July 10, 1956 C. S. RINGLE 2,753,602

QUICK MOUNTABLE DOOR OR WINDOW FRAME

Filed Sept. 3, 1953

FIG. 1

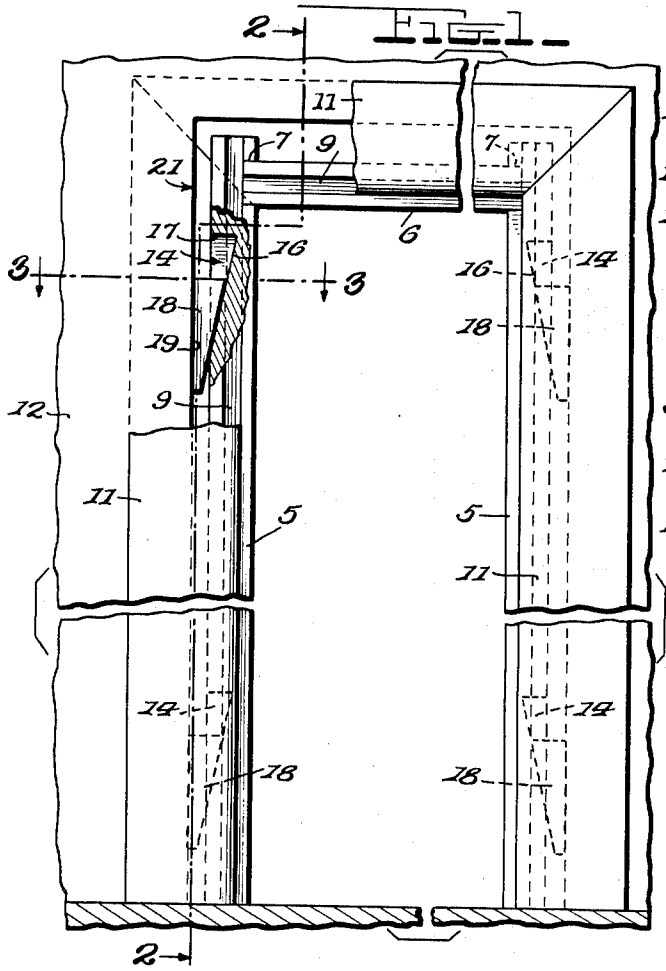


FIG. 2

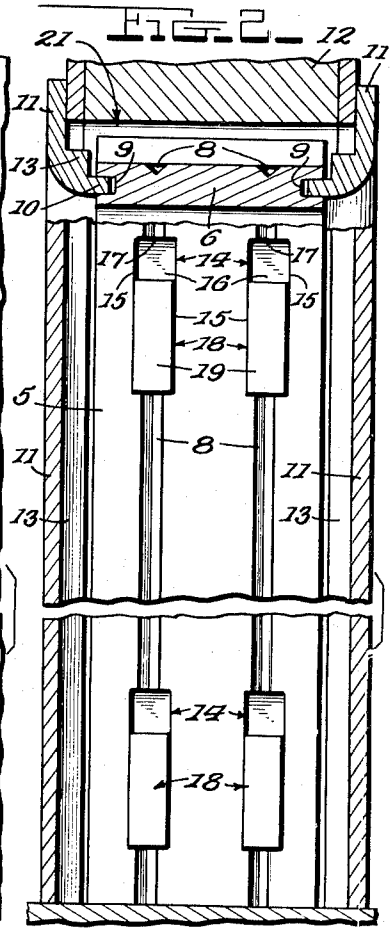


FIG. 3

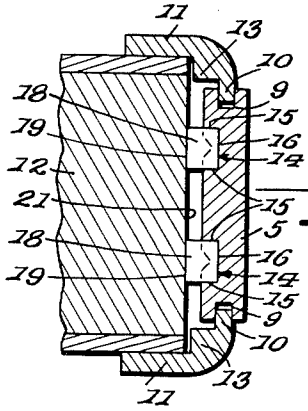
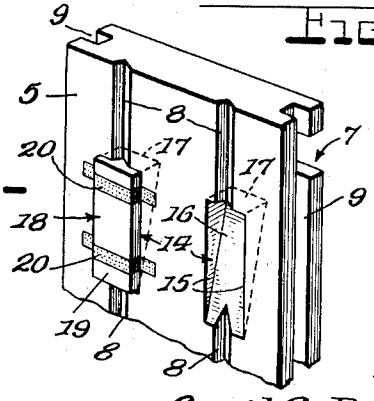


