

Jan. 2, 1968

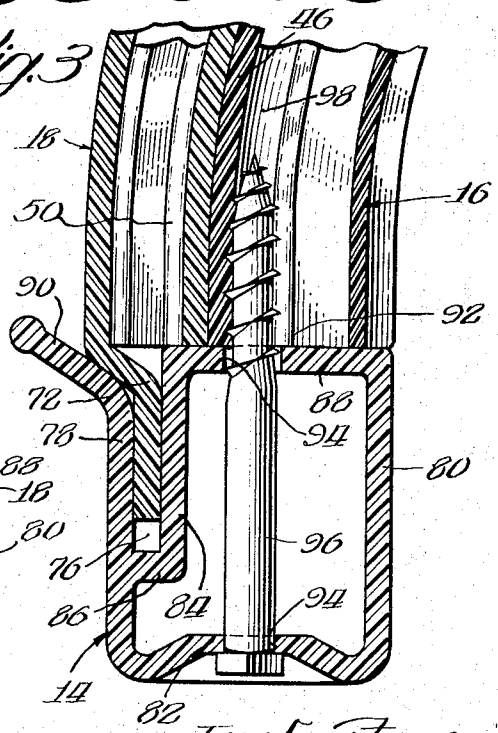
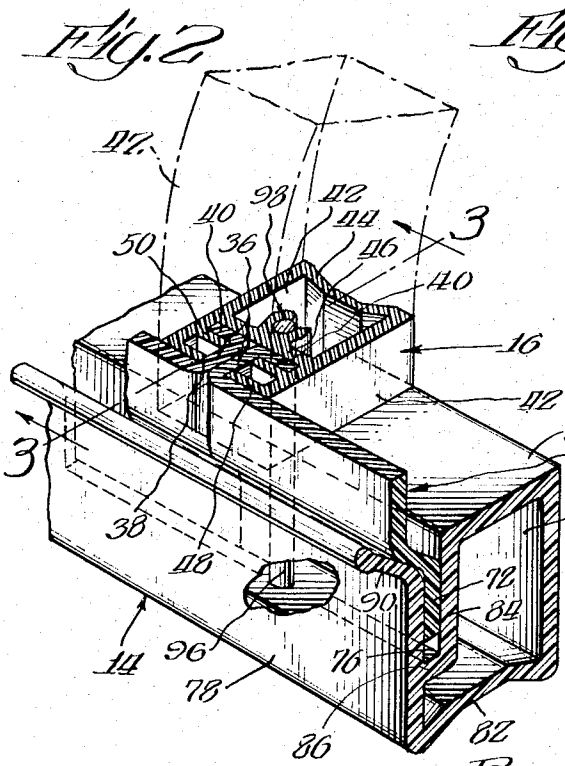
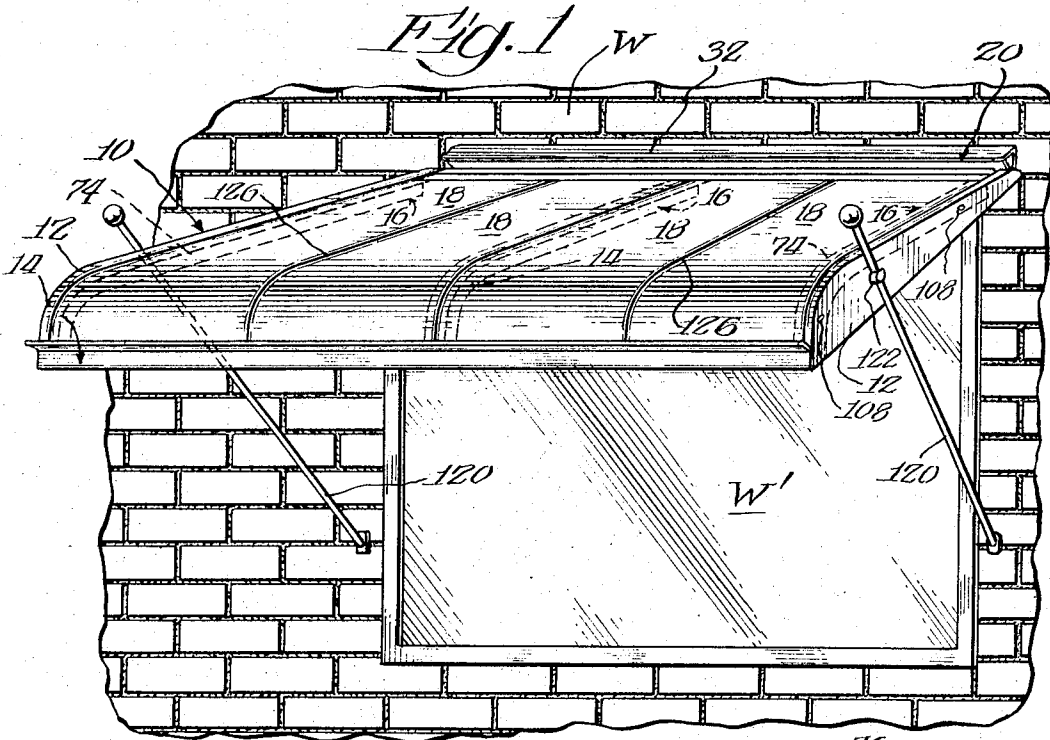
D. G. DEDDO

