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R. L. FRIEND ET AL

2,551,558

AWNING

Filed May 10, 1947

2 Sheets-Sheet 1

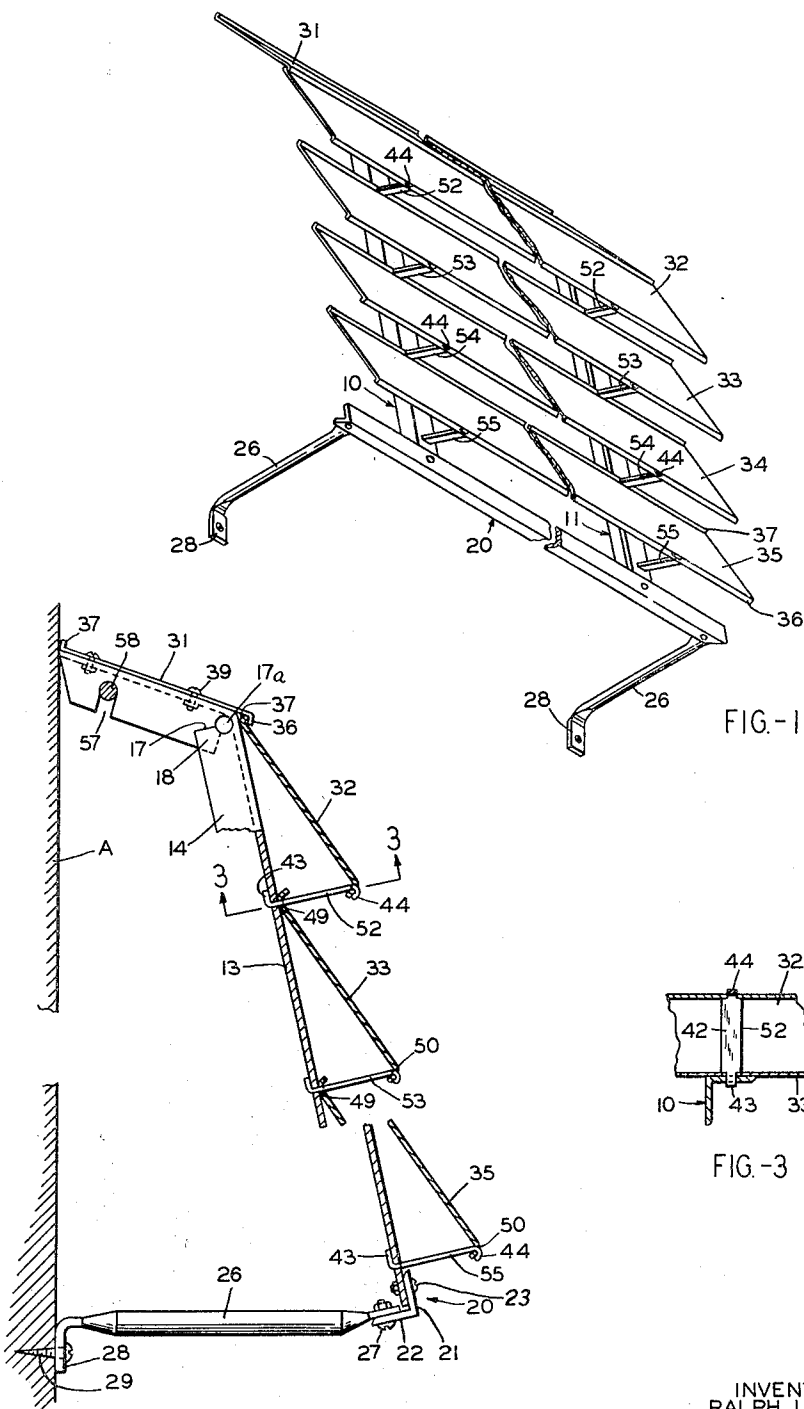


FIG-1

FIG-3

FIG-2

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2 Sheets-Sheet 2

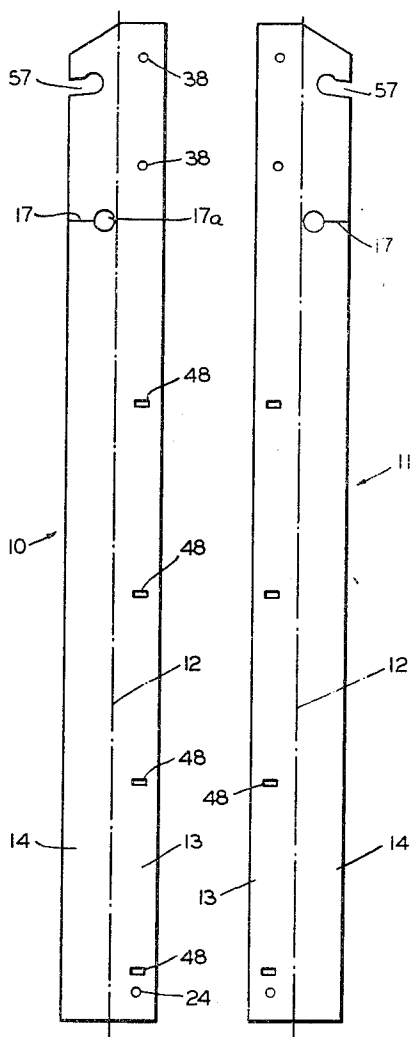


FIG-4

FIG-5

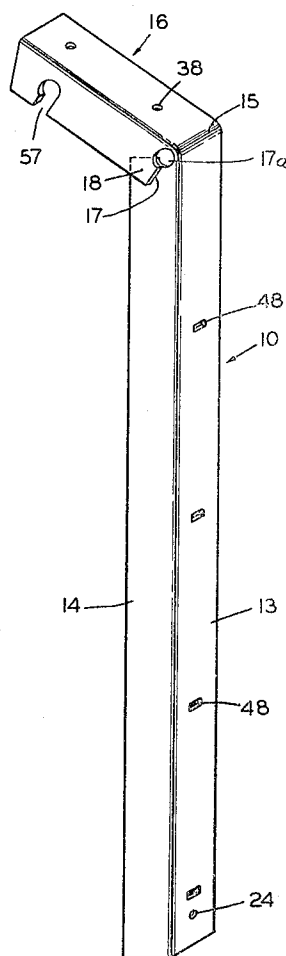


FIG-6

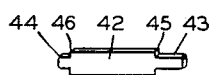


FIG-7

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AWNING

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3 Claims. (Cl. 20—57.5)

1

This invention relates to awnings and more particularly, to awnings of the permanent type in which the horizontal blades or slats are fixed or rigidly maintained in their respective spaced positions.

The present invention has for its primary object the provision of an awning which is characterized by its structural simplicity, its economy of manufacture, the ease of assembly of its parts, and its long service life.

A more specific object of the present invention is the provision of an awning which may be sold in unassembled form, within a conveniently handled package, and readily and quickly assembled and mounted in place by the purchaser thereof.

A further object of the present invention is the provision of an awning in which at least the majority of its blades or slats are permanently retained in horizontal position and at different levels by simple and inexpensive tongue and groove means.

A further object of the present invention is the provision of an awning in which at least the majority of its blades or slats are supported and rigidly retained in their respective positions by a series of sheet metal links, with each pair of such links supporting and rigidly retaining the lower edge portion of one blade or slat and the upper edge portion of the next lower blade or slat.

A further object of the present invention is the provision of an awning having a plurality of laterally spaced depending frame members and a plurality of blades or slats extending across said frame members and disposed at different levels, said frame members and at least the majority of said blades or slats being provided with apertures to receive the end portions of sheet metal links by which such apertured blades or slats are supported and rigidly retained in position, said link end portions being of bendable nature for quick and easy securement of said links to said frame members and to such blades or slats.

Further objects of the present invention, and certain of its practical advantages, will be referred to in or will be evident from the following description of one embodiment of the invention, as illustrated in the accompanying drawing, in which

Fig. 1 is a perspective view of an assembled awning constructed in accordance with the present invention;

Fig. 2 is a side elevational view of such awn-

2

ing, as mounted in place for use thereof, a portion of the side flange of one of the frame members of the awning being broken away;

Fig. 3 is a detail sectional view, on the line 3—3, Fig. 2;

Fig. 4 is a front elevational view of the left side frame member of the awning, in its initial flat form or condition;

Fig. 5 is a similar view of the right side frame member;

Fig. 6 is a perspective view of the left side frame member in its bent form as used in the awning; and

Fig. 7 is a perspective view of one of the sheet metal links which support and retain the majority of the blades or slats of the awning in their fixed positions.

