

(No Model.)

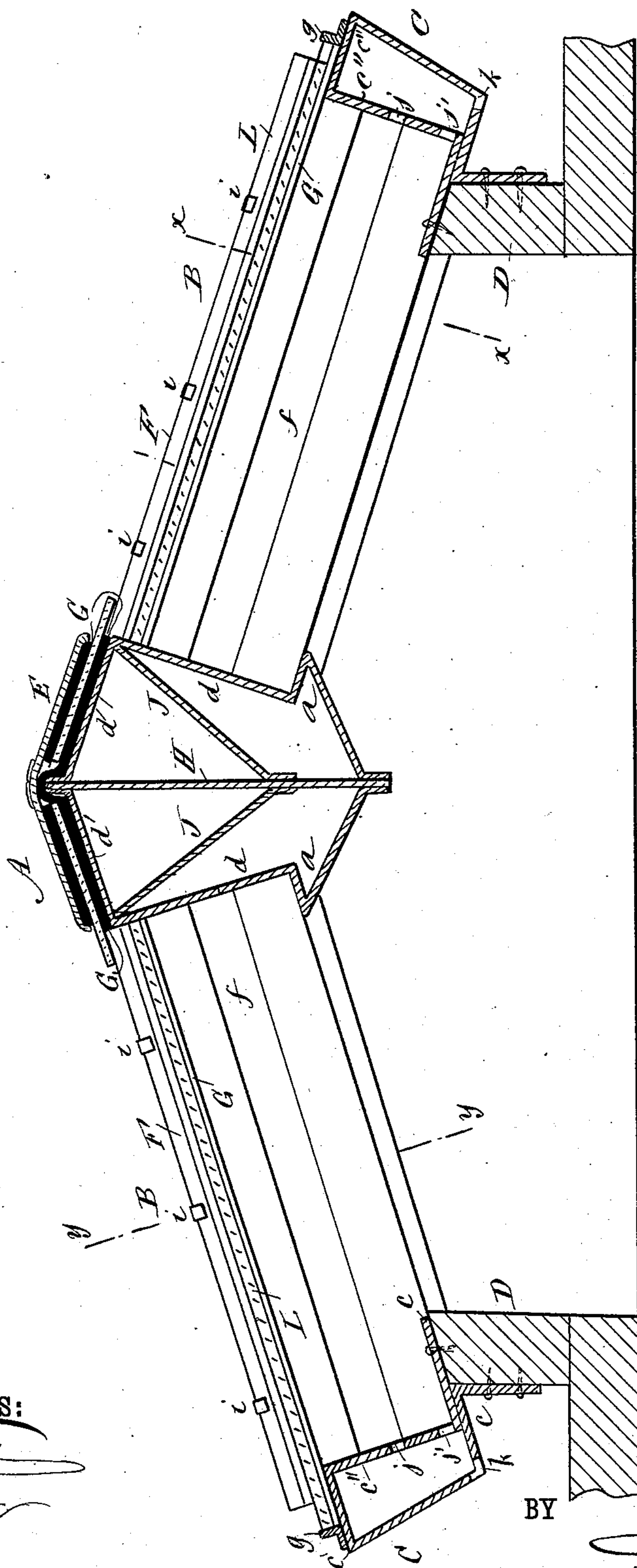
2 Sheets—Sheet 1.

F. H. LEADLEY.  
SKYLIGHT.

No. 255,436.

Patented Mar. 28, 1882.

Fig. 1



WITNESSES:

*C. Verneux*  
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INVENTOR:

