(No Model.)

W. CONOLLY.

SKYLIGHT AND VENTILATOR.

No. 266,015. Patented Oct. 17, 1882.

Fig. 1.

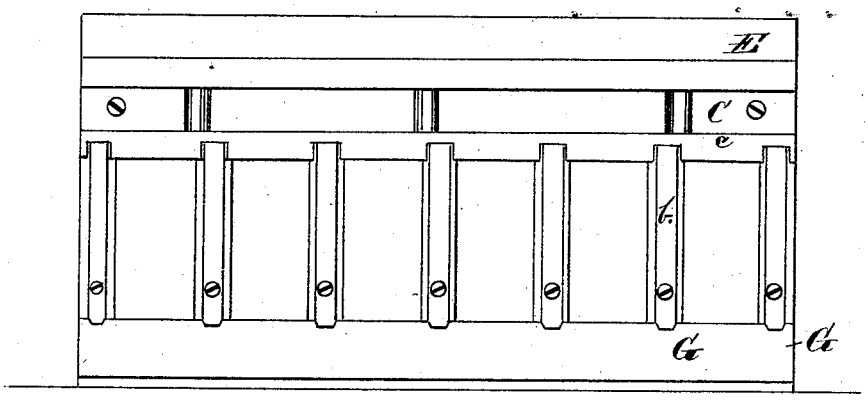


Fig. 3.

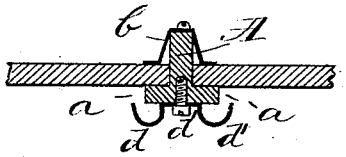


Fig. 2.

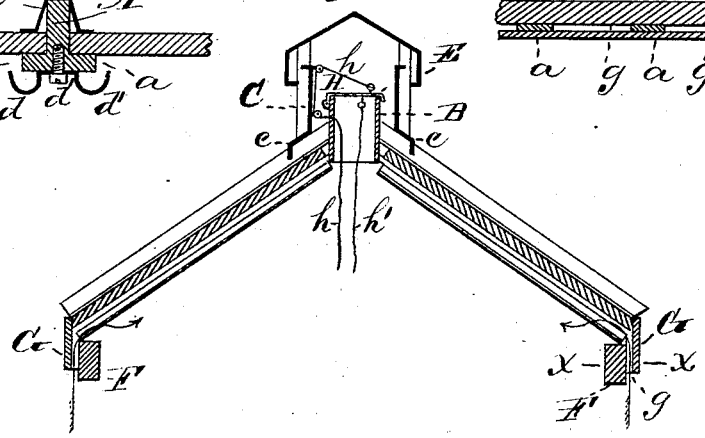
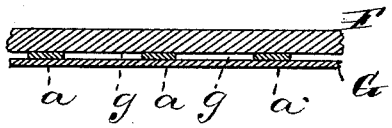


Fig. 4.



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SKLYLIGHT AND VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 266,015, dated October 17, 1882.

Application filed February 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CONOLLY, of New York city, New York, have invented a new and useful Improvement in Skylights and Ventilators, of which the following is such a full, clear, and exact description as will enable others skilled in the art to which this most nearly appertains to make and use the same when taken in connection with the accompanying drawings, in which—

Figure 1 is an elevation of the side of my skylight and ventilator. Fig. 2 is a vertical cross-section thereof. Fig. 3 is a vertical cross-section of the bar, showing detail. Fig. 4 is a view on horizontal section of the curb at line *x x* of Fig. 2.

This my invention consists in making the bars or rafters of the skylight, conservatory, or like structure of T form in cross-section, having attached thereto a sheet-metal gutter-piece below and a cap above the ledge for the glass of the structure; providing a metallic frame for the bars of the sloping roof to abut against at their upper ends, and covering the same with a surrounding box and raised and overhanging roof or cap; providing a cover on the frame, that may be raised and lowered to open and close the opening in the ridge-frame; providing openings at the base or lower edge of the sloping roof, that moisture may escape thereby from the gutters of the rafters and the under side of the glass, and various combinations and devices, all as hereinafter more fully set forth, specified, and claimed.

Heretofore, and before this my invention, sash-bars for glass structures have been made of solid wood or metal, having ledges for the glass to rest upon and gutters below them to receive the water of leakage or condensation, and bars have been made of like form by bending sheet metal in a manner to give that form. These bars are objectionable on account of their weight or weakness and the expense of construction.

The bars A, made according to this my invention, are of solid metal or wood, of a T form in cross-section, so arranged that the glass may rest upon the sides or wings *a a* of the T-bar, and a sheet-metal piece is bent to form a gutter, *d'*, on either side of the middle piece, *d*, by which it is fastened to the solid T-bar A, as shown in Fig. 3, so that one gutter *d'* will project on one side and the other gutter *d'* on the other side beyond the wings *a a* of the T-bar A and be capable of receiving any water that may run from the wings *a a* or from the under side of the glass, resting upon the wings *a a*, whether it be leakage or condensation.

The gutter-piece is made of the form shown and secured to the T-bar by screws passing through the central portion of the plate into the under side of the T-bar.

