April 10, 1956 J. DE MARTIN 2,741,001

LIGHT-TRANSMITTING AWNING OF RIGID METAL TYPE AND LIGHT-TRANSMITTING RIGID METAL PANEL UNITS THEREFOR

Filed Feb. 16, 1952

Fig. 1.

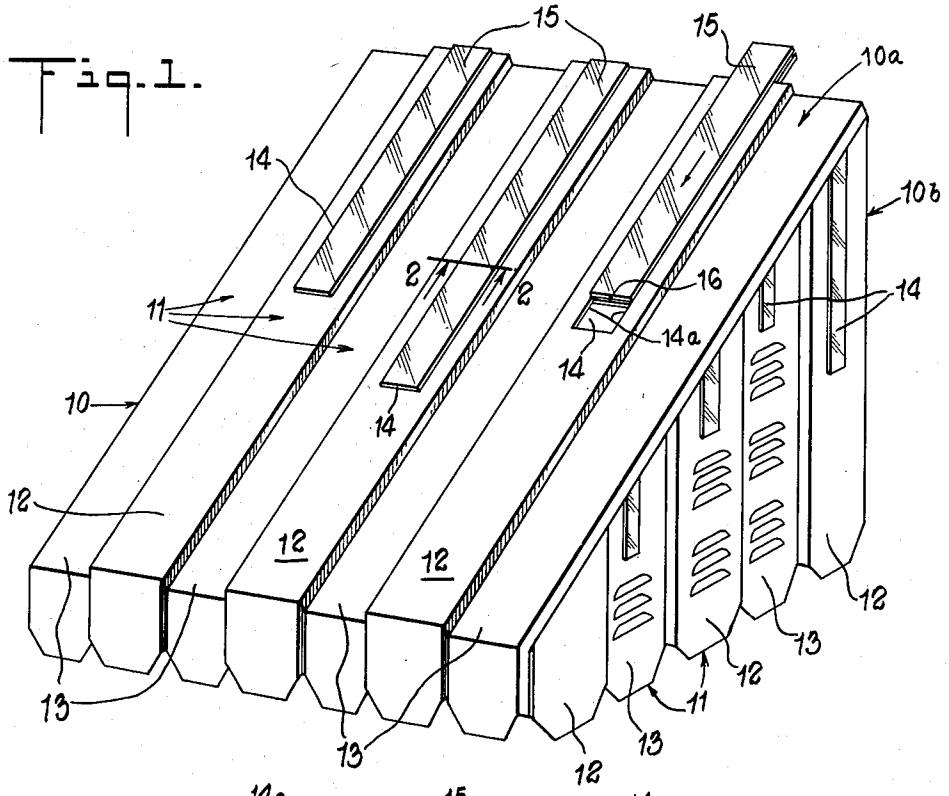



Fig. 2.

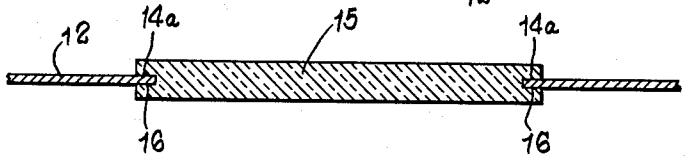



Fig. 3.

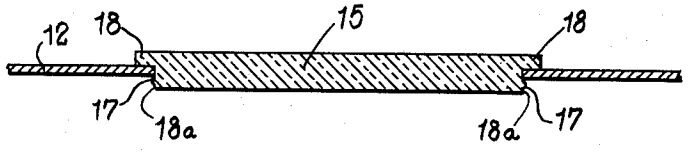



Fig. 4.

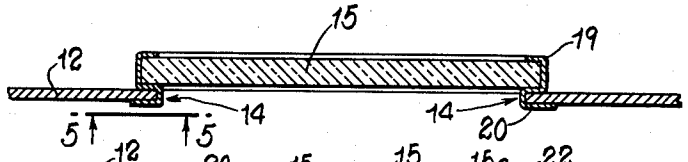



Fig. 5.

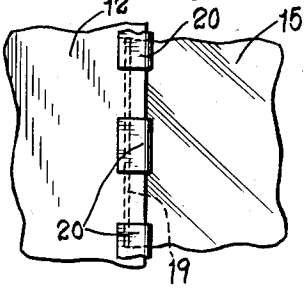
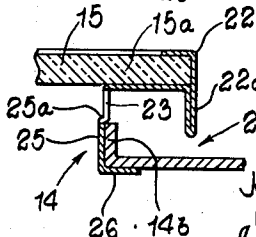



Fig. 6.




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# LIGHT-TRANSMITTING AWNING OF RIGID METAL TYPE AND LIGHT-TRANSMITTING RIGID METAL PANEL UNITS THEREFOR

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4 Claims. (Cl. 20—57.5)

This invention relates to a light-transmitting awning of rigid metal type and light-transmitting rigid metal panel units therefor.

