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WEEP HOLE FORM

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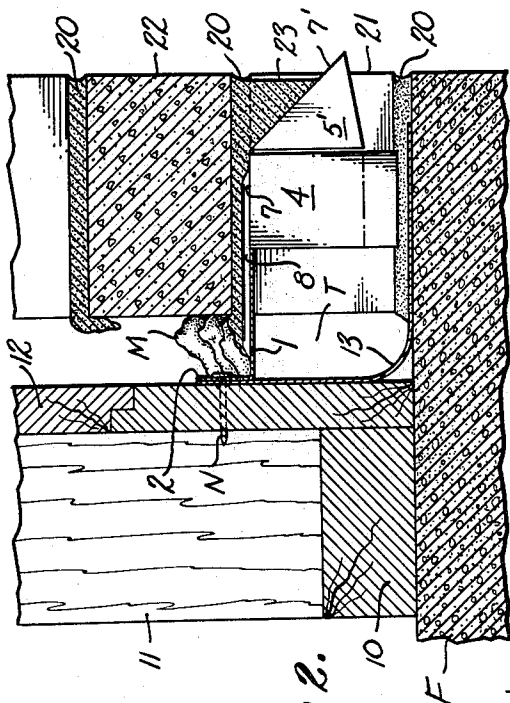


Fig. 2.

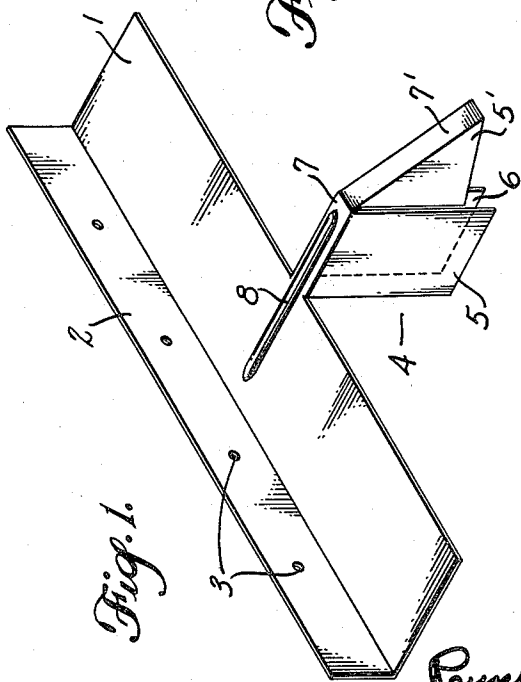


Fig. 1.

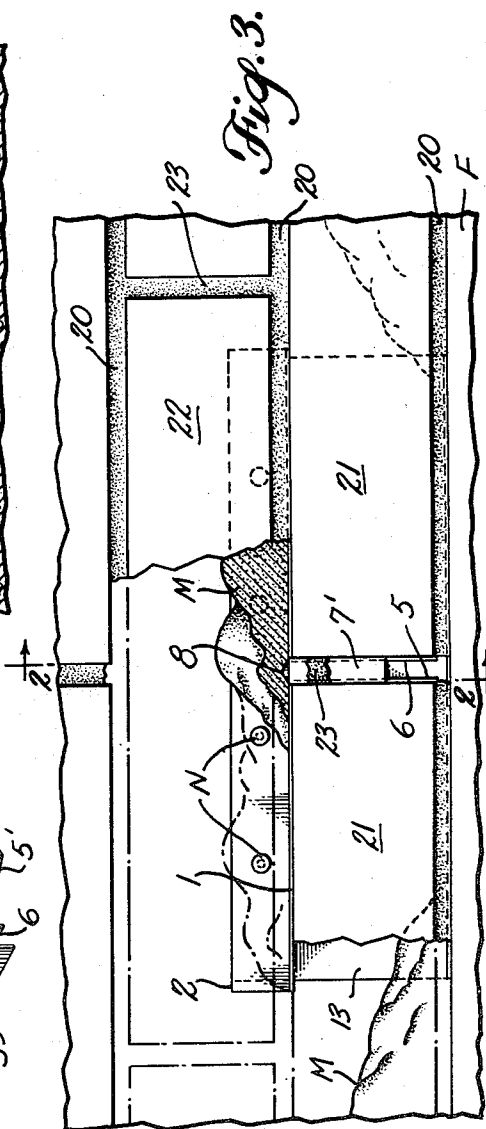


Fig. 3.