Before specifically describing the awning here illustrated, it is to be understood that the invention here involved is not limited to awnings of the particular construction or the particular arrangement of parts here shown, as awnings embodying the present invention may take various forms. It also is to be understood that the terminology or phraseology herein used is for purposes of description and not of limitation, the scope of the present invention being denoted by the appended claims.

The awning here shown, for the disclosure of one form of the present invention, comprises two or more laterally spaced frame members connectible at their upper ends to the top of a window frame, such as the frame A, Fig. 2, and extending downwardly and outwardly therefrom, as best shown in Fig. 2. Although there may be three (or even more) such frame members in a particularly wide awning, in the awning here illustrated there are two such frame members, namely, a left side frame member 10 and a right side frame member 11. These frame members may be, and here are, simple elongated strips stamped from sheet metal in flat form, as shown in Figs. 4 and 5, and subsequently bent along their longitudinal axes 12 into right-angular form, as shown in Fig. 6, to thereby provide each frame member with a front flange 13 and a side flange 14. Each frame member is also bent about a transverse line 15, to provide each frame member with a top end portion 16 extending inwardly at any desired angle, such as an angle of 120 degrees, from the main section of the frame member. To eliminate buckling and the like of the side flanges 14 at this bend, the side flange of each frame member is provided, in lateral alignment with the bend line 15 and while the frame

member is in its initial flat form, with a transverse slit 17 which may, if desired and as here shown, terminates in an aperture 17a to prevent undesired extension of such slit. Upon bending of each frame member about its bend lines 15, the side flange portions on opposite sides of the slit 17 are brought into overlapping relationship, as shown in Fig. 6, and such overlapping side flange portions are welded at 18 or otherwise rigidly united, as shown in Fig. 6.

As will be evident from a comparison of Figs. 4 and 5, the two frame members 10 and 11 are of identical form, the only difference therebetween is that one of the members is turned over before its side flange 14 is bent down, to thereby provide a right side frame member and a left side frame member, each with its side flange disposed on the outer side thereof in use in the awning.

Extending across the lower ends of the two depending frame members 10 and 11 and suitably secured thereto is a base strip 20, the length of which is preferably equal to that of the width of the awning. As here shown, said base strip is a simple sheet metal member of right angular form, with a front flange 21 overlying and secured to the front flanges 13 of the frame members 10 and 11, and with a bottom flange 22 extending inwardly toward the window frame and located just below the lower end edges of said frame members. In order to enable the present awning to be sold in unassembled form and easily and quickly assembled by the purchaser thereof, bolts and nuts 23 are here used for the securing of the base strip 20 to the frame members 10 and 11, the front flange 21 of such base strip and the front flanges 13 of such frame members being provided with aligned apertures 24 for the reception of the bolts. Although the spacing of the frame members 10 and 11 may be varied as desired, in the awning here shown the spacing of the frame members is such that the end portions of the base strip 20 project laterally therebeyond. However, in an awning in which three frame members are used, the two side frame members preferably would be located at or substantially at the ends of said base strip.

To maintain the base strip 20 and hence the lower ends of the depending frame members 10 and 11 in proper outwardly spaced relation with respect to the window frame A, the awning includes two strut bars 25 which may be of any suitable form and material. As best shown in Fig. 2, these strut bars extend between the ends of the base strip 20 and the window frame A, the outer ends of the strut bars (here shown as of flattened form) overlying and being suitably secured to the bottom flange 22 of the base strip and the inner ends of the strut bars being connectible to the window frame. For convenience of assembly, the strut bars are here secured to the base strip 20 by bolts and nuts 27, for which suitable apertures are provided, and the inner ends 28 of the strut bars are bent down and suitably apertured for the reception of attaching screws 29.

