July 14, 1959 A. SCOCCIA 2,894,296

AWNING OR LIKE CONSTRUCTION

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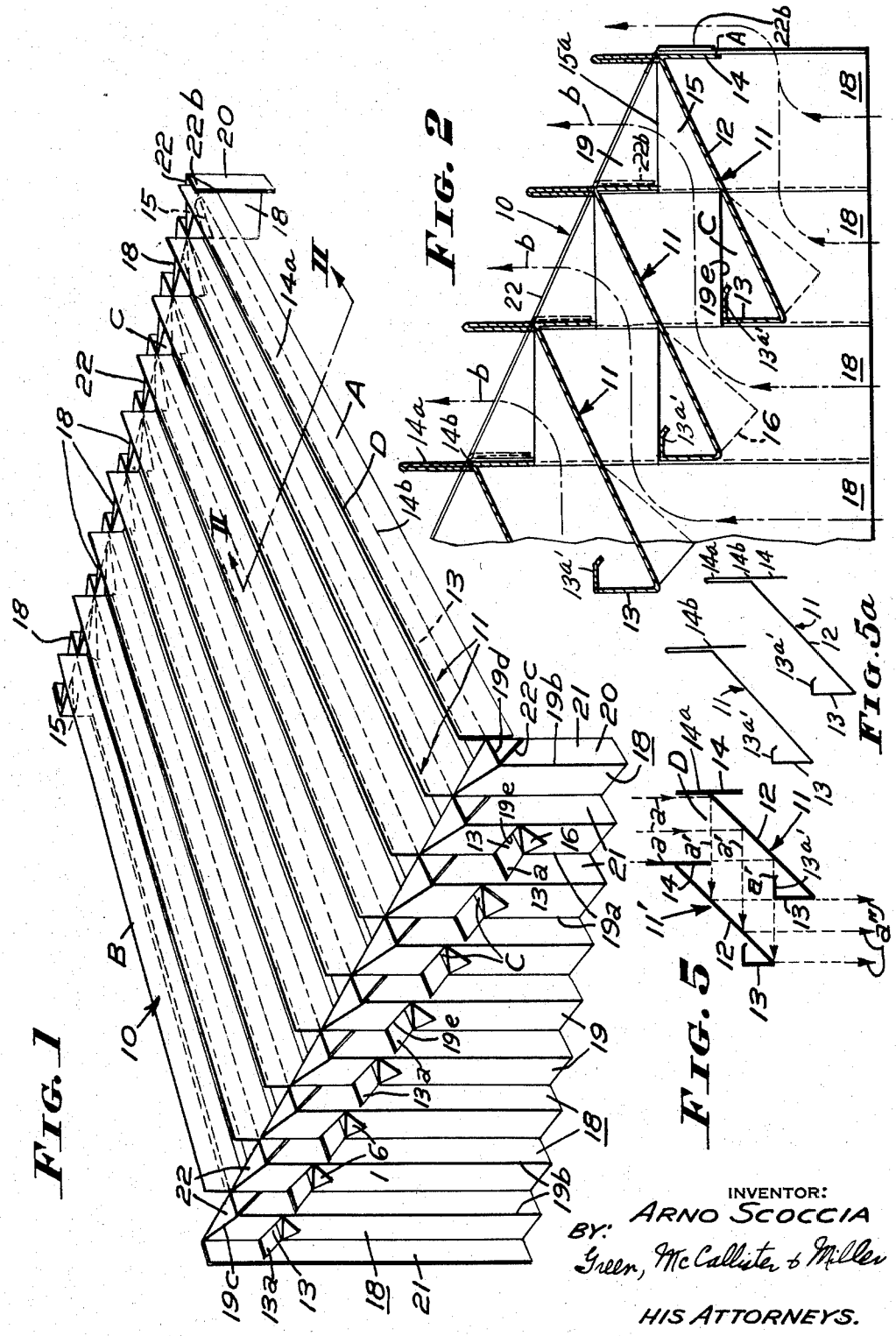


