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D. L. CARLSON

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VENTILATED AWNING

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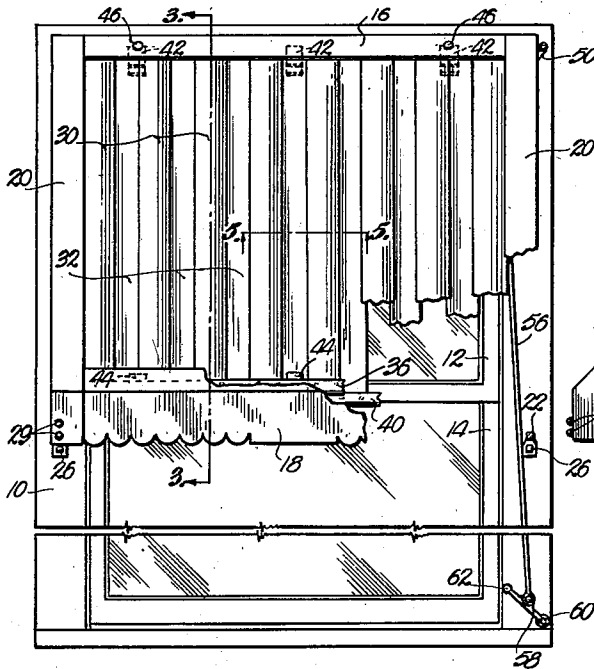


Fig. 1.



Fig. 5.

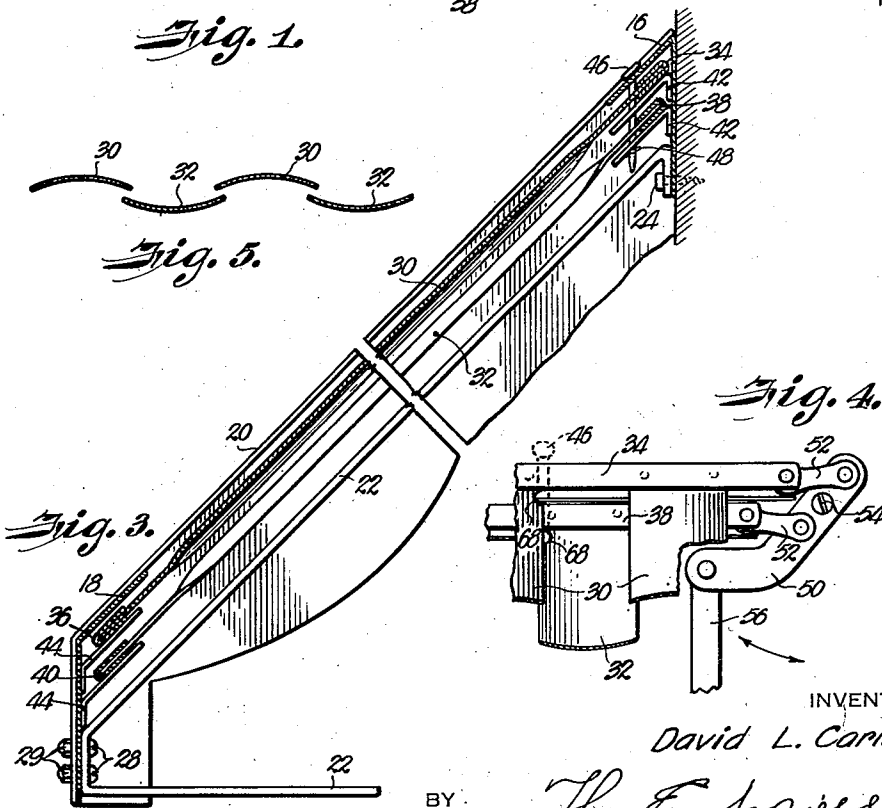


Fig. 3.

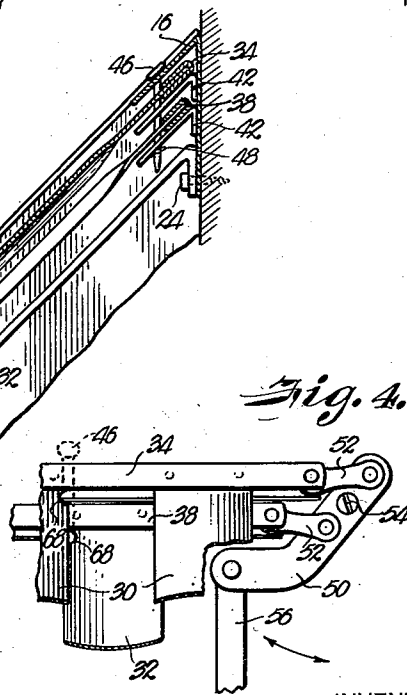


Fig. 4.

