

June 19, 1951

D. YANCHO
METAL AWNING

2,557,775

Filed May 2, 1947

3 Sheets-Sheet 1

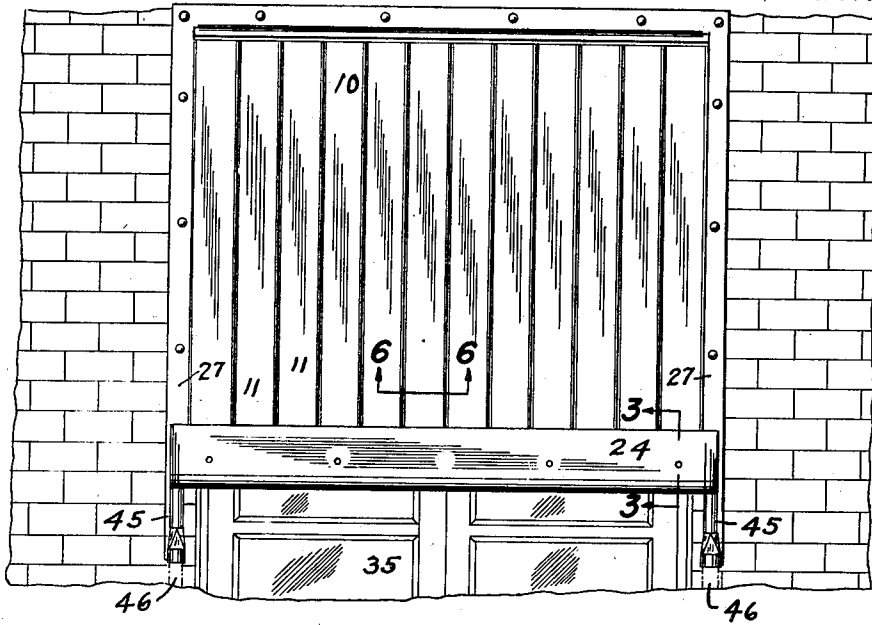


FIG. 1.

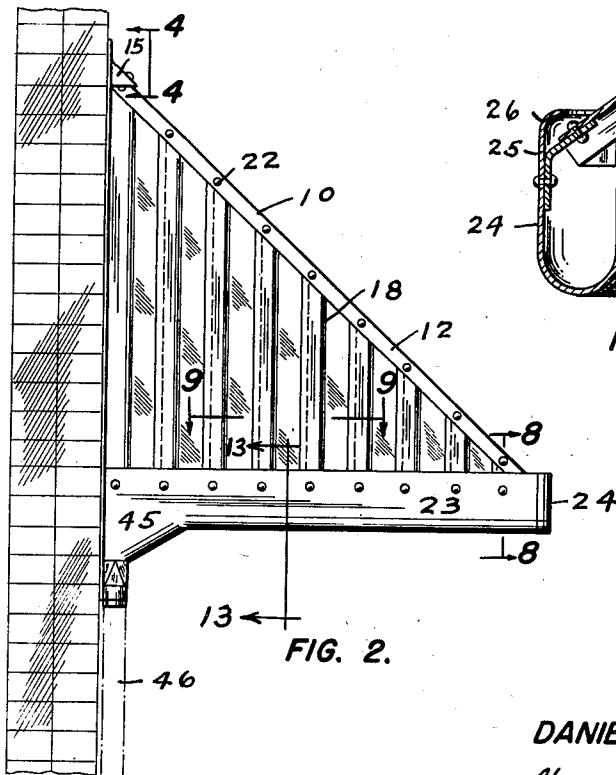


FIG. 2.

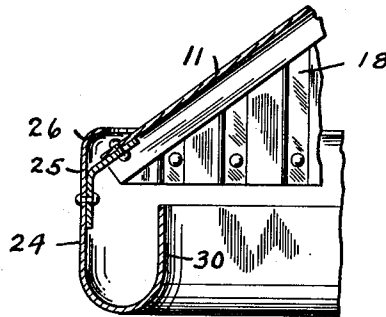


FIG. 3.

