Nov. 9, 1948. I. P. WHITEHOUSE 2,453,609

AREAWAY WALL

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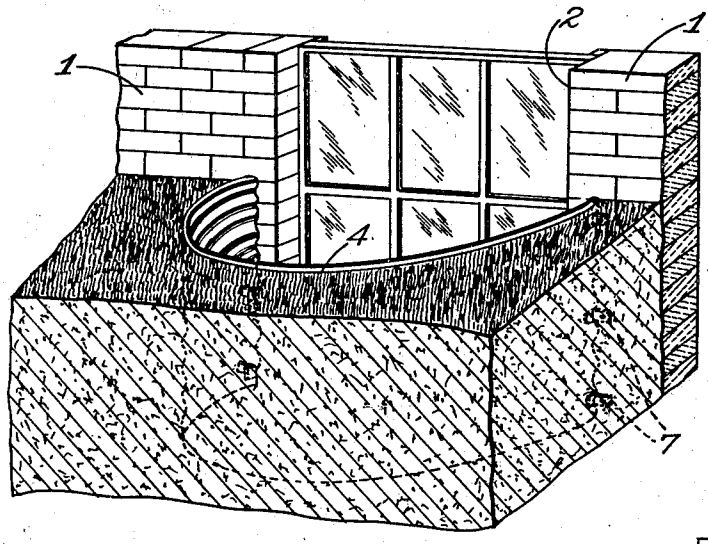


Fig. 1

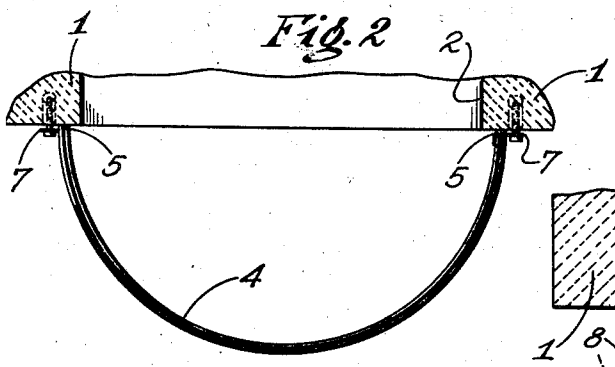


Fig. 2

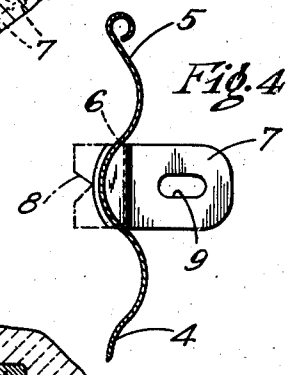


Fig. 4

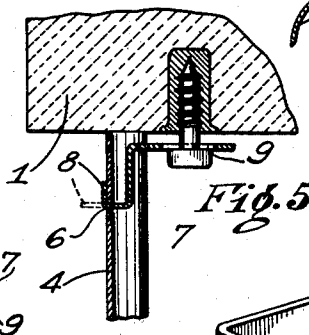


Fig. 5

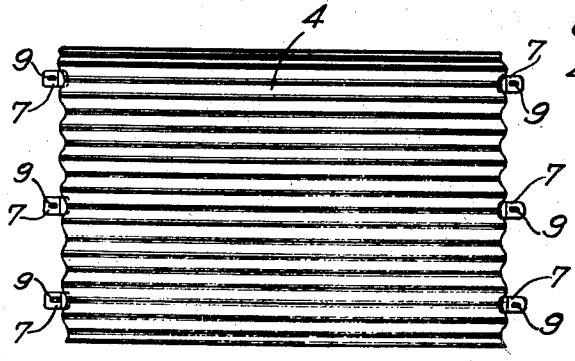


Fig. 3

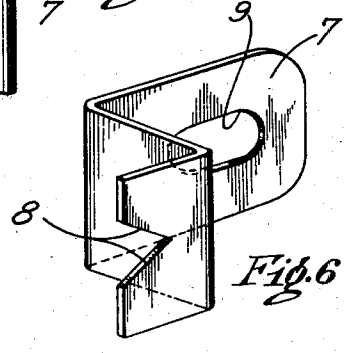


Fig. 6

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AREAWAY WALL

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1 Claim. (Cl. 189—1)

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The present invention relates to the art of earth retaining walls and particularly to a sheet metal wall which, when associated with a fixed wall, will define an areaway or air shaft for an opening in the fixed wall and will prevent substantially all infiltration of earth into the areaway or air space.

Windows and other openings which are located in fixed walls and extend below the ground surface, for example, house basement windows, require areaways, shafts or air spaces outside of the openings for such purposes as light and ventilation. In many cases brick walls have been used to define these areaways. However, as a result of the action of the elements such walls soon lose their attachment to building walls and also develop cracks between the bricks and earth may be washed into the areaway between the walls or thru the areaway wall. Concrete, concrete blocks and tiles have also been used in these areaway walls instead of bricks but have much the same objections as the brick walls.