FIG. 1

FIG. 2

FIG. 5a

FIG. 5

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FIG. 3

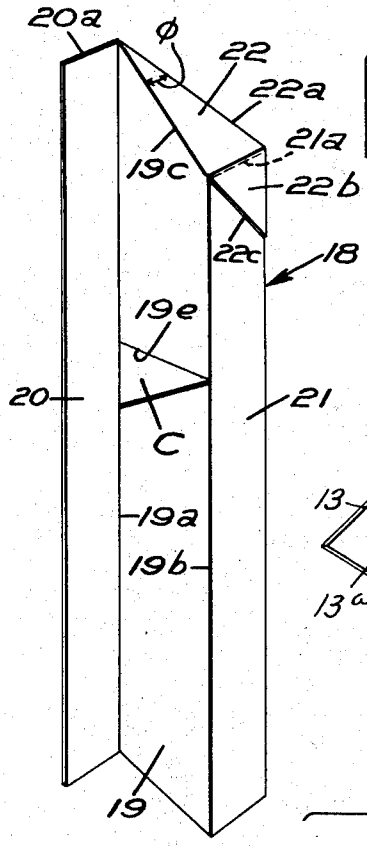


FIG. 3a

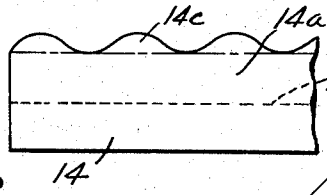


FIG. 4

FIG. 6

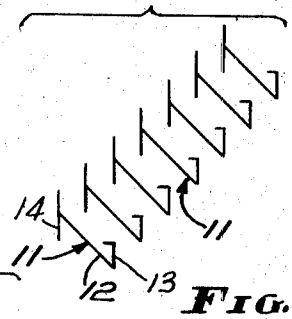


FIG. 7

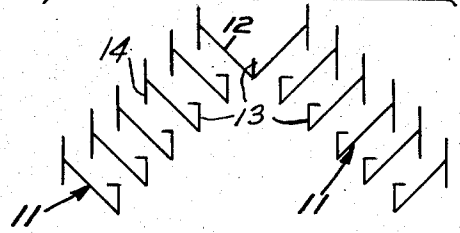


FIG. 9

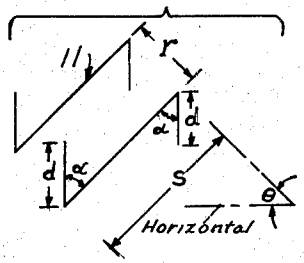
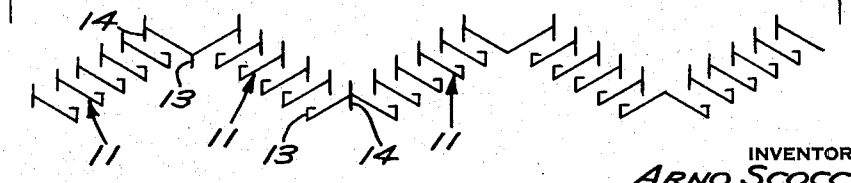


FIG. 8



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2,894,296

AWNING OR LIKE CONSTRUCTION

Arno Scoccia, Ellwood City, Pa.

Application October 4, 1957, Serial No. 688,811

15 Claims. (Cl. 20—57.5)

This invention relates to a louver construction for providing protection against the atmospheric elements and bright sun rays and particularly, to a cover, canopy or awning construction that is vented for air and light.

A phase of my invention pertains to the employment of relatively rigid members in a louver construction to, without the need for adjusting such members, provide for air circulation and particularly, for indirect light ray reflection therethrough, while at the same time providing protection against direct sun rays and against snow, rain, hail and sleet.

This application is a continuation-in-part of my application, Serial No. 595,636 of July 3, 1956, now abandoned, entitled Awning or Like Construction.

In carrying out my invention, I make use of members that are retained in a fixed relation with each other, that provide a cover under which cooler protection is given from direct sun rays, and that provide a much better lighted and more cheerful "under" or protected area.

Although so-called air-vented or louvered types of awnings or overhead protective means have before been provided, it has been my experience that they tend to shade or cut-off light during the day time to too great an extent and to be totally ineffective at night from the standpoint of making use of available indirect light rays. It has thus been an important object of my invention to devise a new and improved form of cover construction made up of a plurality of fixed members which will give protection against the elements during inclement weather and will additionally provide a new high efficiency of lighting candle power therebeneath. This problem has been complicated by the difficulty in providing increased, but indirect light through the canopy, awning, roof or cover construction by relatively cool light rays, while at the same time, providing the construction with effective protection against the elements, including a driving rain, hail or snow;

It has been another object of my invention to devise a new and improved form of overhead roof, cover, awning or like construction which will make use of a novel association or assembly of members to produce improved results;

A further object of my invention has been to provide a construction which will be relatively rigid, will provide for drainage, will be pleasing in appearance, and will provide a new or better efficiency of lighting as to its underneath or undercover area;

These and other objects of my invention will appear to those skilled in the art from the described and illustrated embodiment thereof.