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WEEP HOLE FORM

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8 Claims. (Cl. 72—5)

In building construction, especially in walls where a brick veneer curtain or facing is erected spaced outwardly of a rough inner wall and above a footing, water from condensation collects in the intervening space, and unless this water is promptly drained off, the building may be rather constantly moist in the interior, to the discomfort of the occupants, and to the detriment of the wall finish and even of furnishings, in addition to which dry rot may begin and spread, from the accumulation of moisture. It is the practice to provide drain apertures, called "weep holes," leading from the bottom of the space between the rough wall and the brick veneer curtain. These would provide adequately for drainage, if it were not for the fact that as the brick veneer curtain is erected, mortar droppings from above collect in the lower part of the space, and so tend to clog the inner ends of the weep holes that have been provided at the footing; moisture still collects in the intervening space and runs down to the footing, where it finds no exit, and collects in pools.

The present invention is directed to the solution of that problem, and solves it by means of a special form, of sheet metal or the like, of a novel shape, size, and conformation in relation to the structure with which it is used. By virtue of these novel features this form is very readily yet necessarily or semi-automatically installed in a manner to provide a ledge located, usually, at the height of one brick above the footing. Thereby the ledge defines a tunnel of appreciable length, preferably approximating the length of a brick, between the rough wall and the inner face of bricks in the first course of the facing, and between itself and the footing. Mortar droppings from directly above the ledge will collect upon the ledge, leaving the footing within the tunnel wholly free of droppings, whereas droppings from beyond the ends of the ledge are unlikely to collect upon the footing to a depth to obstruct the entrances to the tunnel. The tunnel therefore constitutes a clear low spot, into which moisture will drain. Immediate drainage from the tunnel is provided by means of a hood which constitutes an integral part of the weep hole form, and which is located, as a necessary result of the manner of the installation of the form as a whole, in a vertical mortar space between bricks of the first course, midway between the ends of the ledge and of the tunnel. The hood is so made that it will prevent entrance of mortar to clog the weep hole or its exit, yet it can be so concealed by mortar as to be quite inconspicuous. Also, it can be readily altered in shape, and in size if necessary, to fit the mortar space which is to receive it, or to adapt it to bricks of different styles and hence of different sizes. A number of such forms are installed at suitable intervals longitudinally of a wall.

It is an object of the present invention to provide a weep hole form of the character indicated, which is inexpensive, which is convenient to install and use, which works readily into the mortar courses without appreciably disturbing them nor the integrity of the brick facing, and

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which requires no great skill nor time for its installation.

Furthermore, it is an object to provide a weep hole form of the character indicated which is readily adapted to different styles or sizes of brick, for instance, to common brick or to Roman brick, or, in suitable cases, to concrete blocks of one size or another, and especially one which can, within limits, be cut down to accommodate at least two different standard sizes of brick.

Bearing in mind such objects, the present invention will be more fully understood as this specification progresses and from the accompanying claims, taken in conjunction with the accompanying drawings, wherein the weep hole form is shown in a construction which is presently preferred by me.

Figure 1 is an isometric view of the weep hole form as it would be supplied for use.

Figure 2 is a vertical cross-sectional view, on the line indicated at 2—2 in Figure 3, through a typical wall, showing the weep hole form installed.

Figure 3 is an outer face view of a wall such as is shown in Figure 2, with a portion of the brick facing broken away to illustrate better the manner of installing the weep hole form.

In a typical construction the inner rough wall, usually of frame construction, rises from the concrete footing F, and may consist of a sill 10, studs 11, and sheathing 12. Building paper or the like may be, and usually would be, used also, but has been omitted to simplify the illustration. Also rising from the footing F, spaced somewhat outwardly of the outer face of the inner rough wall, is the brick veneer curtain or facing including the bricks 21 in the first course, the bricks 22 in the second course, and so on up, with the mortar in horizontal layers 20 between courses, and in the vertical spaces 23 between bricks in the same course.

Preferably, the weep hole form is made of thin and inexpensive sheet material, such, for instance, as galvanized iron sheet. It includes a ledge 1 of a length which should approximate or even may exceed somewhat the length of a brick with which it is to cooperate, and of a depth from front to rear preferably greater in all instances than the spacing between the rough wall and the brick veneer, but not so great as to project outwardly to the outer face of the bricks of the brick veneer curtain, or facing.

