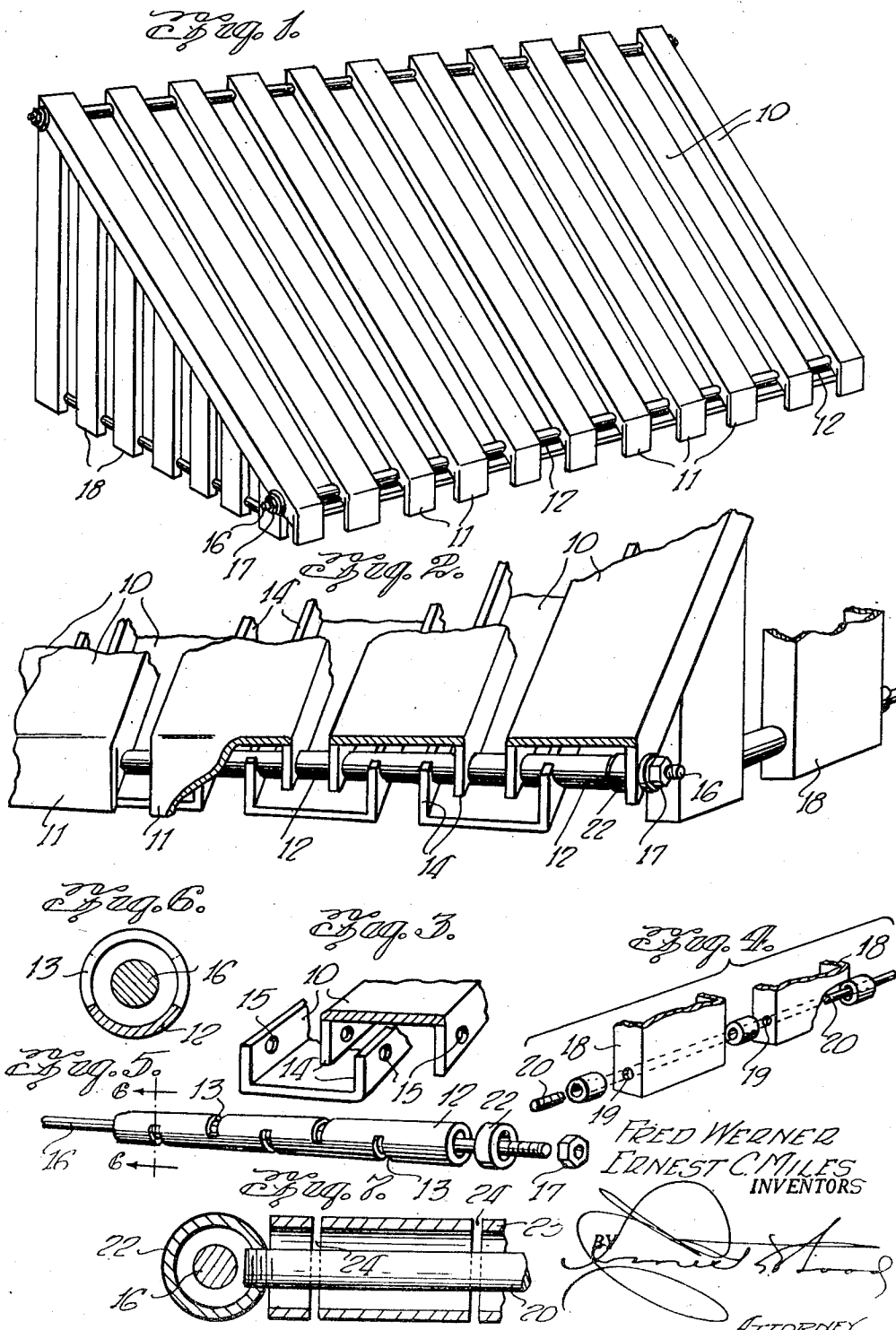


Jan. 25, 1949.

F. WERNER ET AL
AWNING AND VENTILATOR

2,459,983

Filed Dec. 8, 1945



UNITED STATES PATENT OFFICE

2,459,983

AWNING AND VENTILATOR

Fred Werner and Ernest C. Miles, Dallas, Tex.

Application December 8, 1945, Serial No. 633,682

4 Claims. (Cl. 20—57.5)

1

This invention relates to awnings and it has particular reference to metal awnings.

The principal object of the invention is to provide a new and novel construction in metal awnings by virtue of which light and water is entirely excluded, yet insures adequate ventilation. Moreover, the design and construction of the awning is such that mass production may be carried out at comparatively low cost and with but a minimum amount of equipment.

Another object of the invention is to provide a ventilated roof or awning consisting of alternately disposed and overlapping channels held together in parallelism by means of a tubular element having spaced slots receiving the flanges of overlying and underlying channels and through which is passed a rod, the latter extending through holes in the flanges, aligned with the bore of the tube.

With the foregoing objects as paramount, the invention has further reference to certain features of accomplishment which will become apparent as the description proceeds, taken in connection with the accompanying drawing wherein:

Figure 1 is a perspective view of an awning constructed according to the present invention.

Figure 2 is a fragmentary view in perspective, showing the arrangement for receiving the channels in fixed relationship.

Figure 3 is a fragmentary detail view showing the relationship of the channels.

Figure 4 is a fragmentary detail view in perspective, showing in extended relationship the elements of the end structure of the awning.

Figure 5 is a perspective view of the tie rod and spacing tube per se, by which the channels are secured together.

