May 26, 1942. J. P. PACA 2,284,012

BUILDING CONSTRUCTION

Filed Aug. 3, 1940

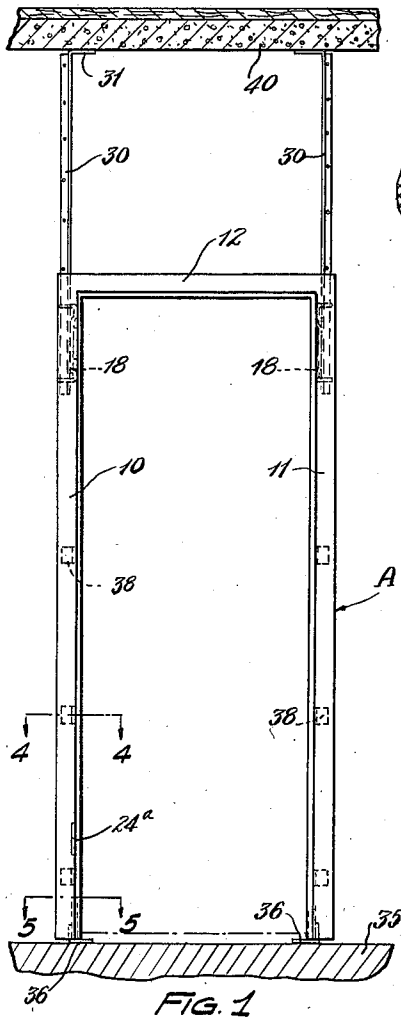


FIG. 1

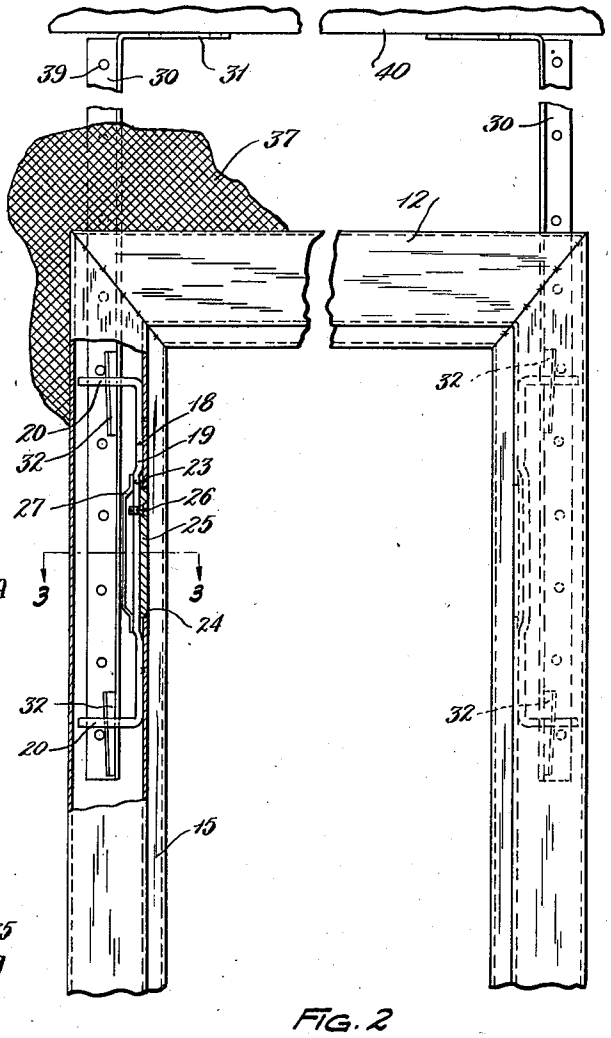


FIG. 2

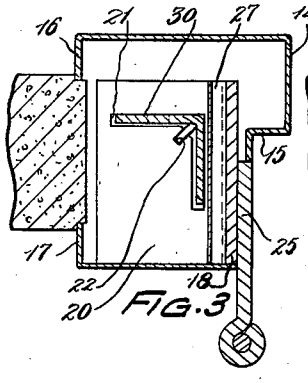


FIG. 3

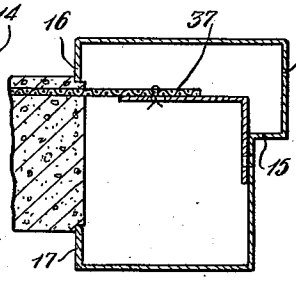


FIG. 4

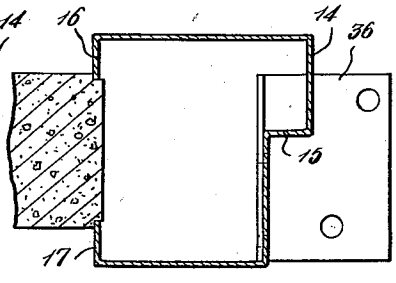


FIG. 5

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BUILDING CONSTRUCTION

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3 Claims. (Cl. 189—46)

This invention relates to building construction, and more particularly to a new and improved door frame structure for all plaster walls.

Heretofore many different types of metal door frames for all plaster walls have been provided; however, such frames have embodied features which for various reasons were not entirely desirable from a commercial standpoint. For example, many frames were of a relatively rigid construction and therefore were not easily adaptable to varying distances between ceiling and floor. Where adjustability was an inherent feature of the construction, the multiplicity of parts employed greatly increased the initial cost of the frame, as well as the cost of erection. Furthermore, those types of frames which were completely fabricated at the shop, in most instances were cumbersome and awkward to handle in shipping.

