July 26, 1938. R. D. HAUGAARD 2,124,775

WALL EDGE FRAMING STRUCTURE

Filed Dec. 15, 1937

FIG. 1.

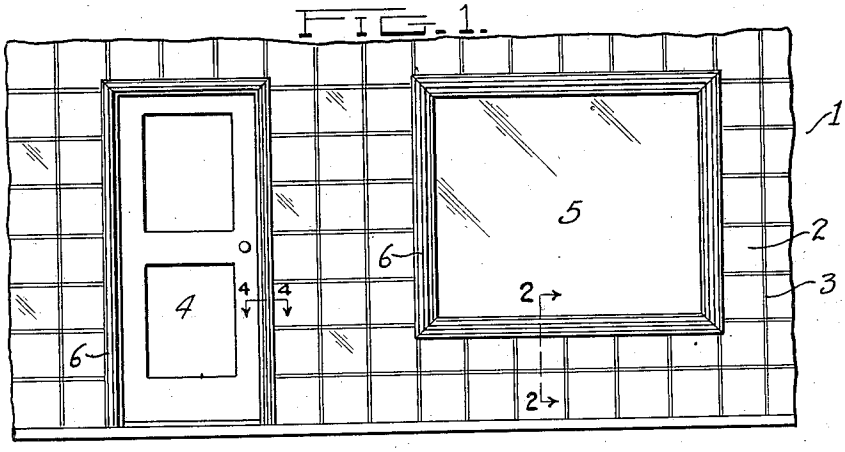


FIG. 2

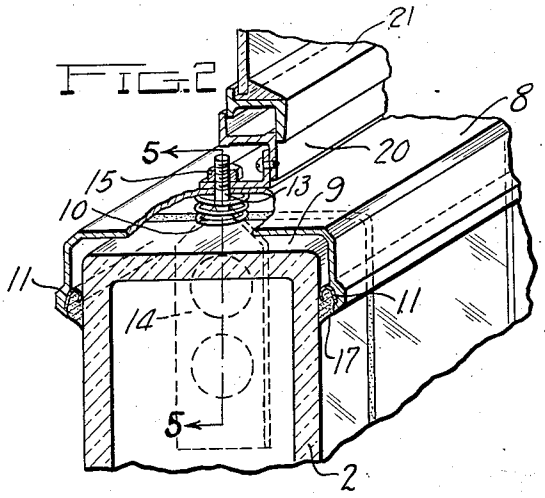


FIG. 3.

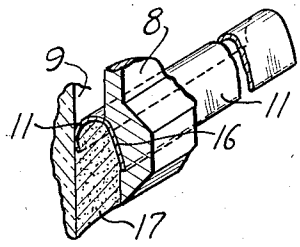


FIG. 4.

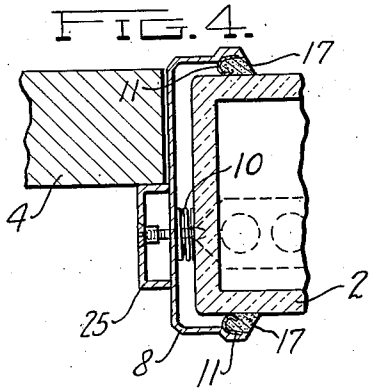
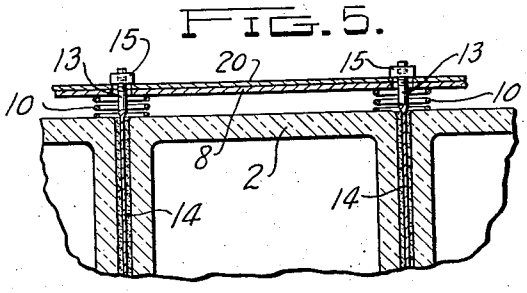


FIG. 5.



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WALL EDGE FRAMING STRUCTURE

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12 Claims. (Cl. 189—46)

This invention relates to framing structures for the edges of walls, and especially to the edges of walls composed of blocks of glass or other ceramic material.

The primary object of this invention is to provide novel means of a simple, efficient and inexpensive character, for securely mounting casings or framing structures in the door and window openings or at the end edges of walls composed of glass blocks, or the like, in a manner to allow for relative expansion of the casing and wall parts due to difference in the coefficient of expansion of the materials thereof.

