F. M. CAMPBELL.

2 Sheets—Sheet 1.

Skylight.

No. 196,784. Patented Nov. 6, 1877.

Fig. 1.

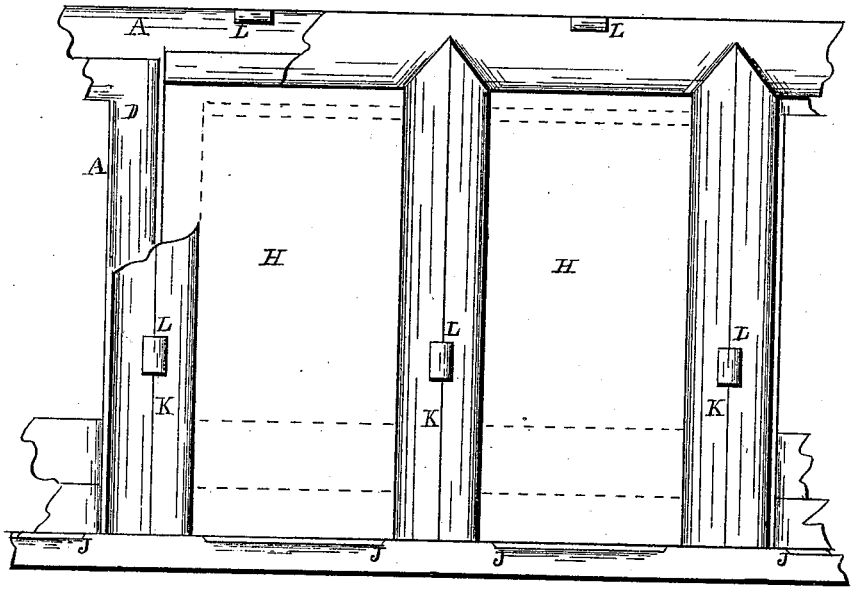


Fig. 2.

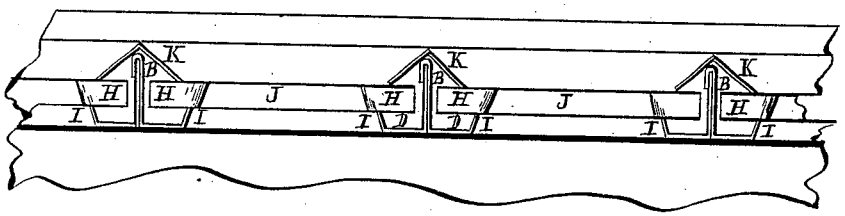
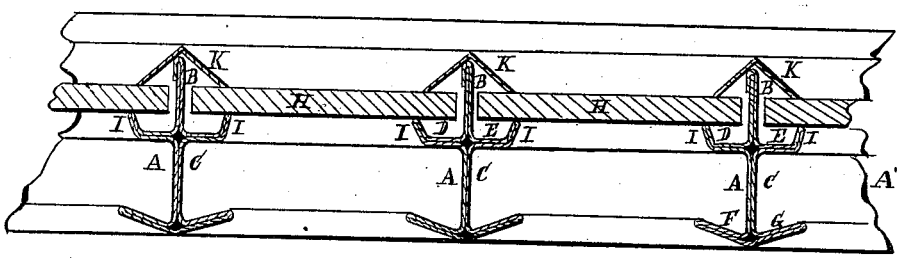


Fig 3.



Witnesses.
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Per Burridge & Co
Attys

2 Sheets—Sheet 2.

F. M. CAMPBELL.

Skylight.

No. 196,784. Patented Nov. 6, 1877.

Fig. 4.

