United States Patent [19]

Faudree

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[54] **TWO PIECE WALL FRAME FOR AN OPENING THEREIN**

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[52] **U.S. Cl.** **52/211,** 52/213, 52/DIG. 6

[51] **Int. Cl.** **E06b 1/18,** E06b 1/30

[58] **Field of Search** 52/211, 212, 213, 217, 52/DIG. 6

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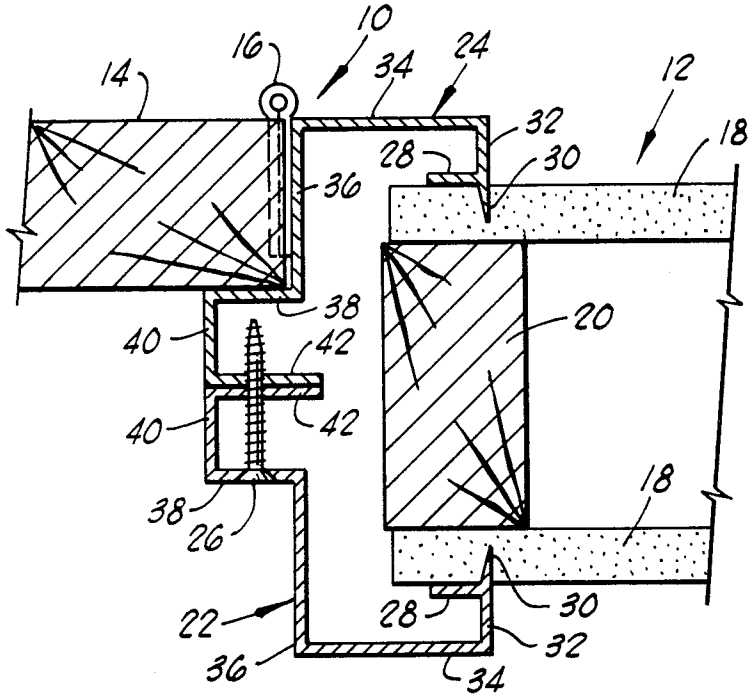
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Assistant Examiner—Leslie A. Braun
Attorney, Agent, or Firm—Robert M. Hessin

[57] **ABSTRACT**

An improved wall frame for inserting into a wall opening, the improvement characterized by the frame being divided into two similar halves. One frame half being further characterized to include a pre-hung door or a pre-installed window or both. One frame half frictionally engaging one side of the wall adjacent to the wall opening, the other frame half frictionally engaging the opposite side of the wall adjacent to the wall opening, and securing means for securing together the two frame halves.