In the drawings, Figure 1 is a perspective view in elevation taken from one side and the front of a cover or awning constructed in accordance with the principles of my invention;

Figure 2 is a greatly enlarged side section taken along the line II—II of Figure 1;

Figure 3 is a vertical perspective view on the scale of

Figure 2 and of an upright side member or slat employed in the construction of Figures 1 and 2;

Figure 3*a* is a fragmental view in elevation illustrating a modified upper edge contour or scallop pattern or shape of a front member portion of my construction;

Figure 4 is a horizontal perspective on the scale of Figure 3 showing a top cover member or slat employed in the construction of Figure 1;

Figure 5 is a somewhat diagrammatic side sectional view illustrating the indirect utilization of above-introduced light rays in the construction of my invention;

Figure 5*a* is a view similar to Figure 5, further illustrating the construction and showing a preferred or doubled-over form of front member portion;

Figures 6, 7 and 8 are diagrammatic views illustrating various shaped assemblies of cover structures that may be employed or devised utilizing the cover construction of my invention. Figure 6 shows a lean-to type, Figure 7 shows a gable type, and Figure 8 shows a series or succession of connected gables;

Figure 9 is a slightly enlarged diagrammatic view that has designations for spacing, length, angles, etc., to which later reference is made herein.

As shown particularly in Figures 1, 2, 3 and 4 of the drawings, a cover construction, such as suitable for an awning and designated as **10**, is made up of a series or a plurality of top, cover or roof portions, panels, slats or members **11**, and interfitting vertically-projected upright members **18**. The members **18** are end-positioned as to the longitudinal extent of the members **11** and side-positioned as to the unitary construction **10**. In Figure 1, I have designated the front of the construction as A and the back of the construction as B.

As shown particularly in Figs. 3 and 4, both the roof or cover members **11** and the side or vertical upright members **18** are of Z-section and are cut, slotted and provided with tabs, so as to interfit and interlatch with each other to form a secure unitary construction. As illustrated in Figures 1 and 2, two of the vertical members **18** are used at each end of each cover member **11**. More accurately, three members **18** are used at each side of the construction for the longitudinal ends of each adjacent pair of cover or roof members **11**. It will be noted that all the members **18** are of the same construction, except that those behind the two front members have been provided with side windows C (see Figures 1 and 3).

The unit of the cover construction **10** has been shown particularly applied to an awning shape, although it has other utilizations, such as in louver, roof or cover constructions. As shown particularly in Figure 4, each roof member **11** of longitudinally cross-extending, somewhat slat-like construction, has a central or intermediate facing body portion **12**. When the member **11** is in its mounted or secured relationship in the unit, the central body portion **12** declines backwardly or in an oblique manner and with respect to adjacent members **11** of the same cover part.

As shown in Figure 4, the portion **12** extends or is positioned in what amounts to a horizontal plane that declines-backwardly and has an upwardly-projecting back riser flange or deflector portion **13** that is folded upwardly therefrom about a joint or bend **12***a*. The portion **13** serves as a back deflector or riser portion which cooperates with a downwardly-projecting front flange or deflector portion **14** to, as shown in Figure 5, control or limit the effective spacing D (see Figure 5) for the transmission of light rays from the top portion of the construction **10** downwardly therethrough and from its underside. As shown in Figure 4, the portion **14** serves as a front flange and with a front riser flange portion **14***a* is shown connected to the central body portion **12**

along a horizontal line 14*b* by a downwardly-bent inner joint or fold portion 12*b*. Thus, the riser flange portion 14*a* is of doubled-over section upwardly from the facing portion 12; and it defines a continuous vertical plane on its front face with the downwardly-projecting front flange 14 of the same member.

