

[54] COMBINATION CABINET EDGE TRIM
STRIP AND CURVED GUIDE TRACK FOR
TAMBOUR DOOR AND METHOD OF
FORMING SAME

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52/98

[51] Int. Cl. A47f 3/00

[58] Field of Search 16/94, 95, 96; 312/138

[56] References Cited

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ABSTRACT

One piece extruded plastic trim and track member includes a pair of elongated back to back U-shaped channels which are spaced apart from each other by a trim portion which is in a plane common to the forward side wall of each channel. The member includes a pair of elongated V-grooves which separate the front surface of the member into three parallel strip portions. The member is adapted to be mounted on the front edge of a cabinet wall with the trim portion following the front edge of the wall to its lower extremity. The channel portions are adapted to be separated from the trim portion along a portion of their length by being slit along said V-grooves. The separated channel portions may be heated after they are slit and bent into a curved shape so that when the trim portion is applied to a vertical cabinet wall edge the curved channel portions will engage the side surfaces of the cabinet wall and form guide tracks for tambour doors located on each side of the cabinet wall. Where a guide track is only to be provided on one side of a cabinet wall, the unused channel portion may be cut away completely from the trim portion and used as a guide channel per se where no trim function is desired.

5 Claims, 4 Drawing Figures

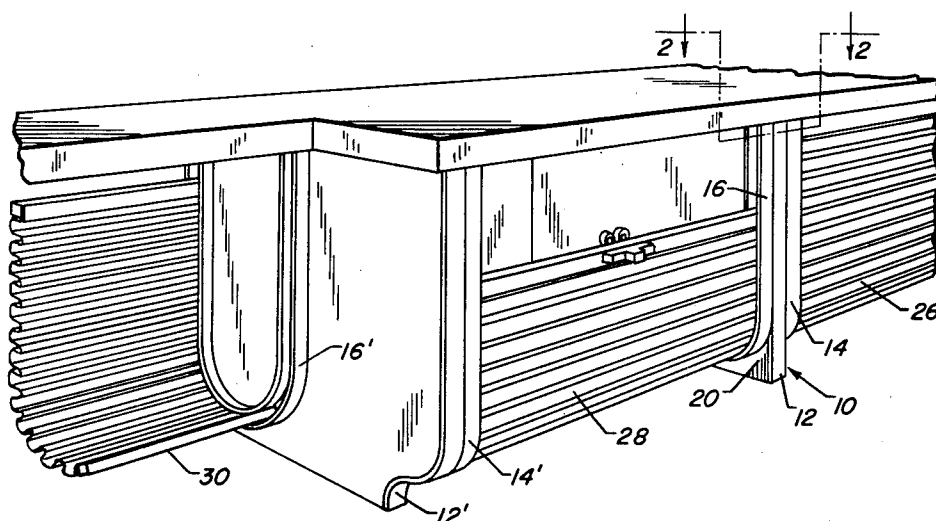


Figure 1

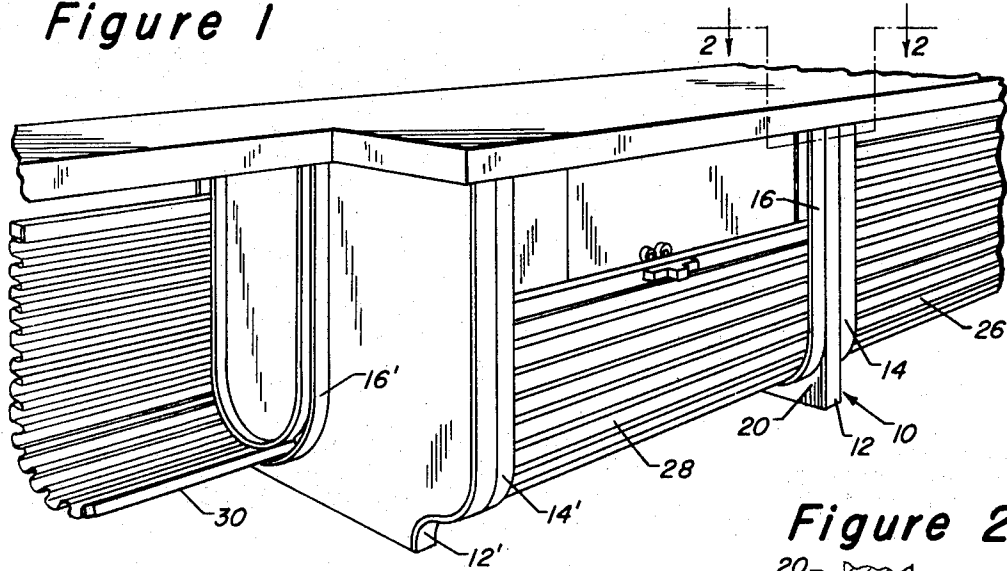


Figure 2

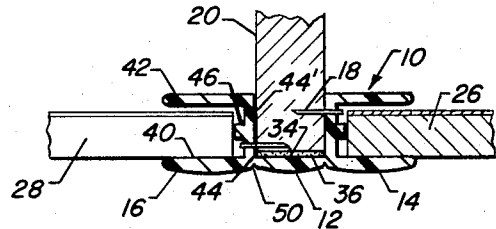


Figure 3

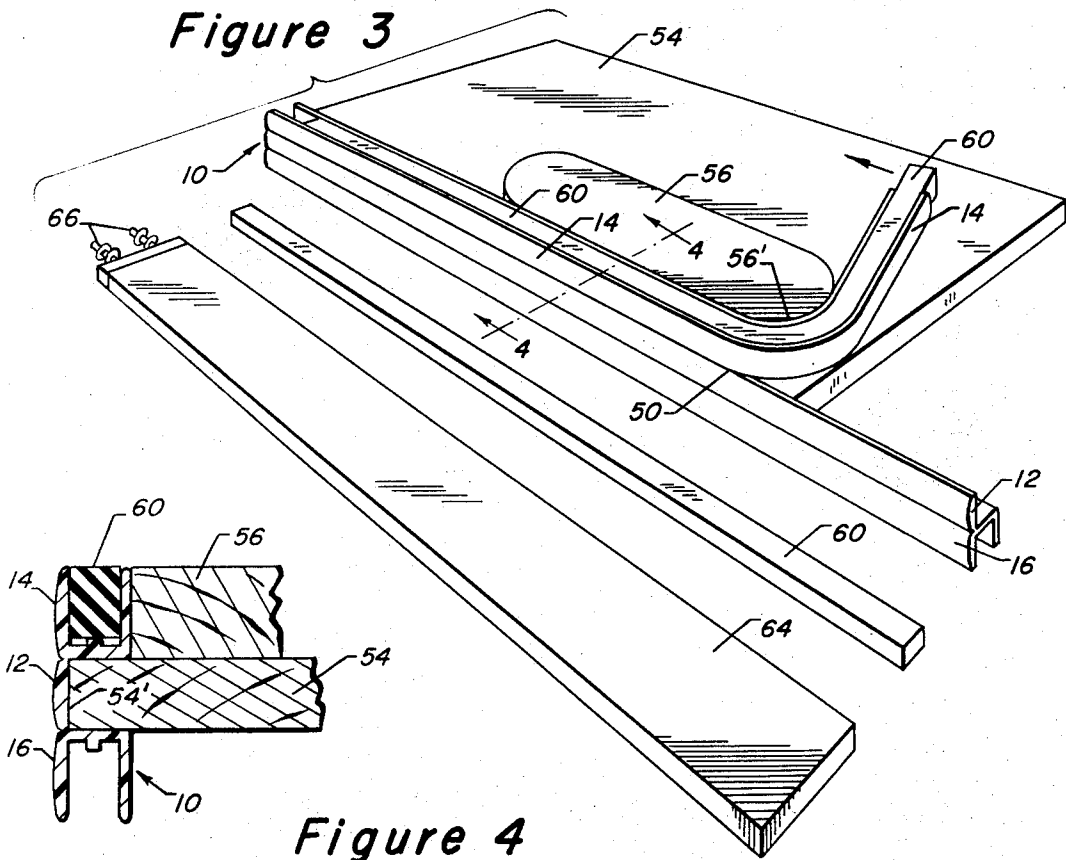


Figure 4

COMBINATION CABINET EDGE TRIM STRIP AND CURVED GUIDE TRACK FOR TAMBOUR DOOR AND METHOD OF FORMING SAME

BACKGROUND OF THE INVENTION

