Sept. 23, 1947. E. D. DRAKE 2,427,767

CABINET SHELF SUPPORT

Filed Sept. 18, 1944 2 Sheets-Sheet 1

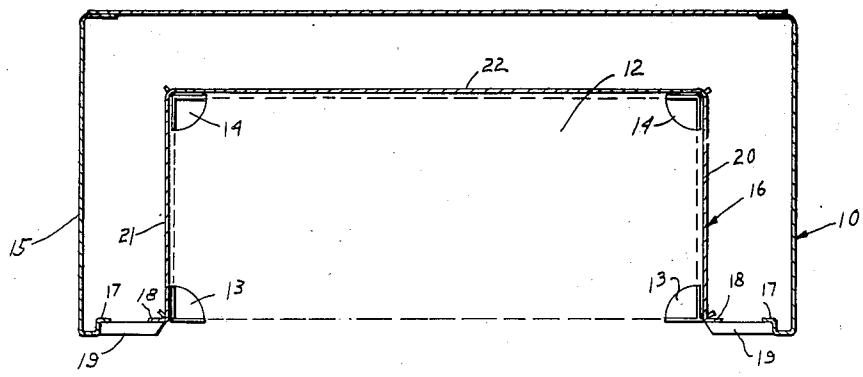


FIG 2

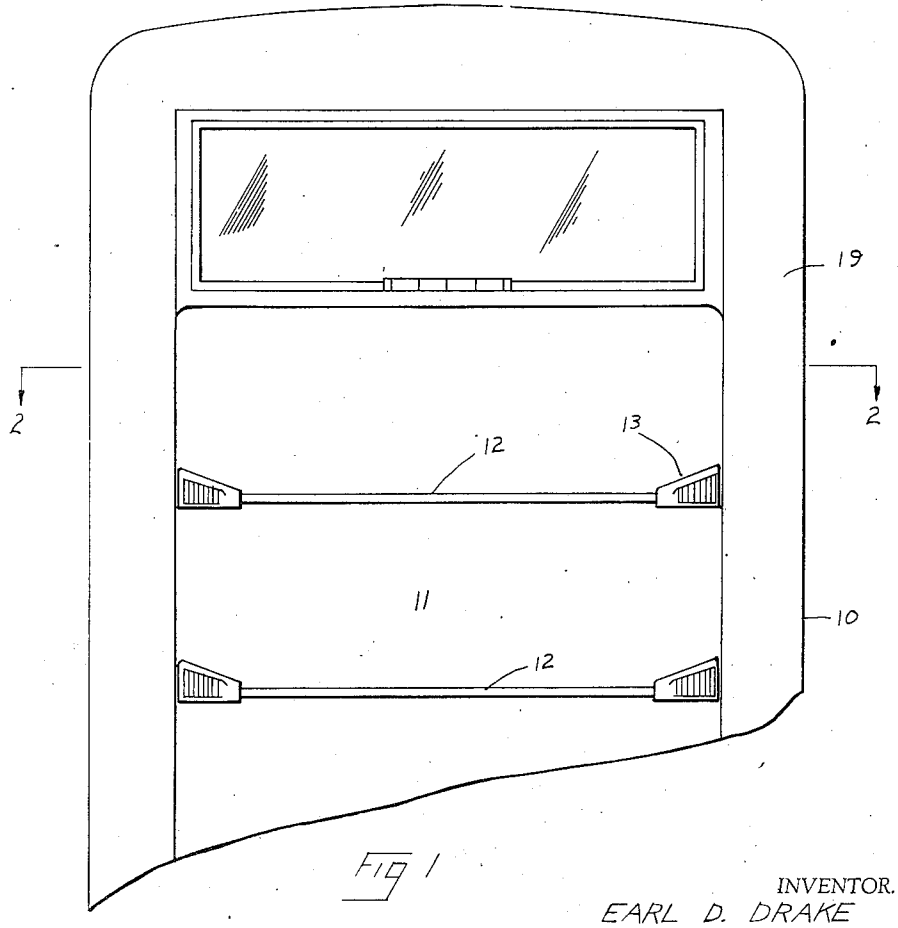


FIG 1

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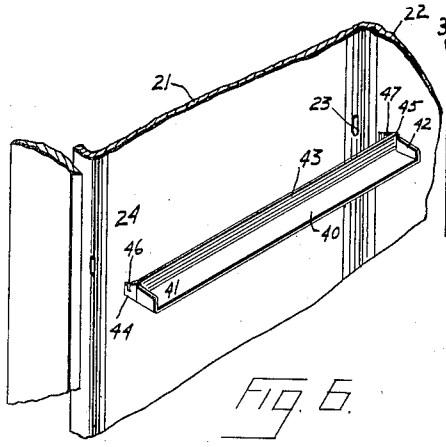


Fig. 6.