INVENTOR.
David L. Carlson
BY *Thos. E. Angell*
ATTORNEY.

UNITED STATES PATENT OFFICE

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VENTILATED AWNING

David L. Carlson, Kansas City, Mo.

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11 Claims. (Cl. 20—57.5)

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The present invention relates in general to awnings and it deals more particularly with ventilated awnings of the type having rigid slats of metal or like material.

The object of the invention, broadly speaking, is to provide a substantially permanent ornamental awning which can be fabricated easily and at low cost and which while offering protection against rain, snow and the direct rays of the sun admits a maximum of air.

Another object is to provide an awning having slats which are adjustable to admit more air and light, or less, as desired. In this connection it is a further object of the invention to provide mechanism by means of which the desired adjustment can be made easily either from the inside or outside of the building.

According to the invention, longitudinally inclined, laterally spaced slats are arranged in two superposed planes, the slats in one plane being movable laterally relative to the slats in the other plane in order to cover or uncover any desired amount of the space between the latter slats.

A feature of the invention resides in making the slats arcuate in transverse cross section for maximum longitudinal rigidity, and positioning the lower slats with their concave side uppermost so they form troughs for carrying away falling rain and the like; the upper slats on the other hand are arranged with their convex side uppermost to facilitate drainage into the troughs formed by the lower slats.

Other objects and features will appear in the course of the following description of the invention.

In the accompanying drawings which form a part of the specification and are to be read in conjunction therewith, and in which like reference numerals are employed to identify like parts of the various views:

Fig. 1 is a front elevational view of my ventilated awning, parts being broken away for purposes of illustration,

Fig. 2 is a side sectional elevation of my awning,

Fig. 3 is an enlarged vertical cross section taken along the line 3—3 of Fig. 1 in the direction of the arrows,

Fig. 4 is an enlarged detail of the awning mechanism, and

Fig. 5 is an enlarged cross sectional view taken along the line 5—5 of Fig. 1 in the direction of the arrows.

Referring more particularly to the drawings, the reference numeral 10 identifies the exterior

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casing of a conventional double-hung window having an upper sash 12 and a lower sash 14, both suitably glazed. The top of my awning is secured to the casing over the window and its bottom preferably is on approximately the same level as the bottom of the upper sash, although it will be appreciated that by varying the proportions of the awning its bottom may be made higher or lower as desired.

Considering the construction of the awning in detail, it will be seen to have a stationary frame comprising an upper cross piece 16 disposed against the window casing, a lower cross piece 18 spaced outwardly from the window and a pair of side panels 20 connecting the two cross pieces; these parts are made of rather heavy sheet metal cut and bent as shown, the side panels preferably being welded to the cross pieces where they overlap at the corners of the frame.

The four sides of the frame are in fact four individual angle members. Each member has one part disposed in a vertical plane, and the vertical portion of cross piece 18 and side panels 20 together form a skirt for the awning which may be scalloped as shown, or cut in any other desired decorative pattern.

Supporting the awning are a pair of irregularly shaped metal braces 22 arranged on either side of the window and fastened at their ends to the casing by means of screws 24 and 26. Screws 24 also pass through the vertical portion of the awning frame's upper cross piece 16, the lower cross piece 18 being fastened to the braces by screws 28 and nuts 29.

Within the awning frame is an upper set of spaced parallel slats 30 and a lower set of spaced parallel slats 32. The slats of the upper set are maintained in rigid relationship with respect to one another by channel-shaped spacing rails 34 and 36 which clamp the slats at their upper and lower ends respectively. A similar set of clamping rails 38 and 40 is provided for the lower set of slats. It will be noted from Fig. 5 that the slats are arcuate in transverse cross section and that those of the upper set are arranged with their convex surface uppermost while those of the lower set are arranged with their concave surface uppermost.

The rails 34 and 38 at the upper ends of the slats rest on three pairs of superposed lugs 42 which are welded at horizontally spaced intervals to the cross piece 16 of the awning frame. Rails 36 and 40 are supported in similar fashion by lugs 44 welded to the lower cross piece 18. In order to prevent the slat assemblies from sliding

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down the inclined surfaces of the lugs under the influence of gravity pins 46 are arranged to pass through vertically aligned holes in cross piece 16 and lugs 42; these pins form stops against which the lower edge of rails 34 and 38 rest, cotter pins 48 being provided through pins 46 to prevent accidental displacement of the latter.

