Aug. 28, 1951 C. N. RAIBOURN 2,565,884

AWNING

Filed June 30, 1949 2 Sheets-Sheet 1

Fig. 1.

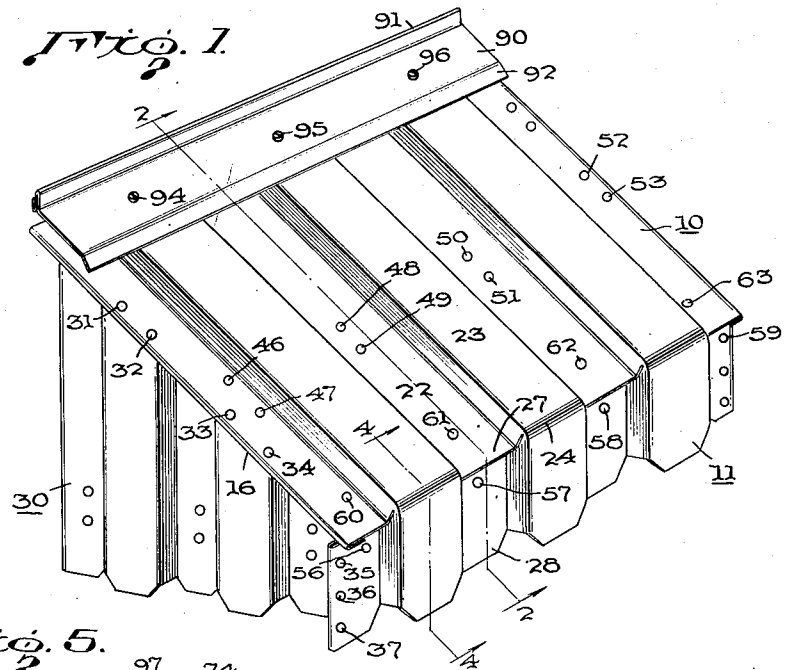
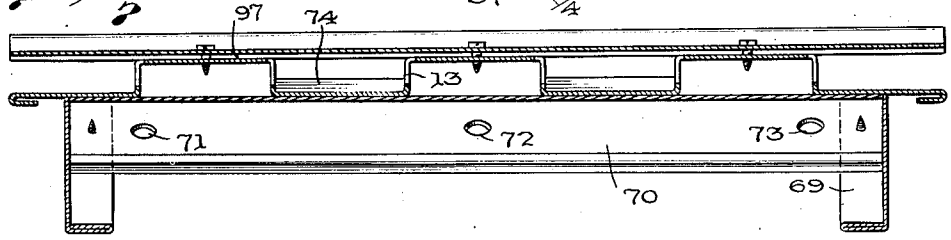


Fig. 5.



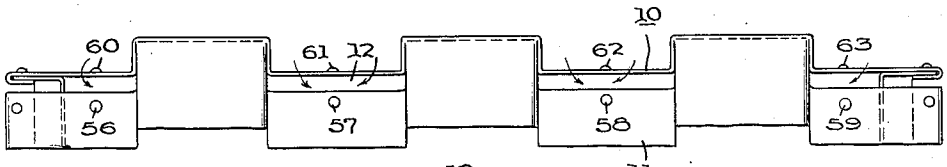


Fig. 6.

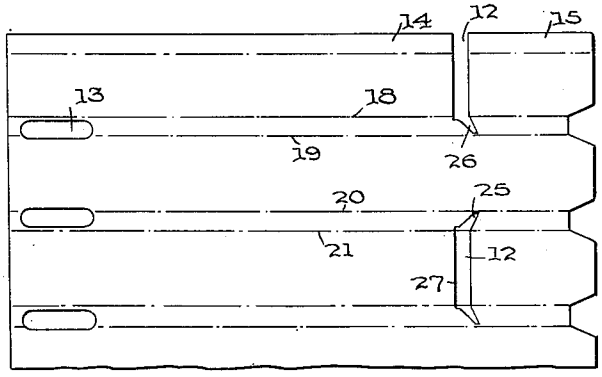


Fig. 7.

