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2,797,451

AWNING

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2 Sheets-Sheet 1

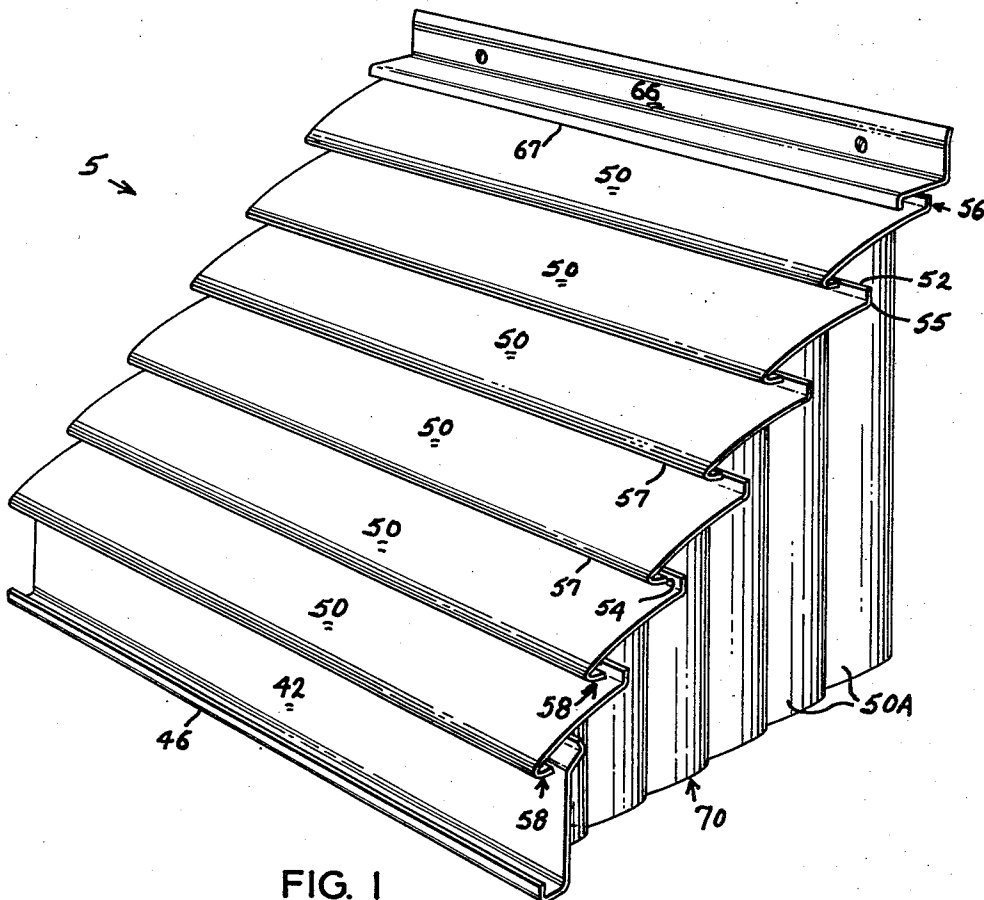


FIG. 1

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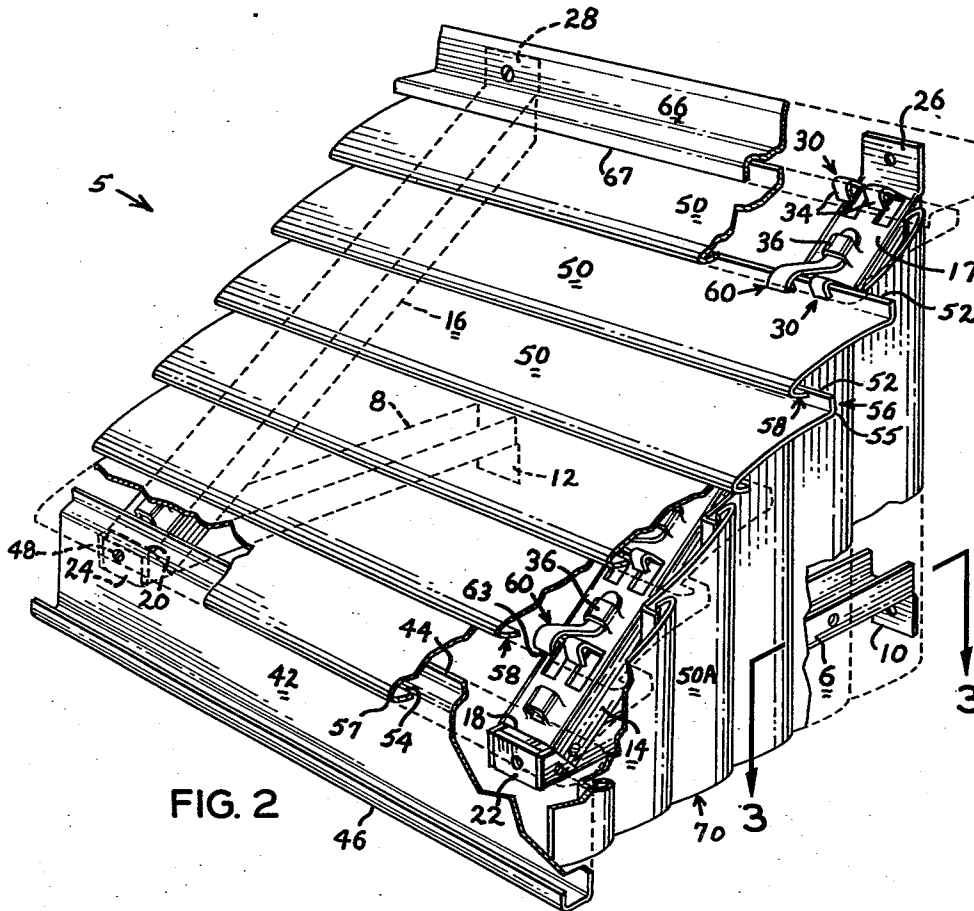