Rails 34 and 38 are connected to a lever or crank 50 by means of links 52 whereby rotation of the crank about its pivot 54 is effective to slide the rails endwise in opposite directions, moving slats 30 to the left and slats 32 simultaneously to the right or vice versa, depending upon the direction the crank is turned. Any suitable form of adjusting mechanism may be employed to turn the crank. For example, it may be connected by a tie rod 56 to a lever 58 situated near the bottom of the window casing, as shown, whereby manual movement of the lever about its pivot 60 by means of handle 62 rotates the crank. An auxiliary handle 64 preferably is provided on the inside of the building, this being rigidly connected to the lever by a shaft 66 extending through the wall so that the mechanism may be operated from inside the building to adjust the slats without opening the window.

It is believed that the operation and advantages of my awning will be self-evident from the foregoing description. When the sun is bright the slats may be made to occupy the position illustrated wherein the upper slats bridge the spaces between the adjacent lower slats and slightly overlap the longitudinal edges of the latter. (Referring to Fig. 4, it will be seen that to permit overlapping of the edges of the upper and lower slats those slats adjacent to the pins 46 are notched at 68.) In this condition the direct rays of the sun cannot pass the awning surface but the heated air tending to accumulate underneath the awning nevertheless can easily escape via the spaces between the upper and lower slats. In inclement weather the slats of the lower set serve as troughs carrying the rain to a point a considerable distance away from the window before it is allowed to fall; thus the window sheltered by the awning may be left open without danger of rain entering the building.

In the event it is desired to admit more air and light to the window than is possible when the awning is adjusted as shown, it is only necessary to move handle 62 or handle 64 down. This turns crank 50 counterclockwise about its pivot and moves the upper slats 30 to the left while simultaneously moving the lower slats 32 to the right. If continued far enough this movement will bring the upper and lower slats into vertical alignment whereby the full width of the space between adjacent slats is unobstructed. A lesser movement naturally will uncover only part of the space between the slats, it being obvious that the opening size can be adjusted to admit light and air in quantities desired.

From the foregoing it will be seen that this invention is one well adapted to attain all of the ends and objects hereinbefore set forth together with other advantages which are obvious and which are inherent to the apparatus.

It will be understood that certain features and subcombinations are of utility and may be employed without reference to other features and subcombinations. This is contemplated by and is within the scope of the claims.

Inasmuch as many possible embodiments of the invention may be made without departing

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from the scope thereof it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:

1. In an awning, a pair of frames each comprising a plurality of laterally spaced coplanar slats having their respective ends rigidly affixed to transverse side rails, means supporting the side rails of one frame horizontally at different levels so that the slats of that frame are inclined, said supporting means constructed and arranged to permit the side rails of said one frame to move in an endwise direction, means supporting the side rails of the other frame horizontally and in vertically spaced relationship to the corresponding side rails of said one frame whereby the slats of the respective frames are parallel, said last supporting means constructed and arranged to permit the side rails of said other frame to move in an endwise direction, and mechanism connected to corresponding side rails of the respective frames for moving one side rail endwise in one direction and simultaneously moving the other side rail endwise in the opposite direction thereby to adjust the position of the slats in the two frames relative to one another.

2. An awning as in claim 1 wherein said mechanism comprises a crank connected to the side rails and manual means for turning said crank.

3. In an awning, a pair of frames each comprising a plurality of laterally spaced coplanar slats having their respective ends rigidly affixed to transverse side rails, means supporting the side rails of one frame horizontally at different levels so that the slats of that frame are inclined, means supporting the side rails of the other frame horizontally and in vertically spaced relation to the corresponding side rails of said one frame whereby the slats of the respective frames are parallel, a lever, means connecting corresponding side rails of the respective frames to said lever at spaced apart points thereon, means pivotally supporting the lever for rotation about a center intermediate said spaced apart points, and means for rotating the lever thereby to move one side rail end-wise in one direction and simultaneously move the other side rail end-wise in the opposite direction.

4. In an awning, a pair of frames each comprising a plurality of laterally spaced coplanar slats having their respective ends rigidly affixed to transverse side rails, means supporting the side rails of one frame horizontally at different levels so that the slats of that frame are inclined, means supporting the side rails of the other frame horizontally and in vertically spaced relation to the corresponding side rails of said one frame whereby the slats of the respective frames are parallel, both of said supporting means comprising track and bearing elements supporting said rails for movement in an endwise direction, said elements engaging each side rail only at longitudinally spaced points therealong, and mechanism connected to corresponding side rails of the respective frames for moving one side rail end-wise in one direction and simultaneously moving the other side rail end-wise in the opposite direction thereby to adjust the position of the slats in the two frames relative to one another.

