J. HENRY.

SKY-LIGHT BAR.

No. 188,904. Patented March 27, 1877.

Fig: 1.

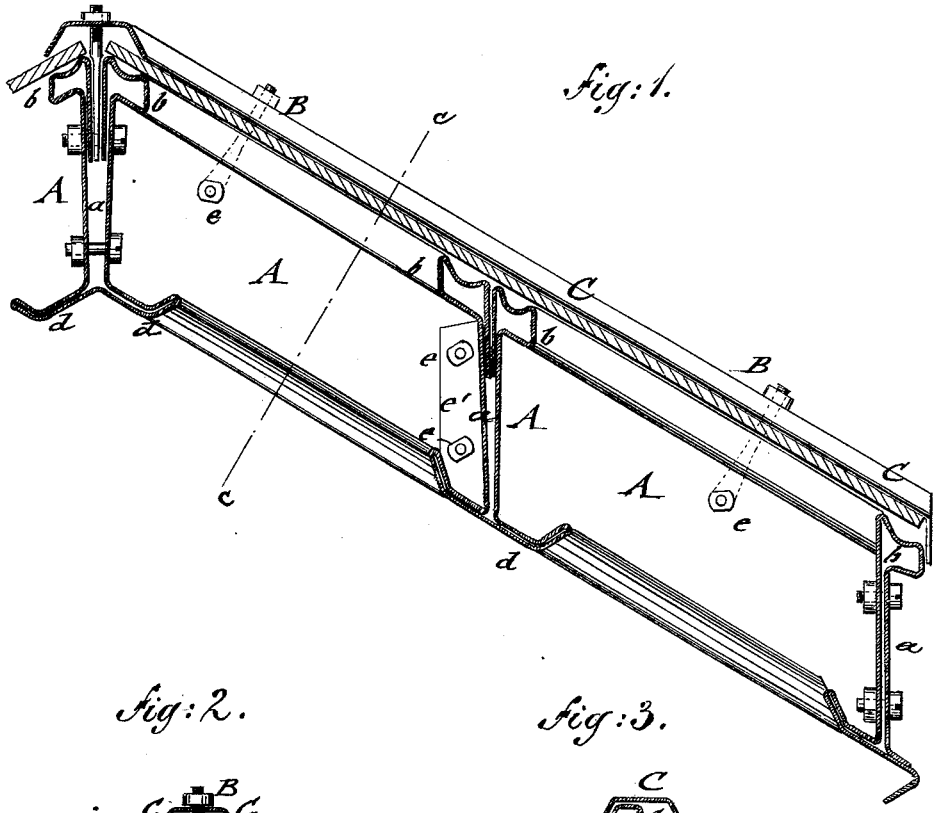


Fig: 2.

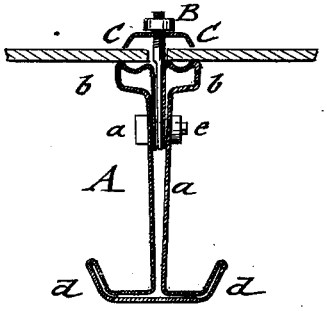
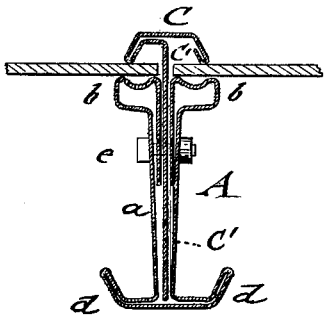


Fig: 3.



WITNESSES:

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JOSEPH HENRY, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND R. PHILIP GORMULLY, OF SAME PLACE.

IMPROVEMENT IN SKY-LIGHT BARS.

Specification forming part of Letters Patent No. **188,904**, dated March 27, 1877; application filed February 3, 1877.

To all whom it may concern:

Be it known that I, JOSEPH HENRY, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Sky-Light Bar, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a sectional side elevation of a sky-light made of my improved sky-light bars; and Figs. 2 and 3 are vertical transverse sections of the bar, respectively on line *c c*, Fig. 1, and through a modified form of the same.

Similar letters of reference indicate corresponding parts.

This invention is designed to provide an improved bar for sky-lights, that may be employed for the main rafter, ridge, base, and cross-bars, the sky-light being constructed without any solder, so as to resist the influence of fire and firmly retain the connection of the bars. The bar is of considerable strength, prevents the putty from escaping from below the glass panes, and forms a reliable support and joint for the glass panes resting thereon.

The invention consists of a sky-light bar formed with two gutters and two glass-supports at both sides of the double center part, to which the cap is connected by flat bolts and fastening cross bolts or rivets. The glass-supports are concaved for receiving the putty, while the double gutter forms an interior gutter for any leak-moisture of the bolts.

In the drawing, A represents a sky-light bar, that is formed of one or more pieces or blanks of sheet metal by arranging at both sides and top of the double shank or center part *a* projecting glass-supports *b*, that are placed at right angles or other angles to the center part, having the ends of the piece or blank bent in downward direction to enter between the center part.

The gutters *d* are formed at the lower end of the center part by extending the sides of the same, and folding them so as to dish upward, as shown in Fig. 2. The sides of the center part run alongside of each other, give the bar the appearance of a joist, and add to the strength of the same.

The intermediate ends of the glass-supports are riveted to the center part *a*, and to the flattened bolt B, that secures the cap or top piece C, by cross bolts or rivets *e*, which serve also to attach the flanges *e'* of the connecting cross-bars, as shown in Fig. 1.

The same shape of bar admits of being used for the main rafter, ridge, base, and cross-bars by merely altering the relative angles of glass-supports and gutters to the center part, which forms an important advantage of my bar.

The screw-bolt or rivet-connection of all the bars dispenses entirely with solder in the construction of the sky-lights, and renders them not only stronger, but also more able to resist fire, as they are not separated from each other by the heat, and can only be destroyed by a destruction of the material of which the bars are made.

In place of the bolts running down from the glass-retaining cap C, an extension, C', of the cap, that is bent inwardly and carried down intermediately between the sides of the center part to the lower end of the same, may be employed, the cap being fastened by cross-rivets *e*, in the same manner as the connecting stay-bolts, as shown in Fig. 3.

Any moisture that passes from the outsides of the glass panes between the same and the cap would pass along the bolts or cap-extensions to an interior gutter formed by the continuous bottom piece of the gutters *d*, to be then conducted off in suitable manner.

The glass-supports *b* are concaved at the upper sides to provide spaces for inserting putty, forming beds for the glass. The concave shape of the supports prevents the putty from working out when dry, while it forms a better joint between the supports and glass, so as to shed the moisture more perfectly along the bar to the gutters.

The cap-piece is filled, in the usual manner, with putty, to secure a tight joint at the upper sides of the panes, the same clasping thus, in connection with the supports *b*, the

glass panes, and forming a reliable and water-tight joint therewith.

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

The bar A, having median part *a*, concaved glass-supports *b*, top piece C, and gutters *d*, in combination with flattened bolt B, rivets *e*, and cross-bars having flanges *e'*, substantially as and for the purpose specified.

JOSEPH HENRY.

Witnesses:

R. PHILIP GORMULLY,

JOHN KEPPERLY.