10 Claims, 11 Drawing Figures



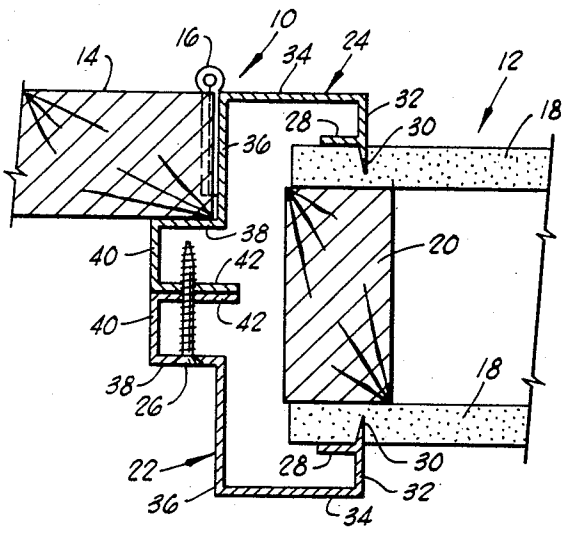


FIG. 1

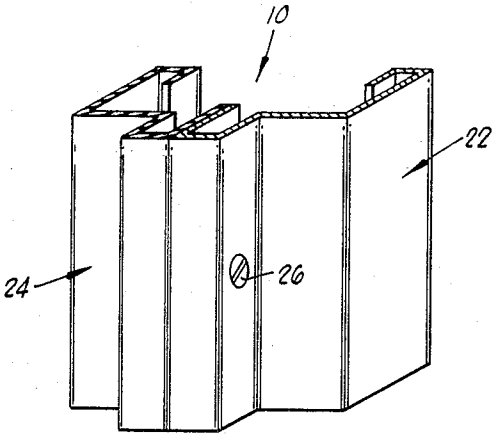


FIG. 2

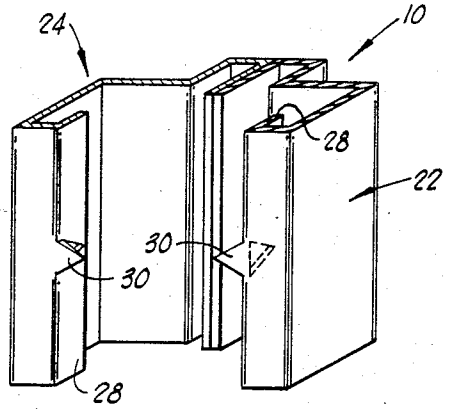


FIG. 3

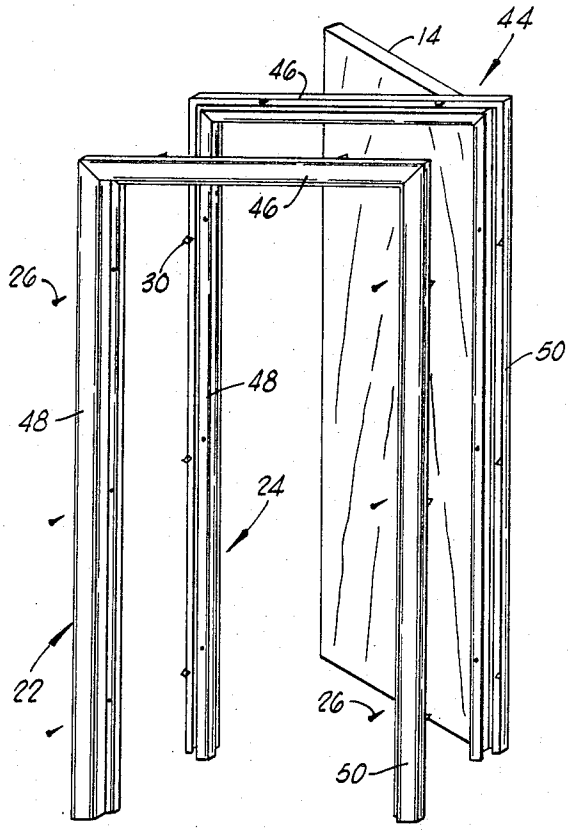


FIG. 4

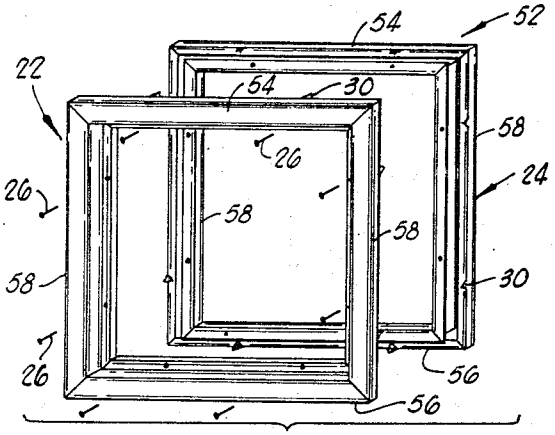


FIG. 5

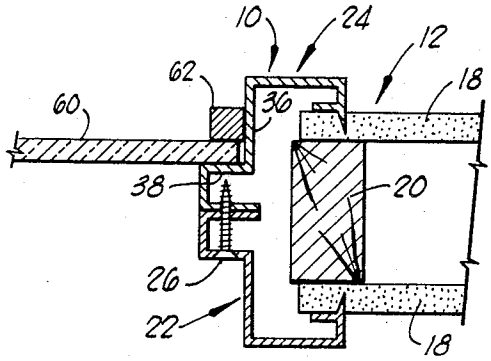


FIG. 8

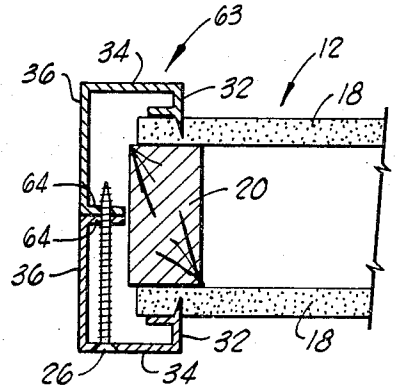


FIG. 7

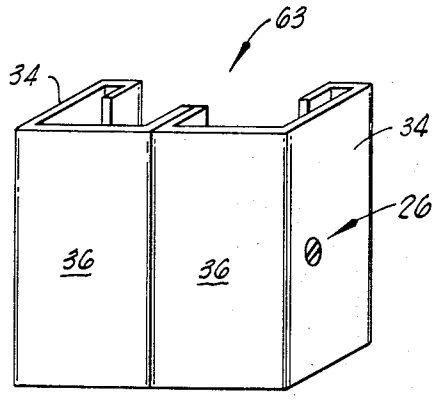


FIG. 8

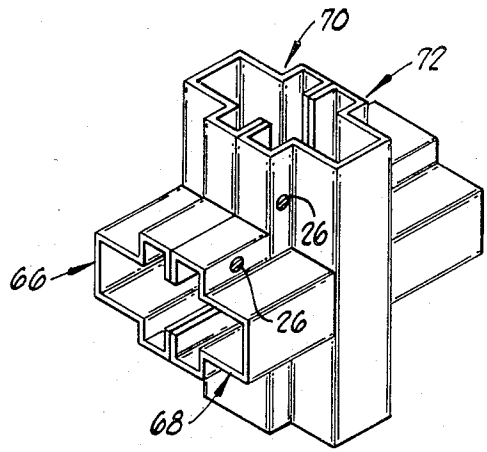


FIG. 9

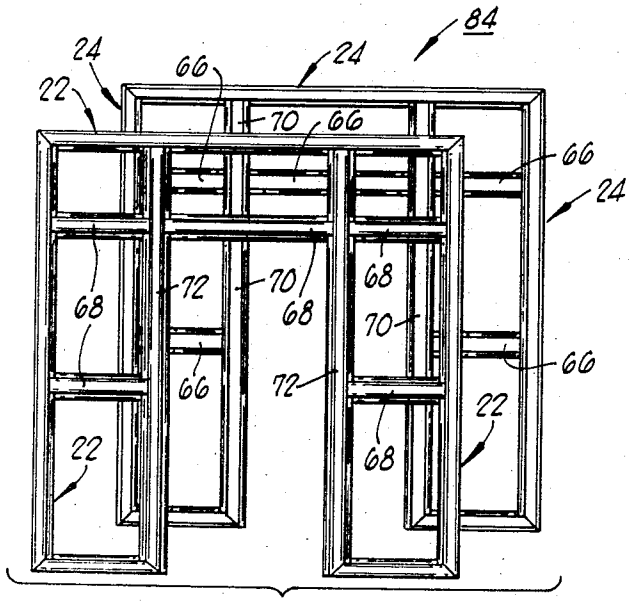


FIG. 11

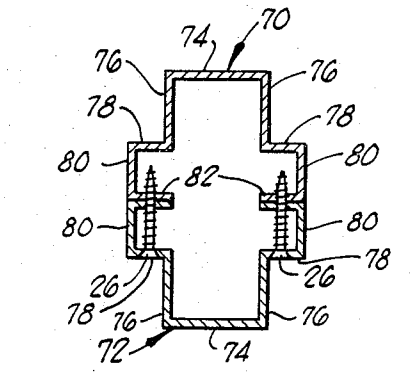


FIG. 10

TWO PIECE WALL FRAME FOR AN OPENING THEREIN

BACKGROUND OF THE INVENTION

1. Field of Invention

The invention is used in the field of residential and commercial building construction to enable contractors to quickly and easily install window and door frames and the added advantage of the window or door already being preinstalled in the frame prior to installing the frame.

2. Description of the Prior Art

Heretofore there have been generally two types of wall frames — wooden frames and metal frames. Wooden frames are cut and fitted by a carpenter and then the door or window are installed in the frame. This method is both expensive and time-consuming.

There are various types of metal frames using different molding construction, with adjustable frame members, and various methods of anchoring the frame to the wall opening. There have also been identical frame members secured to opposite sides of the wall opening, but none of these frame members are secured together as shown in the subject invention. Also there have been frame members secured to each other in a similar way as the subject invention, but the members are not identical and cannot be used interchangeably.