FIG. 2

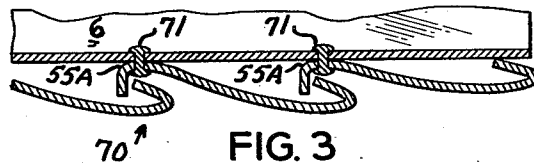


FIG. 3

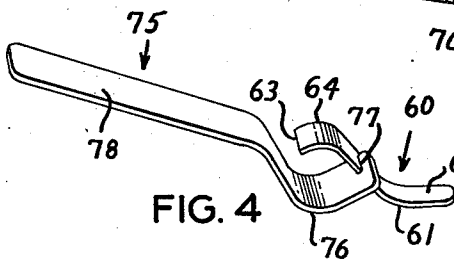


FIG. 4

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AWNING

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5 Claims. (Cl. 20—57.5)

The present invention relates to metal awnings, and more particularly to an awning of a rigid type which is connected to a building, or the like, and wherein the awning structure is not intended to be raised or lowered with respect to an associated frame. Awnings of this type must offer protection against sunlight and readily shed rainwater, and must be provided with ventilating means barring the passage of rain.

A number of metal awnings of this class have been developed and are available on the open market. The primary objection to rigid metal awnings of this class is the necessity of a large amount of storage space required to house the stock of awnings which are ready made for standard-size windows. A further objection to conventional awnings of this class is that it is frequently desirable to install an awning over a building opening, such as a window which is not of a standard size, and therefore requires an awning of a special size which must be ordered from the manufacturer of the awnings in stock in order to have similarly constructed awnings over all openings, and thus present a pleasing appearance of the building structure as seen from the street.

It is therefore the primary object of this invention to provide an all metal awning structure comprising a plurality of interlocking parts which may be readily assembled to produce an awning of selected dimensions.

Another object of this invention is to provide prefabricated awning parts which may be conveniently carried in stock in elongated strips by a dealer, and which may be readily cut to length to form the desired sized awning.

A further object is to provide a ventilated metal awning having individual overlapping roof slats carried by the frame and which may be easily individually replaced should they become damaged.

Another object is to provide an awning of this class in which the overlapping slats of the roof section are connected to the frame without the use of screws, bolts or the like.

An additional object is to provide an awning of this class which requires a minimum of attaching screws for connecting the frame thereof.

Still another object is to provide an awning structure which has a pleasing appearance.

A still further object is to provide an awning permitting substantially vertical as well as horizontal circulation of air.

The present invention accomplishes these and other objects by providing rigid horizontally disposed channel members adapted at one end for connection to a building and upwardly inclined channel supports connected at their lower end to the horizontal members and secured to the building in spaced relation above the members. The web of the supports is disposed upwardly and includes horizontally aligned pairs of hook-shaped legs for holding transversely disposed slats in overlapping relation comprising a roof section. The web of the supports further removably carries a resilient metal tie-clip between each

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pair of projections for engaging and resiliently holding the lowermost edge of each slat in spaced-apart relation with the adjacent lower slat, thereby providing ventilating spaces therebetween. The ends of the awning may be closed, if desired, by attaching selected lengths of the roof slats to the supports and members in spaced-apart overlapping relation.