The covering-cap *b* is made of an inverted-U form; or, if preferred, of a narrower form at top, so as to more nearly conform to the ridge of the T-bar. The edges of the cap come in close contact with the glass when in position on the wings of the bar, and the top of the cap is fastened to the ridge of the bar by screws passing through it into the bar, as shown in Fig. 1.

Another part of my invention consists of the open ridge having about it an inclosing box and cap and a damper so arranged as to overhang the ridge-piece when closed. The ends of the rafters or bars of the two sides of the roof, instead of continuing to meet one another, abut against the ridge-piece B and hold it in place, and are by it held in place at their upper ends. This ridge-piece is preferably made of a depth equal to or greater than the depth of the bars or rafters A A.

A covering-box, C, is made (of sheet-iron preferably) so as to inclose the ridge-piece and set a short distance away from the ridge-piece B on either side. On this covering-box C is attached a roof or cap, E, so arranged that the cap will be a short distance above the upper edge of the box, and large enough to project beyond the box, so as to protect the open ridge from receiving rain or other storm. This box C is provided on its lower edge with a flange, *c*, turned out from the box, which flange *c* lies on the upper surface of the glass, or a short space from it. The ridge of each bar, at the lower end of each, is cut away, so that the flanges or wings *a a* only remain, and this remaining portion is bent so as to form an angle over the wood or other curb, F, and may be se-

curely fastened to the front face of the curb. To these portions so bent over the curb is attached a front piece or base-plate, G, on the outside or side away from the curb, so that spaces *g g* are left between the curb F and the base-plate G, between the wings of each bar, open below to the outer atmosphere and at top to the under surface of the glass and the interior of the structure. This front piece, G, is attached to the extension of the wings *a a* of the rafters, and secured to them firmly, so as to unite them together. It may be arranged to project above the upper surface of the wings or flanges *c c* at the corner or angle of the curb, so as to form a stop for the lower edge of the lower sheet of glass to rest against.

A damper to close the opening through the ridge-piece B may be provided, as at H, by securing it with hinges to one side of the ridge-piece B, or to a side of the box C, the damper being made in the form of a cover to fit over the ridge-piece and throw any water that may come upon it when in its closed position out on either side of the ridge-piece and within the covering-box C, so that it may pass off on the top of the glass under the bottom of the covering-box C and its foot *c* down the slope of the glass.

A cord, *h*, is arranged on the damper H, so that it may be raised, and another cord, *h'*, is provided to close it with, or one cord may be used and a counter-weight or spring arranged to act against the cord, so that by letting out or taking in the cord the damper may be moved; or any like mechanism may be used to move and regulate the position of the damper.

The bars A, ridge piece B, and box C, and roof, with or without the damper H, being in position, as shown in Fig. 2, the glass is put on the ledges or wings *a a* and extended to the ridge-piece B, which may have a flange on it, if desired, and abutted against said ridge-piece B, and cut of a length corresponding with the length of the rafter A from the ridge-piece B to the inner side of the base-plate G, which may be put in position either before or after inserting the glass. The lower edge of the glass rests against the base-plate and is retained in position.

If more than one sheet of glass is placed in one bar, the cross-joint may be either a lap, as in ordinary conservatories, or a butt-joint, when a cross-bar should be put between the rafters to support the abutting edges of the glass.

A cross-bar of the form shown in Fig. 3 may be used, in which event the gutters should be so placed that they will empty into the gutters of the main rafters. The gutter-piece *d* may be put across from one gutter of the rafter to the next gutter of the next rafter, if preferred, so as to catch all drip from the joint and convey it to the gutters of the rafters without using the T-bar and upper cap of the bar.

The gutters *d' d'* at the curb continue as far as the curb and no farther, so as to leave a space between the end of the gutters and the base-plate G for the escape of all water that may be received into the gutters *d' d'*. All moisture that condenses on the under surface of the glass will run down the same to the base and pass out through the openings left between each bar and the next and the curb and the base-plate.

The ease with which glasses may be removed and others replaced in repairing without other help than an ordinary laborer, nor other tool than a screw-driver, is a great advantage of these bars.

The open spaces *g g* at the curb and the open ridge-piece permit a circulation of air along the under surface of the glass, which prevents the heat of the sun from striking down into the building.

I am aware that skylights having open-ridge ventilators have been before used, in which the open ridge has been covered by a raised roof or cap, the edge of which surrounded the ridge and protected it from the beating in of storms, which ventilators have been provided with swinging or sliding dampers.

What I claim as new is—

1. The combination of the gutter-piece consisting of two gutter portions and the interposed attaching portion secured to the lower portion of the T-bar, as specified and set forth.

2. The combination of the gutter-piece consisting of two gutter portions and interposed attaching portion secured to the lower portion of the T-bar, and the covering cap attached to the ridge of the bar, as specified and set forth.

3. The combination of the ridge-piece having an opening through it, the inclosing box and cap, and damper arranged to overhang the ridge-piece, substantially as specified.

4. The combination, substantially as specified, of the rafters provided with an extension at one end of the flanges, bent at an angle to the body of the rafter, with the base-plate and curb.

5. The combination, substantially as specified, of the rafters provided with an extension at one end of the flanges, bent at an angle to the body of the rafter, with the base-plate and curb, and with the gutters of the rafter.

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