April 29, 1958 O. PEARSON 2,832,105

SLIDING DOOR FRAME CONSTRUCTION

Filed March 15, 1956

Fig. 1

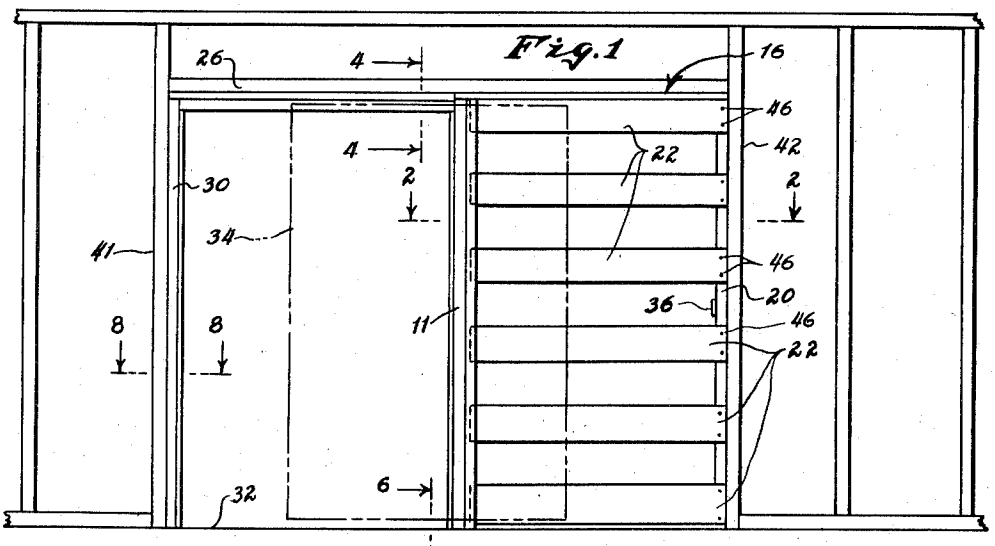


Fig. 2

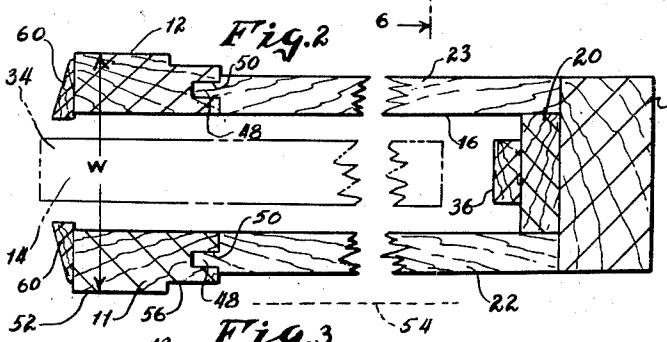


Fig. 3

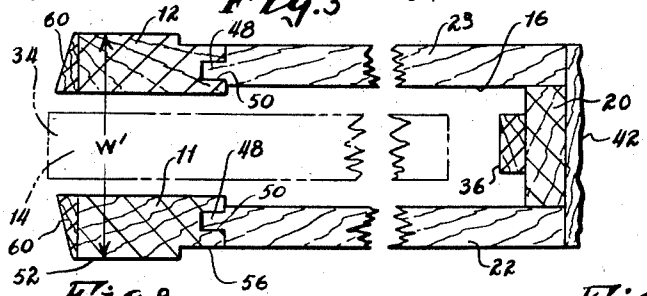


Fig. 4

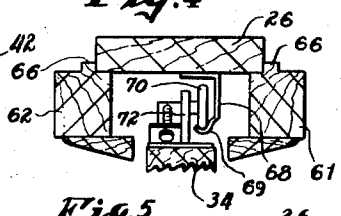


Fig. 5

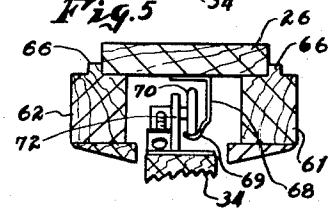


Fig. 6

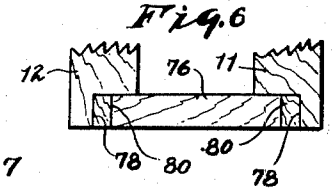


Fig. 8

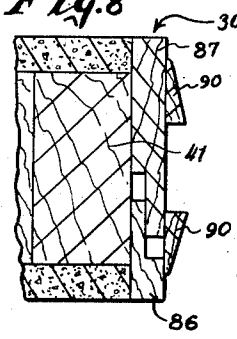


Fig. 9

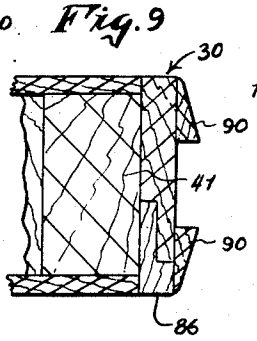
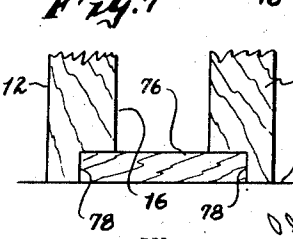


Fig. 7



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SLIDING DOOR FRAME CONSTRUCTION

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Application March 15, 1956, Serial No. 571,792

10 Claims. (Cl. 20—19)

This invention relates to the construction of pocket door frames. Considerable saving in labor is affected by having such door frames prefabricated or supplied to the job in a knocked-down condition with all parts cut to fit. The frames include a doorway and a pocket into which a door slides to leave the doorway open. The assembly is inserted in a wall opening when building a new house and the pocket is covered over its front and back by plaster board or plaster depending upon the covering of the rest of the wall in which the pocket door frame is used.

It is an object of this invention to provide an improved pocket door frame construction which is suitable for use with either plaster board walls, commonly referred to as "dry walls," or with plastered walls which have an underlying layer of lath or lath substitute for holding a rough coat, and then have a finished coat of plaster over the rough. The difficulty encountered with these different wall constructions is that while the framing for both type of walls is the same, usually 2 x 4 studs, each side of the plaster wall has a thickness approximately three eighth inches greater than the thickness of a plaster board or dry wall construction.