Figure 6 is a view of the tie rod and tube in transverse section, taken on line 6—6 on Figure 5, and

Figure 7 is a fragmentary view in vertical section showing the manner in which the vertical end channels are secured together and to the inclined channels constituting the roof or awning.

Continuing with a more detailed description of the drawing, reference numeral 10 denotes each of the service channels constituting the inclined awning or roof, which are assembled alternately upright and inverted so that the flanges of the upper assembly will lie between the flanges of the lower assembly but at no point do the channels touch so that air will be permitted to circulate between them. However, in this relationship it is obvious that moisture falling on the structure will be carried off by the lower or in-

2

verted channels which form parallel troughs. Light also is excluded since the flanges of the channels overlap and afford no opening through which direct light rays may pass.

It will be observed in Figures 1 and 2 that the flanges of the overlying channels 10 are cut short to permit the webs 11 to be bent downwardly to conceal the interlocked flanges and to present a more pleasing finish. It is obvious that these downwardly turned ends of the channels may be decoratively formed if desired to further improve the appearance of the forward edge of the awning, or eaves in case of a roof.

To secure the channels 10 in the relationship described, a tube 12 is employed which has a plurality of relatively spaced slots 13 cut therein, alternate slots being sufficiently deep as to extend past the center of the tube. In other words, the bottom of one slot overreaches that of the adjacent slot. The flanges 14 of the channels 10 are provided with apertures 15, as shown in Figure 3 and when the channels 10 are assembled in the manner shown in Figures 1 and 2, the apertures 15 are in alignment and further reference to these apertures will be made presently.

In securing the assembly, the slotted tube 12 is so disposed in relation to the channels 10 that the flanges of the underlying channels will be received in the lower slots 13 of the tube while upper slots thereof will receive the channels of the overlying channel assembly. With the channels so assembled, a tie rod 16 is passed through the tube 12 and through each of the aligned apertures 15 of the channel flanges, since the apertures are concentric with the bore of the tube 12. When the rod 16 is properly positioned in the tube as described, nuts 17 are threaded onto its ends and tightened to bind all parts together.

While the drawing shows the tie assembly only at the top and bottom of the awning, it is obvious that as many such assemblies, may be employed intermediate the top and bottom of the awning as necessary or desired, depending upon the length of the channels 10.

To cover the opening at the ends of the awning, relatively spaced vertical channels 18 are cut along their upper ends to conform to the inclined plane of the channels 10 and may be secured by being slotted vertically to embrace the outer flange of the end channel, by welding, bolting or otherwise. The lower ends of the end channels 18 are secured together and in fixed relationship either by the arrangement shown in Figure 4 or by that shown in Figure 7, the latter being the

3

same as that employed for securing the awning channels 10, as described.

As shown in Figure 4, the vertical channels are apertured at 19 to receive a tie rod 20 and spacer collars 21 are disposed on the rod between the channels 18. A collar 22 (Figures 2, 5 and 7) is placed on the main tie rod 16 and is apertured and threaded to receive the end of the rod 20.

The arrangement shown in Figure 7 for securing the vertical channels is not unlike that described for the awning channels 10 except that the tube 23 is slotted on one side only at 24 to receive the flanges of the spaced vertical channels 18 whose apertures 19 will be concentric with the bore of the tube 23 in assembly.

The tie rod 20 is then passed through the tube 23 and the apertures 19 of the channel flanges and is threaded into the collar 22 which surrounds the rod 16 at each end, as shown in Figure 7.

It is apparent from the foregoing that any number of channels 10 may be fastened together securely in a minimum of time after the parts have been prepared, to form an awning, roof or the like. Also, the parts may be easily and quickly disassembled.

Manifestly, the construction as shown and described is capable of some modification and such modification as may be construed to fall within the scope and meaning of the appended claims is also considered to be within the spirit of the invention.

What is claimed is:

1. An awning including a plurality of alternately underlying and overlying channels in overlapping relationship having aligned apertures in their flanges, a tube coextensive with the channel assembly having slots in opposite sides thereof receiving the flanges of said underlying and overlying channels, the bore of said tube being concentric with the apertures of said flanges, a tie rod extending through said tube and said apertures to secure said channels in spaced relationship and means for holding said rod against longitudinal displacement.

2. An awning including alternate overlying and underlying channels in overlapping relationship whose flanges are likewise overlapped and provided with aligned apertures, a tube in transverse

4

relation to said channels and provided with relatively spaced slots in opposite sides thereof receiving the flanges of said underlying and overlying channels and whose bore is in concentric relationship with said apertures and means extending through said bore and apertures to hold said channels against relative displacement.

3. An awning comprising alternate upright and inverted channel members whose flanges are overlapping but out of contiguity; said flanges having aligned apertures, a tube disposed between said transverse relation to said upright and inverted channels and provided with transverse slots in alternate sides thereof receiving said flanges whereby the apertures therein will be in concentric relation to the bore of said tube, a rod extending through said tube and apertures and means on each end of said rod to bind the assembly together.

4. In an assembly of the character described, a plurality of co-extensive and overlapping channels in alternate upright and inverted positions, the flanges of said channels being likewise in overlapped relationship and having aligned apertures, a tube in transverse relation to and disposed between the upright and inverted assemblies of channels and having relatively spaced and transverse slots in alternate sides thereof receiving said channel flanges and embracing the apertures therein and means extending through said tube and said apertures for binding the assembly together.

FRED WERNER.
ERNEST C. MILES.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
Re. 20,975	Houseman	Jan. 10, 1939
749,440	Jackson	Jan. 12, 1904
1,606,434	McAfoos	Nov. 9, 1926

FOREIGN PATENTS

Number	Country	Date
775,759	France	1934