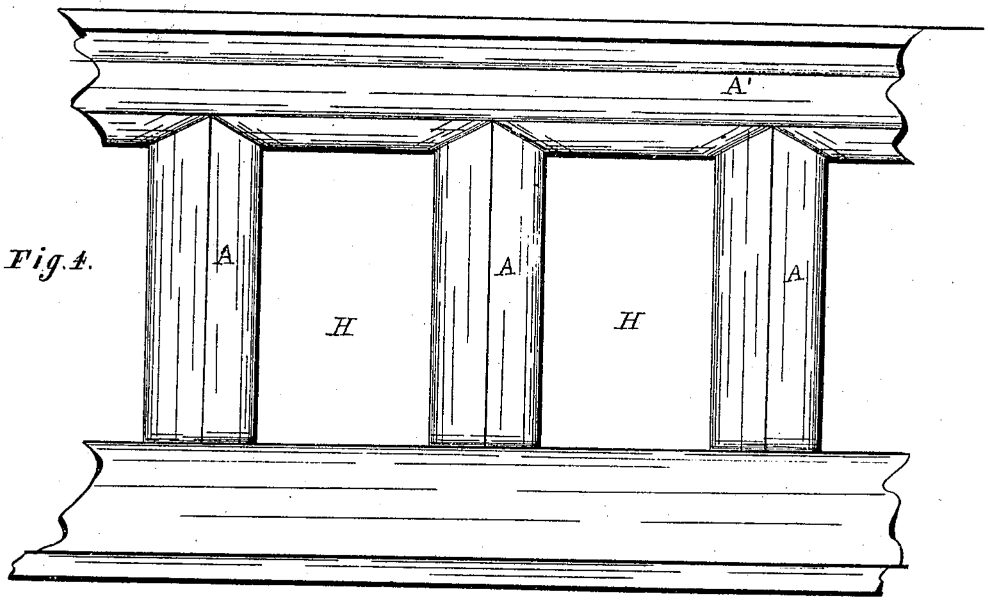


Fig. 5.

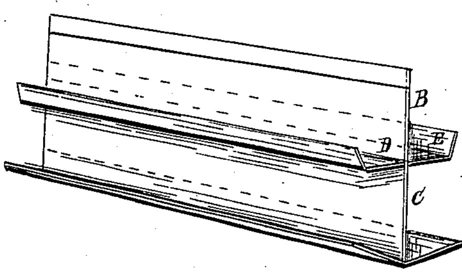
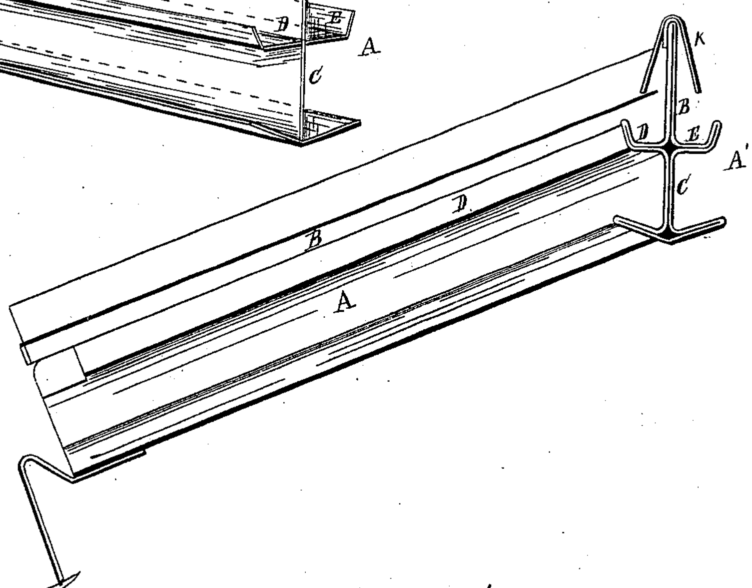


Fig. 6.



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Attys

UNITED STATES PATENT OFFICE.

FRANK M. CAMPBELL, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN SKYLIGHTS.

Specification forming part of Letters Patent No. **196,784**, dated November 6, 1877; application filed August 21, 1877.

To all whom it may concern:

Be it known that I, FRANK M. CAMPBELL, of St. Louis, in the county of St. Louis and State of Missouri, have invented a certain new and Improved Skylight; and I do hereby declare that the following is a full, clear and complete description thereof, reference being had to the accompanying drawings, making a part of the same.