In order to make the same pocket door frame construction of this invention suitable for use with these different kinds of walls, the invention provides means for expanding the thickness of the framing around the doorway without disturbing the thickness of the framing of the pocket in which the wall covering is applied.

Another object of the invention is to provide a pocket door frame construction with vertical pieces that are parallel and spaced from one another to form an entrance for the pocket, and with unsymmetrical connections for the vertical pieces through the remainder of the construction so that by reversal of certain of the parts the spacing of the vertical pieces from one another is changed to increase or decrease the thickness of the construction at the pocket entrance to compensate the differences in thickness between plaster board and plaster walls.

Another feature of the invention relates to the combining of such a pocket or frame construction with a door frame opposite the pocket entrance having lapped pieces which have relative movement for changing the thickness of the door frame in accordance with corresponding changes in the thickness of the pocket to accommodate different types of wall with which the pocket door frame construction of this invention may be used.

Other objects, features and advantages of the invention will appear or be pointed out as the description proceeds.

In the drawing, forming a part hereof, in which like reference characters indicate corresponding parts in all the views;

Figure 1 is a front elevation of a pocket door frame construction made in accordance with this invention, and showing the way in which this door frame structure is located in a wall;

Figures 2, 4, 6 and 8 are greatly enlarged sectional views taken on the lines 2—2, 4—4, 6—6 and 8—8 of Figure 1; and

Figures 3, 5, 7 and 9 are sectional views corresponding to Figures 2, 4, 6 and 8 respectively, but showing the positions of the parts when adjusted for use with a wall made of plaster board instead of plaster.

