Sept. 30, 1952 C. OLSSAN 2,611,932

DOOR FRAME MOUNTING

Filed Nov. 16, 1945 2 SHEETS—SHEET 1

Fig. 3

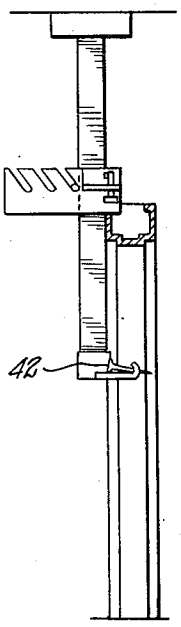


Fig. 1.

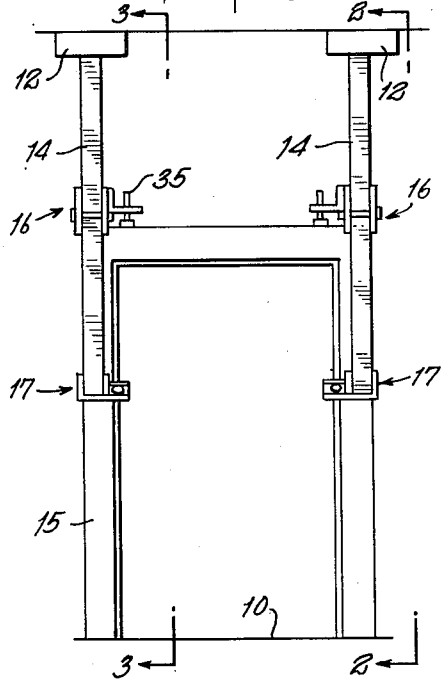


Fig. 2.

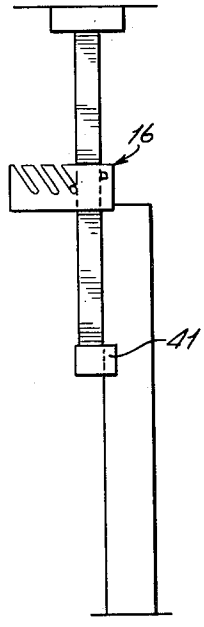


Fig. 4.

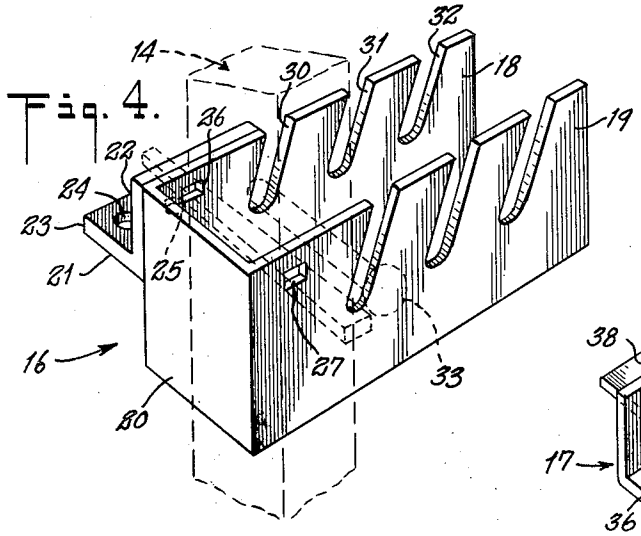
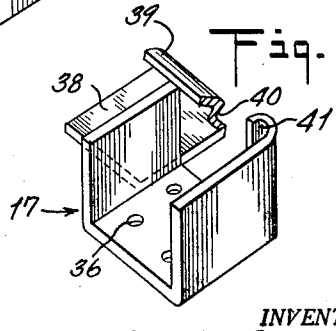


Fig. 5.



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Sept. 30, 1952 C. OLSSAN 2,611,932

DOOR FRAME MOUNTING

Filed Nov. 16, 1945 2 SHEETS—SHEET 2

Fig. 7.

