2,945,270

CABINET CORNER CONSTRUCTION

Filed Feb. 27, 1957

Fig. 1

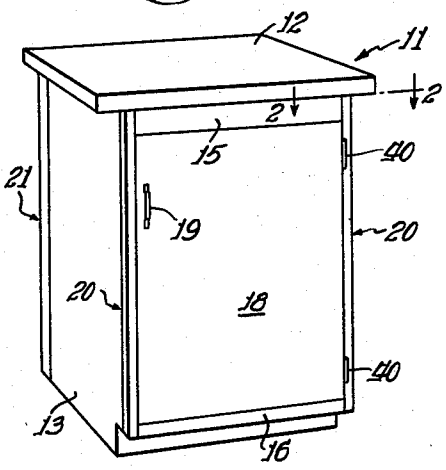


Fig. 5

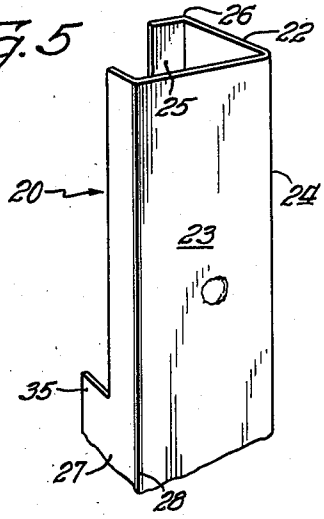


Fig. 4

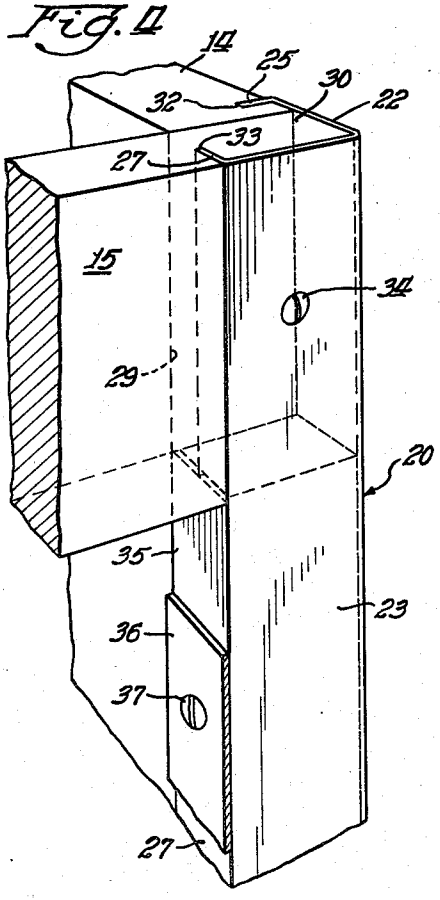


Fig. 3

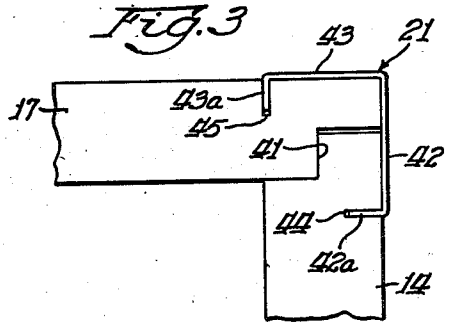
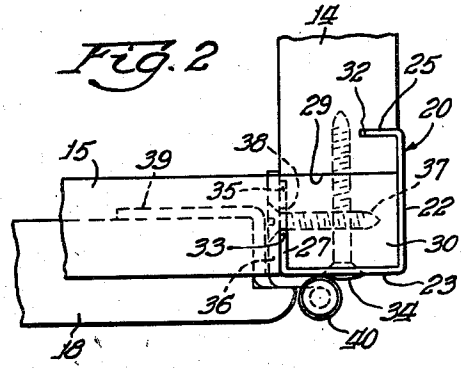


Fig. 2



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United States Patent Office 2,945,270 Patented July 19, 1960

2,945,270

CABINET CORNER CONSTRUCTION

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Filed Feb. 27, 1957, Ser. No. 642,758

1 Claim. (Cl. 20—92)

This invention relates to cabinet corner construction more particularly for cabinets that are constructed largely of wood, and a principal object of the invention is to provide a simple and efficient corner construction including a metal channel member that both enhances the appearance of the cabinet and substantially reinforces it against distortion or sagging.