Other objects and advantages of the invention will be apparent from the following detailed description thereof, and from the accompanying drawing, in which:

Figure 1 is a face elevation of a wall having openings therein in which are disposed casings embodying the features of the invention; Fig. 2 is an enlarged perspective sectional view taken on the dotted line 2 in Fig. 1, with a part broken away; Fig. 3 is an enlarged fragmentary detail in perspective of the side spring joint feature shown in Fig. 2; Fig. 4 is a fragmentary section on the line 4—4 in Fig. 1, and Fig. 5 is a central longitudinal section on the line 5 in Fig. 2.

Referring to the drawing, 1 designates a wall composed of blocks 2, preferably of glass or other ceramic material, with plaster or cement 3 in the joints therebetween, as is customary with such walls, and having a door 4 and a window 5 mounted in frames 6 disposed in openings therein. The frames 6 for the door and window and their manner of mounting, so far as the present invention is concerned, are substantially the same and need not, therefore, be particularly distinguished.

Each frame 6, where it coacts with and ties into the wall structure, comprises channel strips 8 usually of metal, having their channels of a cross-sectional size to receive the respective edge portion of the wall 1 and to provide a space 9 therebetween.

In order to maintain a spacing between a wall edge and the bottom and side walls of a channel member 8, resilient compression members, such for instance as coil springs 10, are placed at intervals between the bottom portion of the channel member and the wall edge lengthwise thereof, and spring strips 11 are disposed between one or both side flanges of the channel member and the wall lengthwise thereof in closing relation to the space 9. If a spring strip 11 is used at one side only of the wall, the side flange of the channel strip disposed at the other side of the wall will be in contact with the wall. It is preferable, however, in most cases to employ a spring strip 11 at each side of the wall.

The compression members 10 are held in position within the space 9 by encircling the outwardly projecting stem ends 13 of tie strips 14, which strips have their inner end portions, in the present instance, of flat form and anchored in the cement 3 between the adjacent edge blocks of the wall. The outer stem ends of these tie strips project through registering openings in the bottom or web portion of the associated channel member 8, and nuts 15 are threaded thereon without the channel member to limit its outward movement relative to the wall edge.

The spring strips 11 are bowed or substantially U-form in cross-section to provide an inner leg for side engagement with the associated wall side and an outer leg for engagement with the inner side of the side flange or leg portion of the channel member 8. Each side flange or leg of the channel member is preferably provided near its outer edge with a longitudinally extending recess 16 into which the outer leg of the associated spring strip 11 seats, as shown. The strip 11 is forced into the respective edge portion of the space 9 and when in register with the recess 16 springs into engagement therewith. The normal width of the spring strip is preferably greater than that between the wall and recess so that the strips at opposite sides of the wall will be under compression and will act to yieldingly center the channel member 8 in a resilient manner thereon. When a casing channel has been thus positioned on a wall edge, the space 9 without the strips 11 is filled with a suitable non-hardening mastic or calking material 17 to give the frame mounting a finished appearance and for weather sealing purposes.

In Fig. 2, a metal jamb structure 20 for a window sash 21 is shown as secured to the frame channels 8 by the tie strips 14 and coacting nuts 15. In Fig. 4, a channel form of stop strip 25 for the door 4 is shown as secured to the frame channel 8 at the outer side of its web in the same manner as shown for the jamb frame 20, except that the nut member is of the countersunk screw-head type.

It is apparent that with the present invention, a channel frame member can be easily, quickly and simply attached to a wall edge of the class described in a manner to permit relative contraction and expansion thereof by merely positioning

resilient cushioning members 16 between the web portion of the channel and the wall, and positioning spring strips 11 between one or both side flanges of the channel and the wall, and the mastic material which is usually packed into the entire space between the wall and frame channel is obviated, except possibly for such material as is disposed without the spring strips 11.

It is further apparent that while the invention is primarily intended for use in connection with walls of the glass block type, and with metal framing structures for edge portions of such a wall, both the wall and the framing structure may be of other materials.

I wish it understood that my invention is not limited to any specific construction, arrangement or form of the parts, as it is capable of numerous modifications or changes without departing from the spirit of the claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent, is:

1. The combination with a wall edge, of a framing structure therefor including a channel member receiving the wall edge in spaced relation, resilient spacing members disposed at intervals between the channel member bottom and wall edge, resilient spacing members disposed between the channel member sides and wall, and means for anchoring the channel member to the wall to limit the relative outward movements thereof.

2. The combination with a wall edge, of a framing structure therefor including a channel member embracing the wall edge with its bottom and at least one side flange in spaced relation thereto, resilient members interposed under compression in the space between said bottom and flange or flanges and the wall in spacing coaction therewith, and means anchored in the wall and engaging the channel member to limit its outward movement relative to the wall.

