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DOOR AND WINDOW FRAME CONSTRUCTION

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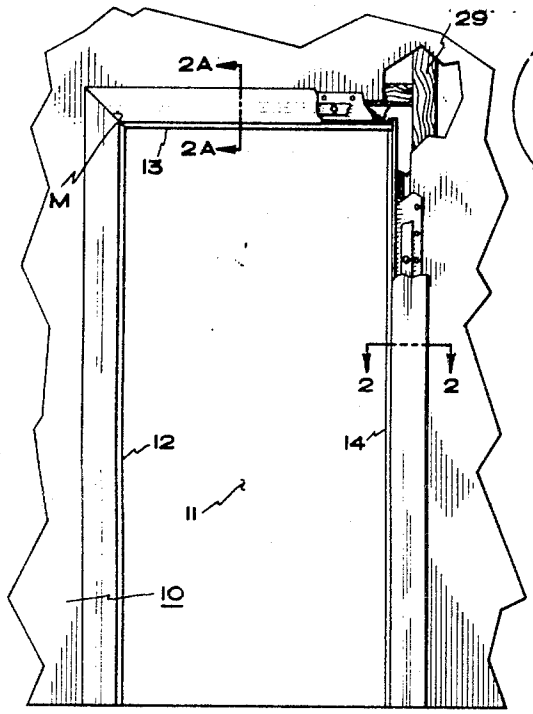


FIG. 1.

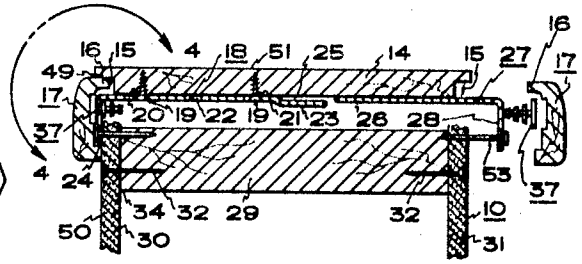


FIG. 2

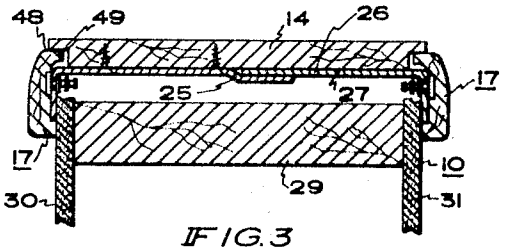


FIG. 3

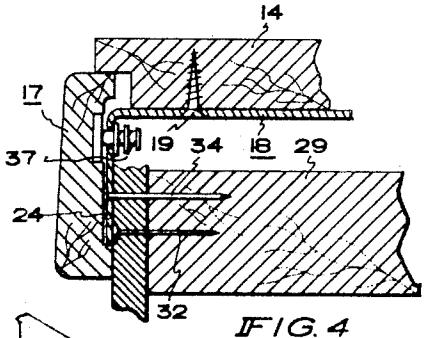


FIG. 4

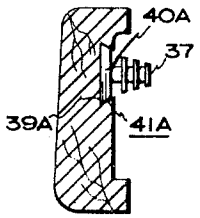


FIG. 5A

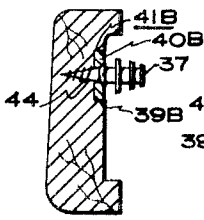


FIG. 5B

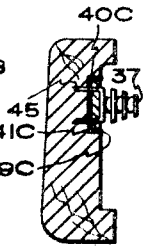


FIG. 5C

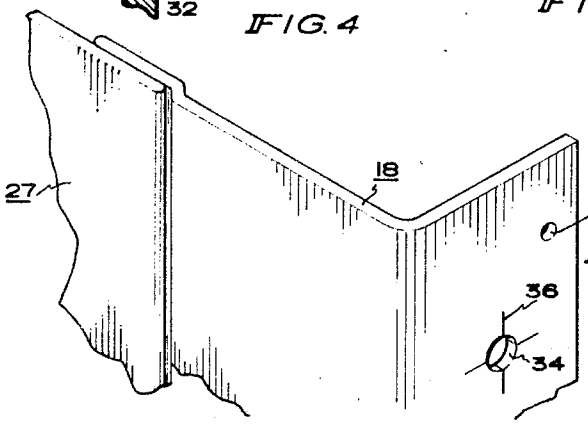


FIG. 6

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DOOR AND WINDOW FRAME CONSTRUCTION

