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Schwartz et al.

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[54] **JAMB CONSTRUCTION**

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[52] **U.S. Cl.** **52/212,** 49/505

[51] **Int. Cl.** **E06b 1/20,** E04c 3/40

[58] **Field of Search** 52/211–217, 52/718, 656; 49/504, 505

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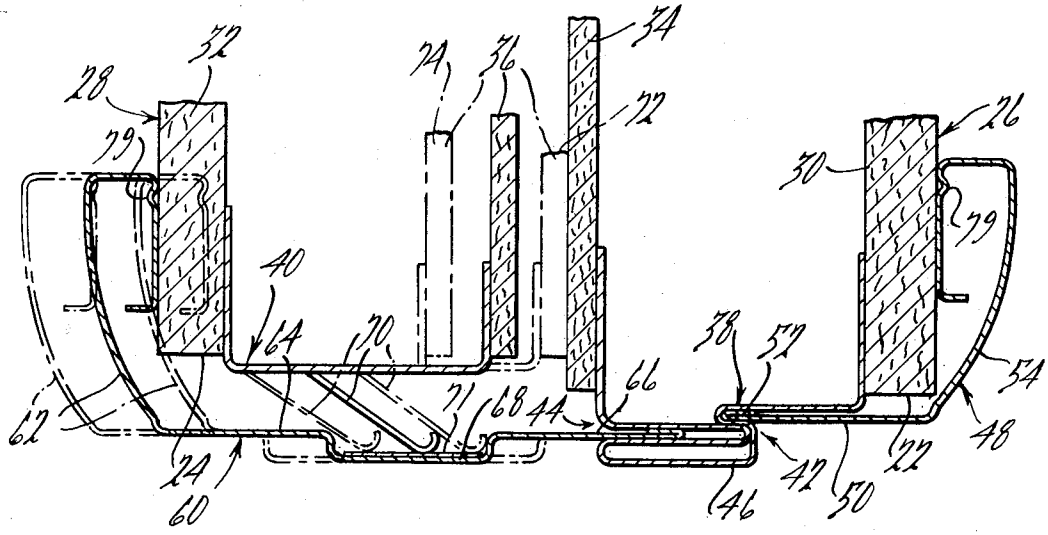
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Assistant Examiner—James L. Ridgill, Jr.
Attorney, Agent, or Firm—Harness, Dickey & Pierce

[57] **ABSTRACT**

A jamb construction which can be readily installed around approximately aligned openings in adjacent partitions in spite of variations in the orientation of one opening relative to the other opening and which provides an attractive finished appearance when installed.

5 Claims, 6 Drawing Figures



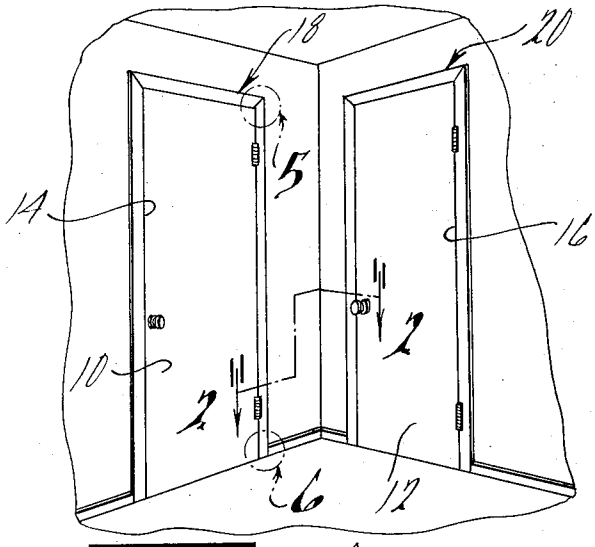


Fig. 1.

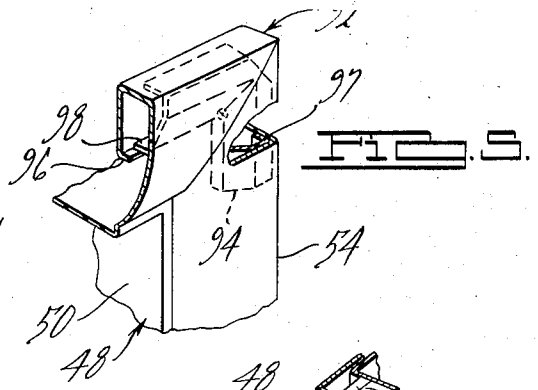


Fig. 5.

