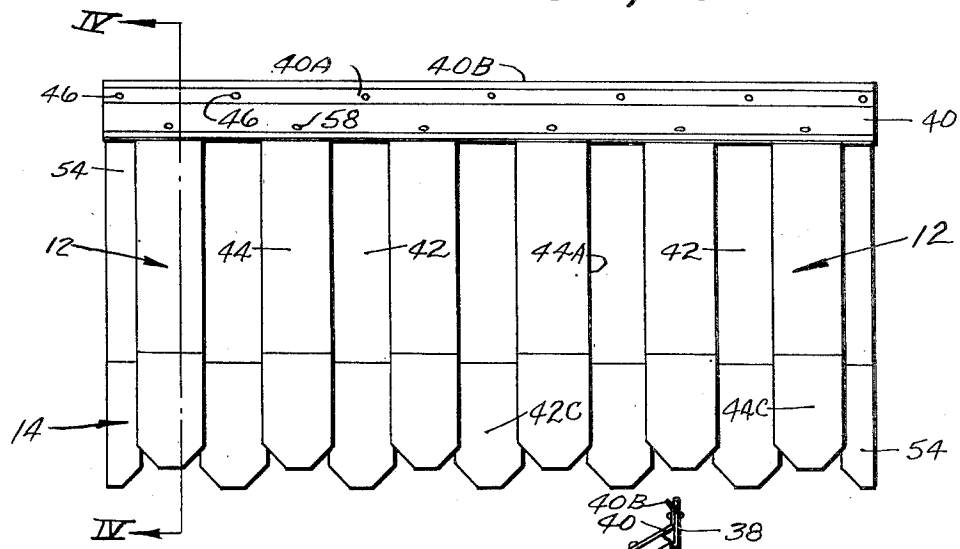
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AWNING

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FIG. 1.



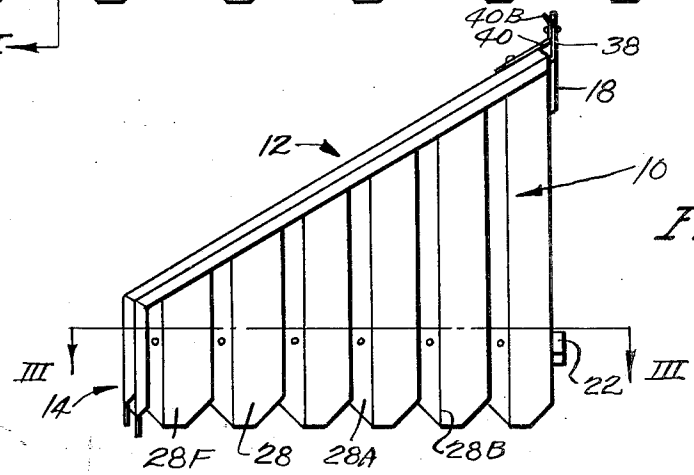
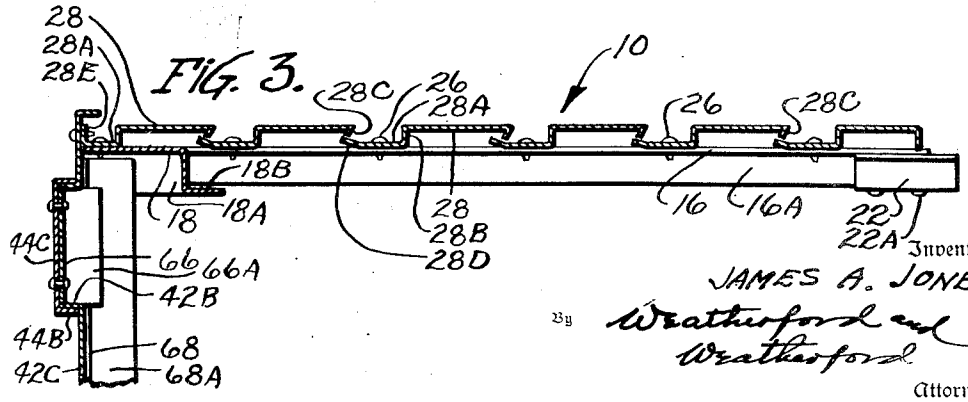


FIG. 2.