The present invention relates to the field of ornamental moldings and trim strips for vertical panel edges as well as to the field of guide tracks for roll up or tambour doors. U.S. Pat. No. 3,419,933 discloses a plastic combination edge molding and guide track member which is formed in a bowed shape and is adapted to be resiliently snapped over the front horizontal edge of a length of shelving so as to provide a pair of adjacent parallel guide tracks for a pair of overlapping sliding doors positioned above and/or below the shelf. The device disclosed in the aforementioned patent would not be suitable for use with doors of the roll up or tambour type since the latter require a guide track which moves away from the edge being trimmed. Conventionally, separate trim members and guide track means are used when a roll up door is mounted for movement relative to a cabinet support wall. Although it is usually economical to form a curved groove in the side surface of a wall panel member by a routing operation, the presence of the groove weakens the wall considerably and thus requires that the wall panel be thicker, heavier, and perhaps more expensive than would be required if separate tracks were mounted to it externally. Furthermore, where grooved tracks are formed in the wall panel surface, the grooves must necessarily be spaced inwardly from the front edge of the panel. If the inward spacing of such grooves is relatively great, the front to back capacity of the cabinet which is behind the tambour door will be restricted. If the grooves are positioned quite close to the forward edge of the wall panel the forward edge will be quite weak and likely to break off. Furthermore, the portion of the wall panel between the forward panel edge and the groove is exposed to view and thus presents a problem in that it must either be finished so as to match the trim applied to the front panel edge, or the edge trim must extend rearwardly enough to cover it. Where