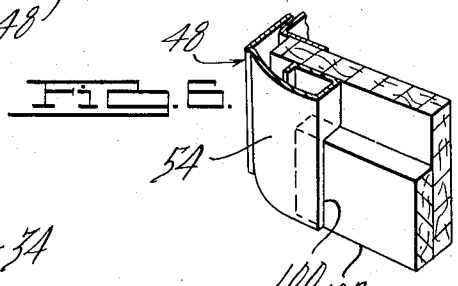


Fig. 6.

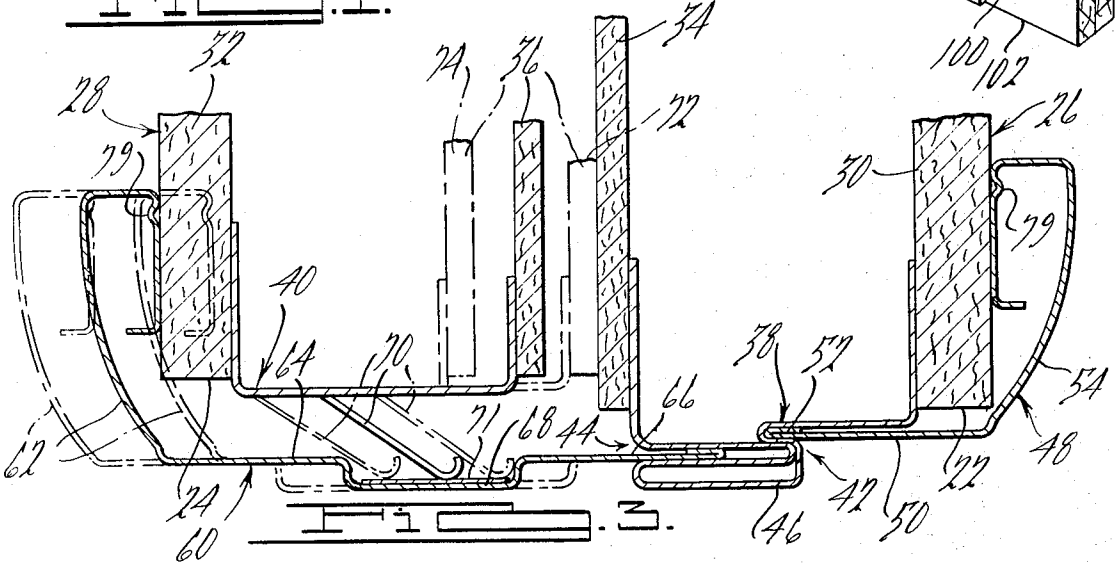


Fig. 3.