By the present invention, not only does the novel frame structure use similar half frame members frictionally engaging each side of the wall and secured together, but the invention discloses a novel use of a spike formed from a frame panel to secure the frame to the wall. Also a door or window can be pre-installed in one of the frame halves prior to installing the frame in the wall opening.

SUMMARY OF THE INVENTION

The present invention discloses the novel features of using similar halves of a wall frame frictionally engaging the opposite sides of a wall and secured together.

The frame may also be characterized wherein one of the frame halves includes a pre-hung door or an installed window. Also the frame using casing members, which are members constructed to be attached to the wall, in combination with vertical mullion members which are not constructed to attach to the wall and horizontal transom members which also are not constructed to attach to the wall are used to make a combination of side light windows and a transom window adjacent to the door.

It is an object of the present invention to eliminate the cost and time for a carpenter to cut and fit wooden doors and window frames during building construction.

It is another object of the present invention to eliminate the cost and time of installing the windows and hanging the doors by pre-installing the windows or the door to the frame prior to installing the frame.

It is still a further object of the present invention to reduce the manufacturing costs of metal, plastic or the like wall frames by making the frame halves similar so that each frame member is interchangeable.

Still another object of the invention is the use of mullion or transom members in combination with casing members to form a wall frame which includes a door frame plus side light and transom window frames.

It is still further an object of the present invention to stamp out a spike from one of the panels in the frame member to aid in securing the wall frame to the wall.

It is also another object of the present invention that the improved wall frame can be installed without stop panels so that swinging doors or windows can be installed.

It is still another object of the present invention that the improved wall frame can be installed without stop panels and used for a door way or window opening without installing a door or window in the improved wall frame.

It is again another object that the improved wall frame because of its simplified structure can be installed after the room is sheet rocked, painted, cabinets installed, finish work completed, and furniture moved, thus giving greater access into the room and avoiding damage to the frame and the installed doors and windows during building construction.

Other objects and advantages of the invention will become apparent as the following detailed description of the invention is read in conjunction with the accompanying drawings which illustrate the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** shows a cross sectional view of an improved wall frame attached to the wall with a door hingably attached to the improved wall frame.

FIG. **2** shows a perspective view of a sectional piece of the improved wall frame shown in FIG. **1.**

FIG. **3** is a perspective view of the improved wall frame showing the reverse side of the sectional piece illustrated in FIG. **2.**

FIG. **4** is a perspective view showing the improved wall frame as a door frame and illustrating the front casing member and the rear casing member of the frame with a door attached to the rear casing member.

FIG. **5** illustrates the improved wall frame as a window frame and shows the front casing member and the rear casing member of the improved window frame.

FIG. **6** is similar to FIG. **1** and shows a cross sectional view of the improved wall frame attached to the wall but with a window installed in the improved wall frame.

FIG. **7** is a cross sectional view of an improved wall frame attached to the wall but illustrated the improved wall frame without stop panels.

FIG. **8** illustrates a perspective view of a sectional piece of the improved wall frame shown in FIG. **7.**

FIG. **9** illustrates a perspective view of a sectional piece of a horizontal transom member intersecting a vertical mullion member used in the improved wall frame.

FIG. **10** illustrates a cross sectional view of either the vertical mullion member or the horizontal transom member shown in FIG. **9.**

FIG. **11** shows a perspective view of the improved wall frame illustrating the use of the casing members in combination with the mullion and transom members to form a door frame with adjacent side light windows and a transom window.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to FIG. **1** the improved wall frame is generally designated by reference number **100** attached to wall **12** and door **14** hingably attached by hinge **16** to the improved wall frame **10.** Wall **12** is

characterized by sheet rock **18** and wooden wall stud **20.** The improved wall frame **10** is characterized by first elongated casing member **22** and second elongated casing member **24** secured together by securing means such as a metal screw **26.** The first elongated casing member **22** frictionally engages wall **12** by rear casing panel **28** and aided by spike **30** inserted into sheet rock **18.** The first elongated casing member is further characterized by side casing panel **32** substantially perpendicular to wall **12** and integrally attached to rear casing panel **28.** Front casing panel **34** is substantially parallel to wall **12** and integrally attached to side casing panel **32.** Jamb casing panel **36** is substantially perpendicular to said wall **12** and integrally attached to front casing panel **34.** The front stop panel **38** is substantially parallel to wall **12** and integrally attached to jamb casing panel **36.** Side stop casing panel **40** is substantially perpendicular to wall **12** and integrally attached to front stop casing panel **38.** Rear stop casing panel **42** is substantially parallel to wall **12** and integrally attached to side stop casing panel **40.**

