Oct. 26, 1937. E. A. KLAGES 2,097,069

WALL STRUCTURE

Filed Feb. 20, 1936

FIG. 1.

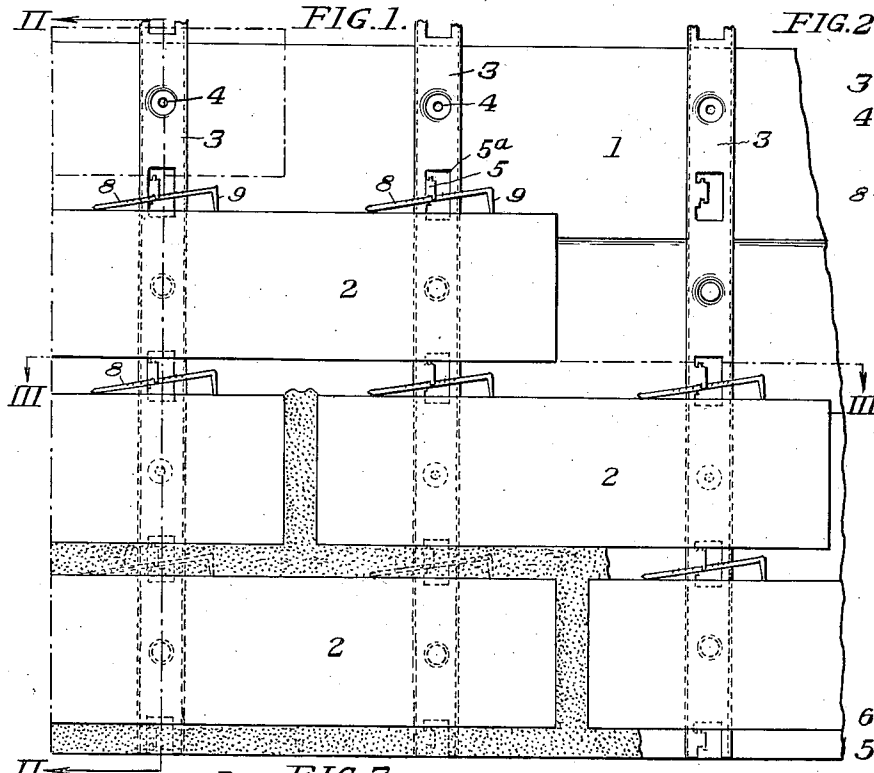


FIG. 2.

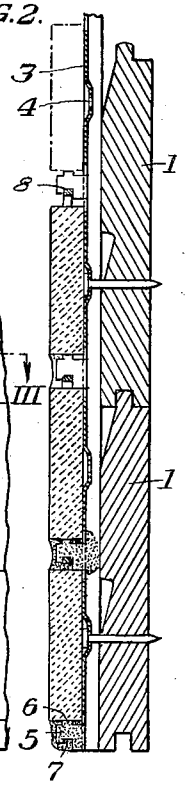


FIG. 3.

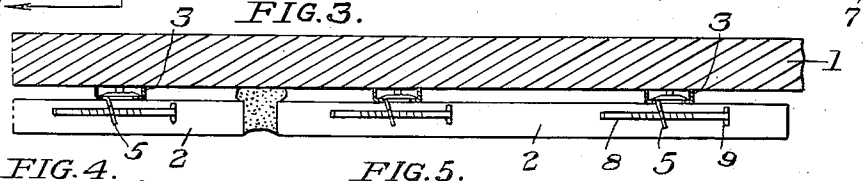


FIG. 4.

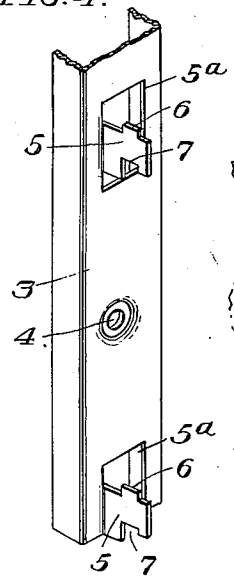


FIG. 5.