FIG. 3.



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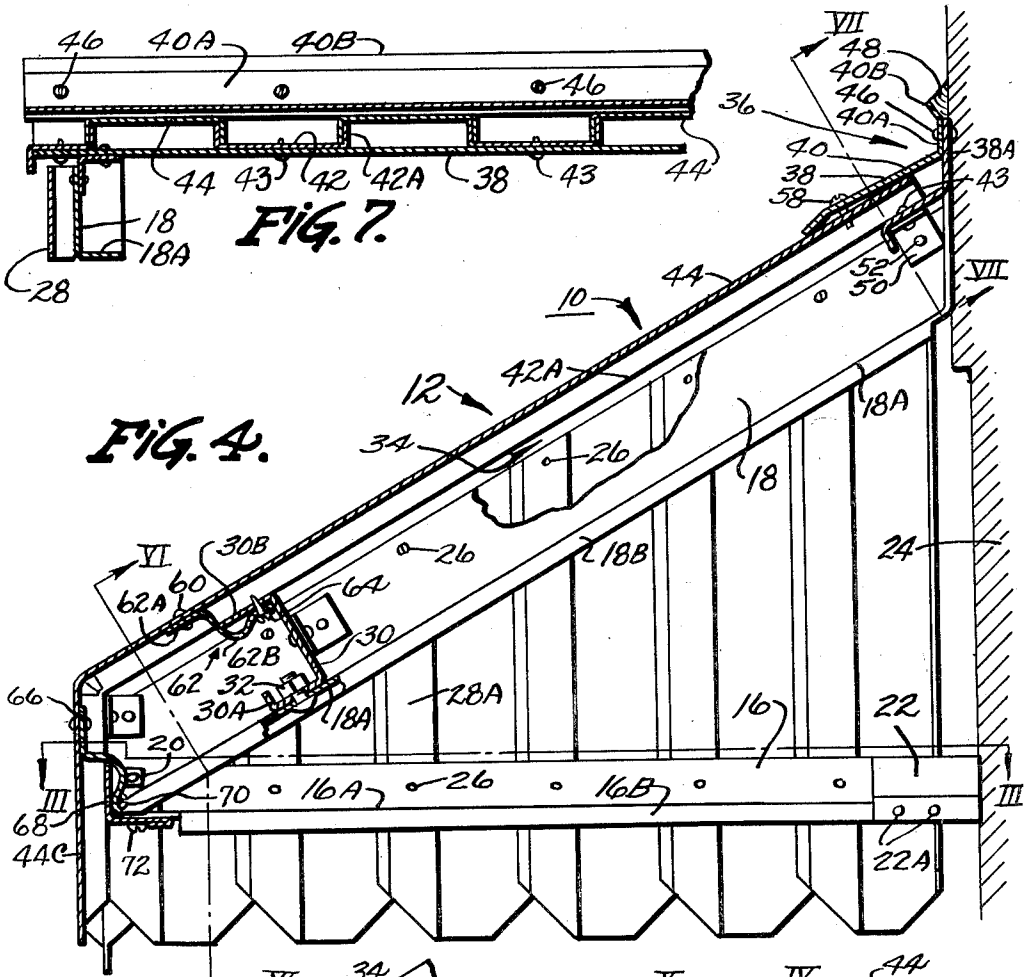


FIG. 4.

FIG. 7.

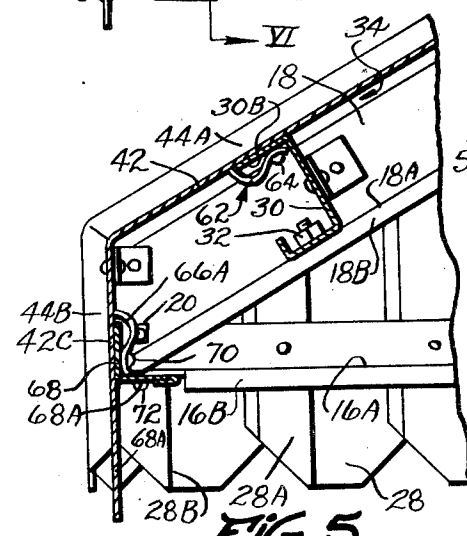


FIG. 5.