FIG. 4



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QUICK MOUNTABLE DOOR OR WINDOW FRAME

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5 Claims. (Cl. 20—11)

This invention relates to a new and improved architectural door or window frame which may be secured in placed with unusual ease and speed.

In mounting a wooden door frame and some types of window frames, it is customary to "back-up" between the vertical side members and the vertical edges of the door or window opening, with pieces of wood, in order that said side members may be properly secured. Such procedure, however, requires time and care and usually necessitates that the carpenter hew and drive numerous wedges of different thickness. In fact, the average carpenter so dislikes this particular job that he will frequently neglect it entirely and rely upon the trim to hold the frame side members in place, with the result that warping soon occurs and the door or window cannot be easily opened and closed.

It is the principal object of the present invention to provide each frame, at the time of manufacture, with adequate wedges for quickly and easily backing-up solidly between the side members and the edges of the frame-receiving opening, thus saving time and trouble and discouraging neglect of this important phase of construction.

A further object of the invention is to provide the frame side members with back-up wedges positioned in readiness for driving and releasably held in this position by temporary means adapted to be rendered inoperative by the wedge driving operation.

A still further object is to so inset the wedges into the frame side members that they will not project sufficiently beyond the same to be accidentally knocked loose during shipment from the mill to the building supply house or delivery to the job, the amount of projection however being sufficient to allow striking of the wedges with a tool to break the wedge holding means and drive the wedges when mounting the frame.

Another object of the invention is to provide a frame which will readily compensate for variances in the thickness of the wall in which it is to be mounted, such compensation being achieved by the provision of novel trim moulding having a tongue and groove connection with the edges of the frame side members and header.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings, and claimed.

In the drawing:

Fig. 1 is a side elevation, partly broken away and in section, showing a door frame constructed and mounted in accordance with the present invention;

Fig. 2 is a vertical sectional view on line 2—2 of Fig. 1;

Fig. 3 is a horizontal sectional view on line 3—3 of Fig. 1; and

Fig. 4 is a fragmentary perspective view showing one of the wedge-receiving recesses unoccupied and showing a wedge mounted in the adjacent recess.

A preferred construction has been shown in the drawing and will be rather specifically described, but attention is invited to the possibility of making variations. Moreover, while only a door frame has been disclosed, it will be obvious that the invention is applicable also to certain forms of window frames.

The vertical side members or jambs of the door frame are denoted at 5 and the header at 6, the members 5 being grooved at 7 to receive the ends of the header 6, as usual. All of the members 5 and 6 are preferably externally grooved at 8 to minimize transverse warping, and the edges of said members have relatively deep longitudinal grooves 9. These grooves 9 receive longitudinal tongues 10 on the trim moulding 11 and said grooves and tongues allow for variances in the thickness of the wall 12 in which the frame is to be mounted.

The moulding 11 is of L-shape in transverse section and is provided in its internal corner with a longitudinal integral reinforcing rib 13. The moulding is secured against the finished wall with its tongue 10 received in the groove 9 and thus there are no unsightly cracks appearing between trim and frame as so frequently occurs with the conventional construction.

Wedge-receiving recesses 14 are formed in the outer sides of the side members 5 and it is preferable to have two of these recesses near the upper end and two near the lower end of each of said side members. The recesses 14 are so located that the door hinge screws will not enter them, as otherwise said screws would have little hold in the frame members.

Each recess 14 is vertically elongated and increases gradually in depth from its lower end to its upper end. The opposed side walls 15 of each recess are plain and parallel and the inclined inner wall 16 is also plain. Each recess has a plain upper end wall 17 but no lower end wall, as the inner wall 16 extends to the outer side of the frame member 6.