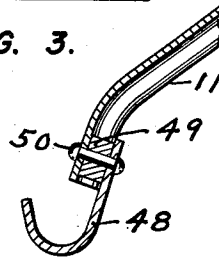


FIG. 17

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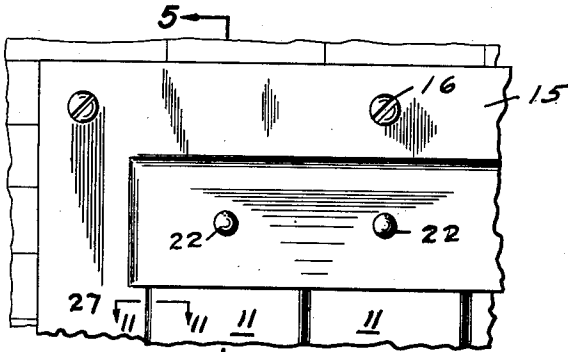


FIG. 4.

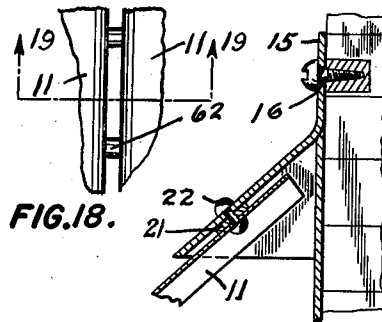


FIG. 5.

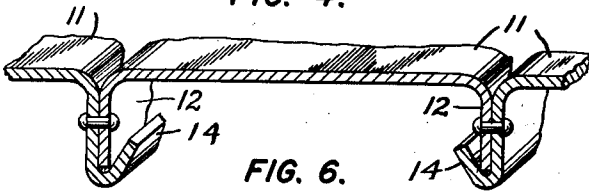


FIG. 6.

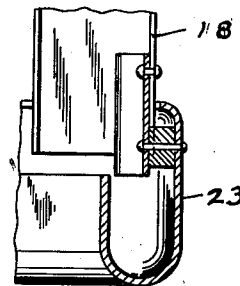


FIG. 8.

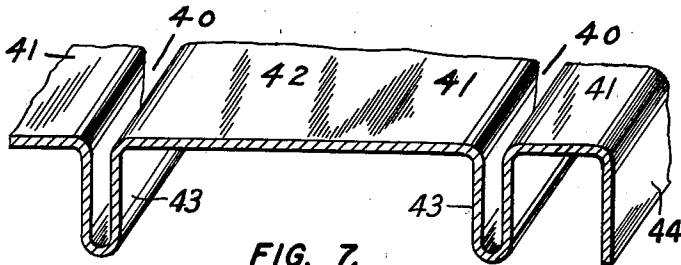


FIG. 7.

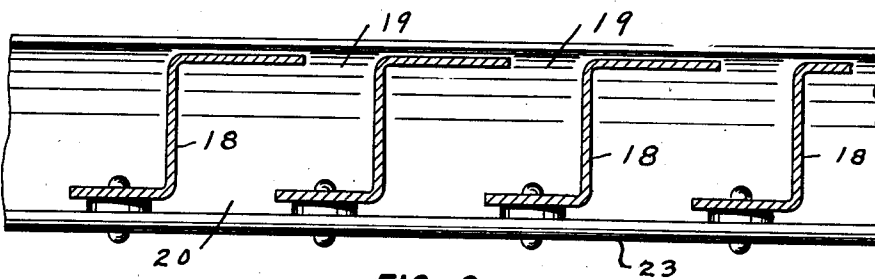


FIG. 9.

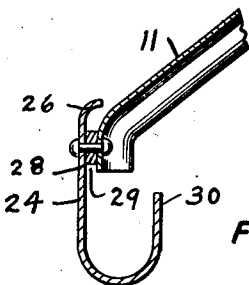


FIG. 10.

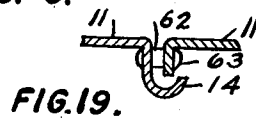


FIG. 19.

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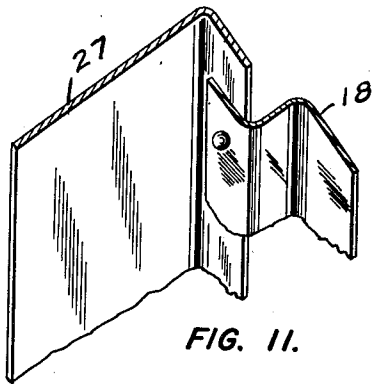


FIG. 11.

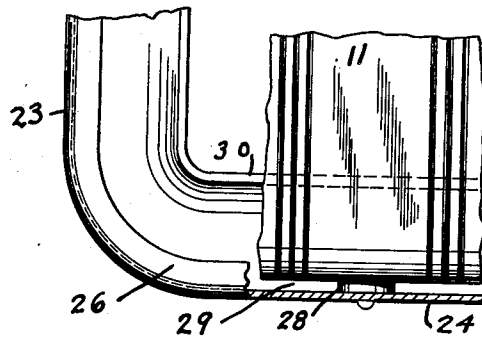


FIG. 12.

