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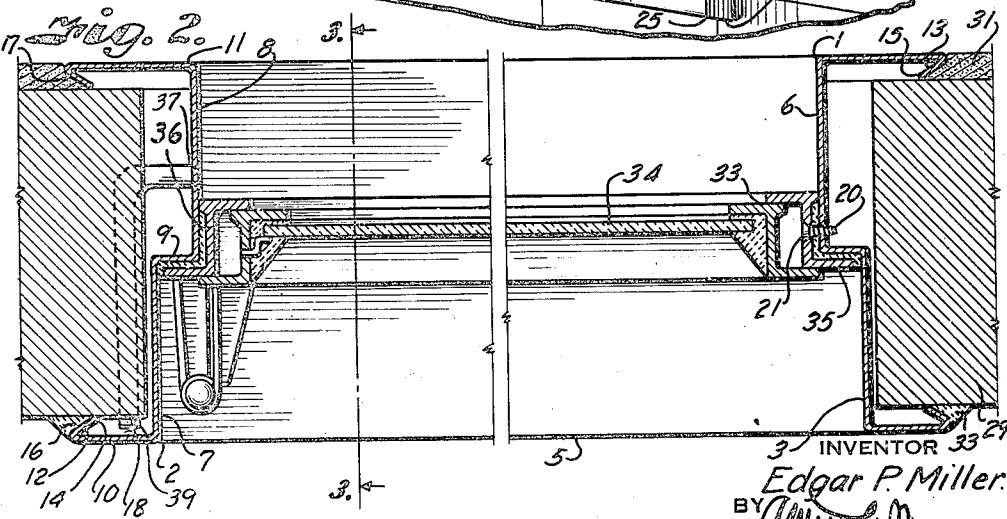
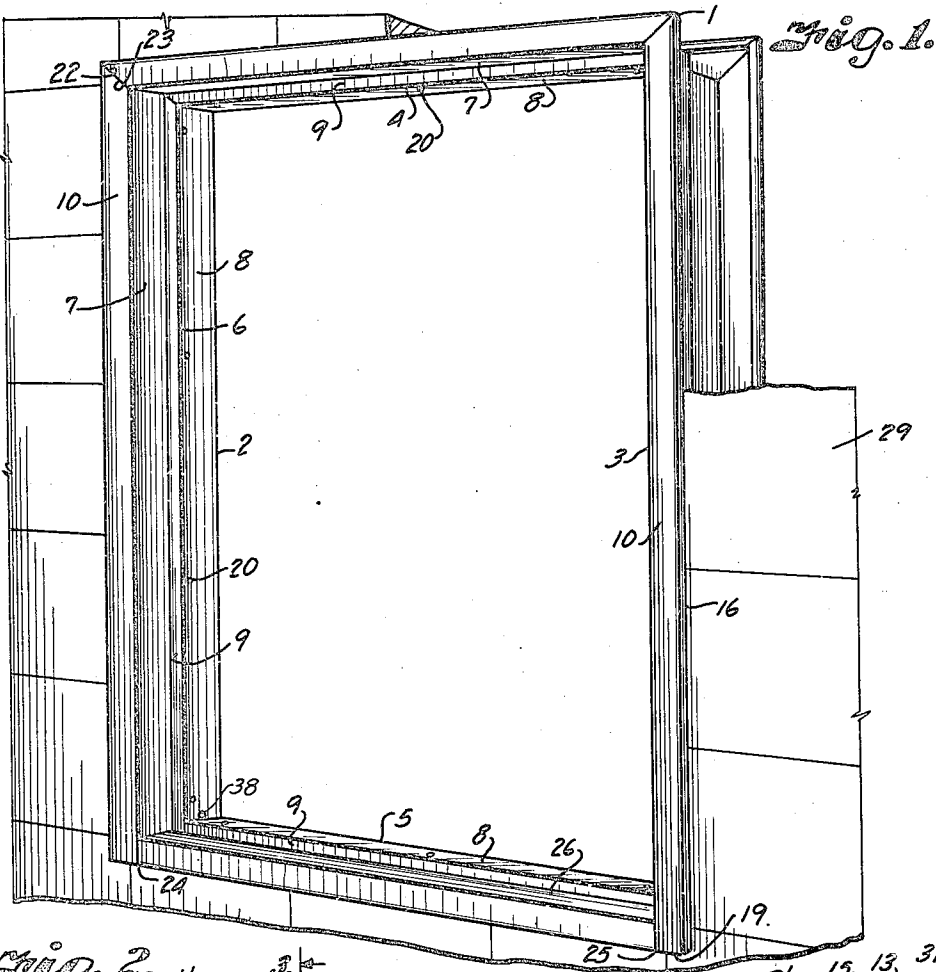
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2,326,549