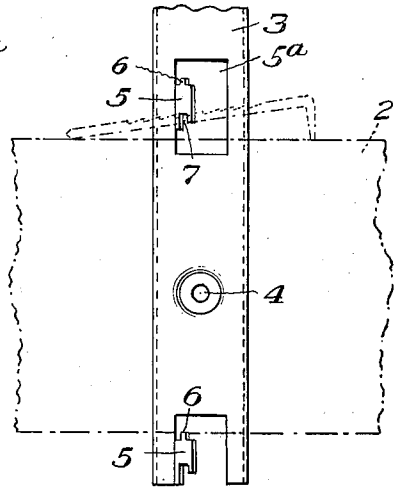


FIG. 6.

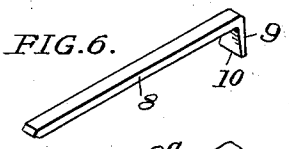


FIG. 7.

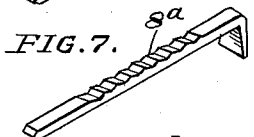
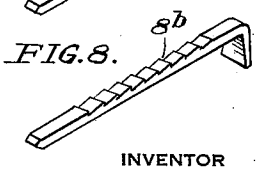


FIG. 8.



INVENTOR

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Patented Oct. 26, 1937

2,097,069

UNITED STATES PATENT OFFICE

2,097,069

WALL STRUCTURE

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Application February 20, 1936, Serial No. 64,899

15 Claims. (Cl. 72—19)

This invention relates to the application of brick, tile, or other veneer,—especially of the thinner forms,—to the walls of frame buildings and to structural elements for use in connection with such veneering. The objects of the invention are: to provide inexpensive metal strips that can be readily attached to the walls of a building to be veneered so that the courses of bricks or tiles when held thereby will be uniformly level and a like distance apart; to provide a ready and firm means for holding the bricks or tiles in place preliminary to and after being pointed with mortar, and to provide ties to hold the mortar in place between the bricks. A further object is in providing a simple construction whereby buildings may be veneered in a creditable manner without the need of skilled labor.

This invention may be readily understood from the description herein given and by reference to the accompanying drawing, in which:—

Figure 1 is a front view of a portion of a frame wall showing veneer as applied by means of the present invention, but with only part of the bricks pointed with mortar.

Figure 2 is a vertical cross-section along the line II—II of Figure 1.

Figure 3 is a horizontal cross-section along the line III—III of Figure 1.

Figure 4 is a larger-scale perspective view of a portion of one of the structural members used in this invention.

Figure 5 is a similar-scale front view of the latter showing, in broken lines, the manner of securing a brick thereon.

Figure 6 is a perspective view of one form of a wedge element adapted for holding the bricks in place.

Figure 7 is a similar view of another type of a wedge element, the notches being necessarily exaggerated to show their form.

Figure 8 is a similar view of still another type of a wedge element, the notches being also exaggerated to show their form.

Referring to the drawing, the numeral 1 designates the weather boards or other external sheathing of the building to be veneered. In this invention a series of channel members 3 is secured vertically and at properly spaced intervals on the face of the walls from the base to the top of the wall surface to be covered, the channels having perforations 4 to permit their being nailed to the walls, although they may be secured by other means, and they are set with their flanges turned inwardly to the wall. The channels may be made of relatively thin sheet metal because of the inherent rigidity in their form.

Projecting from the face of the channels, and preferably struck out from the web portion thereof, is a series of uniformly spaced vertical lugs or elements 5 for supporting the bricks 2, the vertical spaces between the lugs being sufficient to admit the widest bricks suitable for use. The top edge of each lug is provided with an upwardly projecting ear 6 located preferably near the middle in order that the bricks will be supported forward of the back edge and where pressure is not so likely to break them. The upper edge of this projection is preferably relatively short and, therefore, will bite into a brick more effectively than would a longer edge. The bottom edge of each lug has a recess 7 located preferably in line with the ear 6 for the insertion of a wedge member to bear against the upper surface of the brick, thus gripping it between the wedge member and the ear on the supporting lug immediately beneath, the gripping being adjacent or parallel to the mid plane of the brick.

