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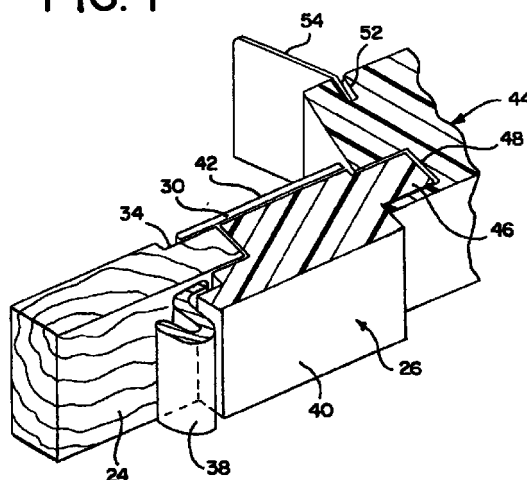
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(54) **Door frame jamb**

(57) A door frame jamb assembly is provided for holding a door and is constructed as an integral unit for transport to the construction site and attachment to a door frame opening. The frame assembly is constructed of several portions, including a jamb portion (24) which is formed of wood and is the portion attachable to the door frame opening (12), a rigid vinyl extender portion (26) which is formed of cellular resin and is attached to the end of the jamb portion, and a rigid brick molding portion (44) which is also formed of cellular resin and has a notch (48) formed therein to receive the second end of the vinyl extender portion.

FIG. 1



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Description

[0001] Door frame structures typically are formed as separate structures and then installed at the construction site. The frame structure typically includes a three sided piece (top and two sides), from which a door is hung. The structure is inserted into an appropriate doorway opening formed in the home or building under construction.

[0002] Door frame structures typically comprise a jamb portion onto which the door hinges are attached. The jamb must be of sufficient strength to hold the heavy door and withstand the punishment typically endured throughout its life. The frame and jamb portion are typically constructed of wood.

[0003] Unfortunately, wood and wood-treated structures have a tendency to degrade and warp or rot under outside weather conditions. Thus, efforts have been made to attach vinyl or other types of structures or coatings to the outside of the wood surface to provide protection from the environment.

[0004] One example of such an effort is shown in U.S. Patent No. 5,758,458 to Ridge. The Ridge patent discloses a door frame assembly that is attachable to a stud or post adjacent a door frame opening. The assembly includes a wood support panel that is attachable to the stud or post. A base strip formed of extruded polymer is attached to and covers the exterior end of the support panel. The base strip is attached to the stud by nails driven through a fin that extends outwardly from the base strip.

[0005] A stop strip of extruded polymer is mounted adjacent to the inner face of the support panel and attached to the support panel. The base strip and the stop strip are separately formed as distinct pieces. The hollow centers and thin panels of the extruded strips in the Ridge patent indicate the use of rigid polymer, such as rigid polyvinyl chloride.

[0006] The present invention involves the use of vinyl attachments to the wood jamb that are formed of cellular or foamed polymer to provide an attractive, yet environmentally protected door frame and jamb.

[0007] According to the present invention there is provided a door frame jamb assembly for holding a door, said frame assembly being attachable to a door frame opening, said frame assembly comprising:

a jamb portion formed of wood, said jamb portion being attachable to said door frame opening, said jamb portion having an interior end and an exterior end;

a solid, non-hollow vinyl extender portion formed of cellular resin, said vinyl extender portion having a first end and a second end, said first end having a notch formed therein for receiving said exterior end of said jamb portion, said exterior end of said jamb portion being firmly attached to said notch of said vinyl extender portion;

a solid, non-hollow brick molding portion formed of cellular resin, said brick molding portion having a notch formed therein, said second end of said vinyl extender portion being received in and firmly attached to said notch formed in said brick molding portion;

a vinyl attachment piece firmly secured to said jamb portion and said vinyl extender portion; and
a flexible foam weatherstrip, said weatherstrip being firmly secured between said jamb portion and said vinyl extender portion.

[0008] In one embodiment the second end of the vinyl extender portion is formed in a tongue configuration. The notch formed in the brick molding portion is formed in a groove configuration to match the tongue configuration.

[0009] In one embodiment the wood jamb portion has a notch formed along its interior end. The vinyl attachment piece is attached to the jamb portion along the notch. The foam weatherstrip is attached between the jamb portion and the vinyl extender portion in the notch. The foam weatherstrip also acts to cover the attachment between the jamb portion and the door frame opening.

