June 2, 1936. L. G. JACOBSON 2,043,174

ENTRANCE ENCLOSURE STRUCTURE

Filed Aug. 13, 1932

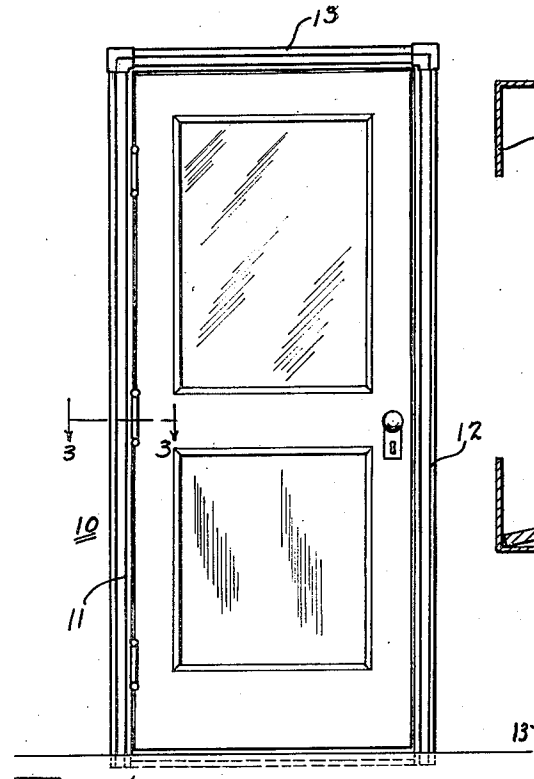


FIG 1

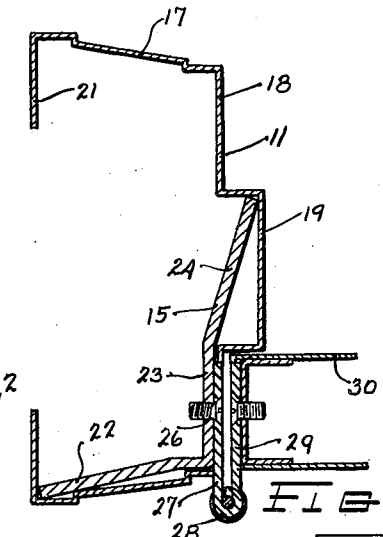


FIG 3

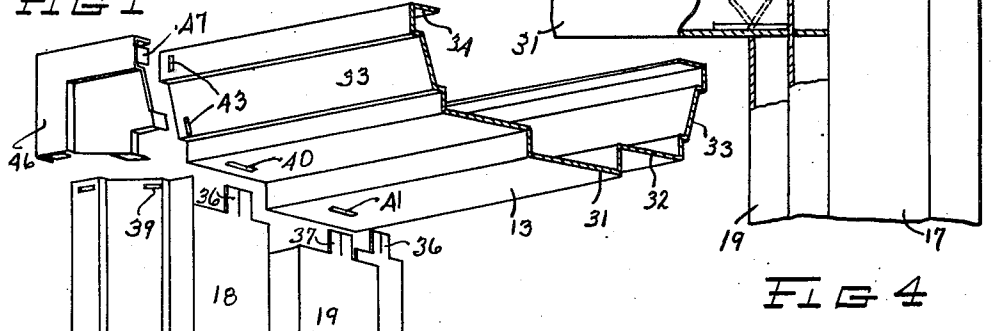


FIG 4

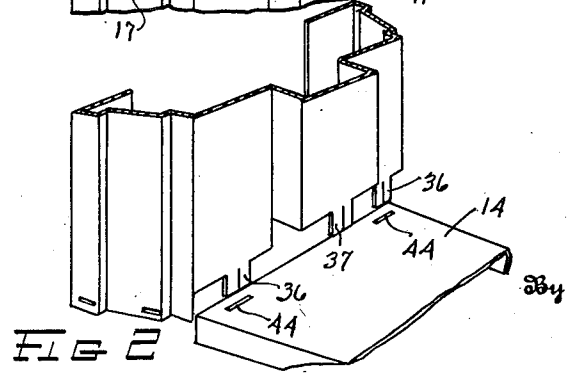


FIG 2

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ENTRANCE ENCLOSURE STRUCTURE

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Application August 13, 1932, Serial No. 628,700

4 Claims. (Cl. 189—46)

This invention relates to an improvement in entrance enclosures, and particularly to the construction thereof.

