

June 8, 1948.

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2,442,891

METAL AWNING CONSTRUCTION

Filed Dec. 15, 1945

2 Sheets-Sheet 1

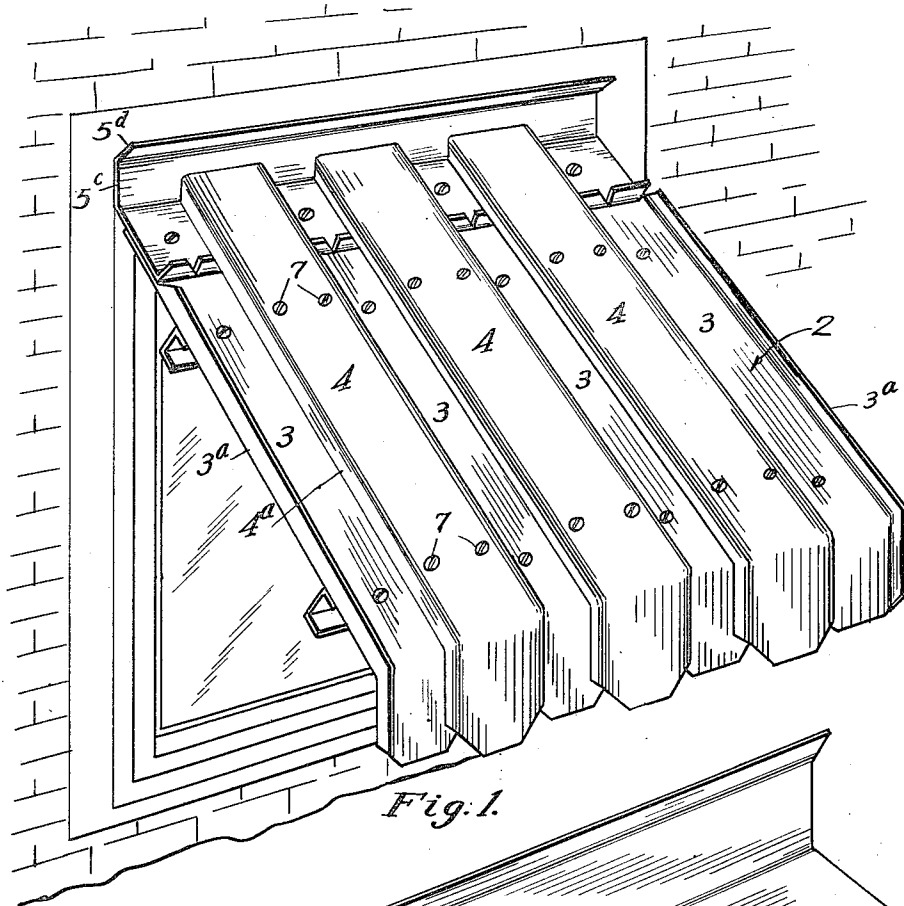


Fig. 1.