a pair of spaced cabinet wall panels are either grooved to form tracks or have external tracks applied to them a problem is presented as to how to mount the tambour door in the tracks. Obviously, if the tambour door is rigid enough to resist being inadvertently bowed and pushed out of its tracks during use it will be too rigid to be bowed sufficiently to place it in the tracks during initial assembly. Accordingly, the tambour door would have to be mounted in its tracks before the cabinet top is attached or at a time when the tracks are spaced apart by more than their final distance, in other words, before either of the top and bottom members are attached to the cabinet. Where separate external tracks are attached to the cabinet end panels it is possible to assemble the door guide tracks to the cabinet with the end panels in their final position by simultaneously placing the door and both guide tracks between the end panels and then trying to hold each guide track in a pre-determined position while it is fastened to the end panels. Obviously, such a mounting technique is quite cumbersome.

SUMMARY OF THE INVENTION

It is an object of this invention to provide a combination trim and guide track member for a cabinet having

tambour doors which overcomes the deficiencies of the prior art while being attractive, of low cost, and easy and quick to assemble to the cabinet wall panels either before or after the wall panels are in their final assembled relationship to each other. It is an additional object of this invention to provide a combination trim and guide track member which may be selectively slit along a grooved line(s) to provide a combination trim and guide track for a cabinet panel having a tambour door on either one or both sides thereof.

It is another object of this invention to provide a method of forming a curved guide track for a tambour door from a straight length of an extruded plastic member.

