March 4, 1958 R. F. HOWARD 2,825,100

VENTILATED HORIZONTAL SLAT METAL AWNING

Filed Oct. 18, 1954

FIG. 1.

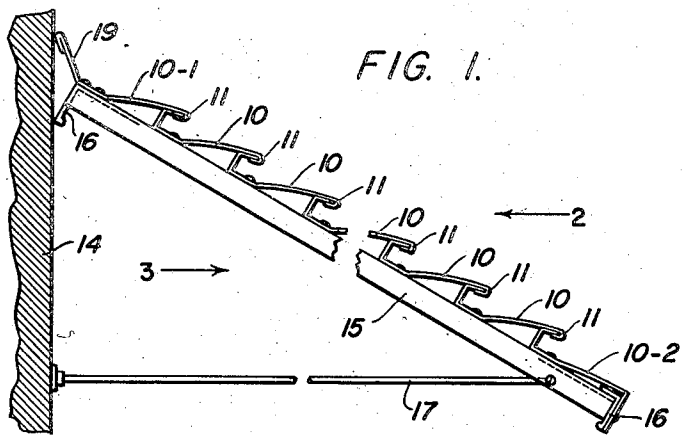
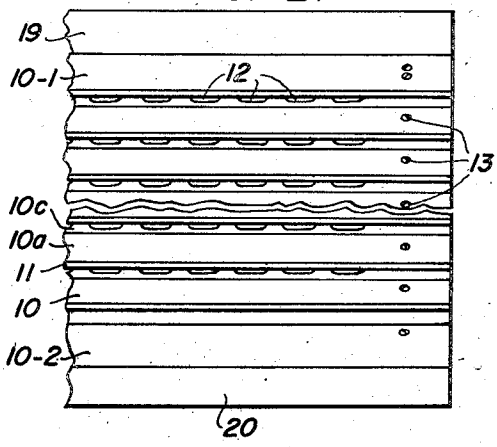


FIG. 2.



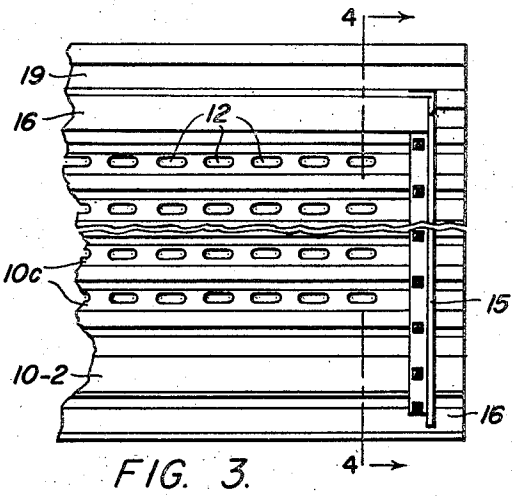


FIG. 3.

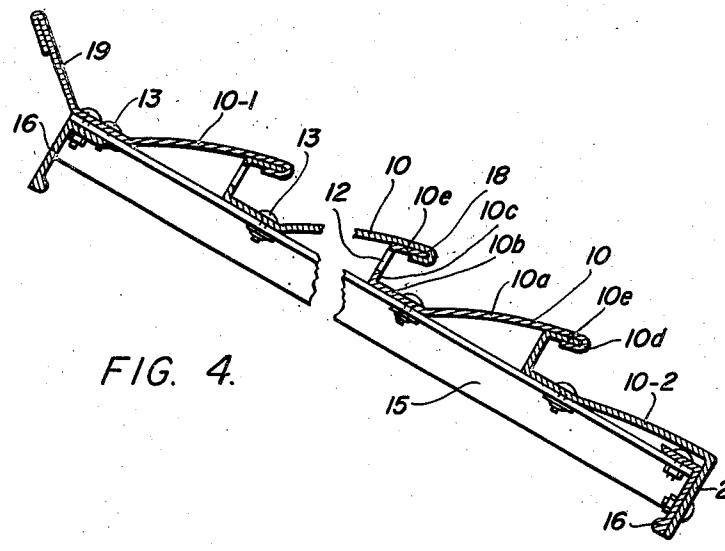


FIG. 4.

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VENTILATED HORIZONTAL SLAT METAL AWNING

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5 Claims. (Cl. 20—57.5)

This invention relates to metal awnings, and particularly to those whose constructions provide for passage of air therethrough for ventilating purposes.

It is a principal purpose of the invention to provide a ventilated metal awning of so-called horizontal slat construction which will afford maximum protection against the weather with minimum obstruction of light and visibility, while, at the same time, being trim and neat in styling and capable of relatively simple and economical fabrication.