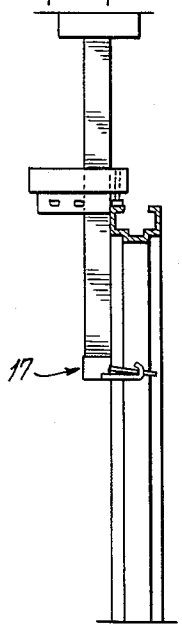


Fig. 8.

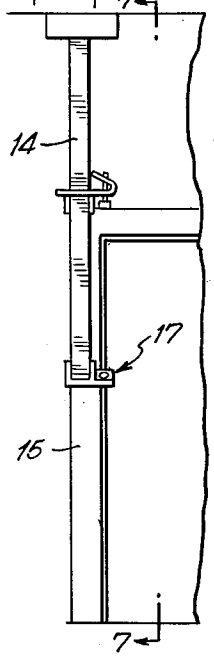


Fig. 9.

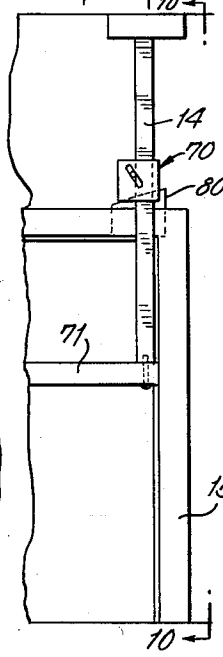


Fig. 10.

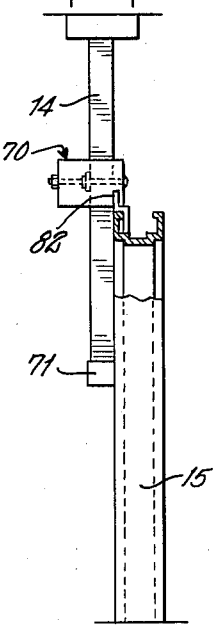


Fig. 8.

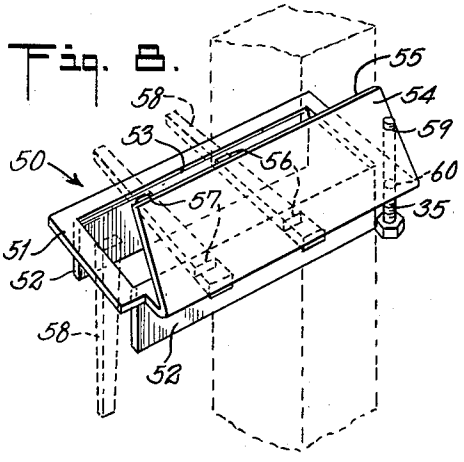
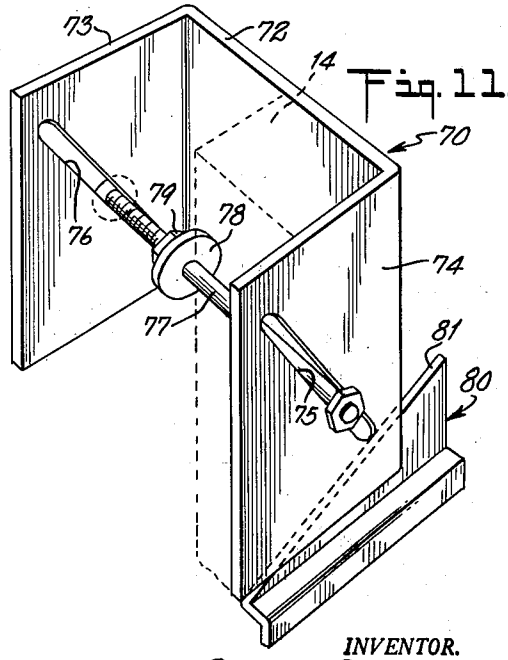


Fig. 11.



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DOOR FRAME MOUNTING

Carl Olssan, Bronx, N. Y.