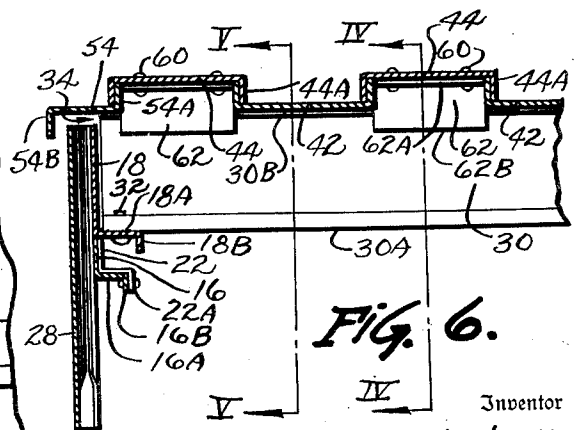


FIG. 6.

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UNITED STATES PATENT OFFICE

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AWNING

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Application September 6, 1949, Serial No. 114,230

6 Claims. (Cl. 20—57.5)

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This invention relates to metal awnings having end walls built up of beams and individual vertically disposed slats, which end walls are connected by transverse members to form a supporting frame, and a sloping roof portion built up of interengaged individual channels supported by and secured to said transverse members.

Awnings, however built, should provide a shield through which neither sunshine nor rain may enter and which will be a protection thereagainst, but which inherently undesirably tend to trap heated air therebeneath; this invention relates to means by which ventilation and free escape of the otherwise trapped air is accomplished.

Areas to be shielded vary greatly in width, and the width of awning erected should be conformed to meet such variations. This invention relates to the means by which such variations may be readily met.

Metal awnings, however constructed, are ordinarily painted both for preservation of the metal and for ornamentation, such ornamentation usually being in the form of strips of contrasting colors, which add to the attractiveness of the structure, but require excessive care and shielding in applying the paint; this invention relates to such a structure in which the strips or slats forming the roof and/or the end walls may be individually painted before assembling and particularly a structure in which set of slats of one color are alternated with set of slats of another color.

The objects of the invention are:

To provide a simple and efficient structure which will protect against the entrance of rain or sun light; and which will freely allow the escape of air trapped therebeneath.

To provide an awning structure built up of a plurality of substantially identical units with a minimum of special parts and which will readily accommodate itself to an endless variety of awning widths.

To provide an awning having a sloping roof portion shielded at its upper end against the entrance of rain and sunlight and laterally vented for the escape of air.

To provide an awning having end walls and roof overlying and spaced above the upper ends of said walls to allow lateral escape of air over said ends, said roof having edge flanges extending below the upper ends of said walls.

To provide awning end walls, comprising vertically disposed, overlapping units, rearwardly open for the escape of air, but shielding against entrance of rain.

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To provide means for attaching and sealing the upper ends of an inclined awning roof to a wall, which means allows lateral escape of air.

To provide means for attaching individual channel units to the supporting frame therefor.

To provide means for forming, alining, and bracing on awning valance; and

To provide means for alining and bracing an awning structure attached to an offset or uneven wall surface.

The means by which the foregoing and other objects are accomplished and the manner of their accomplishments will readily be understood from the following specification on reference to the accompanying drawings, in which:

Fig. 1 is a front elevational view of a typical awning in accordance with my invention.

Fig. 2 is a corresponding side elevational view of the awning.

Fig. 3 is a sectional plan on an enlarged scale taken on the line III—III of Fig. 2.

Fig. 4 is a sectional side elevational view on a similarily enlarged scale taken on the line IV—IV of Fig. 6, with a portion of the web of an upper beam partially broken away.

Fig. 5 is a complementary fragmentary sectional side elevational view taken on the line V—V of Fig. 6.

Fig. 6 is a fragmentary sectional elevational view taken on the line VI—VI of Fig. 4; and

Fig. 7 is a similar fragmentary elevational view taken on the line VII—VII of the same Fig. 4.