An additional purpose is to incorporate, in a ventilated metal awning of horizontal slat type, the peculiarly advantageous drip-line feature embodied in the vertical slat construction of U. S. Patent Number 2,627,634 granted to R. G. Gunter on February 10, 1953, wherein an interlocking tongue and groove arrangement establishes a protective line of drip adjacent each apertured wall portion to effectively preclude any possibility of backflow of rain run-off through the ventilating apertures.

I accomplish these purposes of the invention by a tongue and groove interlocking type of slat of special configuration, as set forth fully hereinafter.

Further objects and features of the invention will become apparent from the following detailed description of the particular preferred specific construction illustrated by way of example in the accompanying drawing.

In the drawing:

Fig. 1 represents an end elevation of the awning construction installed, an intermediate portion being broken out for convenience of illustration;

Fig. 2, a fragmentary front elevation taken from the viewpoint of the arrow **2** in Fig. 1;

Fig. 3, a similar rear elevation taken from the viewpoint of the arrow **3** in Fig. 1; and

Fig. 4, a vertical section taken along the line **4—4** in Fig. 3, but excluding additional intermediate portions and drawn to an enlarged scale.

Referring to the drawing:

The awning here illustrated as being typical of the invention is made up of a plurality of interlocked, horizontal slats **10**, whose lengths extend along the width of the awning structure, as indicated in Figs. 2 and 3. Such slats are interlocked with next adjacent slats along their opposite longitudinal margins. Thus, the interlocks **11** extend longitudinally of the slats and transversely of the awning structure, along the width of the latter.

Each of the slats **10**, except the uppermost and the lowermost, which are indicated **10–1** and **10–2**, respectively, is of special configuration providing for a most advantageous tongue and groove interlock along its opposite longitudinal margins, as well as for firm securement to the supporting framework of the awning structure and for effective ventilation and light transmission.

The terminal slats **10–1** and **10–2** are essentially similar, except for appropriate provision for tying in with the structural framework of the awning or the building against which the awning is installed, as determined in each instance by the nature of the particular installation.

Each of the intermediate slats **10**, which interlock with next adjacent slats along both of its opposite longitudinal edge margins, comprises a main roofing portion **10*a*** of longitudinal strip formation, a securement strip portion **10*b*** having its forward longitudinal margin adjoining the rearward longitudinal margin of the roofing strip portion, an upstanding apertured wall portion **10*c*** having its lower longitudinal margin adjoining the rearward longitudinal margin of the securement strip portion, a locking groove member **10*d*** having its upper and rearward longitudinal margin adjoining the forward longitudinal margin of the roofing strip portion so that the mouth of the groove faces inwardly of the slat, and a locking tongue **10*e*** having its rearward longitudinal margin adjoining the upper margin of the apertured wall portion and the tongue proper projecting forwardly therefrom in overhanging relationship with the securement strip portion **10*b***.

All of these component portions of the slat **10** extend longitudinally along the length of the slat and constitute a side-by-side series transversely of the slat, that is to say, across the slat width. The series may be regarded as commencing with either the locking groove **10*d*** at the forward edge of the slat, or with the locking tongue **10*e*** at the rearward edge of the slat.

The locking groove member **10*d*** is formed along the underside of the forward longitudinal edge margin of the slat, with the mouth of its groove opening rearwardly so as to receive, in securely interlocking relationship, the forwardly projecting locking tongue **10*e*** of the next lower slat. The roofing strip portion **10*a*** and adjoining securement strip portion **10*b*** are both imperforate, and are disposed at an obtuse angle relative to one another. They both extend rearwardly in a continuously substantially flat expanse, the roofing strip portion being slightly bowed upwardly along its width, as illustrated, to give added strength. The upstanding, apertured wall portion **10*c*** advantageously stands at right angles to the securement strip portion **10*b*** which its adjoins, though the angular relationship may vary to one side or the other of the perpendicular, depending upon the ornamental effect desired in particular circumstances and upon the degree of slope of the awning roof in any given instance. The locking tongue member **10*e*** projects forwardly a sufficient distance to protect the apertures **12** of upstanding wall portion **10*c*** against entrance of rain and other precipitation resulting from inclement weather. The extent of its forward projection is preferably such as to completely overhang the securement strip portion **10*b***, considered along the vertical in any given installation, thereby establishing the main drip-line of the interlocked arrangement somewhat in advance of the fasteners, such as the screws **13**, used to secure the individual slats to the supporting framework of the awning. It will be noted that, for rigidity of construction, the screws **13** are disposed within the securement strip portion **10*b*** immediately adjacent its joinder with main roofing strip portion **10*a***.