*F. H. Leadley*  
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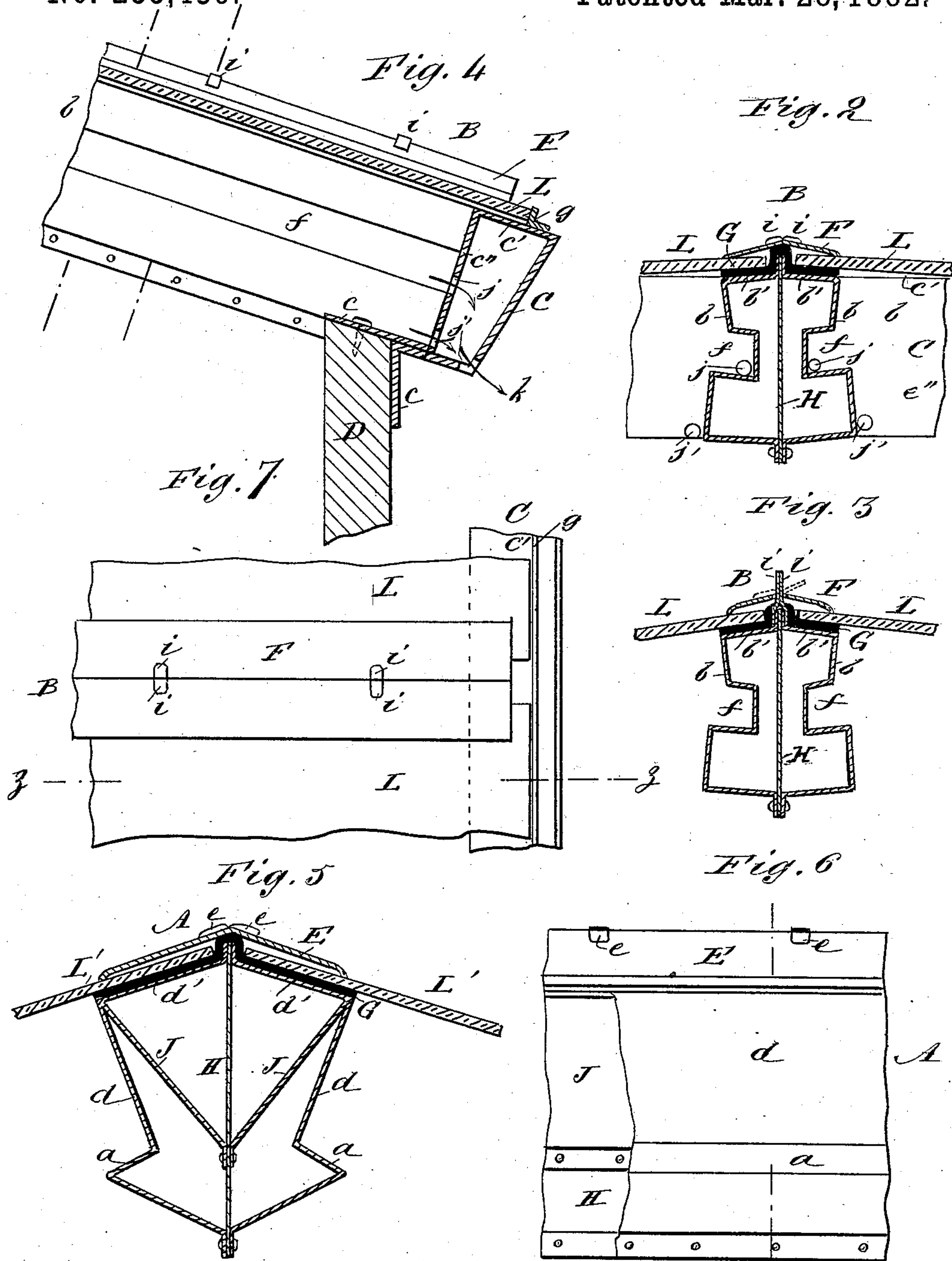
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2 Sheets—Sheet 2.

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WITNESSES:

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# UNITED STATES PATENT OFFICE.

FREDERICK H. LEADLEY, OF ST. LOUIS, MISSOURI.

## SKYLIGHT.

SPECIFICATION forming part of Letters Patent No. 255,436, dated March 28, 1882.

Application filed July 11, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK H. LEADLEY, of St. Louis, in the State of Missouri, have invented a new and useful Improvement in Skylights, of which the following is a full, clear, and exact specification.

The object of my invention is to provide metallic ridge-bars, curbs, and rafter-bars for skylights, constructed and adapted to each other in such manner that troublesome fitting is avoided, and strength, simplicity, and cheapness secured, and so formed that the condensation is amply provided for and carried off and the glass securely held without the use of putty, thus allowing free contraction and expansion of the frames without loosening or permitting the glass to rattle.

In the accompanying drawings, Figure 1 is a cross-section of my improved skylight. Fig. 2 is a cross-section of one of the rafter-bars, taken on the line *x x* of Fig. 1. Fig. 3 is a similar section of the same, taken on the line *y y* of Fig. 1. Fig. 4 is a longitudinal section taken on the line *z z* of Fig. 7. Fig. 5 is a cross-section of the ridge-bar. Fig. 6 is a side view of the ridge-bar with a portion broken away. Fig. 7 is a top view of one of the rafter-bars and curb.

Similar letters of reference indicate corresponding parts.

Though I have shown in the drawings the skylight made of double inclines meeting in the center in the form of a gable-roof, (and for large skylights this is the preferred plan,) it is obvious that it might be made of a continuous incline, in which case the ridge-bar A need not be used, the rafter-bars B B then being each made of a length to reach entirely across the opening in the roof, to rest upon the rails D D or other suitable frames or supports secured upon the roof, instead of resting at one end upon the offsets *a a* of the ridge-bar, as shown in Fig. 1.

