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SLAT AWNING

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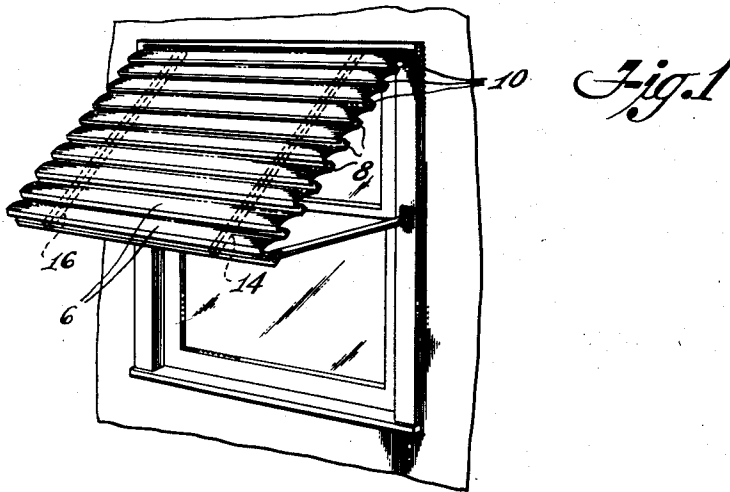


Fig. 1

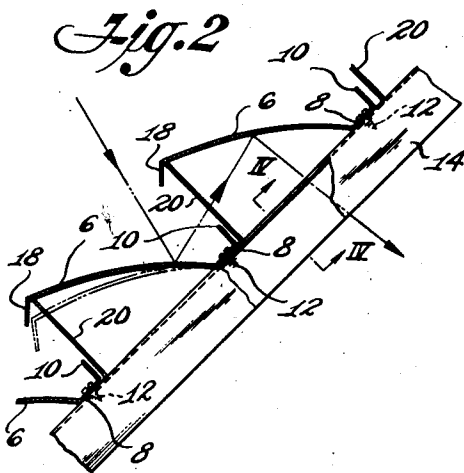


Fig. 2

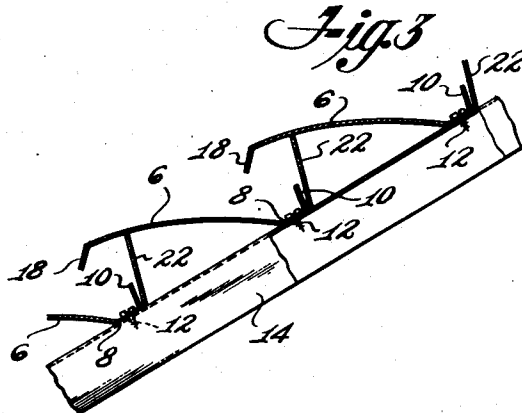


Fig. 3

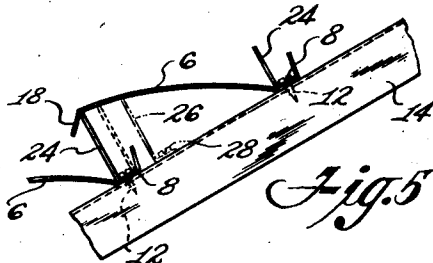


Fig. 5

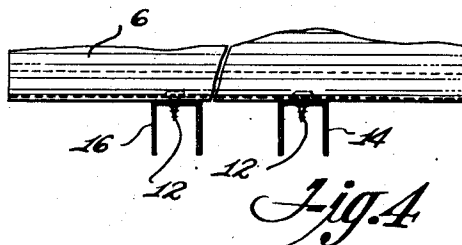


Fig. 4

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SLAT AWNING

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1 Claim. (Cl. 20—57.5)

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This invention relates to a slat type of outside window awning.

The main objects of this invention are: to provide an improved construction of outside window awning of the slat type in which the slats are secured along one edge thereof and the other edge is supported so as to be in a predetermined fixed position; to provide an improved type of slat awning in which the slats have a transverse curvature and are mounted under tension so as to eliminate rattle or noise when subjected to wind conditions; to provide an improved type of transversely curved awning slat which possesses extreme rigidity and adaptability for rigid mounting in a unitary structure; and to provide an improved construction of transversely curved awning slat which reflects the light from the exterior surface of one slat to the interior surface of another slat and transmits it in diffused form to the interior of the room while preventing the entrance of direct sunlight through the window.

An illustrative embodiment of this invention is shown in the accompanying drawings, in which:

Fig. 1 is a view in perspective of my improved awning applied exteriorly to a window frame structure;

Fig. 2 is an enlarged fragmentary sectional view showing a typical mounting of the slats on a base frame member;

Fig. 3 is a view similar to Fig. 2 but showing a slightly modified form of slat and support for its free end;

Fig. 4 is a fragmentary sectional view taken on the line IV—IV of Fig. 2 looking in the direction indicated by the arrows; and

Fig. 5 is a view similar to Figs. 2 and 3 but showing modified forms of support for the free edge of the slats.