3,360,886

AWNING CONSTRUCTION

Filed Dec. 6, 1963

2 Sheets-Sheet 1



Inventor:
Daniel G. Deddo
By Bair, Freeman & Molinare Attys

1

3,360,886
AWNING CONSTRUCTION
 Daniel G. Deddo, 5101 W. St. Paul Ave.,
 Chicago, Ill. 60639
 Filed Dec. 6, 1963, Ser. No. 328,546
 5 Claims. (Cl. 49-71)

This invention relates to an improved awning construction and it particularly relates to an awning construction which is particularly inexpensive to manufacture and assemble.

In the manufacture of awning constructions, as with most consumer products, it is of primary importance that a superior product be provided, and yet be relatively inexpensive and simple to manufacture and/or assemble. In most known awning constructions, a large number of parts are required, and as a consequence, they are not only expensive to manufacture, but are quite difficult and complex to assemble. For example, one problem that is often encountered in assembly is the attachment of the entire awning construction on a wall, in place above a window; it would be clearly advantageous if an awning mounting structure could be first secured to a wall and then the previously assembled awning construction could be securely fastened to the wall-mounted structure. This would enable the assembler to properly position the wall mounted structure and level the same, without supporting the weight of the entire awning construction while doing so.

It is therefore an important object of this invention to provide an improved awning construction, wherein relatively few component parts are used, to thereby provide an awning which is inexpensive and simple to manufacture and assemble, when compared to presently known awning constructions.

It is also an object of this invention to provide an awning construction wherein the rear, side and front portions of the awning panel are utilized for directly connecting the panel to the awning framework.

It is a further object of this invention to provide awning framework members which may be manufactured by employment of extrusion procedures, thereby being of relatively inexpensive construction.

It is another object of this invention to provide an awning construction utilizing a vacuum formed, plastic awning panel having integral portions which are utilized in connecting the awning panel directly to the awning framework.

It is still another object of this invention to provide an improved awning construction wherein the rear portion of the awning is readily mounted to a previously mounted wall structure, thereby avoiding the necessity of supporting the weight of the entire awning while the wall support is properly positioned and leveled.

It is an additional object of this invention to provide an improved awning framework and a panel construction wherein the awning framework is assembled by means of a minimal number of fasteners, the awning panel is assembled thereto simply by being slipped into place on the awning framework, and the entire assembly is pivotably secured to the previously mounted wall structure.

Further purposes and objects of this invention will appear as this specification proceeds.

A particular embodiment of the present invention is illustrated in the accompanying drawings wherein:

FIGURE 1 is a perspective view of my awning construction mounted above an outside window;

FIGURE 2 is a greatly enlarged perspective view, partially sectioned, of the connection between the front member, a side connecting member, and awning panels;

FIGURE 3 is an enlarged sectional view taken along the line 3-3 of FIGURE 2;

2

FIGURE 4 is an enlarged fragmentary, perspective view of the wall-mounting structure, an awning panel member, a side covering member, and a connecting member for securing the side member to the awning panel member;

FIGURE 5 is an exploded view of the embodiment of FIGURE 4;

FIGURE 6 is an enlarged end view, taken along the line 6-6 of FIGURE 4;

FIGURE 7 is an end sectional view of an alternate construction for joining one awning panel to another; and

FIGURE 8 is an end sectional view utilizing an alternate side construction.