The wedge members 8 may be of any suitable form, but are preferably made of rectangular wire bent and widely flattened crosswise at one end to form a wide head 9 terminating, preferably, in a straight edge 10 so that, when forced into place, both ends of the wedges will press against the upper surface of the bricks and any rocking tendency is prevented. The wedges may be smooth on the upper side but are preferably notched to engage the under surface of the lugs in order to prevent any endwise slipping and consequent loosening of their hold on the bricks. The notches may be serrated as shown exaggerated at 8*a* in Figure 7, or they may be ratchet-shape as shown exaggerated at 8*b* in Figure 8. In either case the notches must be relatively shallow so that any lessening of pressure as the wedges are forced into notch-contact with the lugs will be sufficiently compensated for by the slight resilience in the wedges combined with that in the channel web adjacent to the lugs. The wedges also form secure ties for the mortar used in pointing, the doing of which embeds them and the channel lugs thus protecting them from corrosion, and the mortar is further tied in place by expanding back of the joints and the adjacent channel apertures 5*a*.

In this invention it is intended and evident that each brick, and each piece of a brick, must rest on at least two supporting lugs and that, owing to this, it will be necessary to attach an extra channel at both sides of each wall opening. As

not only thin bricks but thin brick corners are readily obtainable, no extra channels are needed at wall corners. To place bricks to form a soldier course, the channels must be attached horizontally.

In the application of brick or tile veneer to the walls of frame buildings by means of this invention, it is obvious that all projecting trimmings on the walls must be removed before attaching the channels, the bottom row of which should preferably be attached first and care taken that their lower ends are set on a straight line parallel to the top of the foundation. Such additional rows of channels as may be needed to reach the top of the walls should rest on the channels immediately beneath and thus maintain the uniform spacing and straightness of every course of bricks to be held thereon. It will be found advisable to complete the attaching of the channels on a wall before beginning the setting of bricks which should be started at the bottom in order to permit the wedge members to be readily shoved or tapped into place and to see that they have notch-contact with the lugs. The pointing should preferably be done from the top of the walls downward and the mortar should be firmly troweled into the joints. The channels, and the nails used in attaching them, should be coated to resist oxidation, unless made of non-oxidizing metal.

While I have illustrated and described certain preferred embodiments of this invention, it will be understood that various changes and modifications may be made without departing from the scope of the appended claims, and that the term "brick" as herein and hereinafter used may include bricks, tiles, or other surfacing blocks.

I claim:—

1. A structural member for use in the construction of veneer walls, comprising a channel having flange portions adapted to be turned inwardly against the wall to be covered and having regularly spaced outwardly extending lugs disposed edgewise in a vertical plane and integral with the web portion of the channel, the spacing coinciding with the distance between the courses of bricks.

2. A structural member for use in the construction of veneer walls, comprising a channel having flange portions adapted to be turned inwardly against the wall to be covered and having a series of regularly spaced outwardly extending lugs disposed edgewise in a vertical plane and integral with the web portion of the channel, the spacing coinciding with the distance between the courses of bricks.

3. A structural member for use in the construction of veneer walls, comprising a channel having flange portions adapted to be turned inwardly against the wall to be covered and having a series of regularly spaced outwardly extending lugs disposed edgewise in a vertical plane, the spacing coinciding with the distance between the courses of bricks; the top edge of the lugs providing supports for the bricks, and the bottom edge being shaped for cooperation with brick-engaging wedges.

4. A strip for use in veneer wall structure, comprising a metal channel having inwardly turned flanges and a series of suitably spaced outwardly extending lugs disposed edgewise in a vertical plane and being integral with and struck out from the web portion thereof; the top edge of the lugs providing supports for the bricks, and the bottom edge being shaped for cooperation with brick-engaging elements.