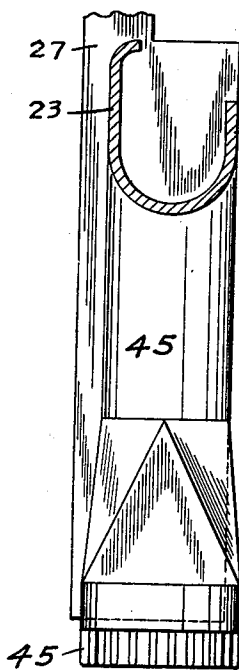


FIG. 13.

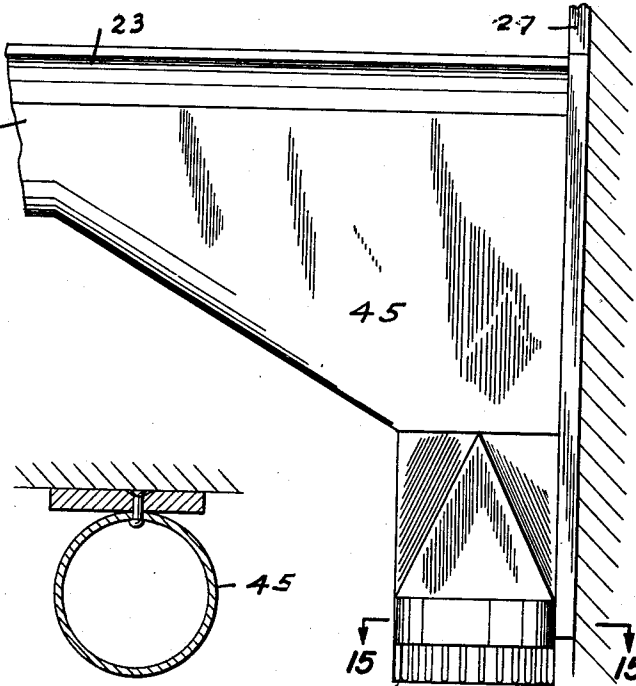


FIG. 14.

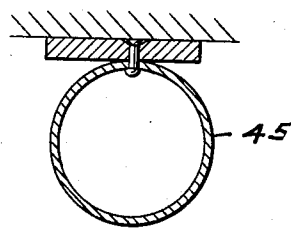


FIG. 15.

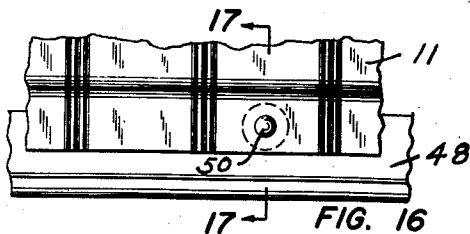


FIG. 16

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UNITED STATES PATENT OFFICE

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METAL AWNING

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Application May 2, 1947, Serial No. 745,386

5 Claims. (Cl. 20—57.5)

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This invention refers to building equipment and more particularly to awnings for placement over windows and other suitable places about the building or other structures. Further the awnings involved, are those known to the trade as metal awnings and are made from rigid material, in contrast to those made of canvas and other flexible materials.

In a particular form of metal awning, the material preferred is of aluminum and coated with enamel. The roofing is constructed of channels alternately inverted and spaced apart to provide for the escape of entrapped air under the awnings or air which has become heated and expanded thereunder and seeks to escape. The alternate channels having their sides pointed upwardly into the others inverted, serve as gutters to carry off rain or water that falls on the roofing. This rain is carried down the slanted roofing and runs off straight at the lower edge. The disadvantage of this form is that it is structurally weak due to the abnormal spacings between the channel slats of which it is formed, without substantial connections to tie them together. Further there is tendency for the rain to get underneath the awning and wet anybody standing there. The front edge, with the rain flowing straight down in a sheet in a severe rainstorm, is subject to being blown in under the awning and drenching the people underneath. In other words it affords little protection in case of a heavy rainstorm. It is claimed to be susceptible to compact storage on one hand because of its demountable channel formation, while on the other hand, being capable of permanent attachment in place, as it is unnecessary to take them down during their long lifetime. Such compactness is therefore of little consequence except during transportation.