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Aug. 28, 1951 C. N. RAIBOURN 2,565,884

AWNING

Filed June 30, 1949 2 Sheets-Sheet 2

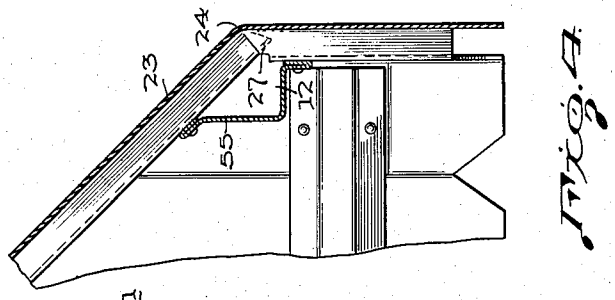


Fig. 4.

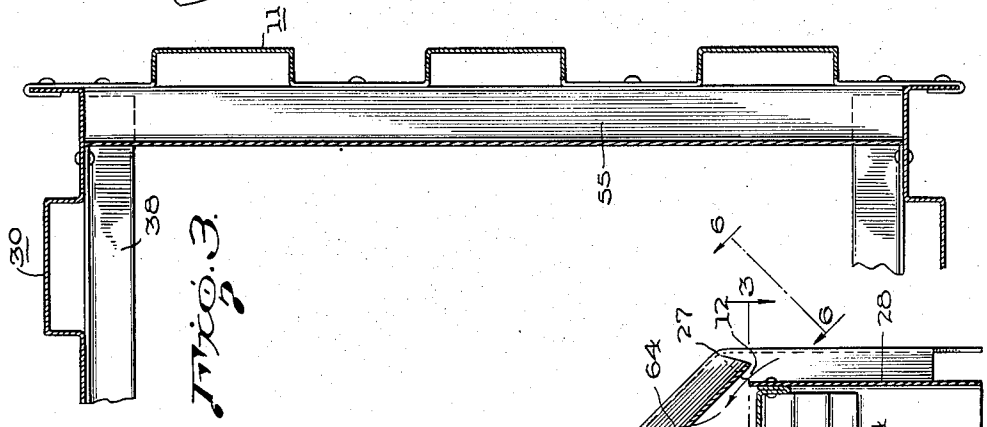


Fig. 3.

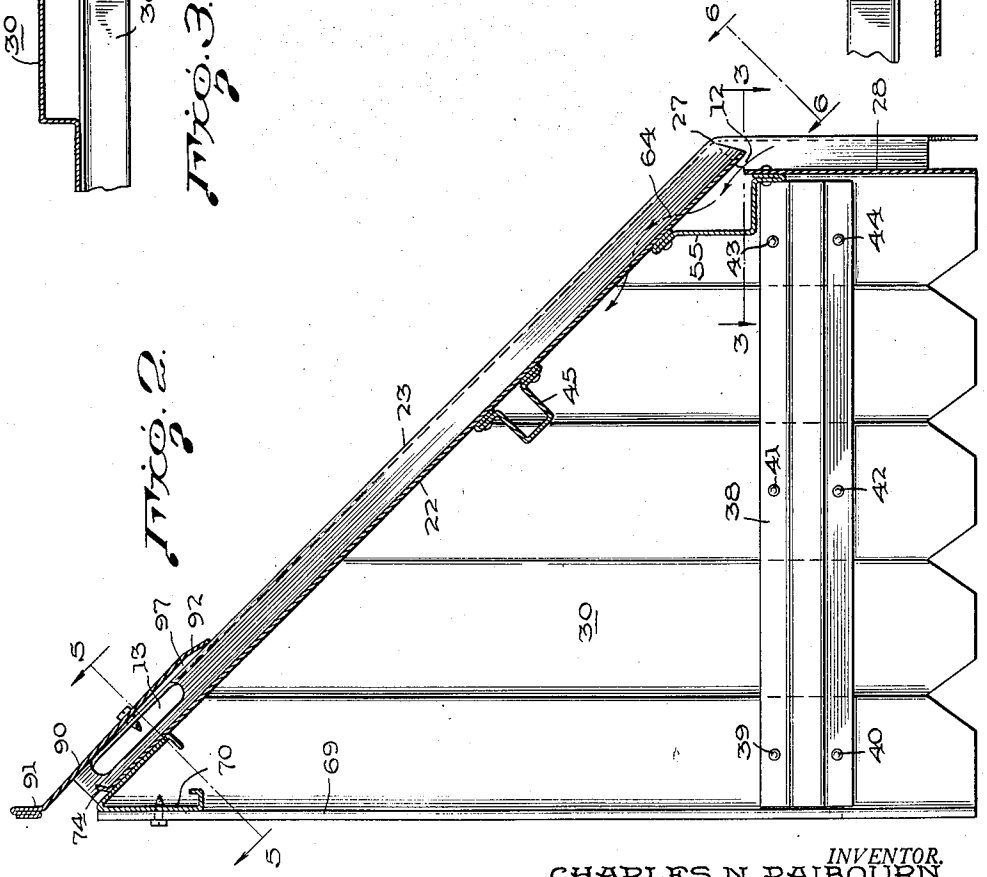


Fig. 2.