Referring to the drawings, my awning construction 10 is shown mounted to a wall W, adjacent a window W'. The awning construction 10 includes an awning framework having an elongated nose or front member 14 and side connecting members 16. The framework is adapted to carry a plurality of awning panels 18 which are adapted to provide a pivotable connection for the entire awning construction 10 on a wall mounted structure 20.

The awning panels 18 may be constructed of any of a variety of plastic or metal sheeting, including aluminum, fiberglass, and various other forms of semi-rigid plastics; desirably, the awning panels 18 are constructed of plastic sheets, as polyvinyl chloride, which are adapted to be vacuum formed and preferably have a thickness of about .040-.060 inch. Referring particularly to FIGURES 2-6, the awning panel or sheet 18 is provided with an elongated rear portion 22 which runs substantially parallel to the supporting wall W and is adapted to be pivotably connected to the wall mounted structure 20. The awning rear portion 22 includes a depending arcuate section 24 and a retaining arm 26, extending upwardly and forwardly from the rear portion of the arcuate section 24. The rear portion 22 of the awning 18 is received by the structure 20, which is secured to the wall W by fasteners or screws 28.

The wall-mounted structure 20 has an upright planar portion 30 which abuts the wall W, an upper outwardly projecting guide flange 32 and a lower arcuate retainer 34. The arcuate section 24 of the awning 18 is pivotably carried or cradled in the retainer section 34 of the wall structure 20 and the retaining arm 26 of the awning panel 18 is adapted to slidably contact the lower or inner surface of the outwardly projecting, locking guide flange 32 of the wall-mounted structure 20. By the unique co-operating construction of the rear portion 22 of the awning 18 and of the wall-mounted structure 20, the structure 20 may be first mounted to a wall before attaching the main portion of the awning construction. This is a great advantage since the wall mounting structure 20 may be properly positioned over a window and leveled without the burden of supporting the weight of the entire awning construction. In connecting the rear portion 22 to the structure 20, the arcuate section 24 may be set in the arcuate retainer 34 of the structure 20; then the arm 26 may be snapped over the outer edge of the upper flange 32; alternatively, the rear portion 22 may be slidably inserted on to the wall structure 20. Desirably, the wall-mounted structure 20 is constructed of aluminum and is made by an extrusion process, thereby substantially reducing manufacturing costs for this part.

In order to join a plurality of awning sheets 18 together, the side connecting members 16 co-operate with the uniquely constructed side portions 36 of the awning panels 18. In the embodiment of FIGURES 2-6, the awnings 18 have channel-like side portions 36. Specifically, the side portion 36 is provided with a downwardly extending wall 38, and an intumed flange 40 which is substantially parallel to the main portion of the awning 18; the side portions

36 extend forwardly from the rear portion 22 of the awnings and are substantially perpendicular thereto.

Referring particularly to FIGURES 4 and 8, the side connecting members 18 are desirably constructed of aluminum and are made by an extrusion process, thereby substantially reducing manufacturing costs. The connecting members 18 include opposed side walls 42 which are rigidly joined at their lower portions by the base 44. They are also rigidly connected intermediate their upper and lower portions by a rib 46. Extending inwardly towards each other from the opposed side walls 42 are top flanges 48; intermediate the upper flanges 48 and the rib 46 are lower flanges 50, which also extend inwardly towards each other.

The channel-shaped side portions 36 of the awning panels 18 are adapted to be slidably inserted on the connecting members 16. Specifically, when joining two panels 18 together by means of a connecting member 16, the outer surfaces of the walls 38 meet in abutting relationship, and are positioned between the pair of parallel inwardly extending flanges 48 and 50. The lower flanges 40 of a side portion 36 are received in the space defined between the lower flanges 50 and the rib 46 of the connecting member 16. The space between the flanges 48 and 50 is dimensioned to snugly pass a pair of awnings 18 therebetween, whereby adjoining awning panels 18 are rigidly and securely held in place. Advantageously, the side walls 38 of the awning panels 18 are adapted to be biased towards each other to thereby provide close contact between the abutting outer surfaces of the walls 38 and to substantially prevent water leakage therebetween; this biasing action may be accomplished in a number of ways, including by providing side walls 38 which are bowed outwardly a slight amount. This structure has a pleasing external appearance since the place of joining one panel to another has the appearance of a straight line, as seen in FIGURE 1; also, in order to enhance the pleasing external appearance of my construction, elongated depressions or grooves 126 may be provided at spaced intervals from the side portions 36 of the panels 18—these grooves 126 provide substantially the same external appearance as the place of joining one panel to another.