Many well known advantages accrue from the use of wood as a principal material for cabinets or the like used, for example, in schools, studios, and the home, in the practice of various arts and crafts, but heretofore, and particularly in schools and studios, where the articles are subjected to a great deal of use by many different people, frequently being moved around from place to place, the cabinets have become loosened in their corner joints so as to have a tendency to sag and even sway under pressure, unless an extensive amount of wood has been employed, which is prohibitive from the standpoint of cost.

The present invention provides a wood-steel corner construction which interlocks side and front members of the cabinet so as to guard against sagging or swaying while also protecting the edges of the corners to prevent mutilation from scratching, bumping or other severe usage or abuse.

In a further aspect, the invention provides backing means for hinge leaves by which a door or other hinge closure may be pivotally supported on the cabinet with security of attachment and contributing to a snug fit and smoothness of operation of the closure.

Other objects and advantages will be apparent from the following description, taken together with the accompanying drawing, showing an illustrative embodiment of the invention, and in which drawings—

Figure 1 is a perspective view of one form of cabinet to which the invention is shown applied;

Figure 2 is an enlarged cross-section of a front corner taken on the line 2—2 of Fig. 1;

Figure 3 is a companion view of the rear corner of the cabinet;

Figure 4 is an enlarged perspective view of the front corner; and

Figure 5 is a perspective view of the upper end of the channel members as shown in Figs. 2 and 4.

Referring in detail to the illustrative construction shown in the drawing, the numeral 11 indicates generally one form of cabinet to which the present invention is shown applied. It is to be understood that the cabinet 11 is merely illustrative and could be greatly varied in form both as to its own characteristics and also as to the characteristics of other articles, such as a desk or table, which could be combined therewith. The cabinet 11 as shown has a top member 12, side members 13 and 14, cross-members 15 and 16 along the upper and lower front face respectively, and cross-members 17 along the upper and lower rear face, only one such cross-member 17 being shown as in Fig. 3. In the space between the upper and lower cross-members 15 and 16 is shown a

door 18 having a handle 19. Instead of the door 18 drawers or racks could be mounted.

In accordance with the present invention, to readily and efficiently secure the cross members to the side members of the cabinet, the metallic channel member of the present invention is employed, for example as shown in the drawings. One form of such channel member 20 is shown in Fig. 5 separated from the rest of the structure, this being seen also in Figs. 1, 2 and 4. A slightly different form of channel 21, still coming within the present invention is shown in Figs. 1 and 3. It will be understood that the channel 20 at the front of the cabinet can assume the position of "left" or "right" by merely reversing or inverting the channel member, one form serving both purposes, and the same is true with respect to the channel member 21 at the rear of the cabinet.

In each case, the channel member 20 or 21, as the case may be, embodies a pair of right angularly related walls connected along their longer edges, each wall terminating in a flange connected to the wall along a line extending in a direction of the length of the channel member and extending angularly inwardly of the channel member. In the case of channel member 20, this comprises the two angularly related walls 22 and 23 connected along their mutual longer edge 24. Extending angularly of the wall 22 and inwardly of the channel member is a flange 25 connected to the channel member 20 and connected along their mutual edge 26 extending in the direction of the length of the channel member. Similarly, from the channel wall 23 there extends a flange 27 connected to the wall 23 along their mutual edge 28 extending in the direction of the length of the channel member and also directed angularly and inwardly of the channel member. The channel member thus forms a partially closed box construction having in the nature of four walls arranged in parallel pair, that is to say, the wall 22 and flange 27 constitute a parallel pair and the wall 23 and flange 25 constitute another parallel pair.