The ledge 1 is provided with means for securing it, for support, upon the rough wall, with its inner edge held closely against the rough wall, and to this end a flange 2 is provided, having holes 3 to receive nails N, driven into the sheathing 12, or is thin enough to permit such nails to be driven through it at random.

Intermediate the ends of the ledge, preferably at the midpoint, and projecting forwardly of its forward edge, is a hood, generally indicated by the numeral 4. Preferably this hood is integral with the ledge, but whether of the same piece of metal, or affixed to the ledge, is immaterial. The hood, in general, comprises two side wings 5 and 6, which are spaced apart in parallel vertical planes disposed at right angles to the plane of the ledge 1, the overall spacing between the wings 5 and 6 being no greater than the width of a vertical mortar space between the bricks of the veneer facing. These wings 5 and 6 are joined by a top strip 7 integral with the ledge, and preferably reinforced by a raised ridge 8. The forward-to-rear depth of the hood, including the width of the ledge from which it is supported, is such that when the form is installed with the rear edge of the ledge against the planar surface of the rough wall's sheathing 12, the hood will project forwardly approximately sufficiently to reach the outer face of the brick veneer, but not appreciably beyond that face.

For reasons which will shortly appear, the hood is pref-

erably formed of a rear portion and a front portion, the front portion having its top strip 7' sloped downwardly and outwardly, and having wings, such as the wing 5' shown in Figure 1, which are similar to and which correspond to the wings 5 and 6 respectively of the rear portion, but which are entirely separate therefrom except as they are connected through the top strips 7 and 7'.

At the start of the installation of the brick veneer facing, it is customary to install a flashing sheet 13 extending a distance up the lower portion of the sheathing 12 and extending outwardly over the footing F. The first course of bricks 21 is laid in the usual manner, with the exception that at suitable longitudinal intervals a weep hole form, as described above, is installed. In installing the same, the ledge 1 rests upon the bricks 21 of the first course, with the hood 4 located in a vertical mortar space 23 between two adjoining bricks in that first course. The space beneath the ledge constitutes a tunnel T. The outer portion of the hood, being supported only by the flexible juncture between the top strip portions 7 and 7', is sufficiently yieldable that, if it projects out too far, it may be pressed inwardly, or if it does not project out far enough, it may be raised and so extended somewhat. The side wings of the outer portion of the hood may readily be flexed slightly inwardly to lie between the wings 5 and 6 of the rear portion, if that is found necessary in order to push the outer hood portion inwardly somewhat. Preferably, when the hood is properly installed its lower outer point projects not greatly, if at all, beyond the outer face of the brick veneer, more or less as shown in Figure 2, and only sufficiently, if at all, to prevent mortar from falling down into and clogging the space beneath it. The vertical mortar space above the top strip 7' would normally be filled with mortar, thereby concealing all except the extreme tip of the hood, yet without danger of clogging the weep hole, and at the same time preserving the integrity of the mortar bond throughout the first course 21.

The building up of the brick veneer curtain proceeds in the normal way, with the laying of the second course of bricks 22. In the laying of these bricks 22 no thought need be given to the weep hole form. Mortar which may drop from the rear of the mortar spaces 20 or 23 directly above the weep hole form will only collect on the ledge 1, as shown at M in Figure 2, or that dropping from beyond the ends of the ledge will fall to the bottom of the interior space, coming to rest upon the footing, but still the ledge 1 is sufficiently high above the footing that it is extremely unlikely that mortar droppings will collect anywhere to an extent to interfere with drainage into the clear space or tunnel T beneath the ledge 1, from which it can find its way out through the weep hole between the bricks separated by the wings 5 and 6, and, of course, between these wings.

It is the intention that such weep hole forms be installed at approximately four-foot intervals, depending of course, upon local practice. Obviously, the weep hole forms could be so formed, or installed in the second course, so as to elevate the ledge 1 high enough above the footing F to insure that the droppings can not rise to a height to obstruct the entrances to the tunnel T.

If a given weep hole form has wings 5 and 6 which are too long for the height of the brick they are to be used with, for instance, if the brick is shallow Roman brick, these wings, being normally of sheet metal, may readily be cut off with a pair of tin snips, and the weep hole form can thus be adapted on the job to use with the shallower bricks.