It is therefore an object of this invention to provide a new and improved awning that will avoid one or more, of the disadvantages and limitations of the previous art.

Another object of the present invention is to provide a new and improved rigid awning that will be practically rain proof; that will afford ample ventilating features and provide for the carrying off of rain or water in an effective manner, when it falls on the roofing of the awning.

An additional object of the herein described invention is to provide a new and improved rigid awning that will be relatively strong and rigid.

Other objects will become apparent as the invention is more fully set forth.

For a clearer understanding of this invention, a particular form thereof is shown by way of example, in the appended drawings.

The following description explains its construction and the principles under which it operates. The scope of the invention is particularly pointed out in the claims.

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Referring to the drawings:

Figure 1 is a front elevation of an awning embodying this invention;

Figure 2 is a side elevation of Figure 1;

Figure 3 is a sectional view taken along line 3—3 of Fig. 1;

Figure 4 is a sectional view taken along line 4—4 of Fig. 2;

Figure 5 is a sectional view taken along line 5—5 of Fig. 4;

Figure 6 is a sectional view taken along line 6—6 of Fig. 1;

Figure 7 is a modified view of the roof construction otherwise similar to Figure 6;

Figure 8 is a sectional view taken along line 8—8 of Fig. 2;

Figure 9 is a sectional view taken along line 9—9 of Fig. 2;

Figure 10 is a sectional view similar to Fig. 3, with a spacer added between the roof and gutter members;

Figure 11 is a sectional view taken along line 11—11 of Fig. 4;

Figure 12 is a plan view of the roof and gutter construction with parts broken away to show the method of attaching the gutter to the roof;

Figure 13 is a sectional view taken along line 13—13 of Fig. 2;

Figure 14 is an inside view of Fig. 13;

Figure 15 is a sectional view taken along line 15—15 of Fig. 14;

Figure 16 is a plan view of the roof construction with a modified gutter arrangement;

Figure 17 is a sectional view taken along line 17—17 of Fig. 16;

Figure 18 is a modified plan view of the roof construction; otherwise it is similar to Fig. 6, and

Figure 19 is a sectional view taken through line 19—19 of Figure 18.

Similar reference characters refer to similar parts throughout the drawings.

For various practical reasons, the material of which the awning shown in this particular form is made, is sheet aluminum, but may be made of other suitable sheet materials of rigid form. The roofing 10 of the awning is given the conventional slant, and is made up of a series of slat channel members 11 arranged with their flanges 12 directed downwardly and those adjacent one another welded tight together. The alternate channels are preferably colored brightly of the same colors to make them look attractive. The joint 13 where the channels backs come together make a natural marking for the slat striping of the roofing. As many channels as will extend over the window, door, portion or opening 35 with which the awning is used, are welded together to form it. One web of each channel is bent under the other to form a gutter 14 as shown in Figure 6. The roofing terminates in a trans-

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verse angle member 15 that serves to additionally hold the channel members 11 together and also serve as vent and flashing where the roofing comes against the wall of the building. It has holes 16 therethrough for holding bolts to hold the awning up.

Angle members 27 are extended down at the sides of the roofing 10 to form connections with the gutters 23 under the ends of the channels 11. The flanges 12 are welded or otherwise attached to uprights 18, of Z-shape cross-section, that are spaced from one another to allow vertical openings 19 and 20 in between them, for ventilating purposes. The Z-bar arrangement not only serves as an effective lateral ventilator but also as barrier against the sidewise entrance of rain into the space under the awning. The spacer collars 21 keep the channels 11 away from the member 15 a spacing sufficient to permit the hot air tending to accumulate under the awning, to escape above the roofing through the spacing. Suitable welding, bolts or rivets 22 hold these spacer collars in place and the uprights 18 to the flanges 12. The uprights 18 also support a gutter 23 at each side of the awning. The gutters 23 also tie-in with a front gutter 24 formed as shown which they serve. The gutter 24 acts as an apron at 25 for the awning, and is surmounted by a flange 30 bent back towards the roofing.

It can be appreciated that rain falling on the roofing flows down its slanting upper surface and eventually reaches the various gutters 23 and 24 which carry it to a suitable collector 45, for disposal through a rain spout 46 out of the way. The front apron 25 projects at 26 above the plane of the roofing along its front so as to stop the rain as it comes down and guide it to the front gutter together and is provided with spacers 28 to leave openings 29 that allow the rain reaching thereto, to flow down into the gutter 24 and be carried away. The front gutter 24 adds to the appearance of the awning as well as strengthening it along the front by rendering the awning very rigid. It is preferably made of slat channels so as to have the same striped appearance as the slanting roofing and retain the same general design or it may be made from flat material and painted to suit the general scheme.