Second elongated casing member **24** which is generally similar in cross section to first elongated casing member **22** is characterized by the same reference numbers used in illustrating the panels described in first elongated casing member **22.**

FIG. **2** is a perspective view of the improved wall frame **10** shown in FIG. **1** and illustrates elongated casing member **22** and second elongated casing member **24** securably attached by securing means **26.**

FIG. **3** is a rear view of the improved wall frame **10** shown in FIG. **2** and further illustrates spike **30** which is stamped out of rear casing panel **28.**

FIG. **4** illustrates an improved door frame **44** using the first elongated casing member **22** comprised of a horizontal head section **46** secured to a vertical jamb section **48** and a vertical hinge section **50.** Second elongated casing member **24** is generally of similar cross section to first elongated casing member **22** but in addition includes door **14** hingably attached to vertical hinge section **50.**

FIG. **5** illustrates an improved window frame **52** using first elongated casing member **22** which includes an upper horizontal section **54** and a lower horizontal section **56** and two vertical side sections **58** secured to the upper section **54** and the lower section **56.**

FIG. **6** is similar to FIG. **1** except that rather than door **14** being hingably attached to the second elongated casing member **24** a window **60** is secured to the second elongated casing member **24** and held in position by a window stop **62.**

In operation the improved wall frame **10** shown in FIGS. **1, 2, 3** and **6** can be assembled by forming elongated casing members **22** and **24** to the desired angular shape using conventional metal forming presses, roller, or metal extrusion type machines. Also at this time the angular spike **30** can be formed from the rear casing panel **28.** Members **22** and **24** then can be cut to the desired lengths. Next various lengths of members **22** and **24** being of similar cross section can be secured together by welding or similar securing means to form an improved door frame **44** shown in FIG. **4** or an improved window frame **52** shown in FIG. **5.**

In making the improved door frame **44** the first elongated casing member **22** of door frame **44** would be positioned into the wall opening and spikes **30** hammered into the sheet rock to secure frame **44** to the wall. On the opposite side of the wall the second elongated casing member **24** would be positioned into the wall opening and spikes **30** hammered into sheet rock. When this is completed securing means **26** would then fasten together stop panels **42** of casing members **22** and **24** thus completing the installation of door frame **44.**

Also door **14** can be pre-hung by hinge **16** to casing member **24** prior to installing the improved door frame **44** or after frame **44** is installed.

Improved window frame **52** would be installed in a wall opening similar to improved door frame **44** and window **60** can be installed before or after frame **52** is completed.

FIG. **7** is a cross section view of an improved wall frame **63** and similar to the cross section view shown in FIG. **1** but without front stop casing panel **38,** side stop casing panel **40** and rear stop casing panel **42** but includes stop casing panel **64** which is substantially parallel to wall **12** and integrally connected to jamb casing panel **36.**

FIG. **8** is a perspective view of the improved wall frame **63** shown in FIG. **7** and illustrated to show an improved wall frame where stop panels would not be required as an integral part of the frame.

Improved wall frame **63** as shown in FIGS. **7** and **8** is an alternative structure to improved wall frame **10** and frame **63** would be used where stop panels are not required in a wall frame. In operation the wall frame would be assembled and installed in the same manner as wall frame **10.** Improved wall frame **63** could be used where a wall frame is desired but no window or door is installed. Also, frame **63** could be used for installing swinging doors or swinging windows and stop panels are not required.

FIG. **9** is a perspective view of a first elongated horizontal transom member **66** secured to a second elongated horizontal transom member **68** by securing means **26** and a first elongated vertical mullion member **70** secured to a second elongated vertical mullion member **72** by securing means **26.** The transom members intersect the mullion members perpendicularly and are securably attached thereto.