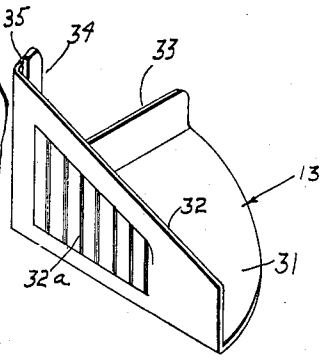


Fig. 5.

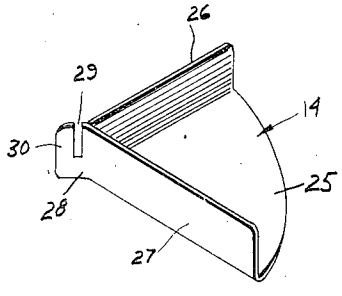


Fig. 3.

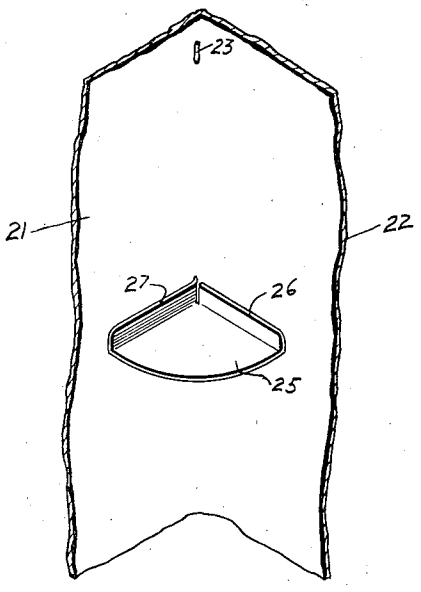


Fig 4

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Patented Sept. 23, 1947

2,427,767

UNITED STATES PATENT OFFICE

2,427,767

CABINET SHELF SUPPORT

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Application September 18, 1944, Serial No. 554,585

7 Claims. (Cl. 211—134)

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This invention relates to supports for shelves within a cabinet, and more particularly to removable shelf supports.

The principal object of the present invention is to provide an extremely simple and economical shelf supporting bracket which can be readily fabricated from sheet metal.

Another object of the invention is to provide a shelf bracket which is readily installed in and removed from the cabinet.

A still further object of the invention is to provide a shelf bracket having integral attaching means thereon which cooperate with the cabinet walls to hold the shelf supports in place.

A still further object is to provide a shelf bracket which can be suitably ornamented and in which the fastening means is completely concealed when the support is in place.

A still further object is to provide a shelf bracket attached to the cabinet walls by integral tongues interlocked with the cabinet walls through openings therein and in which provision is made for positively preventing movement of the brackets in a horizontal plane.

These objects will more fully appear in the following specification when read in connection with the accompanying drawings, wherein:

Figure 1 is a fragmentary front elevational view of a refrigerator cabinet with the door removed showing the present invention;

Figure 2 is a cross-sectional view taken on substantially the line 2—2 of Figure 1;

Figure 3 is a perspective view of one form of shelf bracket employed in the rear corners of the cabinet;

Figure 4 is a fragmentary perspective view of the cabinet showing the shelf bracket of Figure 3 in place;

Figure 5 is a fragmentary perspective view of a slightly different form of shelf bracket employed adjacent the front of the cabinet; and

Figure 6 is a fragmentary perspective view of a refrigerator cabinet showing a still further form of shelf bracket.

Referring now more in detail to the drawings, and particularly to Figures 1 to 5 thereof, there is shown a refrigerator cabinet 10 of generally conventional construction having a storage chamber 11 therein. Located in the storage chamber are a plurality of shelves 12 mounted on brackets 13 and 14. The present invention is directed particularly to the brackets 13 and 14 and the manner in which they are mounted within the storage chamber.

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The cabinet 10 comprises an outer casing 15 which may be fabricated from sheet metal in any preferred manner. Located within the casing 15 in spaced relation thereto is a liner 16 of generally rectangular box-shaped configuration open at its front end. The liner forms the storage chamber 11. Preferably the liner is fabricated from thin sheet metal. Both the casing 15 and liner 16 are provided with flanges 17 and 18 respectively, which are secured together by insulating breaker strips 19. The breaker strips partially support the liner 16 within the casing 15.