Referring now to the drawings in which various parts are indicated by numerals, the awning comprises sides or ends 10 which support a roof 12, which has a depending valance portion 14 at its forward edge, this valance preferably extending to substantially the same depth as the ends. The ends each include a horizontal beam 16, and an inclined beam 18, having the same slope as the roof, the two beams being secured together adjacent their front ends as by a bolt or rivet 20. Both are preferably of right angle shape in cross section with horizontal flanges 16A, 18A respectively and vertical flanges which are designated by the numbers 16 and 18 which identify the beams, and may have additional edge flange portions 16B, 18B respectively. The horizontal beam member is provided at its back or wall end with an attachable section 22 which conforms in cross section to the beam 16 and is adjusted therealong and secured to the beam as by screws 22A, placed during erection of the awning to properly level up the awning irrespective of any inequalities in

the surface of the wall 24 to which the awning is attached.

Attached to the beams 16 and 18 as by screws or rivets 26, are vertically disposed end plates 28, each of which comprises a seating portion 28A which seats against the beams 16 and 18 and is secured thereto by the screws 26, and a rearwardly disposed outwardly spaced parallel body portion designated by the plate designating numeral 28, which is joined to the seating portion 28A by a flange portion 28B, and along its rear edge may have an inwardly turned edge flange 28C. Also, the front edge of the seating portion may have an outwardly deflected flange portion 28D. Adjacent end plates are positioned the one with respect to the other so that the flanged rear edge of the outwardly spaced body portion will overlie the front edge of the seating portion of the next rearward plate. The front edge portion 28E of the first end plate is preferably turned outward at right angles and the seating portion 28A of that plate is secured to the beams 16 and 18 adjacent their outer ends, with the body portion 28 of the plate extending rearward toward the wall end of the awning and the attaching strip of the next end plate is secured with its flange portion in underlying relation to the first attached end plate in order that the opening between such plates will face toward the wall and be shielded by the wall from the entrance of rain. The upper ends of the end plates are cut off flush with the upper edge of the vertical flange 18 of the beam also designated by that number.

The upper inclined beams 18 are connected adjacent their front ends by a transverse purlin 30 disposed between the beams with its lower flange 30A resting on the flanges 18A of the beams and secured thereto, as by bolts 32, and its upper flange 30B extending forwardly parallel to the top of the beam, the depth of the purlin being greater than the depth of the vertical flange of the beam 18, an amount equal to the desired air escape space 34 between the top of the beam and the roof. At their rear and upper ends, the beams 18 are connected by a wall purlin 36 comprising plates 38 and 40, which respectively are adapted to underlie and overlie roof channels 42 and 44, these plates having upwardly extending flange portions 38A, 40A through which attachment of the awning to the wall 45 is made, the flange portions being secured together in abutting relation by rivets 46. One of the upwardly extending flange portions, as the flange portion 40A, has along its upper edge a forwardly deflected portion 40B which forms a groove or pocket along the wall 45 to receive a suitable sealing or caulking compound 48. The lower plate 38 of the wall purlin may be secured to the beams 18 by brackets 50 and suitable attaching rivets or screws 52, the lower plate 38 being spaced above the upper edge of the beams to maintain the air escape space 34.

The purlin 30 and the plate 38, support roof channels 42 which channels have their edge flanges 42A upwardly faced to form drainage troughs, and the webs of these channels designated by the channel member 42, are secured to the plates by screws 43. These channels are spaced such distance apart that substantially identical channels 44 which have their flanges 44A downwardly turned, may be nested over them and complete a rain proof roof. The purlin 30 and the plate 38 also support edge strips 54, each having an inner upturned flange 54A, conforming to the channel flanges, which flange is engaged by the outer flange 44A of one of the downwardly turned channels 44, and an outer or edge flange 54B which is downwardly turned to shield the air escape space 34, the opposite edge strips, one only of which is shown, being formed of the width necessary to complete the desired width of the roof.

