Dec. 28, 1937. D. A. WALLACE ET AL 2,103,569

BRICK SUPPORT

Filed March 20, 1936

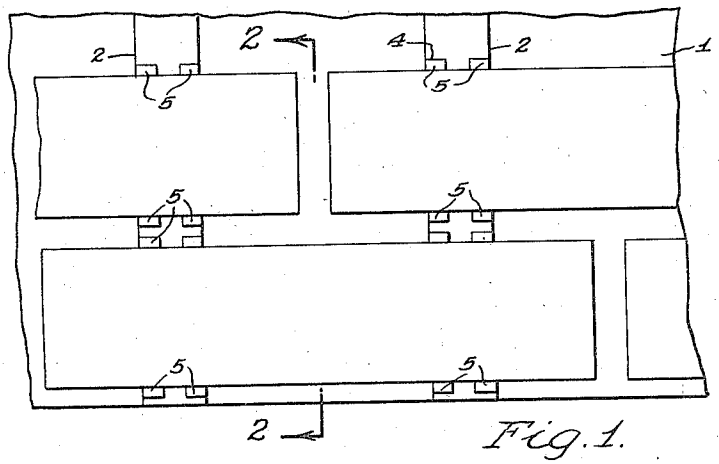


Fig. 1.

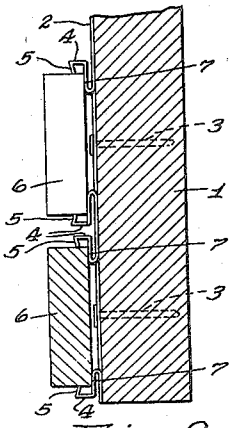


Fig. 2.

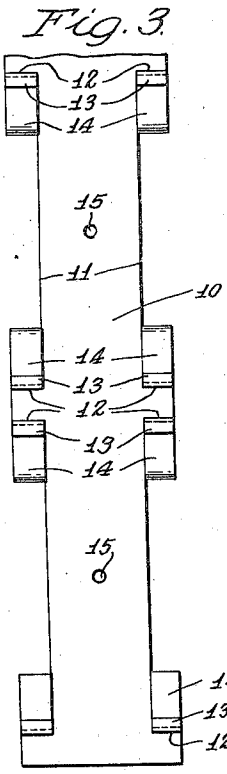


Fig. 3.

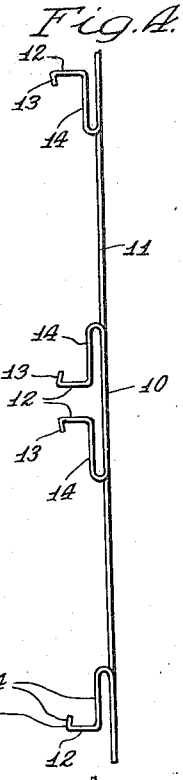


Fig. 4.

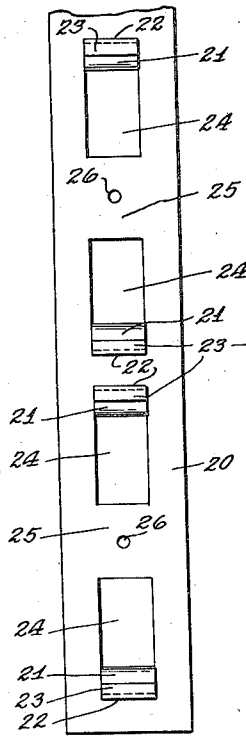


Fig. 5.

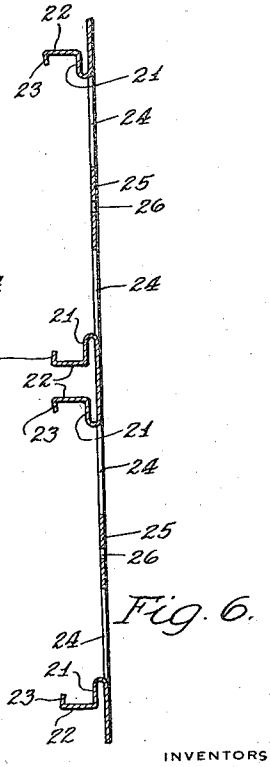


Fig. 6.

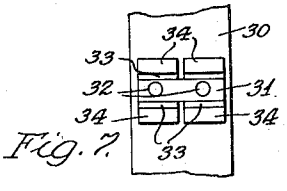


Fig. 7.

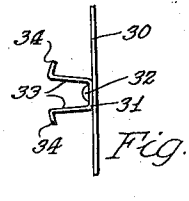


Fig. 8.

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BRICK SUPPORT

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Application March 20, 1936, Serial No. 69,904

11 Claims. (Cl. 72—19)

The present invention pertains to means for attaching bricks or facing elements to the walls or supports of a building structure.