To provide for mounting or interfitting the top members 11 with respect to the upright or side members 18, I make use of slits and tabs at the opposite longitudinal ends of the cover member 11. Again referring to Figure 4, a portion 15 which is of triangular shape having a substantially horizontal, top edge 15*a*, is bent upwardly at 12*d* in the form of an end ear or tab. Each tab 15 is provided by making a slit or cut-out along its back edge 15*c*, along a corresponding mid-edge 12*c*, and from the longitudinal ends of the member 11. Also, the back riser portion 13 has end tabs of rectangular shape 13*a* and the back half of the central body portion 12 has downwardly-projecting, triangular end tab or ear portions 16 which are formed by down-bends 12*e*. Thus, I provide upstanding tabs or ears 15 for substantially the front half, transverse extent or width of the portion 12 and downwardly-projecting ears or tabs 16 for substantially the rear half and that are endwise offset or spaced from the tabs 15 and project downwardly instead of upwardly.

In Figure 4, as above mentioned, I show the front portion 14 as having a vertical upper extension or flange 14*a* that, in the preferred form of this figure, is of doubled-over section to its line of parting or connection 14*b* with the central facing portion 12. In this form, 14*b* may represent a line along which under-applied spot or other suitable welds may be employed. This embodiment of my invention, however, does not require securing means and no sealing means, such as a continuous weld, as does a separate, non-doubled piece or strip type of flange 14*a*, see Figure 5. It will also be noted that the back portion has a forwardly-projecting, substantially horizontal top rim, extension or flange portion 13*a*'. As shown in Figure 4, the rim 13*a*' of each member overlies a joint defined between the facing and back flange portions and may have a slightly beveled longitudinal-forward edge.

As shown particularly in Figure 3, the vertical upright members or slats 18 also have a central body portion 19. The portion 19 projects vertically-upwardly and slopes inwardly when the member 18 is in its mounted relationship, see Figure 1, to provide a zig-zag or somewhat corrugated shape along the sides or roof member ends of the construction. At its back edge, the member 18 is provided with an outwardly-projecting flange or rim portion 20, as provided by a folded-out joint, fold or bend 19*a*. Also, along its front longitudinal edge, the member 18 has an in-bent joint or fold 19*b* to provide a back flange portion 21 that projects inwardly of the over-all construction 10 of Figure 1. Adjacent its top end, each other vertical member 18 (except the front member, see Figure 1) is provided with a triangular-shaped window opening or slit-out portion C that is provided by edges 19*e* and is adapted to pass end tabs 13*a* and 16 of the cover members 11 therethrough.

At its upper end, each vertical member 18 has a top tab portion 22 which is bent inwardly along fold edge 19*c* from the central body portion 19 to rest upon an upper front edge 21*a*. When the tab 22 is flat with the body portion 19, then edge 22*a* is a horizontal edge of the member 18. However, as a result of the bending operation, the tab 22 now establishes a forwardly-declining plane for the top of the roof (see also Figure 1) with adjacently-positioned members 18. This is true since edge 21*a* of the front flange portion 21 is on a lower plane than the corresponding edge 20*a* of the back portion 20. To secure the tab 22 in place, its front end portion 22*b* (also of triangular section) is bent downwardly over 21*a* to provide a lapped-over construction at the top of each of the members 18.

In the mounted relationship of Figures 1 and 2, end tabs 13*a* and 16 of the portions 13 and 11 of the roof member 11 project through the openings or windows C and may be secured in position against outer portions of the members 18, as by soldering, cementing, welding, or by means of metal screws, etc. This provides a rigid construction and especially, since the back flange 20 of a forward side member 18 rests upon or abuts with the front flange 21 of the next adjacent and behind side member 18 and further, since the tab or ear 22*b* rests upon and is clamped over or abuts against the assembly of abutting flanges 20 and 21. The tab 22*b* may also be secured in position in a suitable manner, such as by metal screws, soldering, welding, cementing, etc. It will be noted that oblique side edges 22*c* of the tab 22*b* extends across the front flange 21.

In Figure 2, I have illustrated the flow of air out of the construction 10 along diverting and restricting passageways between the oblique-positioned and spaced-apart cover members 11. Arrows indicated as *b* show how circulating air may flow between the slats or members 11. Thus, although the members 11 are in a somewhat widely spaced-apart relationship with respect to each other, they actually define restricted passageways therebetween that do not prevent the circulation of air, but protect the under-areas from the elements, such as rain, snow, hail and even from such elements when blown with considerable force.