The liner 16 comprises upright side walls 20 and 21, a rear wall 22, and top and bottom walls, not shown. The two side walls 20 and 21 are preferably integral with the rear wall 22 and meet the latter in right angular corners at the rear of the side walls. A plurality of vertically elongated narrow slots 23 are formed in the liner at the junction between the side walls and the rear wall. See Figure 4. A plurality of slots 24 are also formed in the liner in the junctions between the side walls 20 and 21 and the flanges 18 thereon, as shown in Figures 2 and 6. The purpose of the slots 23 and 24 will appear more fully presently.

Each of the shelves, 12, which may be of glass, wire or other suitable construction, is supported by the brackets 13 and 14 previously mentioned. The brackets 14 are identical and are shown best in Figures 3 and 4. Each bracket consists of a horizontal body portion 25 of generally triangular configuration, although one edge may be curved if desired, as shown in the drawings. Two edges of the bracket should be straight, however, and at right angles to each other. Extending upwardly from these two edges are vertical flanges 26 and 27. The two flanges adjoin each other at one apex of the triangular body portion 25. The flange 27 is extended a short distance beyond the apex of the triangular bracket to form a tongue 28. This tongue is provided with a vertical notch or recess 29 extending approximately half way downward into the tongue to provide an upwardly extending member 30 to form a vertically extending hook.

The brackets 14 are mounted in place within the liner by moving them into the liner and inserting the hook-like members 30 into the corresponding slots 23 in the rear corners of the liner. This can be done by tilting the outer curved edges of the brackets upwardly to permit insertion of the hook-like members 30 in the slots. After the hook-like members 30 are located in the slots the

brackets can be lowered to a horizontal position. They are held in that position by engagement of the flanges 26 and 27 with the interior walls of the liner and engagement of the hook-like member 30 with the exterior of the liner at the junction between the walls 20 and 22 or 21 and 22.

It is a very simple matter to install the brackets because they can be guided into place by locating the tongue 28 in the respective corner of the liner and sliding the bracket up or down until the hook-like member 30 slips into the corresponding slot 23.

The brackets 13 are mounted adjacent the front of the cabinet to support the front edges of the shelves. Each bracket 13 is very similar to the brackets 14 previously described. They comprise horizontal body portions 31, a pair of upstanding flanges 32 and 33, and a tongue 34 on the flange 32 extending beyond the apex of the body portion 13. The tongue 34 is provided with a hook-like portion 35 similar to the hook portion 30. The flange 32 is made considerably higher than flange 33 and is suitably ornamented as by ribs 32a.

The only real difference between the brackets 13 and 14 is in the position of the tongues 28 and 34. The tongues 34 are bent so that they form an acute angle of 45° between one side flange instead of an obtuse angle of 135°. This will be evident from an inspection of Figures 2, 3 and 5. The position of the tongue 34 in the case of the right hand bracket 13 is different by 90° than in the case of the left hand bracket, because the brackets are mounted on opposite sides of the liner.

The brackets 13 are mounted in the liner by inserting the hook-like portions 35 into the corresponding slots 24 adjacent the front of the liner in much the same manner as in mounting the brackets 14. One flange of each bracket 13 engages a side wall of the liner.

It will be evident that as only one flange 32 or 33 of each bracket engages a side wall of the liner, the brackets 13 can be rotated in a horizontal plane to a limited extent prior to mounting the shelf therein. However, when the shelf 12 is mounted in the brackets the flanges 32 and 33 on the bracket engage two adjoining edges of the shelf, as shown in Figure 2, which thereafter prevents undesired movement of the corner brackets.

Figure 6 discloses a still further modified form of the invention. In this form the two brackets on one side of the liner are joined together to form a single bracket performing the functions of both. The bracket comprises a horizontal body portion 40, a pair of upstanding flanges 41 and 42 at the ends thereof, and another flange 43 at right angles to the flanges 41 and 42 and extending between the same. The flanges 41 and 42 are parallel to each other. They are extended beyond the flange 43 to form tongues 44 and 45. The tongues 44 and 45 are provided with hook-like portions 46 and 47 respectively, similar to the hook-like portions 30 in Figure 3 and 35 in Figure 5.

The hook-like portions 46 and 47 are adapted to be inserted in openings 23 and 24 in the side wall of the cabinet liner and located therein in the same manner that the brackets 13 and 14 are attached to the cabinet. Because of the fact that the bracket is provided with two tongues 44 and 45, it is essential that the tongues parallel each other so that they can be hooked into the openings 23 and 24.