The primary object of the present invention is to provide a structure wherein bricks or other facing elements are held in position with respect to a pre-formed wall or support by frictional resistance induced by inserting the bricks or facing elements into resilient members made preferably of flexible steel and having openings for the reception of the bricks or facing elements which before insertion of the bricks or facing elements are of smaller width than such elements. The natural tendency of the resilient members to spring back to their original form sets up a frictional condition wherein the bricks or facing elements are firmly held. The friction, obviously, will vary with the resiliency of the material used and also according to surface conditions of the elements being held. However, in the case of bricks or like facing elements having a rough surface cold rolled low carbon steel or high carbon steel tempered may be used with the amount of actual springing not exceeding a very small fraction of an inch and with the lineal contact between the resilient members and the bricks amounting to only a small fraction of the length of the brick.

Another object of the present invention is to provide clip-like brick supporting elements, each set of which is adapted to separately engage and support a brick, and the several sets of clip-like elements being integrally united in strip form so that they may be secured to a preformed wall of building support as a single unit. In addition to facilitating handling and assembly of the clip-like elements this feature positively maintains the elements in proper spaced relation for the subsequent reception of the bricks. From an economical standpoint the present structure has the advantage over our co-pending application, Serial No. 67,481, filed March 6, 1936, wherein individual clips are preformed and subsequently secured to strips or supports in that less metal is required, several assembly steps are eliminated, and several machine operations are avoided. This invention, therefore, constitutes an improvement in some respects on the invention disclosed in the application referred to.

With the above and other ends in view the invention is more fully disclosed with reference to the accompanying drawing, in which

Figure 1 is a fragmental elevation of a wall assembly;

Fig. 2 is a section taken on the line 2—2 of Fig. 1;

Figs. 3 and 4 are elevations of a strip with the resilient securing means thereon;

Fig. 5 is an elevation of a strip illustrating another formation of the securing means;

Fig. 6 is a longitudinal section thereof;

Fig. 7 is an elevation illustrating a double acting securing means attached to the strip, and

Fig. 8 is a side elevation thereof.

Like characters of reference are employed throughout to designate corresponding parts.

Referring more particularly to Figs. 1 and 2 the numeral 1 designates a wall having a plurality of spaced apart strips 2 secured thereto, the securing means comprising nails 3 which are driven through preformed apertures in the strips 2 and into the wall 1. Formed integral with the strips 2 are pairs of flexible arms 4 having inwardly bent portions 5 frictionally engaging adjacent surfaces of bricks or facing elements 6. Each arm 4 has a portion 7 spaced from the normal plane of its respective strip 2 and these portions 7 provide seats for the bricks 6. The inwardly bent portions 5 are supported by the arms 4, prior to insertion of the bricks 6, in a position where the space between pairs of the same is slightly less than the width of the brick so that when the bricks are inserted therebetween the arms 4 are flexed outwardly. The strips 2 and the integral formations thereon are formed of spring metal so that the natural tendency of the arms to spring back to their original position after the insertion of the bricks sets up a friction condition which firmly holds the bricks against the seat formations 7.

In order to facilitate the insertion of the bricks the inwardly bent portions 5 are disposed with their outer surfaces oblique to the plane of the strips 2. Thus the oblique outer surfaces permit the insertion of the bricks quite readily. In addition, the angularity of the portions 5 places them oblique to a plane normal to the surface of the brick they engage so that a sharp corner thereof engages the brick, and this feature augments the frictional holding function.

After the bricks are assembled as above described the spaces or voids between the same are filled with mortar, or in some cases an asphaltic material. Whatever material is used has a tendency to run down slightly into the spaces between the bricks and the surface of the wall 1. It will thus be seen that the seating formations 7 are important in that by spacing the bricks from the wall 1 the subsequent insertion of mor-

tar or cement between the bricks results in the formation of a dead air pocket behind each brick. Dead air is known to have high insulating qualities, but in the event that structures are so formed that this dead air does not provide sufficient insulation a separate insulating material may be used. Inasmuch as the application of a separate insulating material is shown in our co-pending application Serial No. 67,481, above referred to, the showing has not been duplicated here.

Referring to Figs. 3 and 4, there is illustrated a strip 10 similar to that described above, illustrating however, a different proportional arrangement. The strip 10 has portions along its sides cut away as indicated at 11 to provide pairs of arms 12. The arms 12 have integral inwardly bent portions 13 adapted for engagement with bricks or other facing elements. The arms 12 are integrally connected with the strip 10 by portions 14 which extend parallel to the strip 10 and which constitute seats for bricks which are subsequently inserted between pairs of the inwardly bent portions 13. The strip 10 has apertures 15 symmetrically arranged between adjacent sets of retainers 13 for receiving securing elements. The particular location of the apertures 15 is important in view of the fact that in order to provide for a frictional holding action by the retainer portions 13 which are normally spaced apart a distance less than the width of a brick it is necessary to secure the strip to a support in such manner that it will not buckle and permit the retainers 13 to spread apart. By subsequently securing the strip 10 to a support by inserting securing elements through the apertures 15 the portion of the strip between the cut-outs 11 is held rigid so that the flexing necessary to permit insertion of the bricks takes place in the arms 12. By forming the unit of metal having a predetermined gauge and known resiliency any desired degree of resilient pressure may be provided.