In Figure 5 of the drawings, I have illustrated how light rays *a* entering from a top-side of the construction 10 are directed downwardly upon an upper reflective face or surface of the central body portion 12 of the members 11. The rays are then reflected as rays *a*' forwardly upon a reflective under-side of an adjacent member 11', and then downwardly therefrom as rays *a*'' to thus indirectly light the lower or under-area of the construction. The two-stage reflection procedure eliminates glare, but provides a maximum of indirect light in the under-area or reaches of the construction. The deflector flanges 13 and 14 also serve to control the effective size of the spacings between members, as will be understood from the discussion hereinafter set forth. As shown in Figure 5, the extension flanges 14*a* and 13*a*' do not interfere with, but further guide and prevent a diversion of the rays *a* and *a*'. Other rays, if not blocked off from the outside of the members 11, are properly aligned and directed, so that those leaving are substantially represented by rays *a*'.

In making the construction 10, angular relationships of portions of the members or slats 11 is important, but the general layout is influenced by the angle at which the cover or awning is desired and then, from the width of the slat or cover member 11 to be used. In the following formulas, θ (theta) and s may be arbitrarily set and d and r may then be calculated. Reference should also be made to Figure 9 of the drawings.

Formulas that may be used for determination of cover or top members 11:

(1) $$d=\frac{s \sin \theta}{2}$$

(2) $$r=\frac{d}{\sin \theta}=\frac{s}{2}$$

(3) $$\alpha=90^\circ-\theta$$

(4)

w=total flat width of each member or slat 11 or $s+2d$

(5) $$s=\frac{w}{\sin \theta+1}$$

Where:

d=width of each riser flange **13** and **14**.

r=perpendicular distance or spacing between adjacent panels, such as **11** and **11'** of Figure 5.

s=width of central body portion **12**.

α=included angle between **12** and **13** and **12** and **14**.

θ=angle between the horizontal and a plane representing the top-forward slope of the members **11**, as assembled.

Formulas that may be used for determination of vertical members **18**:

(6) $$t=2d+r$$

(7) $$h=r \text{ cosine } \theta$$

(8) $$\phi=\text{arc tangent } \frac{d}{r}$$

(9) $$k=\frac{d}{\text{sine } \phi}$$

Where:

t=total flat width of portions **19**, **20** and **21**.

d=width or extent of each flange **20** and **21**.

r=width of portion **19**.

ϕ=included angle between edge **22***a* and edge **19***c*.

k=length of fold edge **19***c*.

h=horizontal perpendicular distance between the front flanges **14** of two successive cover members **11**.

TABLE I

Specification for three different values of angle θ when w=7 inches (flat width of slat before bending)

		θ=30°	θ=45°	θ=60°
$\sin \theta=$		.5000	.7071	.8660
$s=\frac{w}{\sin \theta+1}$	$s=$	4.667	4.10	3.75
$d=\frac{s \sin \theta}{2}$	$d=$	1.167	1.45	1.624
$r=\frac{d}{\sin \theta}=\frac{s}{2}$	$r=$	2.33	2.05	1.875
$t=2d+r$	$t=$	4.66	4.95	5.12
$\cos \theta=$		.8660	.7071	.5000
$h=r \cos \theta$	$h=$	2.02	1.45	9.375
$\frac{d}{r}=$		.5000	.7071	.8660
$\phi=\text{arc tan}\frac{d}{r}$	$\phi=$	26°34′	35°16′	40°54′
$\sin \phi=$		.4472	.5774	.6546
$k=\frac{d}{\sin \phi}$	$k=$	2.61	2.513	2.48

Figures 6, 7 and 8 of the drawings have been provided to illustrate that a cover construction of my invention may be used in a variety of suitable shapes, such as the lean-to arrangement of Figure 6, the gable arrangement of Figure 7, and the succession or progression of gables of Figure 8. The latter application may be used, for example, to shade a relatively long walk, such as along a store front. Theoretically, in accordance with my invention, all light rays will fall on a reflecting surface portion of the construction **10** and the only light lost will be very slight, such as due to the thickness of the material, to the curvature required in bending the material to form the two angles of the **Z**, to loss by the reflection substantially along the slope of the surface of the central body portion **11** of the slat members, or to reflection at the ledge of a gable type of awning.