[0010] The brick molding portion (which does not necessarily simulate brickwork) is also positioned adjacent the exterior end of the jamb portion. Its exterior surface faces the exterior of the door frame assembly and may provide a smooth surface for ornamental purposes. The brick molding portion may also include a slot that holds a plastic fin for insulation purposes.

[0011] An embodiment of the invention will now be described by way of example and with reference to the accompanying drawings, in which:-

Figure 1 is a perspective view of an integral door frame jamb of the present invention from the interior side of the jamb;

Figure 2 is a top view of the door frame jamb of Figure 1;

Figure 3 is a perspective view of the door frame jamb of Figure 1 from the exterior side of the jamb; and

Figure 4 is a plan view of a doorway illustrating the environment of the present invention.

[0012] The present embodiment provides a door frame and, in particular, a door frame jamb made of wood and cellular or foamed vinyl plastic. The plastic portions are attached to the wood jamb along the outside of the frame.

[0013] A door and frame, such as used in the present invention, is shown in Figure 4. The door 10 is held onto frame 12 by a pair of hinges 14, 16. The frame 12 includes a horizontal portion 18 and two vertical or jamb portions 20, 22. The horizontal and vertical portions are preferably preformed to embody the present

invention. The door 10 is then hung onto the frame and the entire structure inserted and fixed within an appropriate opening at a residential or commercial construction site.

[0014] The details of the portions of the door frame jamb embodying the present invention are shown in Figures 1 to 3. As shown, the door frame 12 includes wood jamb portion 24, which is attached to the wood structure of the door opening. Hinges 14, shown in Figure 4, are attached to jamb portion 24. A vinyl extender portion 26 is attached to the end of jamb portion 24. Vinyl extender 26 may be formed of polyvinyl chloride (PVC) or any of a number of suitable plastics that can be extruded or injection molded. Vinyl extender 26 is formed from cellular or foamed plastic, which includes a blowing agent to cause expansion of the piece upon leaving the extruder. Cellular plastic permits formation of a solid (non-hollow) vinyl extender piece of appropriate configuration.

[0015] The vinyl extender 26 is formed with a series of notches or steps 28, 29, which allow attachment of the extender 26 to the wood jamb 24. A vinyl extension piece 30 is also used to hold the end 32 of the wood jamb 24. The wood jamb is cut with a notch 34 to provide a flush mounting for the extension piece 30. The extension piece 30 may be formed of rigid (non-cellular) or cellular plastic on account of its limited width. The extension piece is attached to the vinyl extender by glue, nails, screws or other attachment mechanisms known in the art.

[0016] A flexible foam weatherstrip 38 is placed between the wood jamb 24 and the extender 26. The weatherstrip forms a seal between the edge of the door (not shown in Figures 1 to 3) and the wood jamb 24. The side panels 40, 42 of the extender 26 and extension piece 30, respectively, have a smooth surface to provide an attractive ornamental look to the extender.

[0017] The vinyl extender 26 is attached to a vinyl brick molding piece 44 at the end opposite from the wood jamb. The brick molding piece is also formed of cellular or foamed plastic in order to provide a material of the proper thickness and necessary configuration. The extender includes a tongue piece 46 that fits within a matching groove 48 of the brick molding piece 44. Other types of connecting joints between the extender 26 and brick molding 44 are possible. The connection between the pieces may be made by glue or staple or other appropriate connection means.

[0018] The brick molding provides the piece of the door frame that faces the exterior of the door or building and is exposed to the environment. The brick molding 44 preferably includes a smooth surface 50 to provide an attractive ornamental piece. The brick molding may be formed of polyvinyl chloride or any other plastic suitable for extrusion or injection molding, and is formed of cellular plastic.

[0019] The brick molding 44 includes a notch or slot 52 for holding a plastic fin 54. The fin 54 can be attached to siding or other portions of the door opening.

[0020] The wood jamb portion 24 is attached to the opening by nailing through piece 24. The nails may be placed near the weatherstrip piece so that the weatherstrip acts to cover the nails and shield them from view.

[0021] The door frame of the present embodiment therefore provides a wood jamb 24 with a vinyl plastic extender 26 and a brick molding piece 44. The frame provides an attractive exterior molding of vinyl plastic attached to a conventional wood jamb piece. The vinyl plastic protects the wood jamb from weather elements. The wood piece jamb may be nailed to the door opening in the conventional manner. The extruded or molded frame pieces provide a strong frame product that avoids the difficulties involved in attachment of vinyl strips or frames to a wood frame during the installation of the door and frame.