Application November 16, 1945, Serial No. 629,183

5 Claims. (Cl. 20—11)

1

The present invention relates to door frame construction and more particularly to the means for securing a door frame in position in such a manner that a wall or partition may be formed therearound.

It is an object of the present invention to provide a novel means for securing a door frame in position with relation to the floor and ceiling of a building prior to the forming of the wall or partition of which the door frame becomes an integral part.

It is a further object of the present invention to provide two studs with clamping means for securing a door frame in position between a floor and a ceiling of a building prior to the forming of the wall or partition.

It is a further object of the present invention to provide a novel clamping means to position a door frame between a ceiling and a floor of a building and providing said clamping means with a plurality of adjustments according to the size stud used in positioning the door frame.

It is a further object of the present invention to provide a plurality of clamps with a plurality of upright supporting members to position a door frame in its proper relationship with a proposed wall or partition between the ceiling and floor of a building.

Other objects of the invention will be apparent by reference to the following description and the accompanying drawings wherein like reference characters designate corresponding parts, and wherein:

Fig. 1 is an elevational view of a door frame positioned by the clamping means of this invention,

Fig. 2 is a view partially in cross section taken on the line 2—2 of Fig. 1,

Fig. 3 is a view partially in cross section taken on the line 3—3 of Fig. 1,

Fig. 4 is a perspective view of the upper clamp indicated in Fig. 1,

Fig. 5 is a perspective view of the lower clamp indicated in Fig. 1,

Fig. 6 is a front elevational view of half a door frame with a clamp mounted in position illustrating another embodiment of this invention,

Fig. 7 is a view partially in cross section taken on the line 7—7 of Fig. 6,

Fig. 8 is a perspective view of the upper clamp indicated in Figs. 6 and 7,

Fig. 9 is an elevational view of half a door frame mounted in position illustrating a still further embodiment of this invention,

Fig. 10 is a view partially in cross section taken on the line 10—10 of Fig. 9, and

2

Fig. 11 is a perspective view of the clamp illustrated in Figs. 9 and 10.

Referring to the drawings by reference characters, and particularly to Figs. 1 through 5, 10 indicates the floor and 11 indicates the ceiling. A pair of blocks or plates 12 are shown mounted against the ceiling 11. A pair of studs 14 are shown positioned against the face of a door frame 15 each stud being aligned with the outer edge of each jamb of the door frame. Two pair of supporting clamps 16 and 17 are illustrated attached to the studs 14 and clamping the door frame 15. The clamps 17 are shown supporting the end of the studs 14, while the clamps 16 are shown mounted on the top lintel portion of the door frame 15 clamped about the studs 14. Clamps 16 are used to grip the studs 14 in a tight relationship and have adjusting members permitting an operator to induce a compressive force between the plates 12 and the lintel of the door frame 15, while the clamps 17 are used to keep the studs 14 in alignment with the jambs of the door frame when the compressive force is induced in the studs 14 to position the door frame 15. A better understanding of the clamps 16 and 17 may be had by referring to Figs. 4 and 5. Fig. 4 illustrates the clamp 16 with a stud 14 shown in dotted lines. The clamp 16 is comprised of two parallel sides 18 and 19 and the end piece 20. A ninety degree angle piece 21, having two sides 22 and 23, is affixed by welding or otherwise to the side 18 of the clamp 16 on its outer surface and is provided with apertures 24 and 25. A pair of rectangular shaped apertures 26 and 27 are provided through the walls 18 and 19 as well as the side 22 of the angle 21. Their size approximately matches a rectangular cut mason's nail when fully inserted in said slots. The sides 18 and 19 are further provided with a plurality of parallel pairs of slots 30, 31 and 32 so formed that a bolt 33 may be moved the full length of any pair of slots 30, 31 or 32. The slots are all formed with a slight angular formation inclined downwardly toward the web so that the bolt 33, when moved from the upper portion of any pair of slots to the lower portion, will move in a path to reduce the area between the wall 20 and the shank of the bolt 33. The pair of slots 30, 31 and 32 are spaced in such a relationship that a 2 x 4 stud may be positioned between the wall 20 and the bolt 33 when in the slots 32, or a 2 x 3 stud may be similarly positioned when the bolt 33 is in the slots 31, or a 2 x 2 stud may be similarly positioned when the bolt 33 is in the slots 30. Thus, it is apparent that the clamp 16 may be