The cabinet side member 14 is cut back at its upper corner as at 29 to receive the end 30 of the top cross member 15 so that the end of the cross member is flush with the outer face of the side member 14 and the front face of the cross member is flush with the outer end of the side member 14. The side member is slotted as at 32 to receive the channel member flange 25 and the cross member 15 is slotted as at 33 to receive the channel member flange 27. The distances of slots 32 and 33 from the corner of the cabinet correspond to the widths of the walls 22 and 23 respectively. Thus the corner of the cabinet is snugly received within the channel member and the side member and cross member are firmly and securely held together by the box-like clamping action of the channel member 20. To guard against relative vertical movement of the channel member with respect to the side member or top member, a retaining screw 34 is shown passed through a screw hole in the front face of the channel member 20, passing through the cross member 15 and screwed home into the end of the side member 14, as best seen in Fig. 2.

Further in accordance with the present invention, just below the cabinet cross member 15 the flange 27 is extended rearwardly as at 35 to a width approximately the same as the thickness of the cross member 15 and this flange extension desirably serves as an abutment and anchorage for a hinge leaf 36, retaining screws 37 passing through mating screw apertures in the hinge leaf 36 and in the channel member flange extension 35 as at 38 to be screwed home into the side member 14 which extends flush with the cross member 15 below the lower edge of the latter. Another hinge leaf 39 pivoted by hinge 40 to the hinge leaf 36 provides the movable hinge

part for the door **18** of the cabinet to which the hinge leaf **39** is suitably secured.

At the rear of the cabinet, as seen in Fig. 3, the side members **14** and rear cross member **17**, which in this instance may be the back member of the cabinet, are desirably rabbeted as at **41**. The channel member **21** has angularly related walls **42** and **43** from which extend respectively inwardly turned flanges **42***a* and **43***a* which are received in slots **44** and **45** respectively in the side member **14** and rear cross member **17**. Here again, the cabinet corner snugly fits into the channel member **21** and the side member and cross member are firmly and securely locked together by the channel member **21**.

It will be understood that there may be a plurality of hinges **36–40** for the door **18** spaced vertically of the cabinet and each arranged similarly to the construction shown in Fig. 2, each hinge plate **36** having desirably a plurality of the screws **37** securing it to the channel member **20**.

At the bottom right-hand corner of the cabinet, the structure shown in Figs. 2 and 4 would be inverted, and at the left-hand corner of the cabinet the structures shown in Figs. 2 and 4 would be reversed, in both instances the structures being complementary.

So constructed and arranged, the channel members **20** and **21** provide an ornamental appearance for the cabinet and in fact give it the appearance somewhat of a metal cabinet while at the same time retaining the acoustical advantages of wood construction in the main. Furthermore, the channel members firmly reinforce the wood construction so that when the cabinet is moved or heavily leaned upon, for example, any tendency of the joints to rock or sag is positively prevented and a completely rigid structure is maintained.

The invention is not intended to be limited to details of construction shown as required by statute, for purposes of exemplification, and such changes, including modifications or additions, may be made as fall within the scope of the appended claim without departing from the invention.

What is here claimed is:

In cabinet corner construction, a wood side member, a wood cross member of less vertical dimension than the side member, said side member being cut out at its top front corner for a vertical distance corresponding to the vertical dimension of the cross member and receiving the end portion of said cross member in said cut-out flush with the front edge and with the outer side face of the side member, an upright metallic channel member having a pair of integral angularly related walls, angularly inwardly turned flanges on the channel walls snugly entered into slots in said side member and said cross member respectively, said side member being slotted therefor on its said outer side face at the rear of said cross-member and said cross-member being similarly slotted in a plane coinciding with the inner side face of the side member, the one of said flanges entering the cross member being extended immediately below the cross member to lap the inner face of the side member below the cross member providing a shoulder underlying the cross member, a hinge leaf lapping the said flange extension, and a fastener screw passing through said hinge leaf and said flange extension and into said side member, whereby a door closure may be attached to said hinge leaf and supported below said cross member by both the channel member and the side member, and said corner is reinforced both by the cross member and by the channel member, a screw-hole in the channel member in the region of said cross member, and a retainer screw in said last mentioned screw-hole passing through said cross member and into the side member, whereby said screws are right angularly transversely disposed while both engaging the channel member.

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