Although any suitable material may be used in making

the slats **11** and **18**, I prefer to use relatively thin and easily fabricated, substantially rigid material with light reflective surfaces. In this connection, porcelain or baked enamel on a metal, such as relatively light weight aluminum or steel strip, polished metal, light colored or painted plastic, etc., may be used for the members **11** and **18**. The paint or enamel may be of a suitable color, such as white, cream, etc.

Since the cover members **11** are positioned transversely of the construction from the standpoint of their longitudinal extent, and are at their ends securely fixed (at opposite sides of the construction) to interfitting and lapping-over vertical upright members **18**, it is apparent that even for very great widths or lengths of covers, the construction has little tendency to sag. However, supports may, if desired, be attached from underneath to run at right angles to the roof slats or members.

Referring particularly to such representative Figures as 2, 5 and 9, it is highly important, in accordance with my invention, to terminate the bottom edge of the front flange portion **14** of one facing member **11**, so that it lies on an inclined plane that also lies on the upper edge of the back vertical flange portion **13***a* (the outer corner between portions **13***a* and **13***a'*), and which plane is parallel and vertically-spaced with respect to the opposed inclined plane (of the intermediate face portion **12**) of facing members **11** and particularly, of an adjacent facing member **11'** (see Figure 5). Also, the bottom edge of the front vertical flange portion **14** of the immediately-opposed facing member **11'** should also lie on the same inclined plane. The vertical extent or width of each portion **14** below the line **14***b* should be equal to or the same as the height or width of the back flange portion **13***a*.

It will also be noted that the front and back flange portions **14** and **13***a* lie on parallel and spaced vertical planes with respect to each other. The front part which includes portions **14** and **14***a*, defines an obtuse angular relationship with the upper side of the intermediate portion **12** and an acute angular relationship with the under-side of the same portion. On the other hand, the back flange portion **13***a* defines an acute angular relation with the upper side of the intermediate portion **12** and an obtuse angular relation with the under-side thereof. The roof plane or slope of the assembly (see Figure 2) also has other than a right angular or perpendicular relation with the inclined planes of the members **11**. In other words, an obtuse angle is defined with the plane of slope of the under-side of each member **11** (or its inclined plane, as represented by the facing part **12**) and an acute angle is defined with its upper-side. Although the height or upper vertical extent of the riser flange **14***a* is shown to be the same as the back flange **13** (so they terminate on the same upper plane), this is not a critical factor, as is the extent of the flange **14** and of it with respect to the flange **13***a*. However, it is believed that the shape of the members **11** is new, independently of the important factors governing their novel arrangement in combination.

Forwardly-turned top rim portion, flange or longitudinal extension **13***a'* not only serves to limit undesirable through-flow of elements (rain, snow, etc.) between adjacent or opposed facing members **11**, but also prevents drain water from washing over upright or vertical flange portion **13***a*, or in other words, over the lower, back side portion of the Z-shaped roof facing member **11**. The upper extension or vertical flange portion of **14***a* may, as shown in Figure 5*a*, be formed from a single piece of flat material that is used to fabricate the member **11** or, as shown in Figure 5, may be made as a separate strip and secured, as by a continuous weld, to the upper edge of the member **11** along the line **14***b*.

As shown in Figure 3*a*, the member **11** may have an upper contour of some suitable pleasing shape, such as

the scalloped shape 14c of this figure. It should be further noted that the flange or lip 13a' and the upper extension or flange of 14a do not cut the desired path of light flow between the members 9, indicated in Figure 5.

It must be emphasized that the perpendicular distance r (see Figure 9) between roof facing members 11 which is equal to the width d of the riser flange divided by the sine of an angle (θ) between the horizontal and a plane representing the top forward slope of the roof, is critically important in assuring the greatly improved and novel operating results of my invention. Stated in another way, the width or transverse extent of the front flange portion 14 (equal to that of the back flange portion 13a) is equal to the spacing or distance r between the facing portions of adjacent members, multiplied by the sine of the angle θ which angle is defined by a line or plane (roof plane) connecting front ends of the facing portions 12 of the members and by a line or plane perpendicular to the front flange portion 14.