Figure 1 is a plan view of the skylight. Fig. 2 is a view taken looking at the eaves. Fig. 3 is a vertical section. Fig. 4 is a plan view of the under side. Fig. 5 is a detached section. Fig. 6 is an end view.

Like letters of reference refer to like parts in the several views.

This invention relates to skylights; and the object thereof is to construct the sash of the skylight of sheet metal, and forming a gutter of the rest, on which the glass lies, so that said glass can be set in the sash without putty or cement. A more complete description of the invention is as follows:

Each bar of the sash referred to is made of a single piece of sheet metal, as will be seen at A in Fig. 3, which represents an end view of the sash-bars cut transversely. An end view and side view of said bars are shown in Fig. 6. A perspective detached view of the same is shown in Fig. 5.

In the said views it will be seen that each bar is composed of a single piece of sheet metal, so bent as to form the central upright parts or webs B C and the gutters D E, respectively, on each side thereof, and at the bottom of the web C flanges F and G, respectively, on the sides of said web C.

The longitudinal bars A, Fig. 3, and the transverse bar A′, Fig. 6, are connected to each other by adjusting the like parts of the one to the corresponding parts of the other, and uniting the same by soldering, as shown in Fig. 4, which represents an under-side view of the sash, and Fig. 6 representing an end view of one bar, A′, and a side view of the bar A attached thereto, the several bars and frame-pieces constituting the sash.

When thus put together it will be seen that all the corresponding parts of the one coincide with that of the others—as, for instance, the gutters D and the flanges F and G of the bars running in one direction meet and are joined to the gutters and flanges of the bars arranged at right angles therewith, as will be seen in Figs. 1 and 4 aforesaid.

The glazing of the frame or sash, when thus constructed and put together, is done by laying the plates of glass H, Figs. 2 and 3, in the sash so that they may rest upon the flanges or sides I, Fig. 3, of the gutters approximating the edges of the panes of glass to the upright parts B of the bars, as shown in the drawings.

The plates of glass thus set are prevented from slipping downward or endwise by foot-pieces J, Figs. 1 and 2, attached to the sash under the glass, and then turned upward against the edge of the glass, as shown in said Figs. 1 and 2. The plates of glass thus set upon the edges or sides of the gutters are further secured in place by caps or hoods K, placed on over the edge of the bars projecting above the surface of the glass, and which are secured thereto by clamps L, consisting of a strip of sheet metal doubled upon itself, the united end of which is fastened to the part B of the bar, whereas the free ends project upward through the cap, and are then bent down thereon transversely, as seen in the drawings. The cap thus secured to the bars extends its entire length, as will be seen in Fig. 1; and in consequence of its being drawn closely down upon the face of the plates of glass by the clamp, (which may be more or less in number, according to the length of the cap or hood,) the glass is firmly held down upon the edges of the gutters, and thereby, together with the foot-pieces J, above alluded to, are prevented from slipping in the sash, and also made tight therein, without the use of putty or cement, usually employed in glazing.

The purpose in having the edges of the glass rest upon and project over the edges of the gutters, in the manner as above described, is to allow the drippings from the glass to fall into the gutters, and by them be carried off, and thereby prevent leakage of the skylight, which at the same time is made durable and strong by the flanges F G, and the double thickness of metal of which the bars and frame of the sash is made.

The above-described sash, though especially

intended for skylights, can also be used for window-sash without essential change in its character.

I am aware that sash-rafters have been made of one sheet of metal, and this I do not claim, broadly; but

What I claim as my invention, and desire to secure by Letters Patent, is—

In skylight and window sash, the sheet-metal bar A, made of one piece of metal, having a straight web from top to bottom in cross-section, intermediate flanged glass-supports and gutters D E, and bottom projecting stiffening-flanges F G, all constructed substantially as and for the purpose described.

FRANK M. CAMPBELL.

Witnesses:
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JOHN H. BARRY.