Extending horizontally across the depending frame members 10 and 11, and located at different levels therealong, are a series of blades or slats, there being five such blades or slats, designated by the reference numerals 31 to 35 inclusive, in the awning here illustrated. Although such blades or slats may be of any suitable material, they are here simple sheet metal stampings, with downturned bottom edge flanges 36

and upturned top edge flanges 37, as shown in Figs. 1 and 2. For manufacturing economy, the blades or slats are of identical character or construction except as to the apertures with which they are provided and which are hereinafter referred to. The two uppermost blades or slats 31 and 32 each has a somewhat different arrangement of apertures, but as the other blades or slats 33, 34 and 35 have the same arrangement of apertures, these three blades or slats are completely identical and therefore interchangeable. Preferably, the width of each blade or slat is such that the uppermost blade or slat 31 not only completely covers the inwardly bent top portions 16 of the two depending frame members 10 and 11, but projects downwardly and outwardly therebeyond sufficiently to enable the upturned top edge flange 37 of the next lower blade or slat 32 to be located behind the downturned bottom edge flange 36 of such uppermost blade or slat 31. As to length, the blades or slats preferably are of the same length as that of the base strip 20, the length of the blades or slats and the base strip 20 determining, of course, the width of the awning.

For the rigid securing of the uppermost blade or slat 31 to the top portion 16 of the two frame members 10 and 11, the front flanges 13 of such top portions 16 and the overlying or registering portions of the blade or slat 31 are provided with registering apertures 38 through which securing means may extend. To enable a purchaser of an unassembled awning to readily secure the uppermost blade or slat 31 in place, bolts and nuts 39 are here utilized for the securing of such blade or slat, as shown.

For the support and rigid retention of the lower edge portion of the next lower blade or slat 32 (the upper edge portion of which blade or slat is supported and retained by locating its upturned top edge flange 37 behind the downturned bottom edge flange 36 of the topmost blade or slat 31) and for the support and rigid retention of the top and bottom portions of the remaining blades or slats 33, 34 and 35, there is here utilized a series of identical links having bendable end portions extending through apertures in said blades or slats and in said depending frame members 10 and 11 for effecting such support and rigid retention of said blades or slats.

In the form here shown, said links are simple and inexpensive sheet metal members, each having a rigid body portion 42 and reduced end portions 43 and 44, the reduction of such end portions not only enabling them to be bent, as will hereafter appear, but also providing the link at the ends of its body portion with stop shoulders 45 and 46, as best shown in Figs. 3 and 7.

To receive the bendable inner end portions 43 of these supporting and retaining links, the front flanges 13 of the depending frame members 10 and 11 are provided with longitudinally spaced transversely elongated apertures or slots 48, and the upper edge (there being two such apertures or slots, in lateral alignment, for each pair of links) portions of the blades or slats 33, 34 and 35 are provided, adjacent their upturned top edge flanges 37, with corresponding apertures or slots 49. To receive the bendable outer end portions 44 of these supporting and retaining links (end portions which may be, and here are, somewhat shorter than the end portions 43), the lower edge portions of the blades or slats 32, 33, 34 and 35 are provided, adjacent their downturned bot-

tom edge flanges 36, with corresponding apertures or slots 50.

As shown in Figs. 1 and 2, two of these links, designated by the reference numeral 52, are utilized for the support and rigid retention of the lower edge portion of blade or slat 32 and the upper edge portion of the next lower blade or slat 33. For the support and rigid retention of the lower edge portion of the blade or slat 32, the outer end portions 44 of such links 52 are extended outwardly through the apertures or slots 50 of such blade or slat, and with such blade or slat resting on the outer shoulders 46 of such links, the projecting free ends of the link outer end portions 44 are bent downwardly alongside the downturned bottom edge flange 36 of such blade or slat, with the consequent clamping of the lower edge portion of said blade or slat between the shoulders 46 and the downwardly bent link ends. For the support and rigid retention of the upper edge portion of the next lower blade or slat 33, the inner end portions 43 of the links 52 are extended inwardly through two laterally aligned apertures or slots 48 in the front flange 13 of the depending frame members 10 and 11 and through the apertures or slots 49 in the upper edge portions of such blade or slat 33. With the inner shoulders 45 of such links bearing or pressing against such blade or slat 33, the projecting free ends of the link inner end portions 43 are bent upwardly alongside the rear surfaces of the front flanges of the frame members 10 and 11, with the consequent clamping confinement of such front flanges and the upper edge portion of the blade or slat 33 between the shoulders 46 and the upwardly bent link ends.