The preferred embodiment of the invention discloses an entrance enclosure comprised of a plurality of elements susceptible of arrangement during assembly to permit installation of a door from either face or side of the enclosure.

Heretofore, little or no attempt has been made to produce an entrance enclosure frame of knock down construction. This has been due principally to the belief that such a design would be of insufficient strength, rigidity, and permanence, thus nullifying any advantages which might obtain through the manufacture of a less costly product. Careful study and development have, however, resulted in producing an entrance enclosure frame made up of four principal elements, namely, side jambs, head jambs, and spreader. These elements, when properly joined together, produce a rigid enclosure structure capable of meeting all necessary requirements.

The main objects of the provision of an entrance frame made in accordance with this invention are: (1) Simplicity and inexpensive manufacture. (2) Assembly at the place of erection. (3) Less shipping costs by reason of small space requirements. (4) Capable of accommodating a right or left hand door or of swinging from either face of the enclosure. (5) Adjustable hinge and strike reinforcement plates.

Other and further objects of the invention may be more clearly understood from a consideration of the following specification which is taken in conjunction with the accompanying drawing, and in which

Figure 1 is a front elevation of an entrance enclosure frame, employing one form of the invention;

Figure 2 is a fragmentary exploded view of the method of joining the side and head jambs;

Figure 3 is an enlarged horizontal sectional view through the hinge side of the structure, being taken substantially on the line 3—3 of Figure 1; and

Figure 4 is a fragmentary view of the jointure of the side and head jamb.

Referring to the drawing, the invention, generally indicated by the reference numeral 10, is shown to be comprised of side jambs 11 and 12, head jamb 13, and spreader 14. The side jambs 11 and 12, with the exception of the difference in location of the hinge and strike reinforcing plates 15, are identical and therefore only one will be described in detail.

Figure 3 of the drawing shows the jamb to be of channel form having side walls 17 connected by a jamb face 18 which is formed with a stop 19 preferably located centrally of and dividing the face 18 into two parts. The free ends of the side walls 17 are terminated by inturned flanges 21. The length of these flanges is optional, since their principal purpose is to provide a seat for the portion 22 of the reinforcing plate 15. If it is definitely known that the owner of a building, in which a structure of this class is to be erected, will not change the plans and require a door for the enclosure to swing from the opposite side or face from that originally intended, the stop 19 may be located toward one or the other faces of the enclosure. However, since this assurity is usually wanting, the side and head jambs are made with a centrally disposed stop portion which permits full flexibility in locating the door. The reinforcing plate 15, as stated above, includes a portion 22 which rests against the jointure of the side wall 17 and flange 21. The remainder of the plate is formed with a portion 23 directed at right angles to the portion 22. This portion abuts a part of the inner face 18 of the side jamb. From this portion the plate continues at a slight angle to form a supporting portion 24 for the stop 19. The plate is snapped into place, being held by the spring tension of the jamb, and is vertically adjustable to permit alignment of the drilled and tapped openings 26 with the openings in the face 18 and the leaf 27 of the hinge 28. The other leaf 29 of the hinge is secured to a door 30 in any expedient manner.

The head jamb 13 is identical in construction with the side jambs 11 and 12, being provided with a stop 31 with which are connected face portions 32. The side walls 33 of the head jamb are likewise terminated by inturned flanges 34. The purpose of these flanges in the head jamb, beyond giving uniformity to the structure, is to provide accommodation for a check reinforcing plate (not shown).

The side jambs 11 and 12 are each formed with the walls 17 of slightly greater length than the face 18. Similarly, the stop 19 is of less length than the face 18, thus producing two steps from the side walls 17 to the stop 19, at either end of the side jamb, for the purpose of accommodating the downwardly projecting face portion 32 and stop 31 of the head jamb 13. Projecting beyond the ends of both portions of the face 18 are bendable tongues 36, similar tongues 37 being provided at the upper and lower ends of the stop 19. In the portions of the side walls 17, which

extend above and below the face 18 of the jamb, suitable horizontally disposed slots 39 are cut. The head jamb 13, since it is to be engaged with the side jambs 11 and 12 by means of tongues 36 and 37, is provided with slots 40 and 41 in the face portion 32 and stop 31. The side walls 33 of the head jamb, are provided with slots 43, these slots corresponding to the slots 39 in the side walls 17 of the side jamb 11.