My structure provides a secure and rigid (not-pivotal) construction that, in its one, fixed position, both provides a non-glaring light in its interior and shuts-off or excludes the weather elements. Further, it provides a maximum area of indirectly-applied (reflected) light. In accordance with my discoveries, reflection (as shown in Figure 5) is maintained as a dual action only, such that soft, clear light rays are provided, without the excessive brightness of a direct or a single reflected light action or the excessive darkness of reflection involving three or more reflecting actions before the light reaches the underside or interior.

What I claim is:

1. A Z-shaped slat-like longitudinally-endwise-extending facing member for use in a stationary awning construction, said member having a central body portion representing a major transverse width of the member, a front flange portion projecting in an angular relationship from a front edge of said body portion and defining an acute angle with one face of said body portion and an obtuse angle with the other face thereof, a back flange portion projecting in an angular relationship from a back edge of said body portion and defining an acute angle with one face of said body portion and an obtuse angle with the other face thereof; said back flange portion being in a spaced, oppositely-projecting and substantially parallel relation with said front flange portion; said front and back flange portions being of substantial equal transverse width; and the width of said front flange portion being equal to the distance between the body portions of adjacent members of the defined construction when they are in a mounted relationship with each other, multiplied by the sine of an angle defined between a line connecting front ends of the body portions of the adjacent members and a line perpendicular to said front flange portion.

2. A Z-shaped slat-like longitudinally-endwise-extending facing member for use in a stationary awning construction which is pervious to light and impervious to the elements, said member having a central body portion representing a major transverse width of the member, a front flange portion projecting in an angular relationship from a front edge of said body portion and defining an acute angle with one face of said body portion and an obtuse angle with the other face thereof, a back flange portion projecting in an angular relationship from a back edge of said body portion and defining an acute angle with one face of said body portion and an obtuse angle with the other face thereof; said back flange portion being in a spaced, oppositely-projecting and substantially parallel relation with said front flange portion; said front and back flange portions being of substantial equal transverse width; a rim portion projecting backwardly from an upper edge of said back flange portion to and over the joint defined between said facing and back flange portions, said rim portion being substantially perpendicular to said front flange portion, and a front riser portion projecting from the front end of said facing portion in an angular relationship with respect thereto and in an opposite direction with respect to said front flange portion, said front riser portion lying on substantially a continuation of a plane representing said front flange portion and having a transverse width substantially equal to the transverse width of said front flange portion.

3. A stationary awning-like cover construction which is both pervious to light and impervious to the elements, comprising a plurality of Z-shaped slat-like longitudinally-endwise-extending roof members, each of said members sloping transversely towards a back portion of the construction in an oblique and spaced relation with each other, each of said members having a central facing body portion and a pair of front and back flange portions projecting in an angular relationship therefrom, said flange portions projecting from opposite faces of said facing portions at acute and obtuse angular relationships respectively; said front flange portion having a width extent which is equal to the distance between the facing portions of a pair of adjacent members multiplied by the sine of an angle defined between a plane lying on front ends of such respective facing portions and by a plane taken at substantially right angles to said front flange portion; and said back flange portion being of substantially equal width extent with respect to said front flange portion.

4. In a rigid light-pervious and elements-impervious awning-like construction defining a forwardly-declining roof plane and having a series of stationary backwardly-declining facing members in a vertically spaced-apart and obliquely-offset relation with each other, means securing said members together as a unit along their opposite end portions, each of said members having a vertical front flange portion projecting downwardly therefrom and a back flange portion projecting upwardly therefrom to define a substantial Z-shape, and having the front and back flange portions connected by a facing body; opposite surfaces of said facing body defining an acute and obtuse angle respectively with respect to the roof plane along a transverse plane representing the width of the facing body, the bottom edge of the front flange portion of one member lying on a common inclined plane with a top edge of the back flange portion of an opposed lower one of said members, said common inclined plane being substantially parallel to the transverse plane of the facing body of each of said members, and said front flange portion having a transverse extent that is equal to the distance between adjacent members multiplied by the sine of an angle defined between the roof plane and a plane perpendicular to said front flange portion, whereby means for simultaneously permitting the passage of light and preventing the passage of the elements through said construction is maintained between said stationary members.