In a similar manner, a pair of links designated by the reference numeral 53 support and rigidly retain the lower edge portion of the blade or slat 33 and the upper edge portion of the next lower blade or slat 34; and a pair of links designated by the reference numeral 54 support and rigidly retain the lower edge portion of the blade or slat 34 and the upper edge portion of the lowest blade or slat 35. For the support and rigid retention of the lower edge portion of such lowest blade or slat 35, a pair of links designated by the reference numeral 55 is utilized, the outer end portions 44 of such links being secured in the apertures or slots 50 of such blade or slat in the manner heretofore described. Inasmuch as these links 55 do not support or retain the upper edge portion of a blade or slat, the inner end portions 43 of such links merely extend inwardly through a pair of aligned apertures or slots 48 in the frame members 10 and 11, and with the inner shoulders 45 of such links in engagement with the front surfaces of said frame members, the projecting free ends of such link end portions are bent upwardly against the rear surfaces of said frame members to thereby rigidly clamp the inner end portions of said links to said frame members and to support and rigidly retain the lower edge portion of the lowest blade or slat 35 in spaced relation to said frame members.

For the top mounting of the present awning, the side flanges 14 of the top portions 16 of the two frame members 10 and 11 are here provided with notches 57, Figs. 2 and 6, for the reception of rod-like supporting means 58 suitably secured to the top portion of the window frame A. Therefore, by hooking the top portions 16 of the frame members 10 and 11 over

said rod-like supporting means 58 and securing the inner ends 26 of the strut bars 26 to the window frame, the awning can be easily, quickly and conveniently mounted in place, as shown in Fig. 2, and removed when desired.

From the foregoing description of the awning here illustrated, it will be evident that such awning is of simple and inexpensive form, capable of being manufactured and sold at low cost, and capable of being sold in unassembled form for ready and convenient assembly and mounting by the purchaser thereof. Other features and advantages of the awnings embodying the present invention will be evident to those skilled in the art to which the present invention relates.

Having described our invention, we claim:

1. An awning, comprising a plurality of elongated frame members arranged in laterally spaced relation and connectible at their upper ends to a window frame for downward and outward disposition, a base strip extending across and secured to the lower ends of said frame members, a pair of strut members having their outer ends secured to said base strip and having their inner ends connectible to said window frame, a plurality of blades or slats extending across said frame members at different levels in spaced overlapping relation, and elongated means for securing said blades or slats in fixed positions relative to one another and to said frame members, said securing means including sheet metal elements having bendable inner end portions secured to said frame members for the support and retention of the upper edge portions of said blades or slats and having bendable outer end portions secured to the lower edge portions of said blades or slats for the support and retention thereof.

2. In an awning, a plurality of elongated frame members arranged in laterally spaced relation and connectible at their upper ends to a window frame for downward disposition, a plurality of blades or slats extending across said frame members at different levels, the upper edge portions of said blades or slats being in engagement with said frame members and the lower edge portions of said blades or slats being outwardly spaced from said frame members and in overlapping relation with respect to the upper edge portions of the next lower blades or slats, and supporting and retaining elements for fixedly supporting and retaining said blades or slats in such positions relative to said frame members, the inner end portions of said elements being provided with spaced inner and outer abutments between which are clamped the frame members and the upper edge portions of the blades or slats, said inner abutments being bendable parts of the inner end portions of said elements, and the outer end portions of said elements being provided with spaced inner and outer abutments between which are clamped the lower edge portions of the blades or slats, the outer abutments of the last mentioned abutments being bendable parts of the outer end portions of said elements.

3. In an awning, a plurality of elongated frame members arranged in laterally spaced relation and connectible at their upper ends to a window frame for downward disposition, a plurality of blades or slats extending across said frame members at different levels, the upper edge portions of said blades or slats being in engagement with said frame members and the lower edge portions of said blades or slats being outwardly spaced from said frame members and in over-

7

lapping relation with respect to the upper edge portions of the next lower blades or slats, and supporting and retaining elements for fixedly supporting and retaining said blades or slats in said positions relative to said frame members, the upper edge portions of said blades or slats and said frame members having registering apertures and the inner end portions of said elements being of reduced form and being bent beneath said frame members, the reduction of such inner end portions of said elements providing shoulders between which and the bent portions of such elements are clamped the upper edge portions of said blades or slats and said frame members, and the lower edge portions of said blades or slats being provided with apertures, with the outer end portions of said elements being of reduced form and extending through such apertures and being bent over the outer surfaces of the lower edge portions of said

8

blades or slats, the reduction of the outer end portions of the elements providing shoulders upon which rest the lower edge portions of said blades or slats, with the lower edge portions of the blades or slats being thus clamped between said shoulders and said bent over portions.

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