positioned about a 2 x 2, 2 x 3 or 2 x 4 stud after a mason's nail (illustrated in dotted lines) has been inserted through the apertures **26**, **27** and the bolt **33** has been properly positioned in the related pair of slots and duly forced into a clamping position against the stud, as illustrated in Fig. 4.

Referring back to Fig. 1, it is apparent that when the clamp **16** has been duly clamped about a stud **14** a bolt **35** is threadably secured in either aperture **24** or **25**, according to the alignment of the clamp **16** with the lintel of the frame **15** so that the head of the bolt **35** rests on the top edge of the frame, as illustrated in Fig. 3. By adjusting the bolt **35** a sufficient degree of compression may be placed through the studs **14** on the lintel of the door frame **15** to retain the frame in a set relationship. However, referring to Fig. 5 it is necessary to position the clamp **17**, which is comprised of a U-shaped member that fits the two inch side of either the 2x2, 2x3 or 2x4, and may be nailed to the end of the stud **14** through apertures **36** in the base clamp **17**. On one side of the clamp **17** there is an extended partition **38** which also extends beyond the back face of the clamp, as illustrated in Fig. 1. The extension **38** has a turned up lip portion **39** with a cut-out portion **40** on the side in alignment with one side of the U-shaped clamp **17**. The opposed side of the U-shaped clamp **17** is provided with a turned over lip portion **41**, thus the clamp **17** will, therefore, be in juxtaposition to the door frame and stud when mounted, having its lip **41** clamped about an edge of the jamb of the frame **15**, while the lower portion of the U-shaped clamp **17** is duly nailed to the bottom of the studs **14**, a screw **42** is then inserted through the cut-out portion **40** to position the clamp **17** in a tight relationship retaining the stud **14** in its aligned position.

Referring to Figs. 6, 7 and 8 another embodiment of this invention is illustrated in which the clamp **17**, as previously described, is also used, but the upper clamp **50** positioned about the stud **14** is a slightly different form as clearly shown in Fig. 8. The clamp **50** comprises a rectangular body **51** having downwardly turned lip portions **52** that are positioned at ninety degrees from the body member **51** on the longer sides of the rectangular shaped member **51**. A rectangular aperture **53** large enough to receive a 2x4 stud therethrough is cut through the center of the body member **51**. Another lip member **54** extending from the upper side of the body **51** is formed in a V shape so that an upper edge **55** of the member **54** will be positioned to extend slightly over the aperture **53**. A pair of apertures **56** and a pair of apertures **57** are cut in the lip members **52** so that a mason's nail **58** may be positioned as illustrated in Fig. 8. The spacing of these nails depends upon the positioning of a 2 x 2 stud as illustrated in Fig. 8 to be held by a nail when inserted through the aperture **56** or a 2 x 3 stud (not shown) to be similarly inserted as shown in Fig. 8 so that a mason's nail would be positioned in t he aperture **57**. In the event a 2 x 4 stud is used a mason's nail is inserted as shown in dotted lines at **58** against the end **52** of the body **51**. In all instances the shape of the mason's nail is sufficient to cause a wedging of the stud member in the aperture **53**. When the clamp **50** has been positioned as indicated in Figs. 6 and 7 a bolt 35 is threadably secured through threaded apertures **59** and **60** in the lip portion **54** and as already described in the preferred embodiment will be the means of jamming the door frame in its proper position.