Referring to FIGURE 7, there is a cross-sectional view through an alternate side connecting member 52; an alternate construction is also provided for the side portions 54 of the awning panels 18. The side portions 54 are generally in the form of upwardly opening channels, and each includes a downwardly extending wall 56, an outwardly extending base 58, and an upwardly extending wall 60. The alternate connecting member 52 includes a planar upper portion 62 and a substantially parallel, planar lower portion 64. The upper and lower portions 62 and 64 are interconnected by an upstanding rib member 66. The outer ends of the lower portion 64 include upwardly extending retaining walls 68, substantially parallel to the rib 66. The upper portion 62 includes outwardly and downwardly extending awning abutment portions 70 at the outer ends thereof. The space formed between the upper and lower portions 62 and 64, the rib 66, and the retaining wall 68 is adapted to slidably receive a channel-like side portion 54 of the awning panels 18. Both embodiments for joining awning panels together provide firm attachment between panels merely by slidably engagement between the connecting members and the awning side panels, no extra fastening means being required.

Referring particularly to FIGURES 2 and 3, the awning panels 18 include inwardly stepped leading portions 72, which are adapted to be inserted into the elongated front framework member 14. The awning panel 18, preferably being of a semi-rigid plastic material, is adapted to conform to the curved portions 74 of the connecting members 16. The front stepped portions 72 of the panels 18 are specifically adapted to be slidably inserted into the forward groove 76, of the front member 14. The front framework member 14 includes a front wall 78,

a substantially parallel rear wall 80, and a base 82 for connecting the front and rear walls 78 and 80 together. The groove 76 is formed between the front wall 78 and an intermediate wall 84, which is integrally joined with the rear surface of the front wall 78 by a connecting flange 86. The intermediate wall 84 is integrally joined with the rear wall 80 by an upper wall 88. The front wall 78 also includes an upwardly and outwardly extending lip portion 90 which, together with the abutting portion of the awning panels 18, provides a drainage gutter for rain water; desirably the gutter thus formed is slanted slightly to one side or the other.

In order to secure the front framework member 14 to the side connecting members 16, the upper wall 88 of the front member 14 is placed into an abutting relationship with the downwardly turned lower end 92 of the connecting member 16. The base portion 82 and the upper wall 88 of the elongated front member 82 are provided with aligned apertures 94 for allowing the passage of screws 96. The threaded portions of the screws 96 are then adapted to be threadably inserted into the ends of the continuous slots 98 provided on the underside of the rib 46 of the connecting member 16.

Referring to FIGURES 1, 4 and 5, the end covering members 12 for the awning construction 10 are adapted to be secured in abutting relationship to the outer awning panels 18. Each end cover 12 includes a downwardly extending side wall 99, which tapers outwardly from the rear of the awning panel to the front thereof. As seen in FIGURES 4 and 6, the rear of the side walls 99 are adapted to cover the arcuate flange 34 of the wall structure 20 and the arcuate portion 24 of the panel 18, to thereby maintain the awning panels 18 in proper alignment on the wall-mounted structure 20. The end cover 12 is also provided with an upper inwardly extending flange 100, and a downwardly extending side wall 102. The side wall 102 is adapted to be inserted into the space between the upper and lower flanges 48 and 50, in abutting relationship to the outer surface of the downwardly extending wall 38 of the awning panel 18. The upper flange 100 of the cover 12 is positioned in abutting relationship to the outer surface of upper flange 48 of the connecting member 16, and the outer side wall 99 is adapted to be in abutting relationship to an outer surface of the side wall 42 of a connecting member 16. Since the end covers 12 are desirably constructed of aluminum, in order to provide a firm connection between the covers 12 and the connecting members 16, apertures are provided in both parts whereby fasteners 108 may be passed therethrough for threadable securement.