The pocket door frame includes two vertical pieces 11 and 12 which are parallel to one another and spaced apart to provide an entrance 14 (Figure 2) for a pocket 16 in which a door is located when the door is in open position.

At the end of the pocket remote from the entrance 14 there is an end wall 20; and this end wall is connected to the vertical pieces 11 and 12 by stringers 22 at the front of the pocket, and corresponding stringers 23 at the back of the pocket.

As best shown in Figure 1, the stringers 22 are spaced apart and preferably parallel to one another. There is a sill 76 at the lower end of the vertical pieces 11 and 12 for holding the vertical pieces in the desired spaced relation to one another at their lower ends, in a manner which will be explained more fully in connection with one of the subsequent figures. There is a plate 26 at the top of the pocket door frame; and this plate 26 is connected with the end wall 20 at one end with the upper ends of the vertical pieces 11 and 12 at an intermediate location near the mid portion of the plate 26.

At the left hand end of the plate 26, as viewed in Figure 1, there is a door frame 30 extending from the plate 26 to the bottom of the door frame or to the floor 32 on which the entire assembly is supported. The space between the door frame 30 at one side and the vertical pieces 11 and 12 at the other side provides a doorway which is closed by a door 34 when the door is moved to the left into contact with the frame 30. The construction illustrated has no sill at the bottom of the door frame and if shipped as a prefabricated unit, a temporary spacer is attached across the bottom of the doorway in accordance with millwork practice.

This door 34 is slightly wider than the space between the door frame 30 and the vertical pieces 11 and 12 on the other side so that even when the door 34 is in closed position, a portion of the right hand side of the door 34 still extends into the pocket entrance between the vertical pieces 11 and 12.

The door 34 slides, on supporting means which will be explained in connection with one of the other figures, and is movable toward the right until it strikes against an abutment 36 located on the end wall 20. The pocket is preferably made long enough so that when the door 34 comes against the abutment 36, the left hand edge of the door is substantially flush with the faces of the vertical pieces 11 and 12 which form the right hand limit of the doorway.

When the framing opening for the prefabricated pocket door frame of this invention is made, the wall of the house is constructed with studs 41 and 42 spaced from one another by the distance necessary to accommodate the prefabricated unit between them. The remainder of the building wall is framed with other studs 43, usually located on 16" centers, and preferably 2 x 4's with their narrow faces in the plane of the wall face. The end wall 20 is centered transversely on the stud 42 and is then attached to the stud by nails or otherwise. The door frame 30 is attached to the stud 41 after adjusting the door frame for the width of the wall in a manner which will be explained in describing the detailed construction of the door frame.

The combined thickness of one of the stringers 22 and its corresponding stringer 23 added to the width of the end

wall 20 exactly equals the length of the stud 42 in the direction of the transverse thickness of the wall as best illustrated in Figure 2. From this construction it is apparent that the faces of the stringers 22 and 23 are in the same plane as the outside faces of the stud 42, and the other studs of the wall in which the pocket door frame of this invention is used. On both the front and the back of the door pocket, therefore, the stringers 22 and 23 provide surfaces to which lath or plaster board can be nailed to continue the wall covering beyond the stud 42 and across the door pocket with no change in the thickness or the contour of the wall.

The stringers 22 and 23 are connected to the end wall 20 by nails 46. At their other ends, the stringers 22 and 23 are connected to the vertical pieces 11 and 12 by tongue and groove connections. In the construction illustrated, there are tongues 48 on the stringers 22 and 23 and these tongues extend into continuous grooves 50 in the faces of the vertical pieces 11 and 12. The tongue and groove connections are also nailed in the final assembly of the pocket.

The vertical piece 11 has a front face 52 which is substantially flush with the surface of the finished plaster wall the face of which is indicated by the dotted line 54. Toward its right hand edge, the face of the vertical piece 11 has a recess 56 providing a face substantially three eighths of an inch behind the plane of the front face 52.