Referring to Figs. 9, 10 and 11, a still further embodiment of this invention is illustrated in which a clamp **70** is illustrated positioned about the stud **14** to rest on the top of the door frame **15**. In this embodiment the stud **14** is securely nailed through its lower end to a cross piece **71** which is slideably secured by wedging to the stop on the door frame **15** as illustrated in Figs. 9 and 10. The clamp **70** as shown in Fig. 11 comprises a three sided U-shaped member with the base **72** being large enough to accommodate a 2 x 4 stud and the two end legs **73** and **74** large enough to accommodate the two inch dimension of a 2 x 4 and provided with angular slots **75** and **76** in which a bolt **77** is positioned. The angular slots are so formed and so positioned that the bolt **77** may be raised to the upper portion of the slots to allow the stud to be positioned against the side **72** and by moving the bolt **77** downward in the slots **75**, **76** the bolt will be jammed against the side of the stud. The bolt **77** is threaded to receive a washer **78** and nut **79**, thus when a 2 x 2 stud is used the washer may be securely wedged against the 2 x 2 by the nut **79**, likewise, in using a 2 x 3 stud the nut **79** may be moved back on the thread and the washer **78** may again be wedged securely against the face of the 2 x 3. When a 2 x 4 stud is used the nut **79** will be moved all the way back against the side **73**. An angular cleat member **80** is provided and fits along the top edge of the door frame **15** and has an extended wedge shaped side **81**. The clamp **70** is provided with a slot **82** into which the side **81** of the cleat **80** is fitted, thus when the clamp **70** has been properly clamped about the stud **14**, the member **80** may be driven into place on the top of the door frame **15** with the wedge shaped leg **81** thus producing considerable compression stress in the stud **14**, thus retaining the door frame **15** in a positive position.

Although preferred forms of this invention have been shown and described, it will be understood that a mechanic working within the scope of what is claimed may make changes or equivalent means without departing from the spirit of this invention.

What is claimed is:

1. A device for securing a door frame in position in combination with a wooden stud that is positioned against the ceiling and aligned with the face of the door frame and secured at its lower end above the floor in a set relationship with the door frame, said device comprising a U-shaped member having a pair of angularly disposed slots inclined downwardly toward the base of the U-shaped member in both legs of said U-shaped member and means inserted through said slots to wedge the wooden stud in a fixed relation with said device and means to wedge said device in its fixed relation on said wooden stud away from the lintel of said door frame.

2. A device for securing a door frame according to claim 1 in which said means inserted through said slots to wedge the wooden stud is a threaded bolt, a nut and washer mounted on said bolt to be adjusted to grip said stud and to permit adjustment to grip other size wooden studs.

3. A device for securing a door frame in position to form a wall or partition there-around, said device including a door frame having a channel shaped cross section, a stud member extending from the mid-portion of the frame to the ceiling, a cross member affixed to the lower end of the

stud and slidingly wedged between the jambs of said door frame to hold said stud in parallel relationship with the jamb of said frame, a clamp having a downwardly moved wedging means to grip said stud, said clamp resting on the lintel of the door frame, and means to force said clamp upwardly away from said door frame to increase the wedging grip of said clamp on said stud while increasing the compression stress in said stud.

4. A device for setting in position in a building a door frame or window comprising in combination, a pair of studs extending from the midportion of said door frame to the ceiling and aligning with the jambs of said frame while said frame rests upon the floor, means affixed to the lower end of each stud and slidingly wedged between the jambs of said door frame, a clamp for each stud having a downwardly moved wedging means to secure said clamp to each stud by said wedging action, and means to force said clamps that are wedged to said stud upwardly from said frame to increase their hold on said frame while increasing the compressive stress in the frame and in the stud between the ceiling and floor.

5. A device for securing a door frame in position in combination with a stud that is positioned against the ceiling and aligned with the jambs

of the door frame and secured at its lower end in a set relationship with the door frame, said device comprising a U-shaped member having a pair of downwardly inclined slots in alignment and a bolt fitted to slideably move in the pair of slots, said device further providing an aperture to receive an angular cleat to be wedged between the device and said door frame to provide a compressive stress in said stud to hold the door frame in a set relationship with said ceiling.

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