As an alternate, referring to FIGURE 8, the ends of the awning construction 10 may be provided with end trim 110, rather than with end covers 12. The end trim 110 includes an upper wall 112, an outer, downwardly extending wall 114, and an intermediate rib extending downwardly from the central portion of the upper wall 112, substantially parallel to the wall 114. The lower end of the rib 116 includes an outwardly extending flange 118, which is substantially parallel to the upper wall 112. The end trim member 110, which is desirably constructed of semi-rigid plastic, is adapted to be slidably received by the connecting member 16, in a manner similar to the connection of the side portion of an awning member 18 thereto. Thus, the intermediate rib 116 is positioned between the upper and lower flanges 48 and 50 of the connecting member 16, and in abutting relationship to the wall 38 of the awning panel 18, while the lower flange 118 is located in the space between a lower flange 50 and the intermediate rib 46 of the connecting member 16.

One of the important advantages of the present awning construction 10 is its simplicity of assembly. As previously mentioned, the mounting structure 20 is first properly positioned and leveled over a window W' and is secured to a wall W. The structure 20 is thus leveled with-

out the burden of supporting the entire weight of the awning construction 10.

The remainder of the awning construction is separately assembled. First, the nose piece or front member 14 is secured to the required number of connecting members 16. Screws 96 are passed through the aligned apertures 94 in the base and upper portions 82 and 88 of the front member 14, and are then threadably secured in the screw slots 98 of the connecting members 16. Following this, the end covers 12 may be inserted into the space between the flanges 48 and 50 of the connecting piece 16, and by means of fasteners 108 the covers 12 may be secured to the connecting members 16. Alternatively end trim 110 may be slidably inserted on the connecting members 110. Following, the assembly of the awning framework, the awning panels 18 are then simply slid into place on the connecting members 16, the channel portions 36 of the awning members 18 being slidably received by the connecting members 16 in the manner previously described. At the curved portions 74 of the connecting member 16, the awning panels, being constructed of semi-rigid plastic, conform to the curvature thereof. The stepped leading portion 72 thereof is then inserted into the groove 76 of the front member 14. At this time, the awning construction is ready to be secured to the wall mounting structure 20.

The arcuate section 24 of the rear portion 22 of the panel 18 is then placed on the retaining section 34 of the wall-mounted structure 20, and the arm 26 is compressed under the outer edge of the upper flange 32 of the wall-mounted structure 20.

Conventionally, pole supports 120 may be pivotably secured at one end to the wall W, and are slidably received by pivot members 122 which are secured to the end covers 12. The pivot members 122 are adapted to be tightened against the poles 120 so that the awning construction 10 is maintained in the normally raised position. The pivot members 122, upon loosening thereof, permit the awning to be pivoted downwardly by cooperation between the rear portion 22 of the awning panel 18 and the lower retaining portion 34 of the wall-mounted structure 20. It is desirable that the awning be pivotable for cleaning purposes and also, in certain areas, it is desirable that the awning be swung downwardly whereby windows may be shuttered during violent storms, and also may be pivoted to any particular angle to provide the desired protection from the sun. Also, the awning panels 18 are desirably provided with transverse gutters or troughs 124, intermediate the rear portion 22 and the leading portion 72 of the panel 18, in order to provide for water drainage. Furthermore, by providing non-corrosive material for the awning panels 18, the parts are easily dis-assembled after long periods of use and the awning 18 is maintained freely pivotable with respect to the wall structure 20.

Not only is my awning construction 10 easy to assemble, but is also highly economical to manufacture. The awning panels 18, as previously set forth, may be vacuum formed to desired shape, including the formation of the leading portion 72, the rear portion 22, the channel-like side portions 36 or 54, and the transverse gutters 124. Furthermore, the front framework member 14, the side connecting members 16 and the wall-mounted structure 20 may all be formed of aluminum and may be manufactured by the economical process of extruding. Thus, by providing vacuum-formed and extruded members for various sections of the awning construction, minimal additional manufacturing, costs are required, as the drilling of assembly holes. Further, a minimal number of fasteners are utilized in my construction. Not only does my awning construction 10 provide a highly economical structure, both from the standpoint of manufacture and from the standpoint of assembly, by utilizing a sliding connection between the awning panels 18 and the supporting framework, "rattling" of the awning construction is greatly re-

duced since there is substantially no problem of loosening of fasteners, as caused by expansion and contraction of associated parts.