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UNITED STATES PATENT OFFICE

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AWNING

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Application June 30, 1949, Serial No. 102,331

7 Claims. (Cl. 20—57.5)

1

The present invention relates generally to awnings and more particularly to awnings of the rigid type fabricated from sheet material, such as metal, and intended to be permanently secured to a building in a non-convertible position.

Awnings of the general type referred to above may be formed or fabricated of sheet metal to provide alternate series of ridges and valleys together with appropriate ventilating apertures to assure the free movement of air which would otherwise be entrapped beneath the awning surface. In the more popular forms of such awnings, the front of the awning is provided with a vertically depending front wall of similar alternate ridge and valley configuration in order to enhance the artistic effect of the structure. In such arrangements, prior to this invention, the ventilation openings for the front portion of the awning were so positioned that drain water could seep along the inner surface of the depending front wall section, causing a discoloration that was visible through the window to which the awning was secured. Also, in the previous arrangements of such awnings, the ventilation openings at the top of the awning were not as effective as they might be in enabling a free flow of convection currents and in precluding the seepage of rain water along the under surface of the awning.

It is a principal object of this invention to provide an improved form of rigid awning structure having effective ventilation apertures so arranged and located as to prevent any seepage of drain water along the underside of the awning to thus prevent the decoloration of the awning surfaces which are normally visible through the window, as well as those surfaces which are seen from the street.

Another object of this invention is to provide an improved type of rigid awning structure having a novel arrangement of ventilation apertures and watershed panel at the top of the awning to provide relatively unrestricted movement of convection currents through and across the awning surface without seepage or drainage of water to the underside of the awning.

Yet another object of this invention is to provide a novel form of rigid awning structure in which the upper awning wall and front wall are formed from a single sheet of metal that is stamped and bent in such manner as to provide concealed ventilation apertures at the front and rear portions of the awning which apertures are completely shielded from the sun and rain to prevent the ingress of either the sun's rays or water through the awning.

2

Another object of the invention is to provide an improved form of rigid awning structure including a downwardly inclined upper awning wall from which a vertically depending front wall section is extended and having concealed ventilation apertures at the front of the awning in the region interconnecting the upper awning wall and the depending front wall.

Further objects and advantages of this invention will be apparent with reference to the following specification and drawings in which:

Fig. 1 is a perspective elevation of the rigid awning of this invention;

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

Fig. 3 is a fragmentary horizontal section taken on the line 3—3 of Fig. 2;

Fig. 4 is a fragmentary vertical section taken on the line 4—4 of Fig. 1;

Fig. 5 is a cross section on the line 5—5 of Fig. 2;

Fig. 6 is a front elevation in the direction of the arrows 6—6 of Fig. 2; and

Fig. 7 is a fragmentary plan view of the stamped blank before bending to form the upper and front awning walls.

Referring to the drawings, the rigid awning of this invention is preferably formed of sheet metal, although other sheet materials may be used, if desired. The awning walls, comprising the upper, front and side wall sections, are formed with alternate ridge and valley portions extending in the direction of the awning which may be of equal width, as shown, or may have varying widths if unusual decorative effects are desired. As shown in Figs. 1, 2 and 7, the upper, downwardly-inclined awning wall surface generally shown at 10, and the vertically-depending front wall surface generally shown at 11 are bent and formed from a single sheet of metal having the appropriate shape, together with the cut-out ventilation apertures 12 to be at the lower front edge, and ventilation apertures 13 to be at the upper rear edge of the awning and particularly located in the vertically extending connecting wall portions between the alternate ridge and valley sections. The single blank of sheet metal, as shown in Figs. 1 and 7, is bent at the outside edges, such as 14 and 15, to form rounded and folded side edges, such as shown at 16. The blank is also bent to consecutively reversed right angles along the dotted lines, such as 18, 19, 20 and 21, to form alternate valley surfaces 22 and ridge surfaces 23, the blank being further bent transversely thereof, as shown in the vicinity of