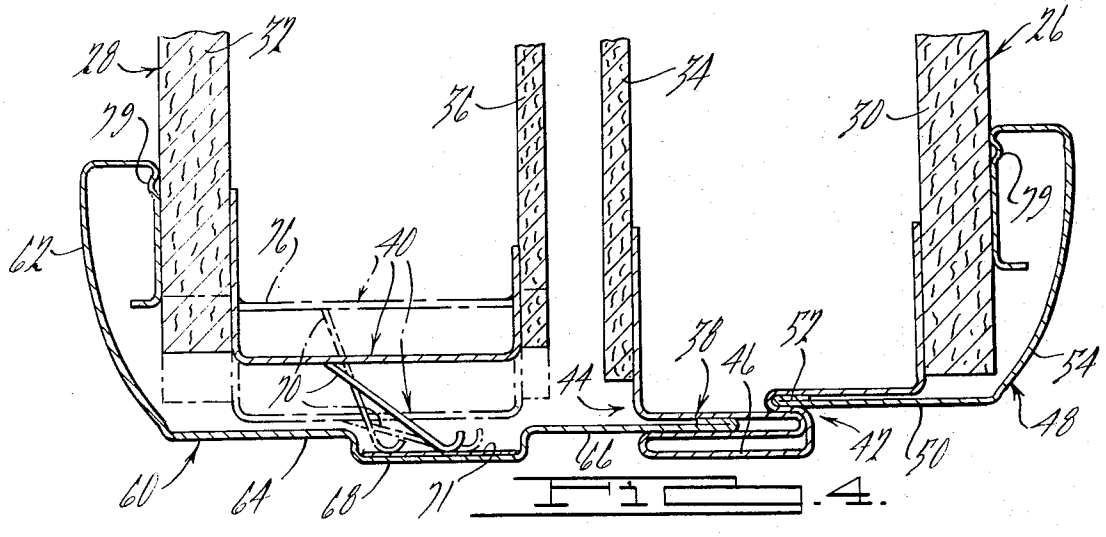


Fig. 4.