Proposals have been made to construct areaway walls of steel sheets but, so far as I know, none of these proposals has been entirely satisfactory. The steel sheets lack strength unless corrugated and, whether corrugated or not, it was difficult to obtain and maintain sufficiently close contact between the edges of the sheet and the permanent or fixed wall to prevent movement of earth into the areaway.

By means of the present invention I have been able to provide an areaway sheet metal wall which is strong enough to retain the earth pressing against one side of it and which may be pressed so tight against the fixed wall as to prevent substantially any ingress of earth into the areaway.

The present invention will be better understood by those skilled in the art from the following description and the drawings accompanying and forming a part of this specification in which

Figure 1 is a perspective view showing an areaway defined by a fixed wall and a sheet metal wall and illustrating a preferred form of the present invention;

Figure 2 is a top plan view, partly in section, of the sheet metal wall of Fig. 1, and its attachment to fragments of the fixed wall;

Figure 3 is a side elevational view taken from the open end of the metal wall of Fig. 2;

Figure 4 is an enlarged fragmentary, vertical, sectional view of the metal wall of Fig. 2 showing an attaching clip in elevation with dotted lines showing a portion of the clip before bending;

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Figure 5 is a horizontal, sectional view taken thru the clip of Fig. 4; and,

Figure 6 is a perspective view of the attaching clip of Figs. 4 and 5.

The present invention is shown in Fig. 1 where 1 designates a fixed vertical wall, such as the basement wall of a house, having a window opening 2 and extending to below the ground surface 3. The sheet metal wall 4 is generally semicircular in plan view with its ends engaging the fixed wall 1 on opposite sides of the window opening and extending vertically from above the ground surface to a level below the bottom of the window.

As is better shown in Figs. 2 and 3, the sheet metal wall 4 is preferably corrugated with the corrugations disposed horizontally. Near its end edges 5 means are provided for attaching the wall 4 to the fixed wall 1 and pressing those edges tightly thereagainst. This means includes a plurality of clips and means for attaching the clips to the fixed wall 1.

As is better shown in Figs. 4, 5 and 6, vertical slots 6 are formed in sheet metal wall 4 near its vertical end edges. Preferably, each slot extends thru a single corrugation which is concave on the outer surface of the wall and convex on the inner surface. The clips serve to secure the sheet metal wall 4 to the fixed wall 1. Each clip, as is best shown in Fig. 6, includes a wall clamping portion which extends thru slot 6 and clamps against the inner and outer sides of the wall and a lateral portion to be attached to the fixed wall. The part of the clamping portion of the clip which engages the inner surface of wall 4 is preferably notched, as shown at 8, so that it may be bent into conformity with the convex side of the corrugation and will grip the corrugation horizontally above and below the horizontal crest of that convex surface. The part of the clamping portion of the clip which engages the outer side of wall 4 is wide enough in a vertical direction to span the concave part of the corrugation and is long enough to extend from the slot almost to the end edge of wall 4 and thereby support the wall against flattening of the corrugation. The laterally extending portion of the clip 7 is perforated, as at 9, and is disposed between the slot and the adjacent end edge of wall 4 but close to that edge. Securing means, such as bolts, extend thru perforations 9 and into fixed wall 1.

It will be understood that when the sheet metal wall 4 is assembled with fixed wall 1 the end edges of wall 4 will bear against the vertical face of wall 1 with the lateral portions of clips 7 lying

parallel to but spaced a short distance away from wall 1. When the attaching bolts are drawn up toward wall 1 they exert pressure on the lateral portions of the clips 7 tending to move them into engagement with wall 1 and press the end edges of wall 4 so closely against wall 1 as to prevent earth from passing between these walls.

It will be understood from the accompanying drawings and the foregoing description that wall 4 is sufficiently strong and corrosion resistant to withstand the pressure of earth outside the wall and to prevent passage of dirt therethru; and also that the end edges of wall 4 are maintained in close fitting, dirt excluding, engagement against fixed wall 1.

Having thus described my invention so that others skilled in the art may be able to understand and practice the same, I state that what I desire to secure by Letters Patent is defined in what is claimed.

What is claimed is:

A horizontally corrugated areaway wall having vertical end edges and slots near the end edges thru inwardly extending corrugations, and a plurality of clips for attaching said wall to and pressing said edges against a fixed wall, each of said clips including a clamping portion extending thru one of said slots, bearing against the inner convex side of the corrugation above and below its crest and spanning the outer concave side of said corrugation, and a securing portion extending laterally from the clamping portion between said slot and the adjacent end edge of the metal wall and close to that edge.

IRVING P. WHITEHOUSE.

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