24 to form the depending vertical front wall 11 extending from the inclined upper wall 10. It will be noted that the ventilation cut-outs 12 are so shaped at their corners 25 and 26 as to enable the transverse bending in the vicinity of 24 to cause the ventilation apertures 12 to be in the valley section 28 of the front wall and recessed beneath an overhanging lip 27 of the valley 22 of the upper wall. Thus water draining down the valley 22 is positively prevented from reaching the underside or inner surface of the front wall 11 but instead drains clear of the front wall due to the overhang of the upper wall valley lip 27 with respect to the front wall valley 28.

Each of the end or side walls of the awning structure, such as the one generally shown at 30, is formed with alternate ridge and valley sections similar to those of the upper and front walls, although preferably no ventilation provisions are made in the end walls. Each of the end walls, such as 30, are provided with turned-out flanges along their upper and front edges which are fastened to the folded edges 16 of the upper and front awning walls by suitable fasteners such as the rivets shown at 31—37. In order to suitably brace the structure, a horizontal girder 38 is fastened to each end wall 30 by rivets 39—44. A cross piece or girder 45 is likewise provided to brace the upper awning wall and is secured by rivets 46—53. In order to reenforce the bend portion between the upper wall 10 and the front wall 11, the transverse girder 55 having a cross-sectional shape as shown in Figs. 2 and 4 is riveted to the front wall 11 at 56—59 and to the upper wall 10 at 60—63. It will be noted that the girder 55 is shaped to permit free movement of air in the direction of the arrow 64 under the valley lip 27 at the front of the awning and through the trough of the underside of the ridge 23. The rear edges of the side wall 30 may be flanged inward such as at 69 to provide a surface for contact with the wall of the building on which the awning is to be installed.

Extending longitudinally along the upper end of the awning is a cross member 70 of generally triangular cross section and this cross member may be fastened to the flange 69 of each of the end wall surfaces 30. A number of holes 71—73 may be provided for mounting bolts (not shown) by which the awning may be attached to the building wall or window frame. It will be noted that the upper ends of the valley surface 22 are bent at 74 and extend almost to the building wall when the awning is in place. Thus drain water is positively prevented from reaching the underside of the upper wall of the awning in the vicinity of the upper end of such valley surfaces as shown at 22. A water shed or flashing 90 is provided to overlie the upper ends of both the ridges 23 and valleys 22 to prevent direct access of the sun's rays or rainwater to the upper ventilation openings 13. It will be seen in Figs. 1 and 2 of the drawings that the water shed 90 is provided with an outwardly-turned flanged lip 91 adapted to engage the building wall and is provided with a slightly down-turned flange 92 so that with the water shed secured to the ridge surfaces by self-tapping screws 94—96, a clearance such as shown at 97 is provided between the underside of the water shed 90 and the ridge surface 23. Thus the ventilation of air from beneath the awning at the upper end is facilitated by permitting the air to flow through the ventilation openings 13 and transversely through the clearance 97 as well as from beneath the water shed 90.

It will be apparent from the description above that the rigid awning arrangement of my invention provides a decorative structure having concealed ventilation openings at the front and rear of the inclined upper awning surface and that the ventilation apertures are so located as to minimize the passage of any light or water with a maximum freedom of air flow. It should also be emphasized that the arrangement of the front awning apertures is particularly effective to prevent the flow of water along both the inside and outside faces of the vertically-depending front wall which would otherwise cause discoloration of the awning. It should be understood that the awning may be surface-coated to resist corrosion and provide decorative effects and that such coating will be additionally preserved with the use of the novel ventilation arrangements of this invention. The awning as illustrated for purposes of the above description is shown to have irregular or scalloped depending edge configurations and it should be obvious that other edge configurations may be used, if desired, without departing from the spirit and scope of the invention as set forth in the appended claims.