The front faces of the stringers 22 are located in a plane approximately another three eighths of an inch behind the plane of the recessed face 56. When a plaster wall is applied over the stringers 22, the lath or lath substitute is nailed to the faces of the stringers 22 and extends out substantially to the plane of the recess face 56. The rough plaster coat and the final white coat bring the face of the wall out to the plane indicated by the dotted line 54, as previously explained.

When the invention is to be used for a wall covered with plaster board, the pocket door frame is assembled with the stringers 22 and 23 turned around so that what was the outside face of each stringer in Figure 2 becomes the inside face of the stringer in the construction shown in Figure 3. Because of the unsymmetrical location of the tongue 48 with respect to the center vertical line of the end face of each stringer, the tongues 48 are closer together when the stringers are turned as in Figure 3 and this locates the vertical pieces 11 and 12 closer together as will be evident by a comparison of Figures 2 and 3. The front faces of the stringers 22 are flush with the plane of the recessed face in Figure 3, face 56, so that wall board, which has a thickness of only three eighths of an inch, has its front face flush with the front face 52 of the vertical piece 11 when nailed to the stringers 22.

Thus the turning around of the stringers 22 and 23 reduces the thickness of the wall as represented by the distance between the outside faces of the vertical pieces 11 and 12, this distance being indicated by the dimension arrows W in Figure 2 and by the dimension arrows W' in Figure 3. The difference is approximately one half of an inch. The stringers 22 and 23, however, remain parallel and the distance between the outside faces of the stringers on both the front and the back of the door pocket remains unchanged and equal to the transverse dimension of the wall framing comprising the stud 42 and the other studs.

Instead of turning the stringers 22 and 23 around in order to bring the vertical pieces 11 and 12 closer together, the unsymmetrical connection can be used with vertical pieces, corresponding to the pieces 11 and 12, which are interchangeable between the different sides of the wall to obtain the difference in overall thickness required when going from a plaster wall of Figure 2 to a plaster board wall as in Figure 3.

In the construction illustrated, there is a length of trim 60 located on opposite sides of the pocket entrance and extending for the full height of the pocket entrance. When the pocket entrance is narrow, as in Figure 3, the trim 60 does not extend across any of the opening of the entrance; but when the pocket entrance is otherwise wider, as in Figure 2, the appearance of the construction is improved by having the length of trim 60 extend across part of the opening so as to make the effective entrance only slightly wider than the door 14.

At the upper ends of the vertical pieces 11 and 12 there are elongated blocks 61 and 62 extending through cut outs in the confronting faces of the vertical pieces 11 and 12. The plate 26 is connected to the tops of the elongated blocks 61 and 62 and there are ridges or flanges 66 extending from the upper faces of these blocks 61 and 62.

The ridges or flanges 66 are not centrally located and when the blocks 61 and 62 are turned around, from the positions shown in Figure 4 to the positions shown in Figure 5, the distance between the inner faces of the flanges and the outer faces of the blocks 61 and 62 is increased approximately one quarter of an inch on each side of the plate 26 so as to increase the spacing of the blocks 61 and 62, and the resulting spacing of the upper ends of the vertical pieces 11 and 12, to the same extent as effected by turning around the stringers in the manner already explained in connection with Figures 2 and 3.

The plate 26 fits between the confronting faces of the ridges 66 and the plate can be attached to the blocks 61 and 62 by nails. On the underside of the plate 26, between the elongated blocks 61 and 62, there is a track element 68 having a flat top portion secured to the bottom face of the plate 26 by screws. The track element 68 extends downwardly and then curves inwardly and upwardly to form a U shaped trough or track 69.

The door 34 is supported by track running elements, preferably rollers 70. These rollers have axles extending from brackets 72 attached to the upper end of the door 34. The brackets 72 are adjustable to change the distance from the axis of the roller 70 to the top of the door 34 so as to adjust the height of the door with respect to the floor and for plumbing the vertical edges of the door. Such adjustable brackets are well known and no further explanation of them is necessary for a complete understanding of the present invention.