The spreader 14 is for the purpose of securing the lower ends of the side jambs in proper spaced relationship and is joined to said jambs by projecting the jamb tongues 36 through slots 44 in the spreader. The spreader is attached to the face portion 18 and not to the stop 19, the gap occurring between the end of the stop 19 and the face of the spreader being concealed from view when the enclosure structure is assembled and the sill is in place.

It will be noted (see Figure 2) that the side and head jambs do not overlap each other to any extent, and in consequence the corner connection of these elements is not complete. This corner is filled by a suitable corner plate 46, which is formed with a face having the same contour as the faces of the side walls 17 and 33 of the side and head jambs respectively. Angularly directed tongues 47 are formed on the plate 46, being engageable with slots 39 and 43 of the side and head jamb. While the corner pieces 46 complete the structure, they also serve the purpose of rigidifying the right angle connection between the side and head jambs.

As stated above, the enclosure structure is of the knock down type and may therefore be shipped knocked down and assembled at the time of installation. Since the side jambs 11 and 12 have identical upper and lower ends, it does not matter which end is placed up nor which of the jambs is located on the right or left side. To complete the interchangeability, the upper and lower hinges 28 are spaced the same distance from the top and bottom of the enclosure, the center hinge being located midway of the end hinges and in horizontal alignment with the latch plate. It may thus be readily understood that at the time of erection, the door may be hinged from either side of either face of the enclosure. The side jambs 11 and 12 are mounted on the spreader 14 with the tongues 36 projecting into the slots 44. The head jamb 13 is next mounted on the side jambs by projecting the tongues 36 and 37 through the slots 40 and 41. Attention is directed to the fact that these tongues are split in order that when projected through the slots, one portion of the tongue may be bent in one direction and the other in the other direction, for the purpose of preventing dislocation of the connected jambs. The corner pieces 46, may now be mounted. The tongues 47 are projected through slots 39 and 43 and, when bent over, secure the corner pieces in place as well as rigidifying the connection between the side and head jambs.

The plates 15 serve the dual purpose of rigidifying the side jambs and reinforcing said jambs at the location of the hinges, strike plate and check. Since the jambs are so formed that the door may be disposed along either side of the enclosure, the reinforcing plates must, of necessity, be reversible. For example, if it is desired to locate the door on the opposite side of the stop 19 from that which is shown in Figure 3 of the drawing, the plate 15 would be reversed and serve the purpose of reinforcing the side jamb equally well.

Although applicant has shown and described only one modification of this invention, it will be apparent to those skilled in the art that other modifications or adaptations may be made without departing from the spirit and scope of the invention as defined in the hereunto annexed claims.

Having thus set forth my invention what I claim as new and for which I desire protection by Letters Patent is:—

1. In a knock down entrance enclosure frame for receiving and supporting a door, a jamb, a reinforcing plate, means on said plate, said means being snapped into engagement with certain of the flanges of said jamb to frictionally support said plate, said plate serving to engage and support an element of door hardware.

2. In an entrance enclosure frame having a jamb, flanges on the jamb forming pockets, a plate in the jamb, the body of the plate abutting the jamb, angular portions extending from the body of the plate, said angular portions being projected into said pockets to locate said plate with respect to the jamb, a body of said plate registering with an opening in the jamb and serving to engage and secure an element of door hardware.

3. In an entrance enclosure frame having a jamb, flanges forming a door stop in said jamb, further flanges forming a pocket similar to a pocket formed by said door stop, a reinforcing and supporting plate in the jamb, said plate including portions extending from the body thereof into said stop and said pocket to rigidify said jamb against lateral collapse, the body of said plate registering with an opening in the jamb and serving to engage and secure an element of door hardware.

4. In an entrance enclosure frame having a jamb, flanges forming a door stop in the jamb, further flanges forming a pocket similar to a pocket formed by the door stop flanges, a reinforcing and supporting plate in the jamb, said plate including a body portion registerable with an opening in the jamb, said body portion serving to engage and support an element of door hardware, and flanged portions on said plate, one of said flanged portions being seated in the pocket formed by said stop, the other of said portions being seated in said pocket, said plate, when mounted, spreading walls of the jamb and being held in position by the spring tension of the jamb walls.

LUDWIG G. JACOBSON.