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ABSTRACT OF THE DISCLOSURE

This invention consists in the provision of a door or window jamb and casing construction which can be precut at the factory and yet assure almost perfect fitting at the job site both as to plumb, miter joints of casing strips, and wall fitting, and this without the necessity of using nails either through the jambs or through the casing. The invention, as will be seen, is easily and rapidly installed on the job site without the need of sawing or hammering thereat. Miter joints of the casing and respective door open openings can be made almost perfectly flush, without regard for variations between the wall surface and the jamb edges.

SPECIFICATION

The present invention relates to door or window jamb and casing construction for wall openings and, more particularly, to a new and improved construction of the type described wherein manual labor on the job site is reduced to a minimum, jambs and casing can be installed without the use of nails, flush fitting is assured at the miter joints of the casing, materials other than wood can be used in forming the casing and jamb construction, and so forth.

In the past the job of finishing a door opening has proven unusually time-consuming. It necessitates often the cutting and always the shimming of the jambs on the job site, plumbing the same as well as possible both with respect to vertical and to the wall surface (which may be wavy), and then cutting on the job the casing and fitting the same in flush, mitered joints at the upper corners. All of this is very time-consuming to perform on the job. Additionally, unsightly nail holes are left in the jambs and casing and must be filled with putty and the putty allowed to dry before the finished open can be primed with a suitable paint. There is the further problem of the extended labor time involved in making the jambs plumb in all directions. Furthermore, once this is accomplished there remains the additional problem of lining as best as possible the jamb edges with the adjacent wall surfaces so there won't be too much of a mismatch or fitting problem when the casing is installed. Almost certainly, however, the wall may exhibit some type of waviness or other irregularity so that, at the corner areas of the door opening, it is almost impossible to obtain a flush fit between the mitered edges of adjacent casing strips. Further, the edges of the jambs may be either in or out of planar line with the wall surfaces adjacent to same, so that spaces or cracks open up either between the casing strips themselves or between the casing and the wall surfaces adjacent thereto.

There is the further problem presented in the case of plastic veneers which simulate wood and other finishes. Normally, corresponding casing and jamb parts cannot be made of plastic since the same would be impervious to

nails. Furthermore, if holes are drilled in such pieces, they become unsightly and difficult to fill.

It would, of course, be advantageous for the jamb and casing to be installed at the job site with minimum inconvenience so that screws, nails and other attachments would not be needed in securing jambs and casing strips to the door opening.

Accordingly, the principal object of the present invention is to provide a new and improved construction for finishing door openings and window openings.

A further object is to provide a finishing construction for door openings where parts need not be made of materials compatible with nail attachments.

An additional object is to provide a door finishing construction wherein jamb installation is easily made plumb in all directions.

An additional object is to provide a jamb construction wherein the casing strips can be fit to the wall without regard to the out-of-level arrangement between the front edges of the casing and the side edges of the jambs.

An additional object is to provide a construction of the type described wherein maximum provision is made for obtaining flush miter joints between adjacent casing strips at the door opening corners.

A further object is to provide for easy and immediate installation of casing strips without the need of nail, screws or other related attachments.

A further object is to provide a door opening that can be made of any one of a number of materials, not requiring penetration of attachments at the job site.

The features of the present invention which are believed to be novel are set forth particularly in the appended claims. The present invention, both as to its organization and manner of operation, together with further objects and advantages thereof, may best be understood by reference to the following description, taken in connection with the accompanying drawings in which

FIGURE 1 is a side elevation, partially broken away for the convenience of illustration, of a door opening incorporating the principles of the present invention.