The ridge-bar A is formed of the side plates, *d d*, bent to form the upper shelves, *d' d'*, and the lower ledges or offsets, *a a*, riveted or otherwise secured at top and bottom to the sides of the center vertical plate, H, the bar being braced upon the inside by the plates J J, riveted to the center plate, H, near the bottom, and reaching to the upper outer corners of the

side plates *d d*. Upon the top of the ridge-bar is the ridge-plate or hood E, which may be secured there by any suitable means, preferably by means of the straps *e e*, which are narrow upward projections left on the upper edges of the side plates *d d*, which straps are adapted to pass through corresponding slots in the center of the hood and clinch over the top of the hood, as shown.

The rafter-bar B is formed of the side plates *b b*, bent to form the upper ledges, *b' b'*, and the water-gutters *f f*, near the center of the plates, riveted or otherwise secured at top and bottom upon the sides of the central vertical plate, H. Upon the top of the rafter-bars is the hood F, secured preferably by the straps *i i* upon the upper edges of the plates *b b*, which straps pass through suitable slots formed in the hood, and are adapted to be clinched over the hood, as in the case of the ridge-bar just described.

The curb C is formed of a single piece of sheet metal, bent to inclose a chamber, as shown, and to form the angle-plates *c c* and the elevated platform *c'*. The height of the platform *c'* is about equal to the height of the ledges *b' b'* of the rafter-bars, and along the top of the platform is placed the stop *g*, against which the ends of the plates of glass L L rest when in place. The vertical front plate, *c''*, of the curb is provided at intervals along its length with the holes *j* and *j'*, and the lower corner of the curb is provided with the holes *k k*, for the purposes hereinafter mentioned. When the curb is in place to form the skylight the angle-plates *c c* are nailed along the outside and upper edge of the rail or support D, which is secured upon the roof around the skylight-opening and upon the rail or support D, at suitable distances apart, according to the width of glass to be used. Against the curb, and at right angles thereto, are to be placed the lower ends of the rafter-bars B in such position relative to the holes *j* and *j'* that the water-gutters *f f* will meet them at the corners, as shown in Fig. 2, the other ends of the bars resting either upon the ledges *a a* of the ridge-bar or upon the rail D or similar support on the opposite side of the skylight-opening. Upon the top of the rafter-bars is now placed the strip of felt, G, which, by preference,



has been previously dipped in lead and oil, and upon this felt is placed the edges of the glass, and upon the glass may be placed another strip of the felt, and then the hood is secured over the whole, as shown.

When the ridge-bar A is used the plates of glass L' L', which are secured upon it in the manner just described for placing the glass upon the rafters, reach over the upper ends of the rafters and the plates of glass L L. The lower ends of the rafter may be soldered to the front plate, *c''*, of the curb.

It will be seen that the rafters, curb, and ridge-bar require practically no fitting in putting them up, and also that the plates of glass will permit the expansion and contraction of the bars and curb without becoming loose, so as to rattle in the wind, as is the case when putty is used. The moisture which condenses upon the rafters will gather in the gutters *ff* and pass off through the holes *j j'* into the chamber of the curb, and from thence through the openings *k* upon the roof. The side plates of the rafter-bars, after being bent to form the shelves *b'*, and then bent downwardly, then inwardly, then downwardly again, then outwardly and slightly upward to form the water-gutters *ff*, are then bent downwardly and inwardly again to reach the center plate. By this manner of bending the plates the greatest strength possible with the amount of material is given the rafters, and sagging of the skylight is thus provided against.

The peculiar formation of the ridge-bar, due to bending the side plates *d d* thereof to form the sloping ledges *d' d'* and the sloping offsets *a a*, and then diagonally downward to the cen-

ter plate, also gives great strength to the bar. Besides, the bar is so braced from the inside that all danger of sagging of the center of the skylight is removed. The braces might be omitted, if desired, for small skylights, but for large skylights they should be used.

Instead of using the strips of felt for securing the glass by and upon the metallic parts of the skylight, I may use strips of asbestos or any similar material and accomplish the same result.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The ridge-bar A, formed with the ledges *d' d'* and the offsets *a a*, in combination with the rafter-bars B and the curb C, substantially as and for the purposes set forth.

2. The ridge-bar A for skylights, formed of the plates *d d*, secured upon the center plate, H, with or without the braces J J, the plates *d d* being bent to form the ledges *d' d'* and the offsets *a a*, substantially as and for the purposes set forth.

3. The ridge-bar A, formed of the side pieces *d d*, secured upon the center plate, H, the plates being bent to form the ledges *d' d'* and the offsets *a a*, in combination with the hood E and the braces J J, substantially as described.

4. The ridge-bar A and the rafter-bars B B and curb C, in combination with the plates of glass L and the plates L', placed over the glass L, substantially as and for the purposes set forth.

FREDERICK HALL LEADLEY.

Witnesses:

EUGENE MACBETH,  
GEO. P. WOLFF.