Heretofore in the construction of slat type awnings there has been considerable difficulty in securing an assembly of the slats to a base frame structure in such manner that the slats when subjected to the action of windstorms and the like, would not rattle and clatter and thereby make objectionable noises, particularly during the nighttime.

In the present construction the individual slats comprising the awning are curved in cross section and each of the marginal edges is provided with a transversely bent flange, the combination of which produces an extremely rigid slat. One of these transversely bent marginal edges is used to anchor the slat to the base frame structure and the other edge of the slat rests upon a supporting post under tension sufficient to prevent the free edge from raising up off the top end of the sup-

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porting posts. The result of this improved construction is that the awning is entirely lacking in vibratory noises when subjected to high wind velocities.

In the construction shown in the drawings my improved awning comprises a plurality of generally rectangular elongated slats 6 preferably formed of strips of aluminum or other sheet metal, which have been subjected to the action of either dies or rolls so as to be given a gentle curvature in cross section, as shown most clearly in Figs. 2, 3 and 5 of the drawings.

One of the marginal edges of the slats 6 is bent to form a base flange 8 and then bent at right angles to form an upstanding flange 10, thus providing practically a channel construction for that edge of the slat. The base or flange 8 is adapted to be secured by self-threading screws or other suitable fasteners 12 to transversely disposed frame members 14 and 16 which are illustrated as being of channel shape cross section but which may be of any suitable construction desired.

The opposite edge of each of the slats 6 is also provided with an inwardly bent flange 18 which provides rigidity for the free edge of the slat and when assembled as shown in Fig. 2, provides a locating point for a support. In the embodiment shown in Fig. 2, the web of channels 14 and 16 has elongated tongues 20 struck out from the metal thereof at right angles thereto to form supporting posts for the outer free edges of the slats, the top edge of which engages the under surface of the slat closely adjacent to the juncture of the curved portion of the slat and flange 18.

In the assembly shown in Fig. 3 of the drawings, the supporting post 22 is so related to the width of the slat 6 as to engage the under curved surface of the slats in spaced relation to the flange 18, but this is merely a matter of choice as either construction is equally satisfactory.

In all instances the base flange 8 is formed at such an angle with respect to the slat 6 and the length of the supporting post 20 or 22 that when the base flange 8 is in surface to surface relation with the webs of the frame members 14 and 16, the free edge of the slat will be positioned if not restrained at a point closer to the frame member than when supported upon the posts as shown in broken lines in Fig. 2. By having the posts 20 and 22 of longer length than the normal position of the slats when not under tension, the slats when assembled and resting on their supporting posts are all under considerable tension and bear firmly upon the top ends of their respective supporting posts so that when subjected to wind and

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air currents, there will be no tendency for the free ends of the slats to rattle or clatter up and down on the ends of their supporting posts.

In the forms shown in Fig. 5 of the drawings the supporting posts 24 are separate angle clips instead of being struck out of the metal of the frame members 14 and 16. As shown in full lines in Fig. 5, the angle clip 24 may have its base end held by the attaching screw 12 with the post having its top end engaging the next adjacent slat at the juncture of the flange 18 with the body 6 of the slat. When the post 24 is reversed or turned 180°, the point of engagement will be inward from such point of juncture and when it is desired to have the post at a point still further inward, as shown at 26, then it will be secured to the frame member 14 by a separate attaching screw 28.

In the use of my improved type of slat awning, the sunlight striking the outer curved surfaces of one slat will be partially reflected upwardly so as to strike the under side of the next adjacent slat thereabove, and from that inner side be reflected into the room, thereby giving light to the room upon which the awning is attached without permitting the direct entrance of the sun's rays. The result of this structure is that the room is well lighted with diffused rays and without being subjected to any direct sun's rays shining through the window.

The right angle flange 10 formed on the base flange 8 of each slat not only imparts great rigidity lengthwise to the slats but also serves as a rain sheet so that rain is not blown by the wind upwardly over the outer curved surfaces of the slats and inwardly through the awning as a whole.

Although but one preferred embodiment and one modification have been herein shown and described, it will be understood that numerous details of the constructions shown may be altered

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or omitted without departing from the spirit of this invention as defined by the following claim.

I claim:

A slat type awning structure comprising a frame including rigid bars spaced transversely from each other and extending downwardly at a forward incline between their upper and lower ends, a plurality of slats extending horizontally across said bars one above another, each slat having a rear side edge portion formed with a longitudinally extending channel having a flat base portion firmly secured against outer surfaces of said bars and a rear wall projecting outwardly from the bars, said slats each extending outwardly at a downward incline from said bars in overlapping and outwardly spaced relation to the rear portion of a slat below it and having a front side edge portion formed with a downwardly extending flange, said slats being formed of resilient material, and posts extending upwardly above the channels of said slats and being of a height greater than the initial distance between said bars and front side portions of the slats, said slats being sprung upwardly and resting upon upper ends of the posts and having frictional binding engagement therewith.

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