Metal awning are conventionally formed of a frame and rigid metal roof and side sections, each composed of a series of panel units comprising raised panel members alternately arranged with depressed channel members. Such sections so formed by these members are adapted to effectively shed water to provide shade against excessive heat or cold and protection against rain or snow, and also many metal awnings are provided with vents to permit the passage of air. Such metal awnings heretofore made, however, are objectionable to some householders because they are completely opaque and thus prevent or shield all light from above the awning from passage or transmission into a room through a window over which such awning is hung, thus resulting in a darkened room.

One of the objects of this invention is to produce a sheet metal awning preferably of the said rigid panelled and channeled type, which while effectively providing shade against excessive heat or cold, sheds water and affords protection against rain or snow and will at the same time permit the transmission therethrough of a given amount of light and sunshine, while at the same time avoiding all glare.

Another object of this invention is to produce such a rigid sheet metal awning having light-transmitting means without detracting from the rigidity thereof and thus to produce an awning for use on the windows of rooms in which it is desired to have a given amount of light or sunshine and at the same time to protect the room against glare, while continuing conventional protection against the elements, shedding rain and snow and also protecting the room from the excessive heat of the sun.

Another object of this invention is to produce a sheet metal awning unit composed of a rigid opaque metal roof and side panel or similar channel member which is provided preferably at the central portion of such members with relatively narrow inserts, composed of relatively narrow transparent strips of plastic material, fixedly-positioned in such panel or channel members of the roof section preferably at the upper portion thereof and also preferably in the upper portions of the sides of the awning and to produce from such units a rigid awning that will transmit or pass light or sunshine into a room without subjecting such room to glare and without materially detracting from the rigidity and strength of the metal awning.

Another object of my invention is to provide in an awning of opaque metal preferably at the upper portion thereof a narrow opening or slit and to fit into said opening an insert of plastic material adapted to transmit light without detracting substantially from the strength and rigidity of the panel.

Another object of this invention is to utilize inserts and panels having interengaging means for fixedly fitting and fastening the inserts within openings in the panels,



and preferably providing interengaging means for such inserts that will enable them to be fitted and fixed into position in such panels during fabrication of the panels for the awning.

Still another object of this invention is to provide means for supporting such transparent inserts of the type specified in a fixed position above the opening by a suitable metallic frame having clips connected to the awning.

Another object of this invention is in an awning of the character specified to utilize transparent plastic strips in panel members of awnings to provide transparent covering members for venting openings which will be raised above such openings to provide air of substantially similar temperatures or heat characteristics on opposite sides of the roof and side members, thus providing air within the awning and avoiding the gathering of moisture on the light-transmitting elements to prevent any clouding up of the same.

With these and other objects in view, the invention comprises the combination of members and arrangement of parts so combined as to co-act and cooperate with each other in the performance of the functions and the accomplishment of the results herein contemplated, and comprises in one of its adaptations the species or preferred form illustrated in the accompanying drawings, in which:

Fig. 1 is a view in perspective of an awning embodying my invention and shown with three transparent inserts at the top and four inserts at each side and in the roof inserts having one of the same longer than the other two, and also showing one of them only partially inserted in the opening;

Fig. 2 is a section on the line 2—2 of Fig. 1 looking in the direction of the arrows and showing my preferred form of connection between the metal panel and transparent insert;

Fig. 3 is a sectional view similar to Fig. 2 showing a modified form of connection between the panel and light-transmitting insert;

Fig. 4 is a sectional view of still another modified form of connection or mounting of my light-transmitting element over a panel opening;

Fig. 5 is a view in plan of the construction shown in Fig. 4 on the line 5—5 of said Fig. 4;

Fig. 6 is still another modification in which a light-transmitting element is employed as a cover sheet for a venting opening.

Referring now to these drawings which illustrate a preferred embodiment of my invention, a rigid metallic awning **10** is composed of roof and side sections **10a** and **10b**, each of which, as shown, is fabricated from a series of opaque metal panel units **11**. It will be understood that these panel units may be manufactured as an independent product and sold for use in awnings or like structures, and in the drawings the awning **10** is built with its roof and sides each composed of a series of raised panel members **12** and depressed channel members **13** arranged in alternating relationship to each other and fastened together at their edges in conventional manner.

In accordance with the preferred form of my invention shown, both the roof and side sections are provided with openings **14**, preferably comprising elongated slots, and these openings or slots are provided with closure-pieces **15** preferably comprising elongated strips of light-transmitting plastic material, such as Bakelite or other suitable material.

The openings or slots **14** are preferably formed and the closure pieces **15** applied thereto in the panel units before fabrication into awning sections and may be so formed in either the raised panel units or in the depressed panel units. These light-transmitting closure-pieces **15** of plastic material may be applied to and connected with the open-

ings or slots 14 in the panel unit in any suitable manner and I have shown in the drawings a number of ways for applying or connecting the said closure pieces with the edges of the openings. Preferably the closure pieces 15 are provided with fastening means for mounting the strip 15 either directly in the opening 14 as shown in Figs. 2 and 3 or above the same, as shown in Figs. 4, 5 and 6. These strips 15 of light-transmitting material are preferably of similar shape and configuration to the openings 14, and in the preferred form of my invention shown in Fig. 2, the edges of these strips 15 of plastic material are provided with fastening means such as the edge slots 16 which are adapted to receive the edges 14a of the openings 14 and to enable the strips 15 to be slid longitudinally as inserts into the opening for the purpose of closing the same. These strips 15 thus provide light-transmission elements that are disposed completely within a panel and are completely surrounded by the rigid metal of the panel unit and the closure member or strip 15 being itself quite rigid and strong, a rigid light-transmitting panel is formed that is strong, durable and non-shatterable.