By the present invention, there is provided a door frame for all plaster walls which minimizes or eliminates the drawbacks inherent in prior types of construction, and is simple and economical to manufacture and ship. The frame embodies characteristics of adjustability whereby compensation may be made for variations in the distance between floor and ceiling. The simplicity of construction readily lends itself to a greatly reduced cost of erection.

Various objects of this invention will appear in the following description and appended claims, reference being had to the accompanying drawing forming a part of this specification, wherein like reference characters designate corresponding parts, and wherein:

Figure 1 is a fragmentary front elevation illustrating the door frame unit of this invention, assembled in position in the wall of a building;

Figure 2 is an enlarged fragmentary detailed elevation of the upper portion of the door frame;

Figure 3 is an enlarged sectional view taken on the line 3—3 of Figure 2;

Figure 4 is an enlarged sectional view taken on the line 4—4 of Figure 1; and

Figure 5 is an enlarged sectional view taken on the line 5—5 of Figure 1.

With reference to the drawing, the frame A comprises the upright side members 10 and 11, and cross member 12, being joined together by means of welding and the like. The frame is uniform, substantially channel-like in cross section throughout, the frontal section 14 of the side members of the frame being offset to form a door stop 15. The sides of the frame are inwardly bent as at 16 and 17 to exercise a locking engagement with the plaster, or other medium of which the wall is made.

A bracket member 18, having a web portion 19, and spaced end flanges 20, is mounted within the channel of each of the upright members 10 and 11, adjacent the upper ends thereof. The web portion of the brackets is suitably spot-welded to the inner surface of the frontal section of the upright members, with the flanged ends extending outwardly therefrom. Aligned angulated slots 21, are formed in the end flanges 20, the apex of which are notched as at 22. The web portion 19 of the bracket is deformed inwardly as at 23, and forms with a cut-away portion 24 in the frontal section of the frame member 10, a recess which receives a hinge plate 25, which serves to support the upper part of the door. The deformed part 23, is provided with tapped apertures which receive screws 26 for maintaining the hinge plate in position within the recess. A cover plate 27 is secured to the bracket 19 to protect the apertures from becoming clogged with plaster. Adjacent the lower end of the upright member 10 is a second cut-away portion 24a in which is mounted a hinge plate for supporting the lower portion of a door.

Strut members 30 extending between the frame and the ceiling 40, serve to anchor the frame thereto, the upper ends of the struts being secured to the ceiling 40 by means of the flanges 31 formed thereon. The struts are substantially angular in cross-section and extend from the ceiling downwardly through the aligned angulated slots of the flanges 20 on the bracket 18. The lower extremities of the struts are frictionally secured within the slots by means of wedges 32 which are driven into the notches 22 and force the strut against the side of the slots. The struts, by means of the wedges, are frictionally held in fixed position with respect to the frame members. Angulated clips 36, having one leg welded to the lower ends of the side members, and the other leg adapted to be secured to the floor 35, serve to anchor the bottom of the frame to the floor.

The expanded metal lath 37, upon which the plaster wall is formed, is secured to the frame A by means of wires engaging perforations 39 in the struts 30 and perforated clips 38, secured to the uprights 10 and 11, at spaced points therealong.

The frame A is adapted to be completely fabricated in the shop and is shipped to the place of installation as a compact unit, the strut members 30 being assembled within the brackets 18 during shipment. In installing the frame it is only

necessary to place the frame in the desired position, secure the upper ends of the struts **30** to the ceiling, anchor the bottom clips to the floor, and drive the wedges **32** into the notches **22** and the frame is ready to receive the metal lath.

It is thus readily seen that there is hereby provided a door frame which may be simply and economically constructed in the shop and readily installed with a considerable savings in construction cost, and that modifications may be made in such construction without departing from the spirit of the invention as defined by the appended claims.

I claim:

1. The combination with a frame for a wall opening comprising side and cross members, of a bracket adapted to be secured within the channel of said side member and having a portion extending outwardly therefrom, said outwardly extending portion being provided with a slot, and a second slot intersecting the first slot near the center thereof, a strut member having one end adapted to be anchored to a ceiling and the other end slidably received in the slot in the outwardly extending portion of said bracket and a relatively thin tapering wedge member adapted to engage in said second slot and serving to force said strut member against the wall of said slot.

2. The combination with a frame for a wall opening comprising side and cross members joined together, of bracket members adapted to be secured within the channel of said side members adjacent the top thereof and having each of its ends outwardly disposed, each of said outwardly disposed ends being provided with a slot of substantially V shape, and a second slot intersecting the first slot at the vertex thereof, strut members having one end thereof adapted to be anchored to a ceiling and the other end slidably received in the slots in said bracket ends, a relatively thin tapering wedge member adapted to engage in said second slot and serving to force said strut members against the walls of said slots.

3. The combination with a frame for a wall opening comprising side and cross members rigidly joined together, the frame members being of generally channel shape in cross section, of bracket members having an elongated plate adapted to be secured within the channel of said side members adjacent the top thereof and having each of its ends disposed at substantially right angles thereto, each of said right angularly disposed ends being provided with an opening therethrough, said opening comprising a pair of slots intersecting at substantially right angles, with a third slot intersecting the first pair of slots at the vertex thereof, strut members having one end adapted to be anchored to a ceiling and the free end slidably received in the openings in said bracket ends, said struts having in cross section a substantially V shape, a relatively thin tapering wedge member adapted to engage in said third slot and serving to force the strut members against the walls of said slots.

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