Other objects will be apparent from the following description when taken in conjunction with the accompanying two sheets of drawings, wherein:

Figure 1 is a perspective view of the assembled device;

Figure 2 is a perspective view similar to Fig. 1, partly broken away to illustrate construction features of the device, the broken away portions thereof being shown in dotted lines;

Figure 3 is a horizontal cross-sectional view taken substantially along line 3—3 of Fig. 2; and

Figure 4 is a perspective view of one of the parts of the device, and a wrench for installing the same.

Like characters of reference designate like parts in those figures of the drawings in which they occur.

In the drawings:

The reference numeral 5 indicates the device, as a whole, comprising, a pair of channel members 6 and 8, of a selected size, horizontally disposed with the web of the channel presented downwardly. An integral portion of the web of one end of each members 6 and 8 is turned downwardly, as at 10 and 12, in perpendicular relation to the members for connecting the same to the vertical exterior wall of a building or the like, not shown. Conversely a portion of the web of the opposite ends of the members 6 and 8 are turned upwardly, as at 22 and 24, in perpendicular relation with the members 6 and 8 for the reasons which will presently be apparent. The members 6 and 8 are connected in parallel spaced-apart relation on opposing sides of a window, or the like. The spacing apart of the members 6 and 8 is determined by the size of the window or opening to be covered. Small windows will require only two of the members six and eight (6 and 8), whereas double or triple windows might well be provided with intermediate members, not shown, for rigidity. The members 6 and 8 are preferably cut to equal length from blank channel stock and the length of the members is determined by the pitch desired for the roof of the awnings, as more fully explained hereinbelow.

The legs of a pair of channel supports 14 and 16 are rigidly connected adjacent one end 18 and 20 to the legs of the members 6 and 8, respectively, adjacent their free ends 22 and 24. The supports 14 and 16 are inclined upwardly from the members 6 and 8 to contact the wall of a building, not shown, in spaced relation above the flanged ends 10 and 12. The supports 14 and 16 preferably have their webs 17 presented upwardly and a portion of the web 17 is turned upwardly, as at 26 and 28, parallel with and for rigidly connecting the support to the wall of the building, not shown. The supports 14 and 16 are similarly preferably cut to equal length from channel stock. The length of the supports may be varied to provide the desired pitch of the roof of the awning as long as the length conforms to multiples of roof element attaching means, as more fully explained hereinbelow. The web 17 of the channel supports have elongated three-sided cuts adjacent each leg of the channel to provide a plurality of longitudinally spaced-apart pairs of strap-like upwardly inclined pairs of projections 30 integrally connected at one end with the webs 17 of the support. Each projection 30 has a portion of its free end doubled back toward itself to form comparatively short downwardly presented hook-shaped ends 34, for the purposes more fully explained hereinbelow. The longitudinal spacing of the pairs of projections 30, upon

the web 17 of the supports 14 and 16, is such that they substantially equal the width of the roof elements, as will be presently apparent. A comparatively small upstanding transversely disposed integral loop 36 is struck from the web 17 of the channel supports 14 and 16 substantially centrally spaced longitudinally between the pairs of projections 30. The loop 36 projects upwardly above the surface of the web 17 a sufficient distance to permit the end portion of a strap-like tie-clip 60 to be longitudinally inserted therein with relation to the supports 14 and 16 and to be frictionally engaged by the under side of the loop 36 and the upper surface of the web 17, as more fully explained hereinbelow.

A drip rail 42 having an upper edge 44 parallel with its opposite lower edge 46, of a selected length, preferably substantially longer than the spacing apart of the members 6 and 8 and the supports 14 and 16, is substantially vertically disposed transversely of the awning frame and rigidly connected to the ends 22 and 24 by screws 48. A longitudinal portion of the edge 44 is inclined upwardly substantially parallel with relation to the surface of the webs 17 for providing an upwardly inclined edge on the drip rail to shed rain water.

The roof includes a plurality of overlapping transversely disposed slats 50 of equal length, preferably equal in length with relation to the drip rail 42. Each slat 50 is substantially rectangular in general configuration having a transverse arcuate curve which bows each slat upwardly between its longitudinal sides 52 and 54. A longitudinal portion of the upper edge 52 of each slat is bent upwardly, as at 55, to form a transversely substantially narrow upstanding upper edge portion 56 for engagement with the hook-shaped projections 30. The width of the edge portion 56 is substantially equal, with relation to the length of the hook-shaped ends 34 of the projections 30, so that the edge 52 contacts the under side of the hooked ends 34 while the bend 55 is in contact with the surface of the web 17. A longitudinal portion of the lower edge 54 of each slat is bent downwardly and back toward itself, as at 57, to form a transversely substantially narrow hook-shaped lower edge portion 58. The width of each slat 50, and the spacing of the pairs of legs 30, is such that the lower edge portion 58 substantially overlaps the upper edge portion 56 of each respective lower slat. The edge portion 58 of the lowermost slat overlaps the upper edge 44 of the drip rail.