FIGURE 2 is an enlarged fragmentary section taken along line 2—2 in FIGURE 1, rotated 90° in a clockwise direction, and is similar to section 2A—2A. The right-hand portion of FIGURE 2 is shown in exploded view.

FIGURE 3 is similar to FIGURE 2, but illustrates the construction in its complete, assembled form.

FIGURE 4 is an enlarged detail taken along the arcuate line 4—4 in FIGURE 2.

FIGURES 5A–5C are horizontal, transverse sections of a representative casing strip which include tension fastener means in accordance with the principles of the invention.

FIGURE 6 is an enlarged, fragmentary, perspective detail, illustrating the manner in which the bracket and bracket member of the construction cooperate together when the assembly is in its assembled form.

In FIGURE 1 an indoor wall **10** includes a door or passageway opening **11**. Opening **11** is defined by the interior surfaces of jambs **12**, **13** and **14**. The construction of the jamb **14** and the associated parts will be understood to be representative of jambs **12** and **13** and their associated equipment. For all practical purposes the construction can be identical.

Jamb 14 in FIGURE 2 includes edge recesses at 15 (two places) for the admission of the front, inwardly turned toe flanges 16 of casing strip 17. A bracket member 18, formed of plastic, metal, or other suitable material, is secured at the factory to jamb 14 by means of screws or other attachments 19. Aperatures 20 and 21 are provided in bracket member 18 for this purpose. Bracket member 18 includes a face flange 22, a pocket forming flange 23, and a side flange 24. The flange 23 forms the pocket 25 which receives face flange 26 of bracket 27. Bracket 27 also includes a side flange 28. The wall 10, of course, is shown to include framing member 29 and wallboard panels 30 and 31 secured thereto by means of conventional wallboard nails 32.

It will be noted at the outset that elongate brackets 18 and 27 preferably extend the full lengths of the jamb and will be provided with nail-receiving apertures 33 and also apertures 34. The former are for the purpose of receiving nail attachments 35 which secure the brackets through the wallboard to the framing 29. Apertures 34 are preferably slotted in quadrature as at 36 to provide for the reception of the tapered tension fasteners 37. The latter may take the form of attachments going under the name of "Tinnerman" fastening means or other equivalent means whereby, as an attachment is further depressed in a hole, its retention qualities with the member provided the hole are increased.

As to the casing strips 17, the same are provided with a slot 39A, 39B, or 39C (see FIGURES 5A–5C) which receive the respective fastener strips 40A, 40B, or 40C of elongate members 41A, 41B, or 41C. The inwardly protruding, graduated tension fastener means 37 are identical in all of the drawings 5A–5C. It will be seen with regard to FIGURE 5A that the fastener strip 40A is undercut in the groove 39A provided in the casing strip. In the case of FIGURE 5B the strip can simply be cemented, screwed by screw means 44, or otherwise secured to the casing strip. In FIGURE 5C staples 45 are used to staple the elongate members to their respective casing strips. Whatever form is taken, it is highly desirable that the tension fasteners be preliminarily affixed to the casing strips for insertion through the respective holes 34 of the bracket or bracket member 27, 18. Of course, if desired, tension fasteners might be preliminarily made a part of their respective bracket or bracket member and the same inserted into suitable apertures within the casing strips. However, the former is much to be desired.

FIGURE 3 illustrates the construction wherein the flange 26 of bracket 27 is advanced into pocket 25. Subsequently, the two casing strips are secured home in the manner illustrated. It will be noted that the front edges 48 of each of the casing strips can be determined at the factory in cooperation with shoulder 49 such that a flush fit exists between these parts.