As here illustrated, see Fig. 1, the awning is installed directly against the exposed face of a wall **14**. The supporting framework comprises a pair of side members **15** in the form of structural steel angles, and upper and lower longitudinal members **16**, also in the form of structural steel angles. A pair of supports **17** are respectively disposed between the lower ends of opposite sides of the so formed structural framework and the wall **14**. The screws **13** secure the individual slats **10** directly to the side members **15**, as illustrated.

A wide variety of other types of supporting structure may, of course, be adopted without altering the structural essentials of the awning roof formed by the interlocking slats **10**.

As is taught by the afore-mentioned Gunter Patent Number 2,627,634, the locking groove member **10***d* of each slat is formed to terminate sufficiently short of the outer face of upstanding, apertured wall portion **10***c* to establish an advance, safety drip-line **18** protecting the apertures against creeping of moisture thereinto. The attainment of this feature in a horizontal slat type of awning is one of the advantageous and sought for results of the present invention.

In the particular embodiment illustrated, the upper terminal slat **10–1** has the normal apertured wall **10***c* and forwardly projecting tongue member **10***e* replaced by an upstanding but rearwardly canted wall member **19**, serving, in effect, as a protective flashing between the awning and the forward face of the wall. On the other hand, the lower terminal slat **10–2** has the normal groove member **10***d* replaced by a downwardly projecting wall member **20**, which provides a finish facing along the forward edge face of the awning.

The ventilating and light-admitting apertures **12** are preferably provided at closely spaced intervals along the length of the upstanding wall portion **10***c*. It will be noted that, in connection with the specially configurated slat described above, a maximum amount of air and light is admitted through the protective canopy provided by the awning structure of the invention.

While many of the advantages of the present awning construction will be obtained whether or not apertures are provided, for example, ease and economy of fabrication and installation, attractiveness of appearance, and structural strength and rigidity, the greatest advantages from the invention are had when the apertures are provided to admit air and light.

The slats **10**, **10–1**, and **10–2** may be fabricated from any suitable material and in any suitable manner. Nevertheless, it is preferred that they be suitably bent to final configuration from elongate strips of lightweight sheet metal, following appropriate perforation in the providing of the series of apertures **12**.

Whereas this invention is here illustrated and described with respect to a particular preferred embodiment thereof, it should be realized that various changes may be made without departing from the scope of the claims which here follow.

I claim:

1. In the roof of a rigid-type awning, the combination of at least one pair of substantially horizontally extending, longitudinally interlocked slats, each configurated to provide, in series relationship across the slat width and extending longitudinally of the slat, a tongue-receiving groove member along the underside of the forward edge margin of the slat with the mouth of the groove opening rearwardly, a roofing strip portion extending rearwardly in a continuously substantially flat expanse from said edge margin of the slat, a securement strip portion extending backwardly and upwardly in a continuously substantially flat expanse from the rearward longitudinal margin of said roofing strip portion, making an obtuse angle with said roofing strip portion, an upstanding wall portion extending upwardly from the rearward longitudinal margin of said securement strip portion, and a tongue portion extending forwardly from the upper longitudinal margin of said upstanding wall portion in overhanging relationship with and comprehending substantially the entire width of said securement strip portion, the said tongue portion of one of the slats of said pair interlocking with the said groove of the other of the slats; means supporting the said pair of slats as so interlocked; and fastening means securing the securement strip portion of each of said interlocked slats to said supporting means.

2. The combination recited in claim 1, wherein the upstanding wall portion of each slat is apertured at intervals along its length; and wherein the lower rearward edge of the groove member terminates short of the apertured wall portion.

3. A formed slat for use in the fabrication of a rigid-type awning, comprising, in series relationship across the slat width and extending longitudinally of the slat, a tongue-receiving groove member along the underside of the forward edge margin of the slat with the mouth of the groove opening rearwardly; a roofing strip portion extending rearwardly in a continuously substantially flat expanse from said edge margin of the slat; a securement strip portion extending backwardly and upwardly in a continuously substantially flat expanse from the rearward longitudinal margin of said roofing strip portion making an obtuse angle with said roofing strip portion; an upstanding wall portion extending upwardly from the rearward longitudinal margin of said securement strip portion; and a tongue portion extending forwardly from the upper longitudinal margin of said upstanding wall portion in overhanging relationship with and comprehending substantially the entire width of said securement strip portion.

4. The combination recited in claim 3, wherein the roofing strip portion is slightly bowed upwardly along its width.

5. The combination recited in claim 1, wherein the fastening means are disposed within the securement strip portion immediately adjacent the joinder thereof with the roofing strip portion.

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