FRAME FOR WALL OPENINGS

Filed Nov. 29, 1940

2 Sheets-Sheet 1



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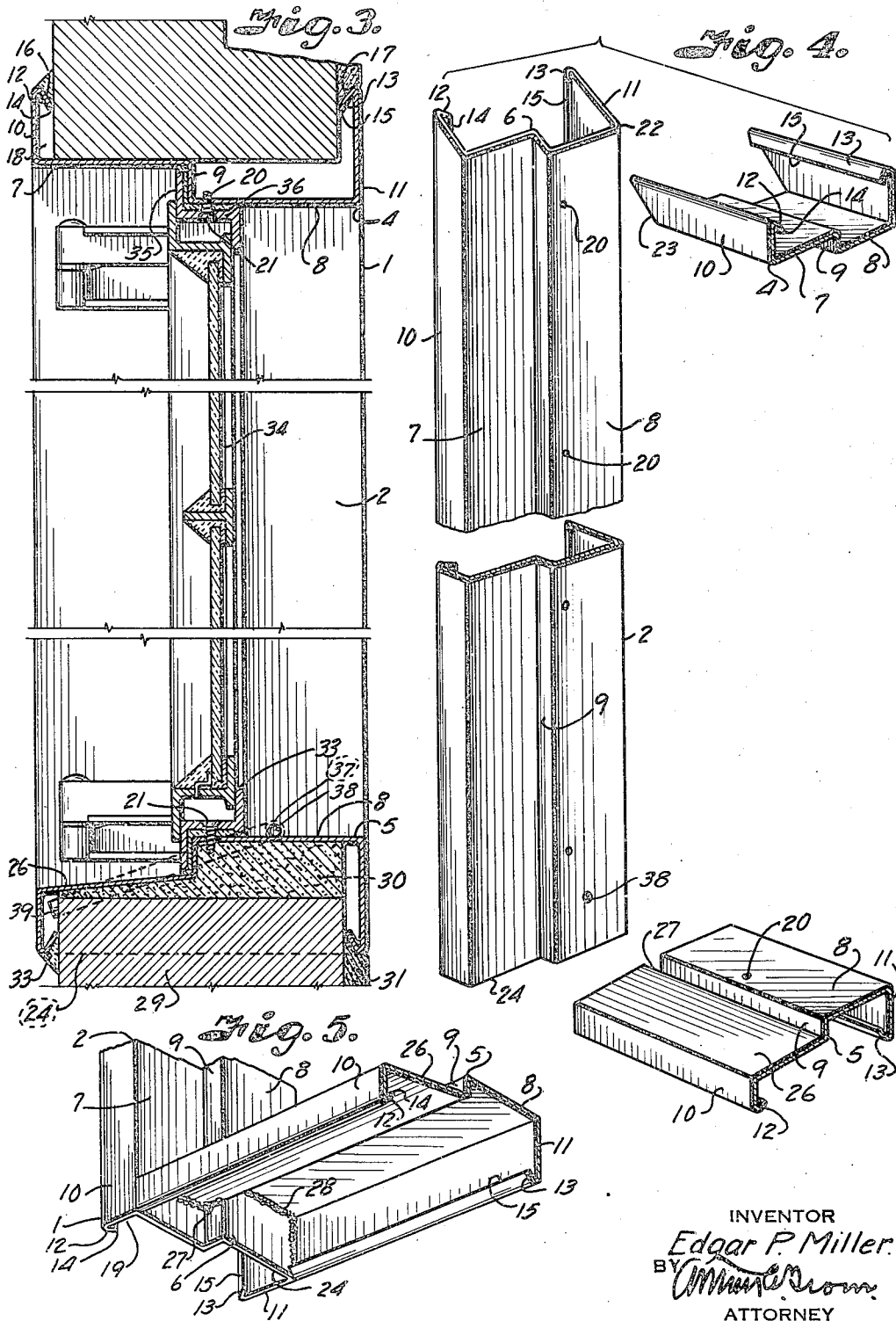
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FRAME FOR WALL OPENINGS

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2 Sheets-Sheet 2



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FRAME FOR WALL OPENINGS

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4 Claims. (Cl. 189—75)

This invention relates to a building construction, and more particularly to framing for the door and window openings of a building, and has for its principal object to provide a unitary frame adapted for easy and accurate installation without the use of bucks, and other secondary framing.