Since the metal from which the various brackets are formed is relatively thin, and the walls of the cabinet liner are also very thin, there is bound to be some relative movement between the brackets and the walls upon which they are supported unless some means is provided for preventing such movement. It will be evident that in each of the above described modifications means for preventing such movement is provided. In the case of the rear corner brackets 14, horizontal movement of the brackets is prevented by engagement of the edges of the brackets adjoining the side and rear walls of the cabinet liner. In the case of the brackets 13 at the front of the cabinet, horizontal movement is prevented by engagement of the upstanding flanges 32 and 33 with the corners of the shelf. Prior to insertion of the shelf the brackets can be moved to a limited extent in a horizontal plane, but once the shelf has been located in position such movement is prevented. In the case of the bracket shown in Figure 6, horizontal movement of the two corner portions thereof is prevented by the interconnection between the two parts.

It will be evident from the foregoing that the present invention provides a very simple form of shelf support because it can be pressed or stamped from sheet metal and readily bent to shape. It is very easily installed and is as readily removed when desired. The shelf which is supported thereon is also easily removed for cleaning, yet it is firmly held in proper position when it is mounted on the brackets.

The brackets 14 are particularly easily installed because the side walls 20 and 21 and the rear wall 22 form guides for sliding the brackets into place. Thus, even though it is difficult to see the slots at the rear corners of the liner, the brackets can be located therein simply by feel.

The upstanding flanges on the brackets can be varied in height and suitably ornamented, either directly, or by attaching ornamental mouldings thereto. Thus without altering the brackets the appearance of the interior of the cabinet can be readily changed, and the brackets can be made to conform to any styling of the cabinet.

The scope of the invention is indicated in the appended claims.

I claim:

1. In a cabinet having a storage chamber defined in part by two angularly arranged intersecting upright walls, said chamber walls being formed to provide an elongated vertical slot at their intersection, a shelf having a corner shaped to substantially conform to said intersecting walls, and means for supporting said shelf comprising a generally triangular corner bracket adapted to fit into the intersection of said walls, said bracket having a recess therein within which said shelf corner is received, and a hook shaped projection extending through said slot and engaging the outer surfaces of said walls above said slot.

2. In a cabinet having a storage chamber defined in part by two angularly arranged upright walls intersecting each other to form an interior corner, said walls having a vertically elongated opening therein at the junction thereof, a horizontal shelf having a corner adapted to be received in the corner between said walls, and means for supporting said shelf within said chamber comprising a generally triangular bracket having a horizontal portion underlying said shelf, a pair of angularly arranged upright flanges thereon adapted to engage said walls, and an upwardly extending hook shaped member re-

ceived in said opening and engaging the outside of said walls above said horizontal portion.

3. In a cabinet having a storage chamber defined in part by angularly arranged adjoining upright walls forming an interior corner therebetween, a generally rectangular shelf, and means for supporting said shelf within said chamber comprising a removable corner bracket, said bracket comprising a horizontal shelf supporting portion having edges juxtaposed to said adjoining walls, and means on said bracket projecting through an opening in said walls at the junction thereof in interlocking engagement with said walls for detachably connecting said bracket to said walls.

4. In a cabinet having a storage chamber defined in part by angularly arranged upright walls forming an interior corner therebetween, a generally rectangular shelf, and means for supporting said shelf within said chamber comprising a removable corner bracket, said bracket comprising a horizontal shelf supporting portion having edges juxtaposed to said adjoining walls, and a vertically elongated tongue on said bracket projecting through an opening in said walls at the junction thereof in interlocking engagement with said walls for detachably connecting said bracket to said walls.

5. In a cabinet having a storage chamber defined in part by two angularly arranged upright walls intersecting each other to form an interior corner, said walls being formed to provide an elongated vertically extending opening therein at the junction thereof, and a shelf supporting bracket having a horizontal portion of triangular configuration adapted to be received in the corner between said walls, said bracket including a vertically extending hook projecting outwardly from the apex of the triangular portion adapted to be received in said vertical opening to secure the bracket to said walls.

6. In a cabinet comprising two angularly arranged intersecting upright wall members formed to provide an opening at their intersection, a shelf member, and means for supporting said shelf member on said wall members including a corner bracket having a vertically extending hook shaped projection inserted through said opening and engaging the outer surface of the intersection of said wall members, said shelf bracket having a side engaging one of said wall members throughout the horizontal extent of said side.

7. In a cabinet comprising two angularly arranged intersecting upright wall members formed to provide an opening at their intersection, a shelf member, and means for supporting said shelf member on said wall members including a corner bracket having a horizontal body portion, and a pair of angularly arranged vertical flanges forming a pocket to receive a corner of said shelf, and a vertical hook shaped projection spaced outwardly from the intersection of said flanges and received in said opening, said hook shaped projection engaging the outer surface of the intersection of said wall members.

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