Claims

1. A door frame jamb assembly for holding a door, said frame assembly being attachable to a door frame opening (12), said frame assembly comprising:
 - a jamb portion (24) formed of wood, said jamb portion being attachable to said door frame opening, said jamb portion having an interior end and an exterior end;
 - a solid, non-hollow vinyl extender portion (26) formed of cellular resin, said vinyl extender portion having a first end and a second end, said first end having a notch (28) formed therein for receiving said exterior end of said jamb portion, said exterior end of said jamb portion being firmly attached to said notch of said vinyl extender portion;
 - a solid, non-hollow brick molding portion (44) formed of cellular resin, said brick molding portion having a notch (48) formed therein, said second end (46) of said vinyl extender portion being received in and firmly attached to said notch formed in said brick molding portion;
 - a vinyl attachment piece (30) firmly secured to said jamb portion and said vinyl extender portion; and
 - a flexible foam weatherstrip (38), said weatherstrip being firmly secured between said jamb portion and said vinyl extender portion.
2. A door frame jamb assembly as claimed in claim 1, wherein said second end (46) of said vinyl extender portion (26) is formed in a tongue configuration, said notch (48) formed in said brick molding portion (44) being formed in a groove configuration to match said tongue configuration.
3. A door frame jamb assembly as claimed in claim 1 or 2, wherein said wood jamb portion (24) has a

notch (34) formed along said exterior end thereof, said vinyl attachment piece (30) being attached to said jamb portion along said notch.

4. A door frame jamb assembly as claimed in any of claims 1 to 3, wherein said foam weatherstrip (38) is attached between said jamb portion (24) and said vinyl extender portion (26) in said notch (28) in said vinyl extender portion. 5
5. A door frame jamb assembly as claimed in claim 4, wherein said foam weatherstrip (38) covers said attachment between said jamb portion (24) and said door frame opening (12). 10
6. A door frame jamb assembly as claimed in any preceding claim, wherein said brick molding portion (44) is positioned adjacent the exterior end of said jamb portion (24), said brick molding portion having an exterior surface (50) that faces the exterior of said door frame assembly. 15 20
7. A door frame jamb assembly as claimed in claim 6, wherein said exterior surface (50) of said brick molding portion (44) has a smooth surface facing the exterior of said door frame assembly. 25
8. A door frame jamb assembly as claimed in any preceding claim, wherein said brick molding portion (44) includes a slot (52), said slot holding a plastic fin (54). 30