3. The combination with a wall edge, of a framing structure therefor including a channel member embracing the wall edge with its bottom and at least one side flange in spaced relation thereto, resilient members interposed under compression in the space between said bottom and flange or flanges and the wall in spacing coaction therewith, one of said resilient members being of spring metal strip form in cross-section and extending lengthwise of the channel member, and means anchored in the wall and engaging the channel member to limit its outward movement relative to the wall.

4. The combination with a wall edge, of a framing structure therefor including a channel member embracing the wall edge, with its bottom and at least one side flange in spaced relation thereto, resilient members interposed under compression in the space between said bottom and side flanges and the wall in spacing coaction therewith, the resilient members between the channel bottom and wall being of coil spring form, and means anchored in the wall and engaging the channel member to limit its outward movement relative to the wall.

5. The combination with a wall edge, of a framing structure therefor including a channel member receiving the wall edge in its channel with its bottom and at least one side flange in spaced relation thereto, a plurality of coiled compression springs disposed under compression between the channel bottom and wall and spring strips of substantially U-form in cross-section interposed under compression between one or both side flanges of the channel member and the wall, and means anchored in the wall and engaging the web portion of the channel member to limit its outward movement relative to the wall.

6. The combination with a wall edge, of a framing structure therefor including a channel member receiving the wall edge in its channel with its bottom and at least one side flange in spaced relation thereto, a plurality of coiled compression springs disposed under compression between the channel bottom and wall, spring strips of substantially U-form in cross-section interposed under compression between one or both side flanges of the channel member and the wall, and tie members anchored in the wall and having portions projecting therefrom through said coiled springs and engaging the web portion of the channel member to limit its outward movement relative to the wall.

7. The combination with a wall edge, of a framing structure therefor including a channel member receiving the wall edge in its channel with its bottom and at least one side flange in spaced relation thereto, a plurality of coiled compression springs disposed under compression between the channel bottom and wall and spring strips of substantially U-form in cross-section interposed under compression between one or both side flanges of the channel member and the wall, means anchored in the wall and engaging the web portion of the channel member to limit its outward movement relative to the wall, and a non-hardening mastic material filling the space between the the channel member and wall only at the outer sides of the spring strip members.

8. A frame structure forming a mounting for an edge of a block wall, including a channel member with its channel of a cross-sectional size to freely receive the wall edge with a space therebetween at the bottom and at least one side of the member, a resilient compressible spacing member adapted to be interposed in the space between at least one side of the channel member and the wall in spacing coaction therewith, and means for forming anchoring engagement with the wall edge and movable engagement with the web portion of the channel member to limit its outward movement relative to an associated wall.

9. A framing structure forming a mounting for an edge of a built-up block wall, including a channel member with its channel of a cross-sectional size to freely receive the wall edge with a space therebetween at the bottom and at least one side of said member, resilient compressible spacing members adapted to be interposed under compression between the web portion of the channel member and the edge of an associated wall and also between the side flanges of the channel member and such a wall, and means for anchoring the channel member to a wall edge to limit the relative outward movements thereof.

10. The combination with a built-up glass block wall, of a framing structure for an edge thereof including a metallic channel member embracing the wall edge with its bottom and sides in spaced relation thereto, resilient members disposed under compression in the space between the channel bottom and wall edge in coaction therewith, spring metal strips closing the spaces between the sides of the channel member and the wall, said resilient members and strips serving to yieldingly retain the channel member and wall in predetermined relation, and means anchoring the channel member to the wall and lim-

iting the outward movement of one relative to the other.

11. A frame structure forming a mounting for an edge of a built-up block wall, including a channel member with its channel of a cross-sectional size to freely receive the wall edge with a space therebetween at least at one side of said member, a spacing strip of channel form in cross-section and transversely resilient to adapt it to be interposed in the space between the wall and side of said member lengthwise thereof to yieldingly space the wall and member, and means for forming anchoring engagement between said channel member and the associated wall.

12. A frame structure forming a mounting for an edge of a built-up block wall, including a channel member with its channel of a cross-sectional size to freely receive the wall edge and with at least one side spaced from the associated wall, said side having an internal longitudinally extending recess, a spacing strip of channel form in cross-section and transversely resilient to adapt it to be forced into the space between a wall and said channel member side lengthwise thereof and to spring into engagement with said recess, whereby the strip is held in said space in closing relation thereto, and means for forming anchoring engagement between said channel member and associated wall.

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