However the awning material could be bent or formed by pressing the sheet forming the roofing into a special integral corrugated contour, as indicated in Figure 7. In this figure, the channels become depressed grooves 40 between flat surfaces 41. The grooves while narrow form gutters to take off the rain without having it flow under the roofing 42. The other portions of the awning can remain as in the original form except that the flanges 43 are formed integral with the roofing 42 and the lower end is bent downwardly at the edge 44. This arrangement avoids a lot of assembly labor and renders it more susceptible to production methods and reduction of the cost of manufacture in quantity.

While the awnings in this invention provide ample ventilation, they do not allow the rain to leak past its parts. They also provide for an effective removal of rain without making a dropping rain curtain at the front or edges. They may be made up quickly and as readily disassembled, without requiring the detachment of every slat formation in the roofing. The slat channels in the roofings are so termed because they resembled slats and enable painting to be done in clear cut strips that make the awning attractive. The bar of Z-shape cross-section at

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the sides gives the awnings a similar slat appearance and may be likewise colored. In the form shown in Figure 6 the gutters 14 will carry off any leakage through the joints or condensation forming under the roofing and getting into them. The integral or tight attaching of the webs or the use of the corrugations formed into the grooves 40 greatly stiffens the roofing. A modified gutter 48 is shown in Figures 16 and 17, attached to the channels 11 by a spacer 49 and rivets 50.

In the modified form of a ventilated roof shown in Figures 18 and 19 the depending sides of the channel 11 are spaced apart by bushings 62 and held in position by rivets 63. Any water entering between the channels will be carried off by the gutter 14.

While but two general forms of the invention are shown in the drawings including the modified roof construction and described in the specifications it is not desired to limit this application for patent to this particular form, as it is appreciated that other forms could be made that would use the same principles and come within the scope of the appended claims.

Having thus described the invention what is claimed is:

1. An awning unit comprising in combination an inverted transverse angle member for forming a support for said awning, spacer collars attached to said support, a plurality of slat channels positioned at one end to said support and spaced therefrom by said spacer collars, said channels having one flange bent at right angles to the top and the opposite flange bent downwardly and upwardly to form alternate gutters, said channels being spaced laterally from each other by bushings, uprights of Z-shape cross-section attached in spaced relationship to one of the flanges of the side channels to allow air to pass through said awning and creating barriers to prevent rain from driving therethrough.

2. An awning unit comprising in combination an inverted transverse angle member for forming a support for said awning, spacer collars attached to said support, a plurality of slat channels positioned at one end to said support and spaced therefrom by said spacer collars, said channels having one flange bent at right angles to the top and the opposite flange bent downwardly and upwardly to form alternate gutters, said channels being spaced laterally from each other by bushings, uprights of Z-shape cross-section attached in spaced relationship to one of the flanges of the side channels to allow air to pass through said awning and creating barriers to prevent rain from driving therethrough, and front and side gutters for collecting rain water from said awning and directing it backward and downwardly from said awning.

3. An awning unit comprising in combination an inverted transverse angle member for forming a support for said awning, spacer collars attached to said support, a plurality of slat channels positioned at one end to said support and spaced therefrom by said spacer collars, said channels having their flanges bent downwardly at right angles to each other and butted tightly together to prevent rain from leaking there-through, uprights of Z-shape cross-section attached in spaced relationship to one of the flanges of the side channels to allow air to pass through said awning and creating barriers to prevent rain from driving therethrough.

4. An awning of the class described comprising

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in combination an inverted transverse angle member for attachment to a wall to form a support for said awning, a roof member for said awning attached to said angle member support, spacers for said roof member to retain it in spaced relationship to said angle member support to allow the passage of air therethrough, uprights of Z-shape cross-section attached in spaced relationship to the edges of the end roof members to form ventilated end members for said awning.

5. An awning of the class described comprising in combination an inverted transverse angle member for attachment to a wall to form a support for said awning, a roof member for said awning attached to said angle member support, spacers for said roof member to retain it in spaced relationship to said angle member support to allow the passage of air therethrough, uprights of Z-shape cross-section attached in spaced relationship to the edges of the end roof members to form ventilated end members for said awning,

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and front and side gutters for collecting rain from said awning and directing it away therefrom.

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