5. In a rigid awning-like cover construction, a plurality of stationary roof members defining a forwardly-declining roof plane and defining a series of backwardly-declining transverse facing portions in a vertically spaced-apart and obliquely-offset relation with each other, each of the facing portions defining an acute angle on its upper side and an obtuse angle on its lower side with the roof plane, each of said members having a downwardly-projecting front vertical flange portion and an upwardly-projecting back vertical flange portion with each flanged portion defining an acute and obtuse angular relationship respectively with opposite surfaces of the facing portion, the front flange portion of one of said members terminating on a backwardly-declining oblique plane that is a plane on which the back flange portion of an adjacent under one of said members terminates, which plane is substantially parallel with planes representing the facing portions of said members, said front flange portion having a transverse extent that is equal to the distance between

adjacent members multiplied by the sine of an angle defined between the roof plane and a plane perpendicular to said front flange portion, and means cooperable with said front and back vertical portions for simultaneously permitting a passage of light between said roof members while preventing the passage of rain, sleet, and snow therethrough.

6. A construction as defined in claim 5 wherein, said last-mentioned means comprises a front riser flange portion projecting upwardly above the facing portion, and the upper edge of said riser portion lies on a common inclined plane with the upper edge of the back flange portion of the same member.

7. A construction as defined in claim 6 wherein the downwardly-projecting front flange portion and the upwardly-projecting front riser flange portion of each of said members are integral with each other and with the facing portion.

8. A construction as defined in claim 7 wherein, the front riser flange portion of each of said members is of doubled-over section upwardly from the facing portion, and the front riser flange portion defines a continuous vertical plane on its front face with the front face of the downwardly-projecting front flange portion of the said same member.

9. A construction as defined in claim 7 wherein said front riser and downwardly-projecting front flange portions of each of said members define a continuous vertical front face connected substantially centrally-backwardly to the facing portion.

10. In an awning-like cover construction which is pervious to light and impervious to the elements, a plurality of relatively thin and rigid longitudinally-projecting roof members; each of said members having a backwardly-declining transverse facing portion in a vertically spaced-apart and obliquely offset relation with like facing portions of adjacent roof members, a front flange portion projecting vertically at an acute and obtuse angular relation respectively with opposite surfaces of the facing portion, a back flange portion projecting vertically at an acute and obtuse angular relation respectively with opposite surfaces of the facing portion, a bottom edge of the front flange portion of each of said members lying on a common backwardly-declining plane with an upper edge of the back flange portion of an adjacent under-positioned one of said members, the extent of said front flange portion being proportioned to the spacing between adjacent members multiplied by the sine of an angle defined between a roof plane of said members and a plane perpendicular to said front flange portions, and means cooperating with said front and back portions for maintaining a passageway for the transmission of light rays between said rigid roof members while simultaneously preventing the passage of the elements therethrough.

11. A construction as defined in claim 10 wherein said last-mentioned means comprises an upwardly-extending projection on the front flange portion of each of said members which terminates into an upper edge lying on a backwardly-declining plane parallel to the backwardly-declining transverse facing portion of said members, and on which the upper edge of the back flange portion of the same member lies.

12. A construction as defined in claim 11 wherein said last-mentioned means comprises a rim portion projecting horizontally-forwardly from the upper edge of the back flange portion of each of said members.

13. A construction as defined in claim 12 wherein said rim portion has a forwardly-beveled edge and overlies the joint defined between the facing and back flange portions of each of said members.

14. A construction as defined in claim 12 wherein said front flange portion projects vertically-upwardly above said facing portion, an upper edge of said front flange portion is of scalloped shape, and the upper edges of the front flange portions of said members define a scalloped plane above said facing portion.

15. A construction as defined in claim 10 wherein side facing members of Z-shape construction project vertically-endwise, and interlocking cutout and tab portions at adjacent ends of said roof members and said side members rigidly secure them together as a cover unit.

References Cited in the file of this patent

UNITED STATES PATENTS

Re. 20,975	Houseman	Jan. 10, 1939
2,233,315	Jones	Feb. 25, 1941
2,239,242	Miller	Apr. 22, 1941
2,441,081	Perry et al.	May 4, 1948
2,546,335	Friend	Mar. 27, 1951
2,666,237	Bertram	Jan. 19, 1954

FOREIGN PATENTS

2,826 of 1908	Great Britain	Aug. 13, 1908