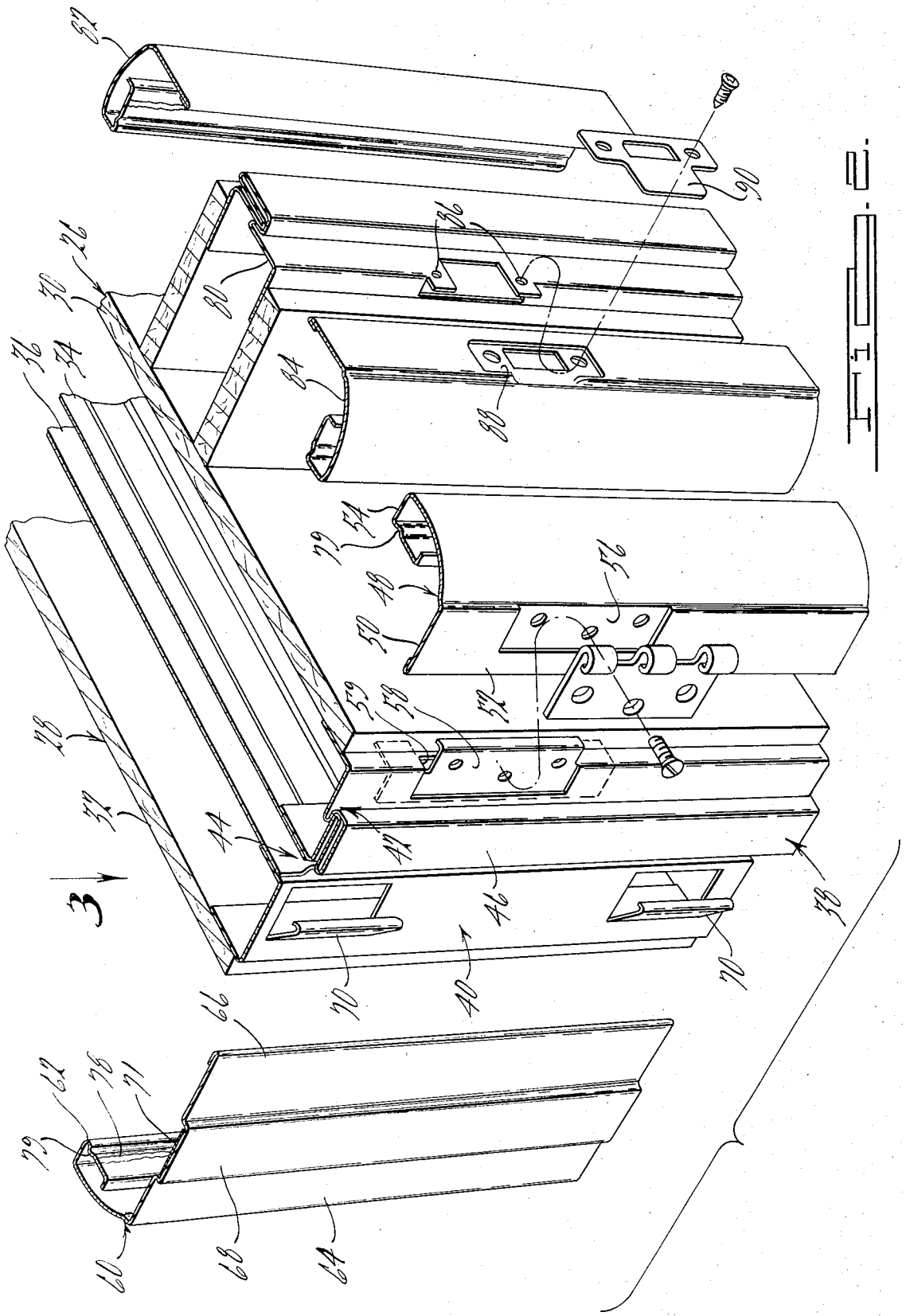

62
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FIG. 2

JAMB CONSTRUCTION

SUMMARY AND BACKGROUND OF THE INVENTION

The present invention relates to a jamb construction which is particularly useful with modular-type building construction.

In building construction where modular-type components are erected on site, corresponding door openings in adjacent modular components which are intended to align with each other are subject to a certain amount of misalignment. Such misalignment may be either linear or angular and in any direction. Accordingly, such misalignment usually requires that the jamb around the door openings be individually tailored to the misaligned openings so that a suitable finished appearance is presented.

Some of the objects of the present invention are: to substantially reduce, or eliminate entirely, the individual tailoring of a jamb to an opening; to provide a door jamb construction which can accommodate misalignment of approximately aligned door openings in adjacent modules; to provide a jamb construction which can be economically fabricated and mass produced, thereby tending to reduce building construction costs; to eliminate shrinking, warping, and large tolerance problems; and to facilitate on-site building construction. The invention need not be limited to use in modular-type building construction and may be advantageously used in conventional construction to substantially reduce jamb installation cost.

The foregoing, as well as additional objects and advantages of the invention will be seen in the ensuing description and claims which are to be taken in conjunction with the accompanying drawings.

DESCRIPTION OF THE DRAWINGS

The drawings illustrate a preferred embodiment of the invention in accordance with the best mode presently contemplated for carrying out the invention.

FIG. **1** is a perspective view of a building unit which includes the jamb construction according to the present invention.

FIG. **2** is an enlarged fragmentary sectional view taken along line **2—2** in FIG. **1** and having portions exploded away.

FIG. **3** is a horizontal sectional view taken in the direction of arrow **3** in FIG. **2** showing how the invention overcomes longitudinal misalignment between openings.

FIG. **4** is a view similar to FIG. **3** showing how the invention overcomes lateral misalignment between openings.

FIG. **5** is an enlarged perspective view taken in circle **5** of FIG. **1.**

FIG. **6** is an enlarged perspective view taken in circle **6** of FIG. **1.**

DESCRIPTION OF THE PREFERRED EMBODIMENT

Turning now to the drawings and first to FIG. **1,** a pair of doors **10** and **12** are hung in doorways **14** and **16,** respectively. Doorway **14** provides passage between adjacent modular units while doorway **16** is entirely within one modular unit. Both doorways **14** and **16** include door jamb constructions **18** and **20,** respectively, according to the present invention. Each jamb

18 and **20** extends from the floor up one side of its doorway, across the top of the doorway, and down the other side of the doorway to the floor.

The details of each jamb **18** and **20** are shown in FIGS. **2–4.** Considering doorway **14** and jamb **18** first, doorway **14** is formed by rectangular openings **22** and **24,** respectively in partitions **26** and **28,** respectively of adjacent modular units. Partitions **26** and **28** are generally similar having interior wall panels **30** and **32,** respectively and exterior wall panels **34** and **36,** respectively. The door openings are provided with vertical jamb members **38** and **40,** respectively which are of generally U-shaped cross-section and inserted into the space between the interior and exterior wall panels around the door openings for attachment to the respective wall panels and which extend the full height of the wall panel and hence also serve as wall studs. (The other vertical jamb section on the opposite side of the doorway as well as the horizontal jamb section extending across the top of the doorway are not shown but are of like construction.) Jamb member **38** is formed to the illustrated configuration from a single piece of metal and comprises U-shaped channels **42** and **44** which run the length of the member. Channel **42** is narrow and relatively shallow and opens away from partition **28.** Channel **44** is of the same width as channel **42,** but is substantially deeper and opens in the opposite direction. The bottom portion of channel **44** overlaps channel **42** and the laterally inner side walls of the channels are connected together by a right angle segment **46** which forms a door stop strip along the jamb member. Because jamb member **38** is formed from a single metal piece, the shape thereof illustrated in the drawing provides a strong, rigid member while facilitating assembly of the remainder of the jamb construction around doorway **14.**