In each recess 14 there is a wedge 18 of a size to normally fill said recess and project laterally a short distance beyond the frame member 5. The outer side 19 of each wedge 18 is parallel with the outer side of the frame member 5 and the inner side of the wedge is inclined in agreement with the inclination of the inner wall 16 of the recess 14. When the frame is manufactured, the wedges 18 are secured in the recesses 14, in their uppermost positions, by rupturable means 20, as shown in Fig. 4, adapted to break when the wedges are driven downwardly during mounting of the frame in the wall opening 21. The means 20 is preferably in the form of lengths of adhesive tape and effectively holds the wedges in the recesses, in readiness for driving. When driven, the wedges firmly back-up the frame side members 5 permitting solid nailing of these members to the wall 12.

To mount the frame, the two side members 5 connected by the header 6 are inserted into the wall opening 21. Three of the moulding strips 11, cut and mitered to size, are then secured to the side members 5 and header 6 at one side of the wall 12, with the tongues 10 fitting into the grooves 9 and these moulding strips are secured also against the wall. At this point, the carpenter plumbs one of the side members 5 and uses a flat tool, such as a chisel, to carefully drive the wedges 19 of this member downwardly until their outer sides are swung against the adjacent edge of the opening 22. During this wedge driving operation, the tape 20 of course breaks but no attempt has been made to show the broken tape in the drawing. The plumbed side member is then secured, and the same procedure is repeated with the other side member. Finally, the trim moulding at the other side of the wall is applied. These operations can be performed quickly and easily and result in a well mounted and stable frame. Moreover, due to the tongues

10 and grooves 9, any variances in wall thickness will not result in cracks or ill fitting at the juncture of the trim with the frame.

From the foregoing description of the invention, it is believed that the construction, use, and operation thereof will at once be apparent, and while there is herein shown and described a preferred and practical embodiment of the invention, it is nevertheless to be understood that various changes may be made therein without departing from the spirit of the present invention or the scope of the appended claims. For example, the rupturable means 20 while shown in the form of lengths of adhesive tape to hold the wedges 18 in the recesses 14, may equally well be replaced by wire brads or other suitable rupturable means.

I claim:

1. A closure frame for mounting in a wall opening, said frame having side and end members of less width than the wall thickness, the edges of said members having relatively deep longitudinal grooves, and trim moulding to lie against the wall sides, said trim moulding having longitudinal tongues receivable in said grooves to the full depth or only partially of the depth of said grooves to compensate for variances in wall thickness, said moulding being of L-shape in transverse section and having an integral longitudinal reinforcing rib in its internal corner, said rib being defined by intersecting right angular surfaces parallel with the edges of said side and end members and with the faces of said wall opening.

2. A closure frame for mounting in a wall opening, said frame comprising opposite side members for support in spaced relation to the edges of said opening, recesses in said side members having inclined bottom walls whereby the recesses are of maximum depth at one end thereof and are of gradually reduced depth toward the other end lengthwise of the side members, back-up wedges in said recesses for engaging the edges of the wall opening when driven in said recesses toward the shallow ends thereof, means normally holding said wedges in said recesses adjacent the deeper ends thereof in readiness for driving, said means being of temporary form and adapted to be rendered inoperative upon driving impact on the wedges.

3. The structure according to claim 2, wherein said means normally engages the wedges and side members and which are rupturable upon driving action of the wedges.

4. The structure according to claim 2, wherein said means comprise strips of adhesive tape engaged with said wedges and said side members.

5. The structure according to claim 2, wherein said wedges project from said recesses when in the deeper ends thereof to a sufficient extent as to be struck by a wedge-driving tool, and the faces of said wedges opposed to said recesses being parallel with said side members.

References Cited in the file of this patent

UNITED STATES PATENTS

1,677,058	Stein	July 11, 1928
1,863,730	Ross	June 21, 1932
2,185,650	Shipway et al.	Jan. 2, 1940
2,651,814	Lester	Sept. 15, 1953

FOREIGN PATENTS

106,130	Sweden	Dec. 15, 1942