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FIG. 1

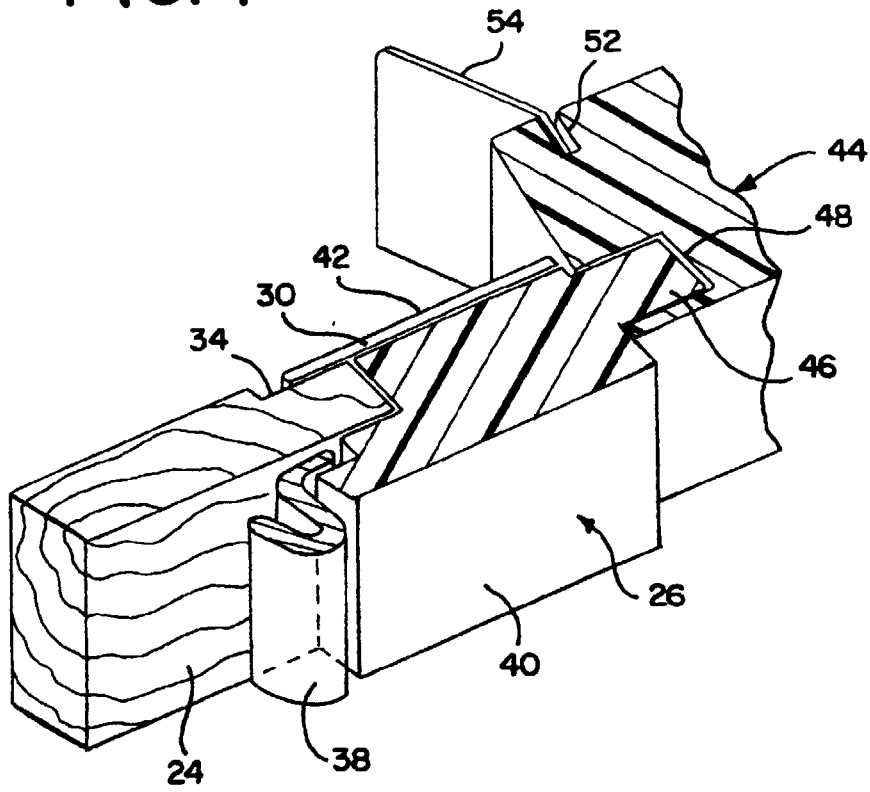


FIG. 2

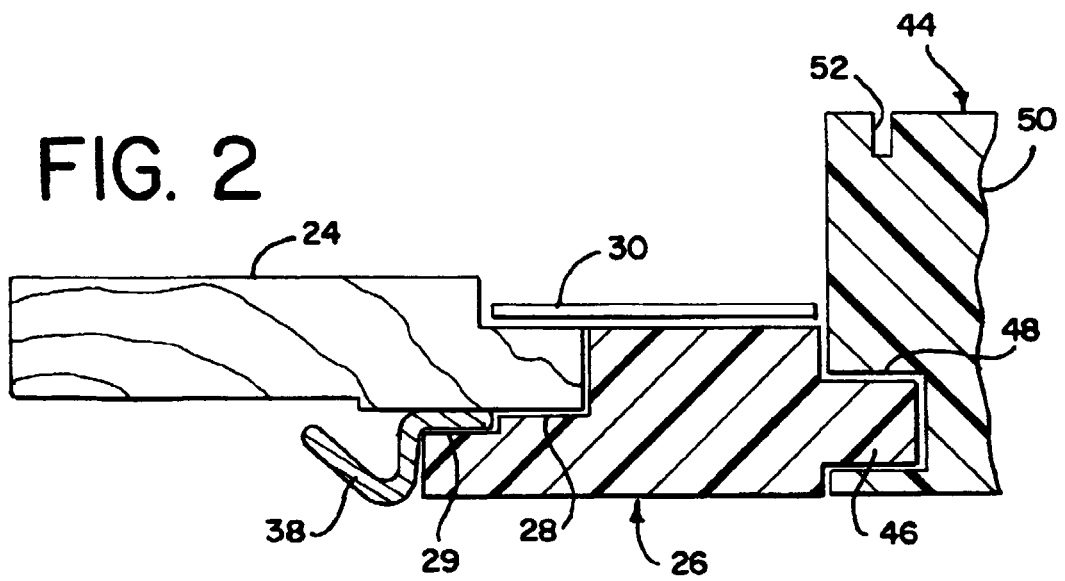


FIG. 3

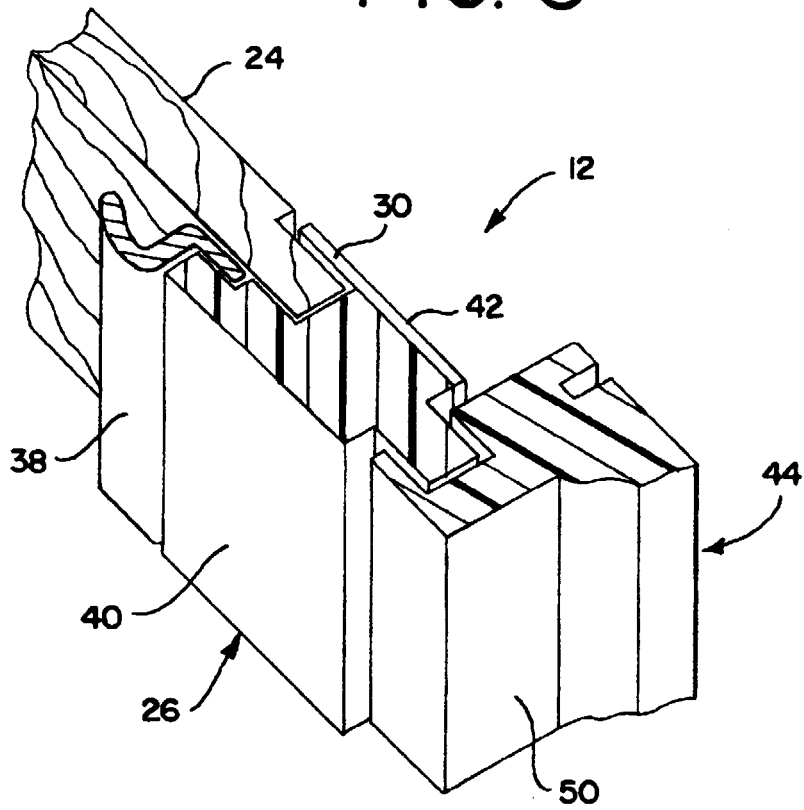


FIG. 4