The combination trim and guide member of the present invention comprises an elongated, extruded, thermoplastic member formed of a material such as rigid vinyl. The front surface of the member is divided into three integrally joined parallel strip portions by a pair of spaced V-grooves which run the length of the front surface of the member. The V-grooves are spaced apart by an amount equal to the width of the end panel of a cabinet with which the device is to be used. Each side of the member comprises an outwardly opening U-shaped channel. The bottom walls of the channels are spaced apart by a distance equal to the thickness of the cabinet wall panel to which the member is adapted to be attached. To permit the member to be used as both a trim strip for the front edge of a cabinet wall panel and also as a pair of curved guide tracks which curve away rearwardly from the front edge of the wall panel, the member is slit for a predetermined portion of its length along both of the V-grooves so as to separate the U-shaped track portions from the trim portion. The guide track portions may then be heated and bent along the length in which they are separated from the trim portion into the desired track shape. After the tracks are formed to their final shape the member is cooled and then attached to a cabinet wall panel such as by using adhesive between the front edge of the panel and the trim portion of the member and by stapling the curved track portions to the side walls of the wall panel. To keep the U-shaped tracks from collapsing while they are being bent, strips of very dense rubber or other flexible material may be placed in the tracks until they are cooled after bending. The presence of the V-grooves on the front face of the member not only make it easier to slit the plastic to the extent desired but also provides a guide for such slitting. In addition, the V-grooves cause the cabinet to have a very aesthetically pleasing appearance since they appear to be a continuation of the panel side edges in the portion of their length where the U-shaped channels are not slit away.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is a fragmentary perspective view of a multiple cabinet assembly which illustrates the different manners in which the invention may be used;

FIG. 2 is a cross-section of the combination trim and track member taken on line 2—2 of FIG. 1;

FIG. 3 is an exploded view showing the different elements which may be used to bend the track portions of the member away from the trim portion; and

FIG. 4 is a cross-section taken on lines 4—4 of FIG. 3.

BRIEF DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1, combination edge trim and guide track member 10 is shown mounted in various positions of use relative to a cabinet structure. The member 10 includes a trim portion 12 and channel or sliding door guide track portions 14, 16. The guide track portions 14, 16 are attached with staples 18 (FIG. 2) to the vertical cabinet wall 20 so that sliding tambour doors 26, 28 can be guided to a storage position under the cabinet shelves (not shown) and partially up the rear wall of the cabinet. The trim portion 12 can remain straight for trimming the vertical edge of a cabinet wall 20 as shown at the right end of FIG. 1 or it can be curved, as shown at 12', in a manner to be described when the contour of the front edge of the cabinet is curved. The member 10 can be used in its entirety to trim the front edge of panel 20 and provide a guide track for a pair of cabinet doors 26, 28 as shown at the right end of FIG. 1. Alternatively, one of the channel portions can be severed from the member 10 and used as a guide track per se where no trim function is required, as shown at the left end of FIG. 1 where door 30 is guided by guide track 16. After a guide track portion 16' has been severed from member 10, the remainder of the member can be used to trim the front edge of an end wall member as shown at 12' and to provide a guide track 14' for the left end of sliding door 28.

Referring to FIG. 2, it can be seen that the trim and track member 10 is molded so that the rear surface 34 of trim portion 12 will be flat. When the trim portion 12 is bent as shown at 12', the line of intersection between its rear surface 34 and any transverse cross-sectional plane will be a straight line. The flat surface 34 permits the trim portion 12 to be firmly bonded with a layer of adhesive 36 to the front edge of cabinet wall member 20. If desired, however, the attachment of edge portion 12 to panel member 20 can be enhanced by the addition of a nail (not shown) at the bottom or top thereof where its presence can be hidden by the cabinet top or a floor covering which abuts the trim strip.

Since channel or guide track portions 14, 16 are identical, only one of them will be described. Channel portion 16 is defined by a front side wall portion 40 which is co-planar with the trim portion 12, a rear side wall portion 42 and a bottom or connecting wall portion 44 which is adapted to engage a panel member 20 on its inner-surface 44'. To reduce sliding friction between the tambour door 28 and the channel portion 16 and also to prevent staples 18 from engaging the tambour door 28 a raised rib portion 46 is formed in the bottom of the channel portion 16.