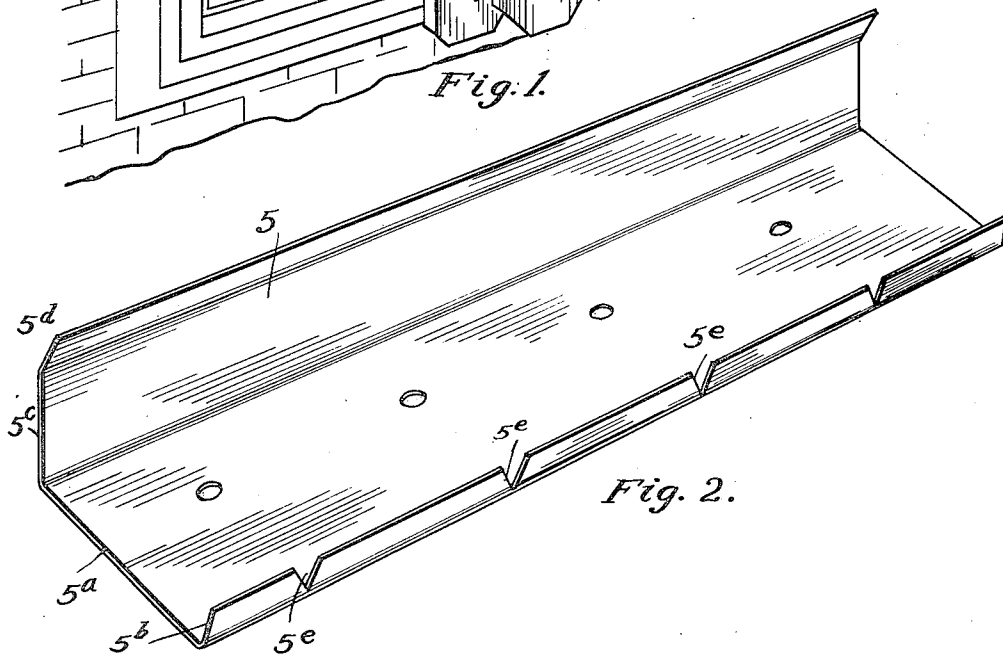


Fig. 2.

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2 Sheets-Sheet 2

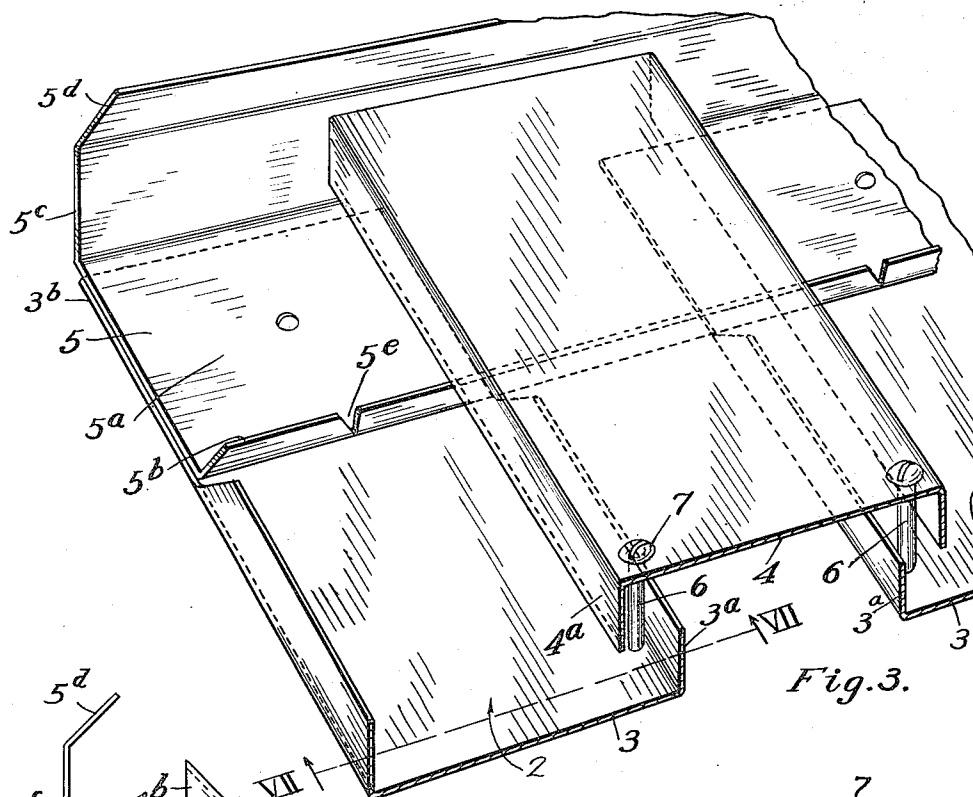


Fig. 3.

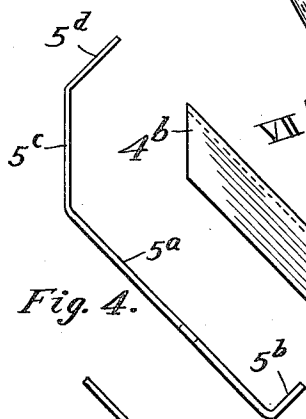


Fig. 4.

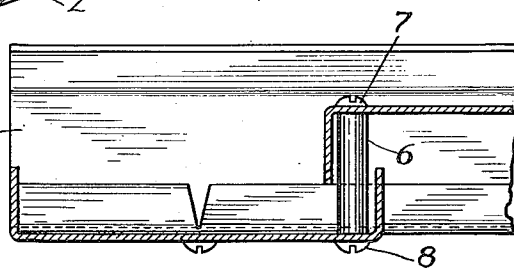


Fig. 7.