A molding **48** covers the transition between jamb member **38** and interior wall **30** of partition **26.** Molding **48** comprises a flange **50,** the free end **52** of which is folded over onto itself and inserted into channel **42.** A contoured portion **54** extends from the other end of flange **50** and wraps around wall panel **30** to abut the exterior surface thereof. In order to hang door **10,** hinge recesses **56** are fashioned in molding **48** and hinge mounting plates **58** are mounted on member **38** (for example, by spot welding) within suitable cut-outs **59** therein.

A molding **60** connects jamb member **38** with partition **28** for the purpose of concealing any gap between the two partitions and covering door opening **24.** Molding **60** comprises a contoured portion **62** (similar to contoured portion **54** of molding **50**) wrapped around panel **32** and abutting the exterior surface thereof. A relatively long flange **64** extends from the laterally inner end of portion **62** and the free end **66** thereof is folded over onto itself and inserted into channel **44.** A rectangular stiffening bead **68** is formed in flange **64,** but leaves sufficient length to the flange end **66** so that end **66** can be inserted fully into channel **44** if necessary. Thus, flange end **66** has a lost-motion engagement with channel **44.** In view of the relatively long length of flange **64,** a plurality of supporting tabs **70** are struck out of member **40** along the length thereof and lodge in bead **68** to assist in supporting flange **64.** Preferably, tabs **70** are permanently affixed to molding **60** after installation and one way of doing this is by lining bead **68**

with an adhesive strip **71** to which the free ends of tab **70** adhere.

FIG. **3** shows how the lost-motion connection of flange end **66** with channel **44** permits the contoured portion **62** of molding **60** to be mounted against wall panel **32** in spite of variations in the distance separating partitions **26** and **28.** Preferably, the jamb construction is dimensioned so that flange end **66** is inserted halfway into channel **44** for nominal separation between partitions **26** and **28** as indicated in solid lines in FIG. **3.** Should partitions **26** and **28** actually abut as indicated at **72,** flange end **66** would be fully inserted into channel **44;** at maximum separation between partitions **26** and **28** as shown at **74,** free end **66** is just barely inserted into channel **44.**

As seen in FIG. **4,** the overlap of contoured portion **62** of molding **60** with wall **32** is sufficient to accommodate lateral variation in the alignment of door openings **22** and **24.** Preferably, the construction is dimensional for nominal lateral separation of corresponding edges as indicated in solid lines in FIG. **4.** Preferably, tabs **70** in their free state just abut bead **68** when lateral separation between corresponding edges is maximum as indicated at **76** in FIG. **4.** As the lateral separation between corresponding edges of the openings decreases, tabs **70** are increasingly deflected by bending to the desired position prior to installing molding **60.**

The invention also overcomes misalignment caused by the plane of door opening **24** being slightly out of parallelism with the plane of door opening **22.** Such out-of-parallelism of door opening **24** relative to door opening **22** can occur about any one, or combination of, three axes: for example, about a vertical axis through the center of door opening **22;** about a horizontal axis through the center of door opening **22** in the plane thereof; about a horizontal axis through the center of door opening **22** perpendicular to the plane thereof. In the first out-of-parallel condition, flange end **66** of the horizontal jamb construction extending across the upper edge of the door opening (not illustrated) would have a variable depth of insertion into channel **44** along the length thereof, and one of the vertical jamb sections would have its flange end **66** inserted into its channel **44** deeper than the flange end **66** of the other vertical jamb section into its channel **44.** In the second condition, flange ends **66** of the vertical jamb constructions at each side of the door opening would have variable depths of insertion into their respective channels **44** along the lengths thereof. In the third condition, the contoured portion **62** of molding **60** would have variable degrees of overlap with wall **32** around the door opening.