5. In an awning, a pair of frames each comprising a plurality of laterally spaced coplanar slats having their respective ends rigidly affixed

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to transverse side rails, means supporting the side rails of one frame horizontally at different levels so the slats of that frame are inclined, means supporting the side rails of the other frame horizontally at different levels in vertically spaced relationship to the corresponding side rails of said one frame whereby the slats of the respective frames are parallel, the support means for said last frame comprising track elements disposed under both side rails of the frame and engaging each of the latter rails only at longitudinally spaced points therealong, bearing members disposed beside the edge of one of the latter rails and engaging said edge only at longitudinally spaced points therealong, and mechanism connected to side rail of said last frame for moving that rail in an end-wise direction thereby to adjust the position of the slats in said last frame relative to the slats in the first frame.

6. In an awning, a pair of frames each comprising a plurality of laterally spaced co-planar slats having their respective ends rigidly affixed to transverse side rails, means supporting the side rails of one frame horizontally at different levels so the slats of that frame are inclined, means supporting the side rails of the other frame horizontally at different levels in vertically spaced relationship to the corresponding side rails of said one frame whereby the slats of the respective frames are parallel, the support means for both frames comprising stationary ledges disposed under both side rails of each frame, along which ledges said side rails are slidable in an endwise direction, bearing elements along one edge of the upper side rail of each frame to prevent said upper side rails from sliding laterally from their ledges toward the position occupied by the lower side rails, and mechanism connected to the upper side rails of the respective frames for sliding same simultaneously in opposite directions.

7. In an awning, a pair of frames each comprising a plurality of laterally spaced co-planar slats having their respective ends rigidly affixed to transverse side rails, means supporting the side rails of one frame horizontally at different levels so the slats of that frame are inclined, said supporting means constructed and arranged to permit the side rails of said one frame to move in an endwise direction, a thrust member connected to the upper side rail of said one frame to shift same in an endwise direction, means supporting the side rails of the other frame horizontally and in vertically spaced relationship to the corresponding side rails of said one frame whereby the slats of the respective frames are parallel, said last supporting means constructed and arranged to permit the side rails of said other frame to move in an endwise direction, and a thrust member connected to the upper side rail of said other frame to shift same in an endwise direction.

8. In an awning, a pair of frames each comprising a plurality of laterally spaced co-planar slats having their respective ends rigidly affixed to transverse side rails, means supporting the side rails of one frame horizontally at different levels so the slats of that frame are inclined, said supporting means constructed and arranged to permit the side rails of said one frame to move in an endwise direction, means supporting

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the side rails of the other frame horizontally and in vertically spaced relationship to the corresponding side rails of said one frame whereby the slats of the respective frames are parallel, said last supporting means constructed and arranged to permit the side rails of said other frame to move in an endwise direction, and linkage between the upper side rail of one frame and the upper side rail of the other frame effective responsive to movement of one upper side rail to shift the other side rail in the opposite direction.

9. In an awning, a pair of frames each comprising a plurality of laterally spaced co-planar slats, means supporting said frames in superposed inclined relation so the slats of the two frames are parallel and their longitudinal axes are inclined from the horizontal, said supporting means constructed and arranged to permit each frame to move edgewise in the plane of its slats along a path transverse to the axes of the slats, and a thrust member connected to each frame to shift said frame in the plane of its slats along said path.

10. In an awning, a pair of frames each comprising a plurality of laterally spaced co-planar slats, means supporting said frames in superposed inclined relation so the slats of the two frames are parallel and their longitudinal axes are inclined from the horizontal, said supporting means constructed and arranged to permit each frame to move edgewise in the plane of its slats along a path transverse to the axes of the slats, and linkage interconnecting the frames to correlate their edgewise movements along their respective paths, said linkage including means effective upon each movement of one of the frames to urge the other frame in the opposite direction.

11. In an awning, a pair of frames each comprising a plurality of laterally spaced co-planar slats, means supporting the frames and superposed inclined relation so the slats of the two frames are parallel and their longitudinal axes are inclined from the horizontal, said supporting means constructed and arranged to permit each frame to move edgewise in the plane of its slats along a path transverse to the axes of the slats, and means for applying oppositely directed forces simultaneously to the respective frames, thereby to cause same to shift simultaneously along their respective paths in opposite directions and thus adjust the position of the slats in one frame relative to the slats in the other.

DAVID L. CARLSON.

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