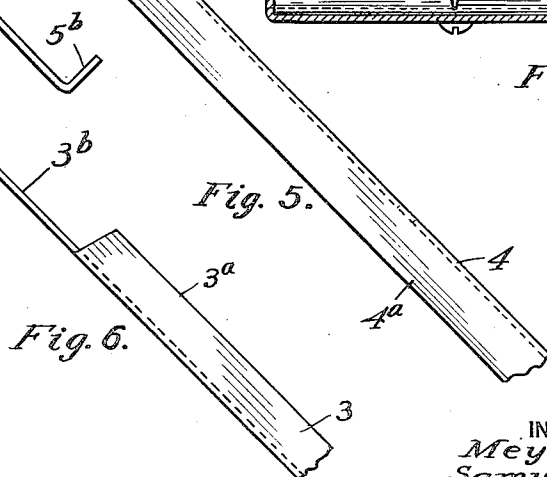


Fig. 5.

Fig. 6.

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METAL AWNING CONSTRUCTION

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Application December 15, 1945, Serial No. 635,213

3 Claims. (Cl. 20—57.5)

1

This invention relates to metal awnings and is for an improvement in awnings of the general type disclosed in Houseman Re-issue Patent No. 20,975 of January 1, 1939.

Awnings of the type referred to have a sloping roof section or panel which is comprised of a series of alternately reversed light sheet metal channels. One series of channels have the side flanges upturned so as to form troughs, and they are commonly referred to in the art as "pans." The pans are in spaced relation to one another. Spanning the opening between the pans and overlapping the flanges of the pans are the inverted channels which are referred to in the art as "covers." These are in spaced relation to the pans so that air immediately under the awning which is warmed by contact with the awning surface may escape from under the awning. At the same time the overlapping of the flanges on the covers and the pans prevents direct rays of the sun from entering between the covers and pans and prevents the wind-driven rain from beating through the space between the pans.

As disclosed in the Houseman patent, these pans and covers, which are in different planes, run the full length of the slope of the awning and they abut at their upper ends against the frame of the window or other part of the building against which the awning is hung. This gives an unfinished appearance to the awning, does not provide a close fit of the awning against the building, and makes the fitting of the awning to the building an exacting task. The object of the present invention is to provide a more weather-tight cover, neat appearing and satisfactory construction for the upper end of the awning.

The invention may be more fully understood by reference to the accompanying drawings, in which:

Fig. 1 is a perspective view of the awning applied to the building, the end curtains of the awning and the awning support being omitted for purposes of illustration;

Fig. 2 is a perspective view of the connecting strip that is provided at the top end of the sloping awning;

Fig. 3 is a perspective view on a larger scale, the view being a fragmentary view of only a portion of the awning;

Fig. 4 is an end view of the strip shown in Fig. 2;

Fig. 5 is a side elevation of one of the cover strips;

Fig. 6 is a similar view of one of the pans; and

2

Fig. 7 is a transverse section in the plane of line VII—VII of Fig. 3.

Referring to the drawings, the sloping cover of the awning is designated generally as 2. It is formed of a plurality of channels having upturned flanges, which channels are hereinafter called pans, and which are designated 3. As clearly shown in Fig. 3, the pans 3 are spaced from one another, and positioned over the spaces between them are inverted channels or covers 4, the edges of the covers overhanging the edges of the pans. The side flanges of the pans are designated 3a and the downwardly turned side flanges of the covers are designated 4a.

According to the present invention the side flanges 3a of the covers are cut away at the upper ends of the awning as best shown in Figs. 3 and 6 so that the flat bottom portion of the channel projects beyond the side flanges forming a flat tongue or projection 3b. The cover members have the flanges 4a extending clear to the uppermost end thereof, but the uppermost end is cut off on a bevel as indicated at 4b in Fig. 5.

Extending across the upper end of the awning is a flashing strip designated generally as 5. It has a flat web portion 5a with an upstanding flange or lip 5b extending along its lower edge. Along the upper edge of the flat portion 5a and at an obtuse angle thereto is a flashing strip 5c, the upper edge of which is preferably turned outwardly to a slight extent as indicated at 5d. The tongues 3b of the pans extend under the flat portion 5a of the strip 5, the upwardly turned lip 5b substantially contacting the edges of the side flanges 3a where they are cut away. A sheet metal screw or bolt and nut passing through the web 5a of the strip 5 and through the tongue 3b of each pan 3 serves to connect each pan with the cross strip.