Each slat 50 is held in spaced overlapping relation with the adjacent lower slat, by an elongated strap-like arcuately curved resilient metal tie-clip 60 (Fig. 4). The clip 60 is bent upwardly adjacent one end, as at 61, leaving a substantially flat end portion 62 for insertion under the loop 36, as disclosed hereinabove. Adjacent its opposite end 63 the clip is arcuately curved downwardly, as at 64, complementary with the under surface of the slats 50. The length of the tie-clip 60 is such that the end 63 frictionally engages the hooked edge 58 of the slat by the resilience of the clip 60 bearing against the slat and the loop 36, thus providing rain proof ventilating spaces between the overlapping edges of the slats.

A substantially right angular header 66, of equal length with relation to the slats 50, is rigidly connected transversely to the upstanding web portions 26 and 28 of the channel supports to complete the roof section. A portion of the longitudinal lower edge 67 of the header 66 overlaps the upstanding edge 58 of the topmost slat 50 in spaced-apart rain proof relation.

Triangular shaped ends may be added to complete the awning, as shown, if desired. The end 70 is formed of a plurality of vertically disposed slats 50A which are identically formed with relation to the roof slats 50. Each end slat 50A is rigidly attached to the adjacent outwardly disposed leg of the member 6 and the support 14, respectively, adjacent the bend 55A by suitable screws or rivets 71. The rivets 71 hold the slats 50A in over-

lapping spaced-apart relation to provide for horizontal as well as vertical ventilation therebetween (Fig. 3).

In actual practice the awning is assembled from the various parts after cutting the same to the desired length from elongated preformed strips, as disclosed hereinabove. The installation of the tie-clip 60, for holding one end of a slat 50, is preferably accomplished by the use of a wrench-like selected length of strap metal 75 arcuately curved adjacent one end portion, as at 76, and having a handle portion 78. The wrench 75 is provided with a lateral slot 77 near the end adjacent the curved portion. The slot 77 is sufficiently wide enough to closely receive edgewise a portion of the tie-clip 60, as shown in Fig. 4. To engage the tie-clip 60 with the slat 50, the clip end 62 is manually inserted upwardly into the loop 36 and the slat 50 is placed with its upper edge portion 56 engaged with the hook-shaped projections 30. The wrench is manually grasped by the handle 78 and the slot 77 is placed upon the clip 60 at a point intermediate its ends. The curved portion 76 of the wrench-like member is disposed downwardly with relation to the lower hook-shaped edge 58 of the slat. By manually lifting upwardly on the wrench handle, the clip 60 may be resiliently raised sufficiently to engage its end 63 with the inside of the hook-shaped edge 58 of the slat. The wrench 75 is then manually removed and the resilience of the metal of the clip 60 holds the slats 50 in spaced overlapping relation. It seems obvious that the slats 50 may be removed from engagement with the clips 60 by use of the wrench and reversing the installations. It seems equally obvious that the clips 60 could be installed by the use of conventional tools, such as pliers.

Obviously the invention is susceptible to some change or alteration without defeating its practicability, and I therefore do not wish to be confined to the preferred embodiment shown in the drawings and described herein, further than I am limited by the scope of the appended claims.

I claim:

1. A metal fabricated awning structure, comprising: a pair of horizontally disposed channel members each having a flanged end securable to a building; a pair of inclined channel supports having one lower end engaged over the outermost end of each said horizontal member, respectively, and having an upper flanged end securable to said building in spaced relation above said horizontal members, said inclined supports having a plurality of pairs of integral longitudinally spaced-apart upstanding hook-shaped projections and an integral transversely disposed upstanding loop between each of said pairs of projections; a header rigidly connected transversely to said flanged ends of said supports; a transverse drip rail rigidly connected to and depending from the outermost end of said members; a like plurality of transversely disposed roof slats having one upturned longitudinal edge removably engaged under said pairs of hooked projections, said slats having a longitudinal depending hook-shaped edge opposite said upturned edge; and a resilient clip slidably engaged at one end within each said upstanding loop and having its opposite end resiliently contacting a portion of said hook-shaped slat edge for resiliently holding said slats against vertical and longitudinal movement with relation to said channel members.