Other objects of the invention are to provide a frame constructed to retain its original shape in a wall structure throughout the life of a building in which it is installed; to provide a frame by which a masonry wall is adapted to be automatically plumbed, thereby assuring a straight wall with a minimum skill and effort on the part of the mason; to provide a frame equipped with unitary plaster and stucco grounds and arranged for effecting a weather-tight seal; to provide a frame construction wherein the side jambs are arranged for firm support on a wall structure to support the upper wall directly upon the header jamb of the frame, thereby avoiding the use of lintels and like masonry supports; to provide a frame constructed with drain channels within the outer casings; and to provide for adequate caulking of the outer casings with respect to a wall.

Further objects of the invention are to provide a frame construction that permits installation of a completely glazed sash after completion of a building, as distinguished from the present method of installing metal sash; and to provide a simple, weather-tight mounting of the sash in the window-frame.

In accomplishing these and other objects of the invention, as hereinafter pointed out, I have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a portion of a wall equipped with a window-frame embodying the features of the present invention, and illustrating the frame prior to installation of the sash.

Fig. 2 is a horizontal section through the wall and window-frame and showing the sash installed.

Fig. 3 is a vertical section on the line 3—3 of Fig. 2.

Fig. 4 is a detail perspective view of a side jamb of the window-frame and adjacent ends of the sill and header members shown in spaced relation prior to assembly.

Fig. 5 is a detail perspective view of a completed joint between one of the side jambs and sill.

Referring more in detail to the drawings:

1 designates a window-frame constructed in accordance with the present invention, and which includes side jambs 2—3, a header jamb 4, and a sill 5. The members 2, 3, 4 and 5 are all sub-

stantially channel-shaped and include jamb face portions 6 of a width corresponding to the wall thickness and have outer portions 7 offset outwardly from inner portions 8 by an offsetting portion 9 forming a substantially flat seat or shoulder extending transversely and at substantially right angles with the portions 7 and 8.

Extending laterally and outwardly from the outer edges of the portions 7 and 8 are casing-like flanges 10 and 11 spaced from the outer and inner faces of the wall structure distances corresponding to the plaster thickness on the inner side, and a stucco thickness on the outer side, or to accommodate a caulking material later described. The peripheral edges of the casing portions terminate in inwardly angularly extending flanges 12 and 13, with the edges 14 and 15 thereof spaced apart a sufficient distance to receive wall blocks snugly therebetween and provide a gauge for automatically plumbing the wall during the construction thereof as later described. The flanges 12 and 13 also form pockets 16—17 to key the wall finish such as the plaster or stucco or receive the caulking material. The outer flanges 12, spacing the casing portions 10 from the wall, maintain drainage channels 18 whereby any moisture which might seep into the wall may readily drain therethrough and discharge through outlets 19 at the lower ends of the side jambs.

The portions 8 of the frame members are provided with spaced apertures 20 through which fastening devices 21 are extended for attaching the sash, as later described. The upper ends of the side and header jambs are mitered as indicated at 22 and 23, and welded together to form a rigid, weather-tight joint. The lower ends of the side jambs are cut on right angles to form a foot or base 24 and 25, adapted to seat directly upon the masonry structure below the window to support the load of the wall structure above the window opening directly upon the header jamb, thereby making separate lintels unnecessary.

The sill 5 has the upper web portion 26 thereof, which corresponds with the portion of the side jambs, sloping downwardly, as clearly shown in Fig. 3, to drain the water therefrom in the manner of an ordinary sill. Otherwise the cross-sectional shape is identical to the jamb members of the frame. The ends of the sill are notched on the inner side of the frame from the offset portion 9 through the inner casing flange or apron, as indicated at 27, whereby the ends of the sill are adapted to fit squarely against the portions 7 and 8 of the side jambs and to be welded thereto as indicated at 28 in Fig. 5.

When the window-frame is thus formed and welded together, it is of solid, unitary construction and adequately retains its shape so as to prevent warping or binding of the sash installed

therein and to adequately support the load of the upper wall structure without the use of bucks, secondary framing, or lintels, thereby not only simplifying the window-frame installation, but also the building construction.