At the lower ends of the vertical pieces 11 and 12 there is a sill 76, best shown in Figures 6 and 7. This sill 76 has its ends located in recesses 78 formed in the inner faces of the vertical pieces 11 and 12. When the pocket door frame is used for plaster walls, there are spacer blocks 80 located in the recesses 78 at opposite ends of the sill 76. Each of these spacer blocks 80 has a length, in the direction of the thickness of the wall, of approximately one quarter of an inch. When the invention is to be used with plaster board walls, the spacer blocks 80 are removed so as to decrease the distance between the vertical pieces 11 and 12 for a quarter of an inch on both sides of the pocket, as previously explained. In order to insure that the sill 76 will extend at least part way into the recesses 78 when the spacer blocks 80 are in use, the recesses 78 are made with a depth substantially greater than a quarter of an inch, that is, the thickness of the blocks 80.

The door frame 30 is of composite construction and includes two pieces 86 and 87 which overlap one another by a lap joint having a length of substantially greater than the variation in the width of the door frame for different kinds of walls, that is, substantially greater than one half of an inch. The face of the piece 86 confronting the doorway is of substantially greater extent than the face of the piece 86 so that the joint between these pieces 86 and 87 is not located in the center of the doorway.

When the pocket door frame is expanded for its greatest width, as when used with plaster walls, pieces 86 and 87 are spread as shown in Figure 8, and there are pieces of trim 90 spaced from one another by a distance slightly greater than the thickness of the door to provide a shallow channel into which the door extends when closed.

One of the pieces of trim **90** covers the seam where the pieces **86** and **87** are joined.

When the door frame is at its minimum width, as when used with plaster board walls, the pieces **86** and **87** are moved as close together as they can come, as shown in Figure 9, and the pieces of trim **90** are connected so as to provide the same width channel as before, though the remote edges of the trim pieces **90** come close to or flush with the faces of the frame pieces **86** and **87** because of the reduced dimension of the frame **30**.

The preferred construction of the invention has been illustrated and described, but changes and modifications can be made, and some features can be used in different combinations without departing from the invention as defined in the claims.

What is claimed is:

1. A pocket door frame construction, for insertion in a wall opening, including two vertical pieces parallel to one another and spaced to form an entrance to the pocket, a sill at the lower ends of the vertical pieces for holding them in spaced relation, a plate at the upper ends of the vertical pieces, means connecting the upper ends of the vertical pieces to the plate for holding said upper ends in spaced relation to one another, said means connecting the upper ends including elements movable into different positions to change said spaced relation of the upper ends of the vertical pieces, an end wall of the pocket opposite said entrance, stringers connecting the end wall with the vertical pieces and forming parallel front and back walls of the pocket for holding plaster or plaster board, connections between the stringers of the front wall and one of the vertical pieces, said connections including end faces on the stringers shaped to engage a complementary end face on that vertical piece and to hold the vertical piece with its outer face at a predetermined distance from the plane of said front wall to allow for the thickness of plaster or other covering on the wall, the shape of the end face on one side of said connections being unsymmetrical with respect to the thickness of the part on which the unsymmetrical face is formed so that turning the unsymmetrical end face upside down moves the vertical piece inwardly or outwardly with respect to the stringers and changes the distance of the outer face of the vertical piece from the plane of said front wall to accommodate a different thickness of wall covering, the parts of the frame being connected so that they can be turned upside down to thus change the position of the vertical piece, and a door jamb opposite the pocket entrance across a doorway of the frame construction.

2. The pocket door frame construction described in claim 1 and in which there are connections between the stringers of the back wall and the other vertical piece similar to those of the front wall, and the parts on opposite sides of the pocket being independently movable so that each wall can be accommodated to a different covering thickness.

3. The pocket door frame construction described in claim 1 and in which the sill is located within a space between the vertical pieces and fits within recesses in the vertical pieces, the recesses being of a depth substantially greater than one quarter of an inch and the spacing between the vertical pieces being increased by quarter inch filler blocks located at opposite sides of the sill and partially filling said recesses into which the sill fits.