To form the valance 14 the upwardly turned flanges 42A of the channels 42 are downwardly slitted to the web of the channel, the downwardly turned flanges 44A of the channels 44 are cut out in V shape to the web and the valance portions of each are bent straight down about their web portions with the valance flange portions 42B extending outward from their valance web portions 42C and the valance web portions 44 against the outer edges of, and the flange portions 44B embracing, the flange portions 42B. The upwardly extending flanges 54A of the edge strips 54 are similarly slitted and the downwardly extending flanges 54B cut out in V shape and these edge strips also bent downwardly about the web portions thereof, with their flange portions 54C and 54D extending respectively outward and inward.

In assembling, the edge strips 54 and the upwardly faced channels 42 are supported on the purlin 30 in properly spaced relation and are slid longitudinally rearward to engage their rear and upper ends between the plates 38 and 40 and until the web portions 42C of their valances aline with the outer ends of the beams 16 and 18, and are secured to the plate 38 as by screws 56 which are covered and shielded by the upper plate 40. The downwardly faced channels 44 are then nested over the upturned flanges 42A of the upwardly faced channels 42 and their rear ends engaged under the upper plate 40 of the wall purlin 36 and are shifted rearwardly until the flange portions 44B of their valances nest over and seat against the webs 42C of the valance channels. The upper ends of the channels 44 preferably are then secured to the upper plate 40 of the wall purlin 36 by screws 58.

Secured to the underside of the webs of the channels 44, preferably by rivets 60, are attaching clips 62 which are positioned longitudinally along the channels, for engagement with the upper flange 30B of the purlin 30, as and when the channels 44 are shifted into place, and are held in such engagement when the channels are anchored by the screws 58. These clips anchor the upper channels 44, and through the interengagement of these upper channels with the underlying channels 42 hold these latter also solidly against the purlin. Each clip is of length to nest between the flanges 42A of the confined lower channels 42 and includes a flat attaching portion 62A and an ogee portion 62B which engages and clamps against the flange 30B. Preferably after seating, the ogee portions of the clips are secured to the flange 30B by screws 64.

Similar clips 66 are secured to the inner surfaces of the webs 44C of the outer valances with the ogee portions 66A of the clips facing downward. A normally loose purlin, preferably of angle cross section and of length to extend from end wall plates to end wall plates of the awning and at its ends to underlie the beams 16, is disposed with one leg 68 of the purlin against the webs 42C of the valances and the purlin moved upward into engagement with the ogee portions of the clips 66, the outer and inner valances being thereby alined and clamped together. The ogee

portions of the clips are then preferably secured to the vertical leg 68 of the angle by screws 70. The vertical leg 68 of the purlin is preferably cut away at both ends to allow the horizontal leg 68A to come against the underside of the horizontal legs 16A of the beams 16 and are secured to these legs as by bolts 72.

1. A metal awning comprising end walls, having top edges sloping downwardly from rear to front, transverse purlins connecting the tops of said end walls and supported by said walls, and a sloping roof supported by said purlins; said purlins including a wall contacting purlin and second purlin spaced therefrom, said wall contacting purlin being at the rear of said end walls and comprising a vertically disposed web portion adapted for attachment to a wall surface, and upper and lower flanges extending forwardly and downwardly in conforming slope to the top edges of said end walls and the second of said purlins being adjacent the front of said ends and including a forwardly facing upper flange, said roof including substantially identical channels disposed parallel with said end walls, and alternately faced with their flanges upward, forming trough channels, and downward, forming cover channels, said trough channels being disposed in transversely spaced relation with the rear ends of said trough channels being supported by the lower flange of said wall contacting purlin and secured thereto as by screws, and said upper flange overlying said ends and said screws but being free therefrom, and the forward portions of said trough channels being supported on but not attached to said second purlin, and said inverted cover channels each respectively having rigidly secured to the underside of its web portion an attaching clip including a flat web contacting portion, of a width equal to the space between adjacent trough channels, and a depending rearwardly faced ogee portion positioned and adapted for engagement with said forwardly facing flange of said second purlin, said cover channels being nested over and supported by the flanges of said trough channels with said clip web contacting portions respectively abutting adjacent trough channels and said ogee portions extending through the space between adjacent trough channels and engaging said second purlin flange, the rear ends of said cover channels underlying the upper flange of said wall purlin and secured to said wall purlin upper flange as by screws.