The structure shown in the drawings is assembled and operates as follows. Preliminarily, of course, there will have been constructed a wall including framing 29 and wallboard panels 30 and 31. Additionally, bracket member 18 will have been secured at the factory to jamb 14 by a plurality of screws 19, two of which are shown. Since the bracket member 18 as well as bracket member 27 can be accurately formed, there can be an accurate predetermined 90° relationship between the flanges 22 and 24 of representative bracket 18 and, likewise, of jamb 14 with the general line of wallboard panel 30. Additionally, since the flange 24 preferably extends with the rest of bracket member 18 from floor level to the corner area of the door opening, this means that edge 49 can be predetermined to parallel with the general line of surface 50 of the wall. Hence, all that is needed is for the carpenter to place a vertical level on jamb 14 such that surface 51 is vertical and he will be assured that the jamb is plumb in all directions. For securement of the right hand portion of the jamb, the user need only insert the bracket 27 in

pocket 25 and then nail flange 28 home by nails 53. This completes securement of the jamb to the framing of the wall. Subsequently, it is a simple matter to insert the casing strips with their elongate members home such that the tension fasteners 37 proceed through apertures 34, see FIGURE 6, this so that the casing strips are driven home in the manner indicated in FIGURE 2. For this purpose a rubber mallet can be used, if desired; relief areas 15 accommodate the slight adjustment of the casing as may be necessary in its installation. Hand pressure might optionally be employed. Tension fasteners are so constructed, as illustrated, that the casing strips will not back off from their securement via the tension fasteners 37 with the outermost flanges of the bracket member 18 and bracket 27.

If desired, the jambs 14 may be keyed together at the corner areas through the conventionally used tongue and groove joints which are preliminarily nailed together. See FIGURE 1. The jambs are of course precut at the factory so that their lengths with the length of the overhead jamb are exactly determined and the door opening predimensioned.

Following the installation as shown in FIGURE 2 of the right-hand side of the door, the remaining door jambs 13 and 12 and their respective casing strips may be installed by use of corresponding brackets in a manner as representatively shown in FIGURE 2.

Since the jambs as above described can be exactly positioned and made plumb in all directions, the miter joints or junctures M of the casing can be made flush and precise without additional fitting problems, fillers, and so forth. This is so, not only because of the plumb character of the jambs as illustrated, but also because of the relief area at opposite margins of jamb 14, for example, into which toe portion 16 of the respective casing strips are respectively thrust. Sufficient relief areas should be provided in the jamb margin areas such that wall irregularities can easily be taken care of. Hence, the casing strips when thrust home are not made to rely upon the coplanar character of edge 49 and surface 50, but rather can adjust for various deviations in the wall by virtue of the inset character as at 16 of the construction.

While particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made.

I claim:

1. For finishing a rough, rectangular opening in a wall constructed by framing defining said rough opening and wall panels secured to opposite sides of said framing, in combination: plural jamb means disposed within said rough opening proximate said framing and defining the finished interior surface of said rough opening, each of said jamb means comprising bracket member means constructed for securement to one side of said wall and a one-piece jamb secured to said bracket member means, bracket means engaging at least one of said bracket member means and said jamb for supporting said jamb with respect to said framing, said bracket means being constructed for securement to the opposite side of said wall; plural, one-piece casing strips constructed for casing formation on opposite sides of said wall, said bracket means, bracket member means, and casing strips being provided with mutually aligned, intercooperating means for retaining said casing means against said wall and proximate opposite edges of said jamb when said casing strips are urged toward their intended position against said wall and said jamb, and wherein each of said bracket member means includes an offset extremity, each of said bracket means including an inwardly directed extremity nestled between and mutually engaging said offset extremity and said jamb to comprise the sole connection between said bracket means and said jamb.

2. Structure according to claim 1 wherein said bracket member means and said bracket means have nominally

L-configured transverse cross-sections, are vertically elongate, and wherein each include plural apertures extending down their lengths, each of said casing strips including inwardly directed tension fastener means thrust through said apertures when said casing strips are disposed in position, to retain said casing strips in their intended disposition.

3. Structure according to claim 1, wherein each of said jambs are recessed to provide edge recesses proximate said framing, each of said casing strips including a forward, inwardly directed, flange toe adjustably positioned within respective ones of said edge recesses.

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U.S. Cl. X.R.

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