Although, throughout the specification, I have referred to "awnings" it is to be understood that this term is meant to include other types of constructions on which my structure can be used, as roofs or shelter panels for summer homes, wall panels for outside fences, etc.

While in the foregoing there has been provided a detailed description of particular embodiments of the present invention, it is to be understood that all equivalents obvious to those having skill in the art are to be included within the scope of the invention as claimed.

What I claim and desire to secure by Letters Patent is:

1. An awning construction comprising, in combination, a first pivotable plastic awning panel, a second pivotable plastic awning panel, integral side portions on each of said panels including upright side wall portions, an elongated connecting member for slidably receiving and securing said portions of said awning panel in side by side relationship, said upright side wall portions on the respective panels being in abutting relationship for rigidly holding said panels in side by side relationship, a wall mounted metal support structure for receiving said awning panels, a lower arcuate support portion and an upper outwardly extending locking guide flange on said support structure, an integral rear portion on each of said panels, each of said rear portions including an integral depending arcuate portion substantially conforming to the inner portion of said lower arcuate support of said wall mounted structure for providing sliding pivoted engagement therebetween, and an integral arm extending upwardly and forwardly from the rear portion of said integral arcuate portion for slidably engaging against the lower surface of said locking guide flange so that said panel and said wall mounted structure are maintained in pivoted locking engagement.

2. The construction of claim 1 wherein each of said awning panels includes a transverse trough spaced from said rear portions for providing drainage of water from said panels.

3. The construction of claim 1 wherein said side portions are inwardly opening and define a space therebetween, said elongated connecting member having first and second lateral portions, and inwardly facing upper flanges connected to said side portions, said side portions being slidably received in abutting relationship in the space between said flanges.

4. An awning construction comprising a first pivotable awning panel, said awning panel having integral channel-like side portions, an elongated connecting member for slidably receiving and securing said integral side portions of said panel members in side by side relationship to each other, said channel-like side portions opening inwardly and defining a space therebetween, said elongated connecting member having first and second lateral portions, inwardly facing upper flanges connected to said lateral portions, said channel-like side portions being slidably received in abutting relationship in the space between said flanges, a rib connecting said first and second lateral portions together, said rib including a slotted opening integral with said rib for receiving threaded fastener means, a front member connected to the front portions of said awning panels, said threaded fastener means joining said front member to said connecting members, means for adjustably maintaining said panels in a desired pivoted position, a wall mounted support structure for pivotably receiving said awning panels, integral rear portions on said panels for pivotably connecting said panels to said support structure, and cooperating locking means on said support structure and on said rear portions for maintaining said awning panels in locking pivotable engagement with said support structure.

5. The construction of claim 4 wherein said front member includes an elongated groove, said panel in-

7

cludes a forward lip, said groove receiving the forward lip of said awning panel, and said front members being secured to said connecting members.

References Cited

UNITED STATES PATENTS

| | | | |
|-----------|---------|-----------------------|----------|
| 2,593,221 | 4/1952 | Thompson et al. ----- | 52—77 |
| 2,776,460 | 1/1957 | Bottom ----- | 52—77 |
| 2,780,847 | 2/1957 | Eagleson ----- | 20—40.1 |
| 2,780,848 | 2/1957 | Wells ----- | 49—71 |
| 2,867,273 | 1/1959 | Brennan et al. ----- | 49—71 |
| 2,900,681 | 8/1959 | Becker ----- | 52—74 |
| 3,002,591 | 10/1961 | Hess ----- | 52—508 X |

8

| | | | |
|-----------|---------|-----------------|----------|
| 3,009,548 | 11/1961 | Miller ----- | 52—497 X |
| 3,092,171 | 6/1963 | Deddo ----- | 52—74 X |
| 3,140,763 | 7/1964 | Edelstein ----- | 189—76 X |
| 3,206,898 | 9/1965 | Schroyer ----- | 52—74 |

5

FOREIGN PATENTS

| | | |
|---------|--------|------------|
| 228,361 | 8/1959 | Australia. |
| 232,139 | 1/1960 | Australia. |

10 DAVID J. WILLIAMOWSKY, *Primary Examiner.*HARRISON R. MOSELEY, *Examiner.*P. C. KANNAN, *Assistant Examiner.*