4. The pocket door frame construction described in claim 1 and in which there are blocks at the upper ends of the vertical pieces with flanges on the blocks bearing against the opposite side faces of the top plate, the opposite faces of each of the flanges being at different distances from corresponding sides of the blocks so that the plate spaces the vertical pieces at different distances from one another when the blocks are turned around to bring opposite faces of their flanges against the side faces of the plate.

5. The pocket door frame construction described in claim 1 and in which the connections between the stringers and the vertical pieces are tongue and groove connections.

6. The pocket door frame construction described in claim 1 and in which the outside faces of the vertical pieces have cut-out portions along their sides which are toward the stringers, the cut out portions having a depth of approximately three eighths of an inch, and the stringers are set back from the cut-out portions for an additional distance of one quarter of an inch when the stringers are connected to the vertical pieces in the positions that locate the outer faces of the vertical pieces at their maximum distance from the plane of the front or back wall to accommodate the thickness of lath used on a wall to which the plaster is to be applied.

7. The pocket door frame construction described in claim 1 and in which the connections of the stringers and vertical pieces are tongue and groove connections, and the front faces of the vertical pieces along the edges adjacent to the stringers are recessed for a depth equal to the minimum thickness of wall covering with which the pocket is intended to be used.

8. The pocket door frame construction described in claim 1 and in which the door jamb opposite the pocket entrance is made of two pieces that lap one another for expanding the width of the door frame to accomodate differences in the spacing of the vertical pieces from one another, and a track for a door-supporting element, the track extending across the doorway and into the pocket.

9. The pocket door frame construction described in claim 1 and in which the sill is located between the vertical pieces at their lower ends and fits into recesses in the vertical pieces, which recesses having a depth in excess of one quarter of an inch, and there are spacer blocks in the recesses at each end of the sill and each of a thickness of approximately one quarter of an inch, blocks at the upper ends of the vertical pieces with flanges in contact with the side faces of the top plate, the opposite faces of the flanges being different distances from corresponding sides of the blocks so that the plate spaces the vertical pieces at different distances apart when they are turned around to bring opposite faces of their flanges against the side faces of the plate, and the connections between the stringers and vertical pieces are tongue and groove connections, a track riding element on the track supported by the plate, and a door hanging from the track element downwardly between said vertical pieces.

10. A door pocket into which a door slides within a wall, the pocket including two vertical pieces parallel to one another and spaced from one another to form an entrance to the pocket, a sill at the bottom of the vertical pieces and spacing them from one another at their lower ends, a plate at the top of the vertical pieces, means connecting the upper ends of the vertical pieces to the plate for spacing them from one another at their upper ends, said means connecting the upper ends including elements movable into different positions to change said spaced relation of the upper ends of the vertical pieces, an end wall of the pocket opposite the entrance, stringers connecting the end wall with the vertical pieces, some of the stringers forming the front wall of the pocket and others of the stringers being parallel to the front wall stringers and forming the rearward wall of the pocket for holding plaster or plaster board which is to form the wall covering the pocket, means holding the stringers at predetermined spacing from one another and the front and back walls parallel to one another, connections between the stringers of the front wall and one of the vertical pieces, said connections including end faces on the stringers shaped to engage a complementary end face on that vertical piece and to hold the vertical piece with its outer face at a predetermined distance from the plane of said front wall to allow for the thickness of plaster or other covering on the wall, the shape of the end face on one side of said connections being unsymmetrical with respect to the thickness.

of the part on which the unsymmetrical face is formed so that turning the unsymmetrical end face upside down moves the vertical piece inwardly or outwardly with respect to the stringers and changes the distance of the outer face of the vertical piece from the plane of said front wall to accommodate a different thickness of wall covering, the parts of the frame being connected so that they

can be turned upside down to thus change the position of the vertical piece.

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