The word "brick," as used herein, is intended to include not only the various styles and sizes of burned or baked clay bricks, but blocks of molded concrete or the like, also of various styles and sizes, such as are laid up in a manner analogous to bricks, or any construction wherein the problem of clogging of weep holes by mortar droppings is encountered.

I claim as my invention:

1. A weep hole form comprising an elongated flat sheet of material, which in use is disposed in a horizontal plane, a narrow top strip of sheet material extending outwardly and downwardly from and in a direction at right angles to one of the longer edges thereof, intermediate the ends of the flat sheet, two side wings of sheet material extending from the opposite edges of the top strip, downwardly in planes which are parallel, and perpendicular to the plane of the flat sheet, to define with said top strip a hood, said hood being disposed wholly below the plane of said flat sheet, and means extending along that longer edge of the flat sheet which is opposite the top strip, for supporting engagement with a support, thereby to support the weep hole form.

2. A weep hole form as defined in claim 1, wherein the top strip, in at least the outer portion of the hood, slopes outwardly and downwardly to an outer tip located at a level near the lower edge of the side wings.

3. A building construction comprising, in combination, a footing, a rough wall rising from said footing at a distance inwardly from the outer surface thereof, a veneer curtain formed of bricks laid in superimposed mortared courses supported upon the outer portion of said footing, spaced from the rough wall, horizontal ledges of sheet material secured at intervals in the length of the wall against the surface of the rough wall, at the height at least as great as the height of a brick above the footing, and each of a width and located to project forwardly into the mortar space between bricks of a lower and an upper course, to define a tunnel beneath the ledge, and between the ledge and the footing, a hood supported from and intermediate the ends of said ledge, including two side wings of sheet material which are disposed in parallel vertical planes transverse to the length of the ledge, and which are spaced apart by no more than the width of a vertical mortar space in the lower course, and a top strip joining the side wings and sloping downwardly and outwardly, the hood being located within such a mortar space, and communicating freely with said tunnel, and the hood being of a size to extend to but not appreciably outwardly beyond the outer face of the brick veneer curtain, in the vicinity of the footing, to define a weep hole for draining the tunnel.

4. A building construction comprising, in combination, a supporting footing, a rough wall rising from said footing at a distance inwardly from the outer surface thereof, a veneer curtain formed of bricks laid in superposed mortared courses, supported upon the outer portion of said footing, spaced from the rough wall, horizontal ledges of sheet material having supporting means along one edge supported from and contacting said rough wall throughout the length of such edge, the ledges being spaced at intervals in the length of the wall, and being spaced above the footing by at least the height of a course of bricks, and each ledge being of a width such that it extends into the mortar space between a lower and an upper course to define a tunnel between the footing and the ledge and the rough wall and the veneer curtain, a hood including two side wings also of sheet material spaced apart by a distance approximating the width of a vertical mortar space in the course below the ledge, and located in such a mortar space, and a top strip joining said side wings and extending from the ledge outwardly to but not appreciably beyond the outer face of the veneer curtain, in the vicinity of the footing, said side wings and top strip cooperating to define a clear weep hole communicating freely with the tunnel and extending to the exterior of the brick veneer curtain, in the vicinity of the footing, for drainage from the tunnel.

5. A building construction as in claim 4, characterized in that each side wing of each hood is divided into separate inner and outer parts, the top strip being connected to all such parts and constituting the sole connection between the several parts, and in that the top strip slopes

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downwardly and outwardly from the level of the ledge, emerging in the vicinity of the lower face of the bricks whereon the ledge rests.

6. A weep hole form as in claim 1, wherein each side wing is divided, along a line transverse to the top strip, into two separate adjoining parts disposed substantially coplanar, but capable of overlapping at their adjacent edges by bending of the top strip which supports all thereof, along the line of division of the side wings. 5

7. A weep hole form as in claim 6, wherein the parts of the side wings farthest from the flat sheet are of triangular shape, and the portion of the top strip intermediate said triangular wing parts inclines outwardly and downwardly from the plane of the flat sheet. 10

8. A weep hole form as in claim 1, wherein the top strip inclines outwardly and on said one side of the plane of the flat sheet, to a level at its tip approximating the level of the lowermost edges of the side wings. 15

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