I claim:

1. A rigid awning structure having a single sheet of material bent transversely to form a downwardly-inclined upper awning wall and a vertically-depending front awning wall, said awning walls being further formed to provide alternate ridge and valley sections, the valley sections of said upper wall being extended to overlie the valley sections of said front wall, ventilation openings in the vicinities of the lower end and the upper end of the upper awing wall, the ventilation openings in the vicinity of the lower end of said upper wall being located in the valley sections of said front wall and immediately adjacent the aforementioned overlying valley sections of said upper wall, and the ventilation openings in the vicinity of the upper end of said upper wall being located in the vertically extending connecting portions between said ridge and valley sections.

2. A rigid awning structure having a single sheet of material bent transversely to form a downwardly-inclined upper awning wall and a vertically-depending front awning wall, said awning walls being further formed to provide alternate ridge and valley sections, the valley sections of said upper wall being extended to overlie the valley sections of said front wall, ventilation openings in the vicinities of the lower end and the upper end of the upper awning wall, the ventilation openings in the vicinity of the lower end of said upper wall being located in the valley sections of said front wall and immediately adjacent the aforementioned overlying valley sections of said upper wall, the ventilation openings in the vicinity of the upper end of said upper wall being located in the vertically extending connecting portions between said ridge and valley sections, and a water shed transversely overlying the ridge and valley sections of the upper wall together with the ventilation openings in the vicinity of the upper end of the upper wall.

3. A rigid awning structure having a single sheet of material bent transversely to form a downwardly-inclined upper awning wall and a vertically-depending front awning wall, said awning walls being further formed to provide alternate ridge and valley sections, extending in the direction of the awning, ventilation openings in

the vicinities of the lower end and the upper end of the upper awning wall, the ventilation openings in the vicinity of the lower end of said upper wall being located in the valley sections of said front wall, the ventilation openings in the vicinity of the upper end of said upper wall being located in the vertically extending connecting portions between said ridge and valley sections, and a water shed transversely overlying the ridge and valley sections of the upper wall together with the ventilation openings in the vicinity of the upper end of the upper wall, said water shed having a downwardly-turned lower edge terminating in close proximity to the ridge surfaces of the upper wall whereby a ventilation space is provided between the ridge surfaces and the underside of the watershed.

4. A rigid awning structure having a single sheet of material bent transversely to form a downwardly-inclined upper awning wall and a vertically-depending front awning wall, said awning walls being further formed to provide alternate ridge and valley sections extending in the direction of the awning, the upper end of the valley sections of the upper wall being bent upwardly, ventilation openings in the vicinities of the lower end and the upper end of the upper awning wall, the ventilation openings in the vicinity of the lower end of said upper wall being located in the valley sections of said front wall, the ventilation openings in the vicinity of the upper end of said upper wall being located in the vertically extending connecting portions between said ridge and valley sections, and a water shed transversely overlying the ridge and valley sections of the upper wall together with the ventilation openings in the vicinity of the upper end of the upper wall, said water shed having a downwardly-turned lower edge whereby a ventilation space is provided between the ridge surfaces and the underside of the watershed.

5. A rigid awning structure comprising a downwardly-inclined upper awning wall, a front wall vertically-depending from the lower end of said upper wall, said front and upper walls having alternate ridge and valley sections extending in the direction of the awning, ventilation openings in the front wall valley sections adjacent the lower end of said upper wall, the valley sections of said upper wall extended to overlie the valley sections of said front wall and thus conceal said ventilation openings in the front wall valley sections.

6. A rigid awning structure having a single sheet of material bent transversely to form a downwardly-inclined upper awning wall and a vertically-depending front awning wall, said awning walls being further formed to provide alternate ridge and valley sections extending in the direction of the awning, and ventilation openings in the front wall valley sections in the vicinity of the transverse bend, the valley sections of the upper awning wall being extended at the aforementioned transverse bend to overlie the valley sections of the front wall to conceal said ventilation openings.

7. A rigid awning structure comprising a downwardly-inclined upper awning wall, a front wall vertically-depending from the lower end of said upper wall, said front and upper walls having alternate ridge and valley sections extending in the direction of the awning, ventilation openings in the front wall valley sections adjacent the lower end of said upper wall, the valley sections of said upper wall extended to overlie the valley sections of said front wall and thus conceal said ventilation openings in the front wall valley sections, ventilation openings in the vertical wall portions interconnecting said ridge and valley sections in the vicinity of the upper end of the aforementioned upper awning wall, and a water shed transversely overlying the ridge and valley sections together with said ventilation openings of the upper wall.

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