In installing a window-frame constructed as described in a masonry building, for example one constructed of preformed blocks 29, the blocks are laid up to the bottom level of the window openings and a bedding mortar 30 is placed thereon. The unitary frame is then placed on the bedding mortar so that the foot portions 24 and 25 of the side jambs rest squarely upon the upper face of the blocks. The frame is then plumbed perpendicularly and temporarily supported in position, usually by bracing extending from the header jamb to the floor structure (not shown). The flanges 12 and 13 of the inner and outer casing portions of the frame then form gauges or guides to receive and align the blocks therebetween as the wall construction progresses upwardly in the direction of the header jamb of the frame. The wall construction is thus automatically plumbed incidental to plumbing of the window-frame so that it may be constructed with a minimum skill on the part of the mason. When the top of the window-frame is reached, the upper blocks may be placed directly upon the portion 7 of the header jamb so that it serves the purpose of a lintel.

When the building is plastered, the plaster 31 may be applied directly to the inner face of the wall and pressed into the pocket 17 formed between the wall and the flanges 13 to a thickness flush with the outer face of the inner casing portions of the frame, as clearly shown in Figs. 2 and 3, the plasterer using the inner faces of the casing portions as grounds.

If the outer face of the wall is to be stuccoed, the stucco may be applied in a similar manner, using the outer casing portions of the frame as grounds, or the pockets 16 may be filled with a suitable caulking material 32 as shown in Fig. 3, to provide a weather-tight joint between the frame and the face of the wall.

Attention is directed to the fact that the space 18 forms a drainage channel across the top of the frame and down the sides thereof, whereby any water seeping into the wall or under the frame is free to drain through the outlets 19.

After the construction is completed, the frame 33 of the window-sash, carrying the glazed panes 34, is applied within the window-frame so that the marginal flanges 35 seat against the offset portions 9 of the frame and the webs 36 telescope within the portions 8, as clearly shown in Figs. 2 and 3, a suitable caulking material 32 having been inserted between the portions of the window and sash frames. The sash frame is then secured by fastening devices, such as drive screws 21, to complete the job.

When the frames are used in climates that cause a metal frame or window to sweat and moisture to collect on the sill of the window, I have provided a drain 37 consisting of an opening 38 in the member 2 located on a level with the sill 8 of the frame and connected by a tube 39 with the drainage channels.

While I have particularly illustrated and described a window-frame, it is obvious that a door or like frame may be constructed in a similar manner without departing from the spirit of the invention.

From the foregoing it is obvious that I have provided a unitary frame for wall openings which is readily installed without the use of secondary frames and which facilitates plumbing of the wall structure. It is also obvious that the frame is constructed to adequately support the load of the wall above the frame and to retain its shape throughout the life of the building. It is also obvious that I have provided a window-frame construction that is weather-tight with respect to the wall structure when the installation is completed.

What I claim and desire to secure by Letters Patent is:

1. A frame for the opening of a masonry wall adapted to be plastered on at least one side including, side jambs of channel-like cross-section to form a jamb portion and casing portions spaced from the wall a distance substantially equal to the thickness of the plaster, and inwardly extending flanges on the casing portions to engage the masonry elements of said wall, said casing portions on the plastered side of said wall having plaster ground portions extending directly from said jamb and adapted to lie in the plane of the finished surface of the plaster to form a ground for gauging thickness of said plaster applied to the wall.

2. A frame for the opening of a masonry wall adapted to be plastered on one side including, side jambs of channel-like cross-section to form a jamb portion and casing portions spaced from the wall a distance substantially equal to the thickness of the plaster, a similarly shaped header connecting the jambs, and inwardly extending flanges on the casing portions of said jambs and header to engage the masonry elements of said wall, said casing portions on the plastered side of said wall having plaster ground portions extending directly from said jamb and adapted to lie in the plane of the finished surface of the plaster to form a ground for gauging thickness of said plaster applied to said wall.

3. A frame for the opening of a masonry wall adapted to be plastered on one side including, side jambs of channel-like cross-section to form a jamb portion and casing portions spaced from the wall a distance substantially equal to the thickness of the plaster, similarly shaped header and sill members connecting the jambs, and inwardly extending flanges on the casing portions of said jambs, header, and sill members to engage the masonry elements of said wall, said casing portions on the plastered side of said wall having plaster ground portions extending directly from said jamb and adapted to lie in the plane of the finished surface of the plaster to form a ground for gauging thickness of said plaster.

4. A jamb member for a frame of the character described including, a jamb portion having an offset for seating a closure and having flange portions extending at right angles from the edges of the jamb portion to form combination casings and plaster grounds for said jamb and having inwardly extending flanges on the outer edges thereof and spaced apart for receiving tiles composing a wall in which the frame is adapted to be inserted.

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