5. A strip for use in veneer wall structure, comprising a metal channel having inwardly turned flanges and a series of regularly spaced outwardly extending lugs disposed edgewise in a vertical plane, the middle portion of the upper edge of each of said lugs having an upward projection on which a brick may rest, and the lower edge of each of said lugs being recessed for the insertion of a brick-engaging wedge element.

6. A strip for use in veneer wall structure, comprising a metal channel having inwardly turned flanges and a series of suitably spaced outwardly extending lugs disposed edgewise in a vertical plane, the middle portion of the upper edge of each of said lugs having an upward projection on which a brick may rest, and the corresponding portion of the lower edge of each of said lugs being recessed for the insertion and retention of a brick-engaging wedge element.

7. A veneer wall structure comprising a plurality of parallel vertically extending channels having inwardly turned flanges and outwardly turned lugs projecting from the web thereof, bricks set against said channels and resting on the lugs in such manner that each brick is supported by at least two lugs, and wedge elements between the top of the bricks and the bottom of the lugs immediately above.

8. A veneer wall structure comprising a plurality of vertically extending strip-like elements having a series of outwardly projecting lugs thereon, bricks supported on the lugs, and wedge elements between the top of the bricks and the under surface of the adjacent lugs.

9. A veneer wall structure comprising a plurality of vertically extending strips secured to the wall; the said strips having a series of outwardly projecting lugs thereon, bricks supported on the lugs and wedge elements between the top of the bricks and the under surface of the adjacent lugs, the wedge elements being inserted in the direction approximately parallel with the face of the bricks.

10. A veneer wall structure comprising a plurality of vertically extending supporting strips having a series of outwardly projecting lugs thereon, bricks supported on the lugs and wedge elements between the top of the bricks and the under surface of the adjacent lugs, the strips being so positioned that the lugs of one strip are in horizontal alignment with those of another and the strips being so spaced that each brick straddles two strips and is supported on two lugs.

11. A veneer wall structure comprising a plurality of vertically extending supporting strips having a series of outwardly projecting lugs thereon, bricks supported on the lugs and wedge elements between the top of the bricks and the under surface of the adjacent lugs, the lugs being integral with the strips and struck from the web thereof and positioned edgewise to have the greatest rigidity in a vertical direction, and the lower edge of the lugs being recessed to receive and retain the wedges.

12. A veneer wall structure comprising a plurality of vertically extending supporting strips having a series of outwardly projecting lugs thereon, bricks supported on the lugs and wedge elements between the top of the bricks and the recess in the adjacent lugs; the said wedge elements comprising nail-like members having the head offset to hold them in an inclined position when in place on the bricks, and the said wedges being inserted in the direction approximately parallel with the face of the bricks.

13. A veneer wall structure comprising a plu-

rality of vertically extending supporting channels having a series of outwardly projecting lugs thereon, bricks supported on the lugs and wedge elements between the top of the bricks and the recess in the adjacent lugs; the said wedge elements comprising nail-like members having the head widely offset to hold them in both an inclined and non-rocking position when in place on the bricks, and the said wedge members being inserted in the direction approximately parallel with the face of the bricks.

14. A veneer wall structure comprising a plurality of vertically extending supporting channels having a series of outwardly projecting lugs thereon, bricks supported on the lugs and wedge elements between the top of the bricks and the recess in the adjacent lugs; the said wedge members being notched to cooperate with the said lugs, and the said wedges being inserted in the direction approximately parallel with the face of the bricks.

15. A veneer wall structure comprising a plurality of vertically extending channels secured to the wall, the channels having a series of outwardly projecting lugs disposed edgewise on a vertical plane; bricks supported on the lugs and wedge elements between the top of the bricks and the recess in the adjacent lugs, the wedges being notched for cooperation with the said lugs and being inserted in the direction approximately parallel with the face of the bricks, and the wedges forming secure ties for the mortar used in pointing and with which the joints are filled as may be desired.

EDWARD A. KLAGES.