2. In an awning structure comprising a supporting frame including a transverse purlin, a roof supported on said frame, consisting of a plurality of substantially identical channels each including a web and vertical side flanges, said channels being alternately upturned and downturned to form trough channels and cover channels and arranged with the flanges of said covers seated on the webs of said troughs, and the flanges of said troughs abutting the webs of said covers, said troughs being spaced apart with said cover webs overlying the spaces between said troughs, said trough webs resting on and being unattached to said purlin, and clip means carried by said channels including a flat upper portion and a depending body portion, said flat upper portions each being of a width less than the width of a said cover web to lie between proximate upturned trough flanges and engage said proximate trough flanges adjacent their upper ends, said upper portions being secured to said

cover webs, said depending body portions extending between proximate spaced troughs to engage said purlin and clamp said troughs against said purlin, the body portion of said clip means being of a width coextensive with the width of said upper portion and extending transversely between the flanges of adjacent troughs to engage said trough flanges and cooperate with said upper portion engagement to limit transverse relative movement of said troughs.

3. In an awning structure comprising a supporting frame including a transverse purlin, a roof supported by said frame consisting of a plurality of overlying roof members and a plurality of underlying roof members, said underlying members resting on and unattached to said purlin, and being arranged in transversely spaced relation, each said overlying member being seated on two adjacent said underlying members over the space between said two underlying members, and having a clip depending from its underside through the said space into attaching engagement with said purlin to clamp said two underlying members to said purlin, each said clip having a flat upper portion contacting the underside of its related overlying member, said upper portions being of a width substantially equal to the said space between underlying members, each said upper portion extending transversely substantially into engagement with two adjacent said underlying members to limit relative transverse movement thereof.

4. In an awning structure comprising a supporting frame including a transverse purlin, a roof supported by said frame consisting of a plurality of overlying roof members and a plurality of underlying roof members, said underlying members resting on said purlin, and being arranged in transversely spaced relation, each said overlying member being provided with vertical side flanges respectively seated on two adjacent said underlying members, with said overlying member spanning the space between said two underlying members and having a clip depending from its underside through the said space into attaching engagement with said purlin to clamp said two underlying members to said purlin, each said clip having a flat upper portion contacting and rigidly fixed to the underside of its related overlying member, said upper portions being of a width equal to said space and each said upper portion extending transversely into engagement with said underlying members upon which its overlying member is seated to limit relative transverse movement of said underlying members.

5. A metal awning comprising sloping end walls, transverse purlins connecting the tops of said end walls, a first of said purlins being at the rear and a second thereof being adjacent the front of said ends, and a sloping roof supported by said purlins; said roof including substantially identical channels disposed parallel with said end walls, and alternately faced with their flanges upward forming trough channels and downward forming cover channels, said trough channels being transversely spaced and being supported by said purlins and attached to said first purlin only, and said cover channels being nested over and supported by said trough channels with the flanges of said covers seated on the webs of said troughs and the flanges of said troughs abutting the webs of said covers; said second purlin including a forwardly facing supporting-flange por-

tion, spaced below the webs of said cover channels, each said cover channel respectively having rigidly secured to the underside of its web portion an attaching clip extending downwardly between adjacent troughs, said clip including a flat web contacting portion of a width equal to the space between said adjacent troughs, abutting said adjacent troughs, and a depending rearwardly faced ogee portion engaging with said purlin flange to secure said cover channel to said purlin and clamp adjacent said trough channels against said purlin.

6. A metal awning including end walls having straight upper edges sloping downwardly from back to front, a transverse purlin connecting said end walls, and disposed with its upper surface projecting above said walls; and a roof consisting of a plurality of alternate upturned and downturned channel members, said roof being of width to extend laterally beyond said end walls, said downturned channels overlying said upturned channels in staggered relation, said roof being seated on said purlin with said upturned channels against said upper surfaces and said downturned channels thereabove to support said roof independent of said end walls with said

channels spaced above the level of said ends for uninterrupted escape of air between said roof and ends from front to back thereof, whereby to promote free escape of air from beneath said roof.

JAMES A. JONES.

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