In Fig. 3 I have shown a panel construction in which instead of providing edge slots in the strip and sliding the same into contact with the edges of the opening, I provide the side longitudinal edges of the strip with edge flanges 18 and rectangular engaging edges 18a on the vertical wall of which a series of teats 17 are arranged below flanges 18, thus producing a fastening means for the light-transmitting strip 15 that is adapted for engagement with the edges of the opening by a mere mounting of the strip above the opening and the application manually of pressure thereto to move and latch or lock the same within the opening 14.

In Figs. 4 and 5, I have shown another modified form of panel unit in which a strip 15 of light-transmitting material is inserted within a metal frame 19 provided with fastening clips 20. As illustrated, said frame 19 is adapted with said strip 15 seated therein to fit over said opening and is provided along its edge with a series of said clips 20 which are adapted to extend through the opening 14 and to be turned into contact with and fastened beneath the edges of the opening 14 for the purpose of securely mounting such strip 15 in proper position above said opening 14 in the panel to transmit light therethrough.

In Fig. 6 I have shown another modified construction in which a clip frame 22 is arranged to cause the light-transmitting closure pieces 15 to be raised above and extend to opposite sides of the opening 14 so as to provide raised and overhanging portions 15a adapted to extend over the edges of the panel opening 14 and to cooperate with its carrying clip frame 22 in the production of venting openings 23 at the edges of said opening 14. As illustrated, the edge of the opening 14 is bent to provide a vertically-extending flange 14b and the clip frame is provided at its edge with a folded, downwardly-extending vertical flange 22a which is in the same plane as the opening 24, and terminates above the surface of the panel member 12 and therefore causes an opening 24 beneath the same and said opening 23 to be out of registration with each other and thus to avoid passage of water through the venting openings 24 and 23. Said clip frame 22 is also provided, at a position substantially registering with the edge of the opening 14, with a downwardly-extending clip portion 25 having an intermediate bend 25a adapted to seat on the upper edge of the flange 14b and below such bend 25 clips 26 are provided for extension beneath the edges of the opening 14 and to interlockingly engage such edges for the purpose of mounting the clip frame 22 in position.



Having described my invention, I claim:

1. In an awning of the rigid metal type embodying inclined and vertical sections composed of a series of separable opaque channel-shaped panel units comprising flat panel portions and edge flanges extending angularly therefrom, said edge flanges having interengaging fastening means to fabricate the roof and sides of an awning, at least one of said panel units comprising a light-transmitting panel unit provided in its flat surface between the edge flanges thereof with an elongated opening and a light transmitting closure piece of non-shatterable plastic material mounted with edges extending over the outer surface of said panel to cover said opening.

2. In an awning of the rigid metal type as claimed in claim 1 in which the elongated opening extends to one of the edges of said awning sections and comprises a slot disposed centrally in said panel unit, the closure piece of plastic material comprises a strip of substantially similar shape adapted to cover said slot and transmit light therethrough, and said strip has edge means adapted to engage the edge of the slot.

3. In an awning of the rigid metal type embodying inclined and vertical sections composed of a series of separable opaque channel-shaped panel units comprising flat panel portions and edge flanges extending angularly therefrom, said edge flanges having interengaging fastening means to fabricate the roof and sides of an awning, at least one of said panel units comprising a light-transmitting panel unit provided in its flat surface with a light-transmitting opening extending to an upper end of an awning section and a light-transmitting closure piece of plastic material adapted to fit over said opening, said light-transmitting opening and closure piece of non-shatterable light-transmitting plastic material having interengaging fastening means mounted on the edges of said opening and extending above said edges for slidably mounting said piece of plastic material above said opening from an edge of an awning section.

4. In an awning of the rigid metal type embodying inclined and vertical sections composed of a series of opaque channel-shaped panel units, each comprising flat panel portions and edge flanges extending angularly therefrom, said edge flanges having interengaging fastening means to fabricate the roof and side sections of an awning, at least one of said panel units comprising a light-transmitting panel unit and provided in its flat surface between the edge flanges thereof with an elongated rectangular light-transmitting opening, a double-channeled plate-mounting frame member composed of sheet metal and embodying one edge portion provided with a channel opening in an outward direction to engage the edges of said opening and another edge portion provided with a channel opening inwardly and adapted to engage the edges of a plate, and a rectangular closure plate of non-shatterable, light-transmitting, plastic material mounted in said plate-mounting channel of said frame and closing said opening.


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