FIG. **10** is a cross sectional view of vertical mullion members **70** and **72** which are also generally similar in cross section to the horizontal transom members **66** and **68.** The first elongated mullion member **70** is characterized by a front panel **74** parallel to the wall, two jamb panels **76** substantially perpendicular to the wall and integrally connected to each side of front panel **74,** two front stop panels **78** being substantially parallel to the wall and integrally connected to jamb panels **76,** two side stop panels **80** perpendicular to the wall and integrally connected to the front stop panels **78,** two rear stop panels **82** substantially parallel to the wall and integrally connected to side stop panels **80.** The second elongated mullion member **72** being generally of similar cross section to the first elongated mullion member **70** is characterized by the same panel designations and is secured to the first elongated mullion member **70** by securing means **26.**

FIG. **11** is a perspective view of an improved door and window frame **84** illustrating the use of first elongated casing member **24** attached to first elongated transom member **66** and first elongated mullion member **70** to form a door opening, transom window, and side light windows and attached to one side of the wall. Second elongated casing member **22** is attached to sec-

ond elongated transom member **68** and second elongated mullion member **72** to form a generally similar cross sectional frame half to be attached to the opposite side of the wall opening and the members secured together by securing means **26.**

In operation the improved door and window frame **84** shown in FIG. **11** is assembled and installed using the same method described in installing the improved door frame illustrated in FIG. **4.** It should be pointed out that the mullion members and transom members shown in FIGS. **9, 10** and **11** are used only for framing doors and windows but would not be used for attachment to the walls surrounding the wall opening. In this instance casing members would be used.

The foregoing illustrates and describes the novel teachings with respect to improved wall frames for inserting into a wall opening and engaging the untrimmed wall. Employment of these teachings will greatly reduce the time and cost of labor of installing doors and windows in the construction of homes and buildings. Changes may be made in combination and arrangement of the elements as heretofore set forth in the specification and shown in the drawings, it being understood that the changes may be made in the embodiments disclosed without departing from the spirit or scope of the invention as defined in the following claims.

What is claimed i:

1. An improved two-piece wall frame for disposition in a wall opening in secure engagement with the untrimmed wall, the improvement comprising:

a first elongated unitary casing member having a side casing panel substantially perpendicular to said wall and including plural fastening means for embedded engagement in the wall, a front casing panel integrally connected to said side casing panel and substantially parallel to said wall, a jamb casing panel integrally connected to said front casing panel and substantially perpendicular to said wall, a front stop casing panel integrally connected to said jamb casing panel and substantially paralllel to said wall, a side stop casing panel integrally connected to said front stop casing panel and substantially perpendicular to said wall, and a rear stop casing panel integrally connected to said guide stop casing panel and substantially parallel to said wall;

a second elongated unitary casing member being of generally similar cross-section to said first elongated casing member and in embedded engagement with the opposite side of said wall in mirror image position to said first elongated casing member with said rear stop casing panels in abuttment; and

a securing means for insertion through said first casing member front stop panel and rear stop panel for rigid fastening to said second casing member rear stop panel to rigidly affix said first and second casing members in embedded engagement with the wall.

2. An improved wall frame as set forth in claim **1** wherein said first and second elongated casing members include a rear casing panel substantially parallel to said wall and integrally formed with side casing panel and said rear casing panel frictionally engages said wall.

3. The improved wall frame as set forth in claim **2** wherein said fastening means is an angular shaped spike stamped out of said rear casing panel and oriented for forced insertion into said waall.

4. The improved wall frame as set forth in claim **1** wherein the securing means is a metal screw.

5. The improved wall frame as set forth in claim **1** wherein the frame is made of metal.

6. The improved wall frame as set forth in claim **1** wherein the frame is made of plastic.

7. An improved wall frame as set forth in claim **1** wherein the frame is used for a door opening and said first elongated casing member comprises a horizontal head section secured to a vertical jamb section and a vertical hinge section for insertion into said door opening and said second elongated casing member is of similar cross-section to said first elongated casing member for juxtaposition and fastening to the opposite side of said door opening.

8. The improved wall frame as set forth in claim **7** wherein a door is pre-hung on the vertical hinge section of said first elongated casing member prior to insertion into said door opening.

9. The improved wall frame as set forth in claim **1** wherein the frame is used for a window opening and said first elongated casing member comprises a horizontal upper and lower section each secured between two vertical side sections for insertion into said wall opening, and said second elongated casing member is of similar cross-section to said first elongated member for juxtaposition and fastening to the opposite side of said window oening.

10. The improved wall frame as set forth in claim **9** wherein a window is secured to the window frame section prior to insertion into said window opening.

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