2. A metal fabricated awning structure, comprising: a pair of spaced-apart horizontally disposed channel members each having one end adapted for securing the same to the wall of a building; a pair of channel supports connected at one end to the free end of each said member, respectively, said supports inclined upwardly and adapted for securement to said building wall in spaced relation above said horizontal members, the web of said channel supports disposed upwardly; a roof carried by said channel supports, said roof comprising a plurality of transverse slats substantially horizontally

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disposed, each said slat having one upturned longitudinal edge substantially vertically disposed, and an opposite downwardly curved longitudinal edge substantially hook-shaped parallel with said upturned edge and overlapping said upturned edge of each adjacent lower slat, respectively; and means carried by the web of said channel supports for securing said slats to the same, said means including a plurality of pairs of co-operatingly horizontally aligned longitudinally spaced-apart hook-shaped projections rigidly connected at one end to the web of said channel supports and engaging the adjacent upturned edge of each said slat, respectively, a transversely disposed upstanding loop rigidly connected to the web of said channel support between each said pair of projections, respectively, an elongated arcuately curved resilient metal tie-clip slidably engaged at one end within each said upstanding loop, respectively, and having the end opposite the first said end resiliently contacting a portion of said hook-shaped edge of each said slat, respectively, and holding said slats in spaced-apart overlapping relation, thereby providing ventilating spaces therebetween.

3. An all metal ventilated awning comprising a plurality of interlocking parts to produce an awning of selected dimensions, said parts including inclined spaced-apart channel supports extending longitudinally of the awning, the webs of said channel supports disposed uppermost and flanged upwardly at one end for securement to a building, said webs perforated to form a plurality of co-operatingly aligned longitudinally spaced-apart pairs of upwardly inclined hook-shaped projections and an integral transversely disposed upstanding loop between each pair of projections; horizontally disposed channel members each rigidly connected at one end to the depending end of said inclined channel supports, respectively, the web of the end opposite the said one end of said horizontal channel members adapted for securement to said building; a transverse header rigidly connecting the upper ends of said inclined channel supports in spaced-apart relation; a substantially vertically disposed transverse drip rail rigidly connected to said members adjacent the depending spaced-apart ends of said inclined channel supports; a plurality of transversely disposed roof slats, each said slat having one upturned longitudinal flanged edge engaged under said co-operating pairs of hooked projections on each inclined channel support, respectively, each said slat having a longitudinal arcuate hook-shaped edge opposite said flanged edge; and a resilient tie-clip slidably engaged at one end within each said upstanding loop, respectively, and having the end opposite the first said end resiliently contacting a portion of said hook-shaped edge of each said slat, respectively, and holding said slats in spaced-apart overlapping relation, thereby providing ventilating spaces therebetween.

4. A metal fabricated awning structure, including: a pair of parallel spaced-apart horizontally disposed channel members each having one end adapted for securing

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the same to a building; a pair of channel supports connected at one end to the free end of each of said channel members, respectively, said supports inclined upwardly and secured to said building adjacent their uppermost ends in spaced relation above said members, the webs of said channel supports disposed upwardly; a transverse vertically disposed drip rail having one edge connected to the connected ends of said channel members and said channel supports; a roof carried by said channel supports, said roof including a plurality of transversely disposed laterally downwardly inclined overlapping slats, each said slat having one upturned longitudinal edge substantially vertically disposed and an opposite downwardly curved longitudinal edge substantially hook-shaped parallel with and overlapping, in spaced relation, said upturned edge of each slat, respectively, the lowermost said slat overlapping in spaced relation the topmost edge of said drip rail; a header rigidly connected transversely to said channel supports adjacent their uppermost end and longitudinally overlapping, in spaced relation, the upturned edge of the uppermost slat; and means carried by said channel support web for removably holding said slats in spaced-apart overlapping relation, said means including transversely aligned upwardly extending projections rigidly carried in spaced-apart relation by the web of each said channel support, respectively, said projections having their free end portions doubled back upon themselves forming hook-shaped ends for engaging the upturned edges of said slats, an upstanding loop carried by the web of each said channel support, respectively, in spaced-apart relation between said projections, an elongated arcuate spring clip having one end portion engaged within each said loop, respectively, and having its opposite end resiliently contacting the underside of said hook-shaped edge of each said slat, respectively, for resiliently holding said slats.

5. Structure as specified in claim 4, and triangular ends for said awning, said ends each comprising a plurality of vertically disposed transversely arcuate slats having one longitudinal outwardly turned edge and an opposite inwardly turned hook-shaped edge parallel with the first said edge, each said slat rigidly connected adjacent said outwardly turned edge to each said horizontal member and each said inclined channel support, respectively, for holding said slats in spaced-apart overlapping relation, thereby providing ventilating spaces therebetween.

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