Thus, even if door openings **22** and **24** are slightly out of parallel, flange end **66** will be inserted into channel **44** around the entire jamb, so long as the maximum separation between partitions **26** and **28** at any point around the door openings does not exceed the maximum separation as indicated in broken lines at **74** in FIG. **3.** Hence, the jamb construction provides total concealment of door openings **22** and **24** and presents a neat trim appearance in spite of misalignment of the openings.

The invention affords expeditious on-site assembly. Customarily, jamb members **38** and **40** are mounted in partitions **26** and **28** during construction of the modules in the factory and moldings **48** and **60** are assembled on site after the modules have been placed side by side. Alternatively, molding **48** could be assembled at the factory or could be integrally formed with jamb member **38.** It will be observed that no fasteners are required to attach moldings **50** and **60** and that the contoured portions may be bonded to the wall panels by suitable adhesive **78** (FIG. **2**). The portions of moldings **48** and **60** which are bonded to the respective wall panels include a groove **79** into which excess adhesive **78** is forced when the moldings are pressed against the wall panels. This renders the installation smear-proof, which is important where the interior wall panels are pre-painted.

FIG. **5** illustrates a preferred construction allowing a horizontal molding, such as molding **92** running across the top of doorway **14,** to be quickly and accurately fitted with a vertical molding, such as molding **48.** A right angle bracket **94** is located within the two moldings at their junction. Bracket **94** comprises a portion **97** which mates with molding portion **54** of molding **48** and a portion **98** which mates with portion **96** of molding **92.** With bracket **94** affixed to one of the two moldings, the other molding may be rapidly fitted thereto with the aid of bracket **94.** The resulting flush fit of the two moldings provided a neat, trim finished appearance.

FIG. **6** illustrates a preferred construction of molding **48** in the vicinity of a baseboard molding **102.** Molding portion **54** of molding **48** is provided with a cutout **100** which has a lost motion engagement with molding **102.** This allows baseboard molding **102** to be installed prior to the vertical molding, and permits the vertical molding to be readily installed thereafter.

While doorway **16** does not present potential misalignment problems as does doorway **14** (but rather typifies conventional-type construction), a jamb member **80** (FIG. **2**), similar or identical to jamb member **38,** can be used in jamb **20.** Moldings **82** and **84** are inserted into jamb member **80** around the door opening in similar fashion to moldings **48** and **60** with respect to jamb member **38.** Jamb member **80** and molding **84** are fashioned with suitable threaded tabs **86** and a strike plate recess **88,** respectively, for monting a strike plate **90.**

While it will be apparent that the invention herein disclosed is well-calculated to achieve the benefits and advantages as herein above set forth, it will be appreciated that the invention is susceptible to modification, variation and change without departing from the spirit thereof.

We claim:

1. In a jamb construction for an opening through a partition having two spaced walls, a channel element having a web and two flanges disposed between said walls at said opening with the channel facing inwardly, the web of said channel element having a pair of oppositely facing channel portions disposed outwardly on top of each other, a molding having an outer contoured portion covering one wall about said opening and a flange portion extending into one of said oppositely facing channels, a second molding having a contoured portion engaging the other wall about said opening and a flange portion extending into the other of said oppositely facing channels, and means for securing said moldings in fixed relation to each other and said walls.

2. In a jamb construction as recited in claim **1,** wherein the oppositely facing channels along with the

supporting portion therefor forms a stop for the closure element between said webs.

3. In a jamb construction as recited in claim 1, wherein a second pair of walls are disposed adjacent and parallel to said first set of walls and having said channel element disposed between one pair of walls, a second channel element disposed between said second pair of walls and facing thereinto, said second molding having its flange extended so as to pass over the two inner adjacent walls into the other oppositely facing channel in the web of said first channel element.

4. In a jamb construction as recited in claim 3, wherein tabs extend outwardly from said second channel element into engagement with the inner surface of the extended flange of said second molding, and an adhesive on said inner face of said extended flange which is engaged by the tabs and adherred thereto in fixed relation.

5. In a jamb construction as recited in claim 1, wherein said receiving means is an adhesive applied to the inner face of the contoured portion of the moldings for engagement with the outer surfaces of the outermost walls.

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