The front face of the member 10 is divided into three parallel sections by V-groove portions 50 which are in alignment with the rear surface 44' of channel 16 and the corresponding surface of channel 14. The V-grooves 50 serve several functions. They provide a guide for slitting the channel portions 14, 16 from the trim portion 12 while at the same time making such slitting operation quite simple since they reduce the thickness of material to be severed. The V-grooves 50 are also quite aesthetically pleasing since they break up the otherwise relatively substantial width of the member 10. They also present a continuous trim line upwardly from the region where the tracks 14, 16 curve away

from the trim portion 12. Finally, they permit the trim portion 12, in the region wherein it is separated from the channel portions 14, 16, to present a smooth, somewhat rounded front corner edge which presents a pleasing appearance without the requirement for additional finishing.

FIG. 3 illustrates a simple apparatus which may be used for bending the channel portions 14, 16 relative to the trim portion 12. The channel portion 14 is first slit along V-groove 50 to the point where the channel and edge portions are to curve away from each other. A forming board 54 is adapted to receive the member 10 with the trim portion 12 in contact with an edge 54'. A curved forming templet 56 having a curved edge 56' is attached to the board 54 at a location spaced from the edge 54' sufficiently to permit the rear surface of channel 14 to be engaged. Obviously, the shape of the board edge 54' and the templet 56 will depend on the shape to be given to the member 10. To prevent the channel 14 from collapsing while it is being bent, and to make the bend as smooth as possible, a strip of rather dense stiff rubber 60 is placed in the channel 14 during the bending operation and is then removed after bending. A heater plate 64 having electrical terminals 66 is used for heating either the entire member 10 at one time or the portions thereof which are to be bent. In order that the guide tracks 14, 16 can retain their bent shape it is preferable that the member 10 be formed of a normally rigid thermoplastic material such as vinyl. When the member 10 is made of thermoplastic material, it is bent by merely heating it sufficiently to soften it to a bendable state after which it is bent around the templet 56 and permitted to cool in place.

Although they form no part of the present invention, the cabinet panels 20 are preferably formed of plywood or particle board and the tambour doors 26, 28 and 30 of plastic. Since the doors are rather resistant to bending and buckling, they are assembled to their tracks, such as 14', 16 in the case of door 28, either from the top of the cabinet before the cabinet top is in place, or from the front before one of the tracks is mounted to the cabinet.

We claim as our invention:

1. A one piece plastic combination trim strip and door track member for a tambour door comprising: an elongated trim portion which is adapted to overlies the vertical front edge of an upright cabinet support wall member, said trim portion having a rear surface which intersects any transverse plane passed through it in a direction normal to its axis in a straight line; at least one elongated generally U-shaped channel portion joined to said trim portion along at least a portion of the respective lengths thereof, said U-shaped channel portion defining a guide track adapted to receive one edge of a sliding door, one side wall of said channel portion being immediately adjacent said trim portion and defining an integral generally co-planar extension of said trim portion where said channel and trim portions are joined; said member having an area of reduced wall thickness along a line separating said joined channel and trim portions so as to permit said joined channel and trim portions to be separated along any portion of said line, whereby said channel portion may be curved away from the plane of said trim portion.

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2. The combination trim strip and door track member of claim 1 wherein said member comprises a pair of channel portions, said channel portions facing in opposing directions and being separated from each other by said trim portion.

3. The combination trim strip and door track member of claim 1 wherein said at least one channel portion has a rib projecting upwardly from its bottom wall surface sufficiently to prevent a door guided by said channel portion from engaging fastening means which contact the bottom wall surface adjacent the rib.

4. The combination trim strip and door track member of claim 1 wherein said line separating said channel and trim portions comprises a V-groove formed on the front surface of said member.

5. The combination trim strip and door track member of claim 2 wherein the front surfaces of said channel portions and said edge portion are each curved, said area of reduced wall thickness being defined by a pair of V-grooves formed in said front surfaces along the lines of intersection of said curved surfaces.

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