The cover members 4 have the beveled ends 4b thereof abutting against the flashing portion 5c of the strip 5, and the downwardly turned edges of the flanges 4a rest on the top edge of the lip 5b of the strip 5 serving to support the upper ends of the covers in proper vertical spaced relation to the pans. In other words, the lip 5b constitutes a support for the upper ends of all of the covers. At other points along their length, the covers may be supported on spacing posts 6, there being screws 7 which pass through the tops of the covers into these posts and screws 8 which pass through the bottoms of the pans into the posts. Because of the support to the upper ends of the covers furnished by the lip 5b of the continuous cross strip 5, fewer of these supporting

posts have to be used in the awning than would otherwise be necessary, and the posts that are used can be spaced to better advantage. Since the posts add to the cost of the construction, and since it is desirable to have as few screws as possible, the elimination of these posts is a very desirable feature.

In lieu of the posts which are shown in the drawings, the form of connection shown in our copending application Serial No. 635,214, filed December 15, 1945, may be substituted. In our said copending application the lower edges of the flanges have inwardly turned lips which engage in notches in the posts, eliminating any necessity for screws on the cover members at all.

In order that water which falls on the strip 5 may drain into the pans, the lip 5b is notched as indicated at 5e, the notches registering with the centers of the pans. Thus any water which falls into the strip 5 can flow into the pans, but it cannot otherwise escape to leak through the awning.

The construction has a further advantage, in that the warm air which tends to form under the awning when the sun is beating against it tends to collect under the cover elements 4. While some of the air will escape between the overlapping flanges 3a and 4a, particularly when a breeze is blowing, much of the warm air will tend to follow up the slope of the roof of the awning under the covers and be confined against escaping by the overlapping flanges. By forming the pans in the manner described, so that the side flanges do not extend up the entire length of the pans, the warm air so moving under the covers to the top of the awning may spread out laterally and escape from under the covers much more readily than where the pans and covers are in overlapping relation to the very top edge of the awning. At the same time the provision of the strip 5 aids in making the awning more water tight. The vertical flashing strip 5c presses directly against the window frame or other part of the building to which the awning is secured, providing a flat, smooth surface for engaging the building. Neither the pans nor the cover members therefore need have their upper ends abut against the building at all.

Not only does the strip 5 provide a kind of a flashing along the upper edge of the awning, but it aids in tying the covers and pans together at the upper edge so that the construction is mechanically better and the awning has a much more finished and pleasing appearance. The flashing web 5c and the lip 5b give rigidity to the member 5. The little overhang provided by the upper edge 5d also strengthens the section and improves its appearance.

The member 5 may be formed either of sheet metal or may be an extruded section. The part 5a can be bent with respect to the part 5c so as to conform to the slope of the awning roof, some awnings being much flatter than others.

While we have illustrated and described one preferred embodiment of our invention, it will be understood that various changes and modifications may be made therein within the contempla-

tion of our invention and under the scope of the following claims.

We claim:

1. In an awning of the type having alternately turned channel members in overlapping spaced relation providing alternate pans and covers, a transversely extending connecting strip at the top of the awning, the pans having extensions which pass under the connecting strip and are secured thereto, the covers passing over the top of the connecting strip, the connecting strip having a flat wall portion at the back thereof adjacent which the covers terminate, the transverse connecting strip having an upwardly turned lip at its lower edge providing a support for the ends of the cover members for holding them spaced above the pans.

2. In an awning of the type having alternately turned channel members in overlapping spaced relation providing alternate pans and covers, a transversely extending connecting strip at the top of the awning, the pans having extensions which pass under the connecting strip and are secured thereto, the covers passing over the top of the connecting strip, the connecting strip having a flat wall portion at the back thereof adjacent which the covers terminate, the transverse connecting strip having an upwardly turned lip at its lower edge providing a support for the ends of the cover members for holding them spaced above the pans, the said lip being notched at intervals where it traverses the pans so that water may drain therefrom only into the pans.

3. A metal awning of the class described comprising a spaced series of channel members having upwardly turned flanges, the channel members having flat projections at the uppermost ends, the said members being spaced from one another, a transverse connecting strip under which said extensions project and to which the said extensions are secured, the said connecting strip having a vertical wall contacting portion along the upper edge thereof, and inverted channels alternately disposed in overlapping relation with said first channels, the inverted channels passing transversely over said connecting strip and terminating adjacent said vertical wall portion, means on the first channels below said connecting strip for supporting the inverted channels, said connecting strip having an upwardly turned lip along its lower edge passing under the downwardly turned sides of the inverted channels and forming a support therefor whereby the inverted channels are held in spaced relation to the first channels at the upper ends of the structure.

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

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