In the form shown in Figs. 5 and 6 the strip 20 is severed in such manner as to form integrally united struck up portions which are subsequently bent to form a seat formation 21, resiliently flexible arms 22 and integral inwardly bent brick retainer portions 23. The openings 24 resulting from the formations above described are spaced inwardly from the sides of the strip, and are also spaced one from another as indicated by the web portion 25 disposed intermediate each pair of retainers 23. The web portions 25 are each provided with an aperture 26 through which nails or other securing elements are subsequently driven to secure the strip to a support. The securing elements are thus located with respect to the retainers so as to prevent buckling of the strip by insertion of bricks between the retainers 23 which have a width greater than the normal spacing of the retainers.

The strips illustrated at 2 and 10 each have a pair of retainers in side by side relation, the retainers being formed integral with the strip and being capable of engaging surfaces which are not in direct alignment. This feature permits the adjacent retainers to adapt themselves to bricks or facing elements having irregular surfaces. As illustrated in Figs. 7 and 8, this same function may be duplicated by a clip which is formed separately from the strip and subsequently secured thereto. As shown in these views the strip 30 has a clip 31 secured thereto by rivets or equivalent securing means 32. Each clip has bifurcated arms 33 with retainer portions 34 bent outwardly thereof. In a wall assembly a series of clips 31 are secured to the strip in spaced apart relation and the bricks are subsequently inserted between adjacent pairs of clips. The bifurcated arms 33 support the retainers 34 in such manner that they may adapt themselves independently to surface irregularities on the bricks.

Although a specific embodiment of the invention has been illustrated and described it will be understood that various changes may be made within the scope of the appended claims without departing from the spirit of the invention, and such changes are contemplated.

What we claim is:—

1. A device adapted for supporting bricks comprising a metal blank of strip form, said strip being severed and having the severed portions bent from the plane of the strip and extending substantially normal to the plane of the strip, the extremities of the severed portions being bent inwardly whereby the edges thereof provide retainers for the reception of facing elements, said severed portions and retainers being resiliently flexible, and said retainers being spaced apart a normal distance less than the width of the bricks they are adapted to receive.

2. A device adapted for supporting bricks comprising a metal blank of strip form, said strip being severed and having the severed portions bent from the plane of the strip and extending substantially normal to the plane of the strip, and knife-like retainers on the extremities of said bent portions, said severed portions and retainers being resiliently flexible, and said retainers being spaced apart a normal distance less than the width of the bricks they are adapted to receive.

3. A device of the character described comprising a metal blank of strip form, said strip being severed and having the severed portions bent from the plane of the strip and extending substantially normal to the plane of the strip, the extremities of the severed portions being bent inwardly to provide retainers for the reception of facing elements, said inwardly bent portions being disposed oblique to the plane of said strip.

4. A device of the character described comprising a metal blank of strip form, said strip being severed and having the severed portions thereof bent from the plane of the strip, said severed portions being bent in such manner as to provide spacer elements off-set from the plane of the strip, flexible arms disposed outwardly of the spacer elements, and retainers on the ends of said arms.

5. In a device of the character described, a metal blank of strip form having severed portions, the said severed portions being bent outwardly of the plane of the strip and forming pairs of resiliently flexible arms, the ends of said arms being bent to present knife-like edges adapted to frictionally engage facing elements.

6. In a device of the character described, a metal blank of strip form having severed portions, the said severed portions being bent outwardly of the plane of the strip and forming pairs of resiliently flexible arms adapted to frictionally engage facing elements, and spacer elements between pairs of said arms and off-set from the plane of said strip.

7. In a device of the character described, a metal blank of strip form having severed por-

tions, the said severed portions being bent outwardly of the plane of the strip and forming pairs of resiliently flexible arms adapted to frictionally engage facing elements, said strip having means located between the pairs of arms adapted for engagement by facing elements inserted therebetween for limiting the depth of insertion of the facing elements.

8. In a device of the character described, a metal blank of strip form, said blank being severed and having the severed portions bent to respectively form runs extending parallel to the strip and in a plane off-set from the plane of the strip, runs extending substantially normal to the plane of said strip, and runs extending at an angle to said last named runs.

9. In a device of the character described, a metal blank of strip form, said blank being severed and having the severed portions bent to respectively form runs extending parallel to the strip and in a plane off-set from the plane of the strip, runs extending substantially normal to the plane of said strip, and runs extending at an angle to said last named runs, the said blank being formed of spring metal whereby to embody resiliency in all of said runs.

10. In a device of the character described, a metal blank of strip form, said strip having severed portions at the sides thereof providing pairs of spaced apart arms, the arms of each pair being spaced transversely of the strip and the pairs of arms being spaced lengthwise of the strip, and retainers on respective sets of said arms and oppositely disposed for engagement with facing elements placed therebetween.

11. In a device of the character described, a metal blank of strip form, said strip having severed portions at the sides thereof providing pairs of spaced apart arms, the arms of each pair being spaced transversely of the strip and the pairs of arms being spaced lengthwise of the strip, retainers on respective sets of said arms and oppositely disposed for engagement with facing elements placed therebetween, and spacer elements on said arms off-set from the plane of the strip and adapted to be engaged by said facing elements.

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