A. & G. BICKELHOUPT.
Skylight.

No. 206,853. **Patented Aug. 13, 1878.**

Fig: 1

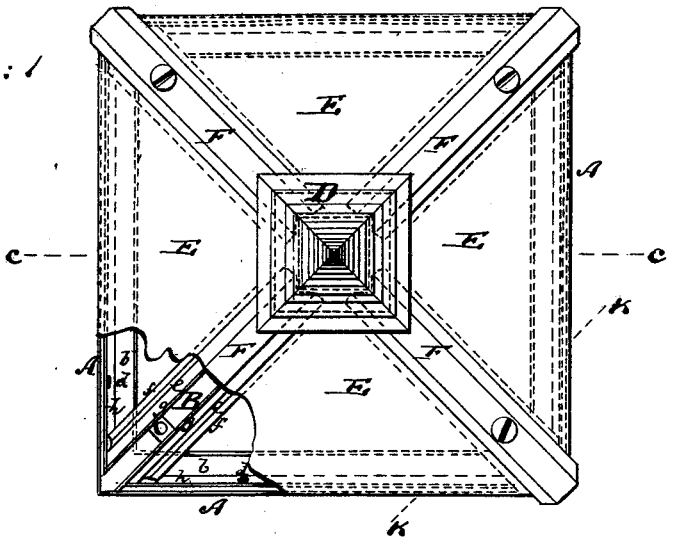


Fig: 2

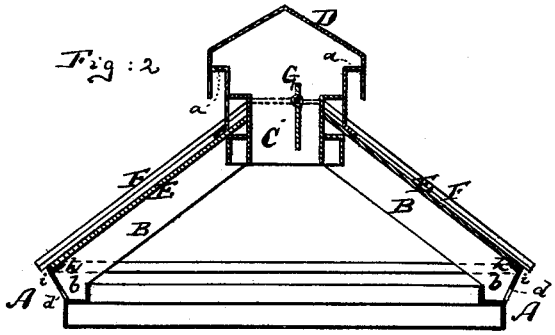


Fig: 3

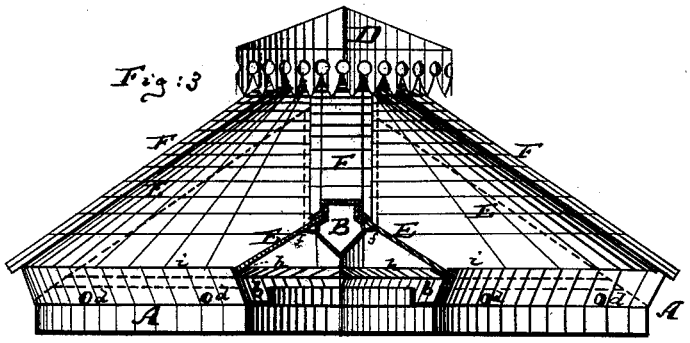
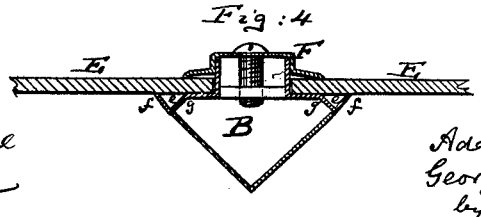


Fig: 4



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UNITED STATES PATENT OFFICE.

ADAM BICKELHOUPT AND GEORGE BICKELHOUPT, OF NEW YORK, N. Y.

IMPROVEMENT IN SKYLIGHTS.

Specification forming part of Letters Patent No. **206,853**, dated August 13, 1878; application filed December 22, 1877.

To all whom it may concern:

Be it known that we, ADAM BICKELHOUPT and GEORGE BICKELHOUPT, both of the city, county, and State of New York, have invented a new and Improved Skylight, of which the following is a specification:

Figure 1 is a top view, partly in section, of our improved skylight. Fig. 2 is a vertical transverse section of the same on the line *c c*, Fig. 1. Fig. 3 is a detailed transverse section on the line *k k*, Fig. 1. Fig. 4 is a detailed transverse section on an enlarged scale of one of the supporting-ribs of the skylight.

Similar letters of reference indicate corresponding parts in all the figures.

The object of this invention is to produce a skylight of superior strength, and one in which the glass will be more fully protected than in any of the skylights now in use.

The invention is intended as an improvement on the skylight described in Letters Patent No. 181,547, dated August 29, 1876.

It consists, principally, in so constructing the supporting-ribs for the glass frames as to have a double trough support for each upright edge of each pane and a single trough support for each lower edge of each pane.

It further consists in an improved arrangement of water-trough and ventilating apparatus, as hereinafter more fully described.

The letter A in the drawing represents the supporting-frame of the skylight, the same being of rectangular or other form. From the corners of this frame extend upwardly a series of converging ribs, B B, whose upper ends connect with a chimney, C, which is covered by a hood, D, and provided with ventilating-apertures *a*, as indicated in Fig. 2.

E E are glass panes of triangular or other appropriate form, each pane being, at its lower edge, supported on the frame A, and at its upright or converging edges on ribs B B. After the panes have been placed on said ribs they are fastened by plates or strips F, which are, by means of screws or otherwise, fastened upon the ribs B so as to partly lap over the panes of glass, as clearly indicated in Fig. 4.

Within the chimney C is placed a damper, G, which can be opened or shut at pleasure, to regulate the discharge of air through the skylight. Along the inner face of the frame A and beneath the glass covering is arranged a continuous trough, *b*, which is intended to receive the water of condensation which drips off the inner faces of the panes. One or more apertures, *d d*, are formed in the outer side of this trough *b* to permit the discharge of water collected in the trough upon the roof from which the skylight projects. The ribs B B are also constructed to form troughs *e e* under the panes of glass, as clearly shown in Fig. 4, there being one such trough, *e*, along each edge of every rib.

By this construction we provide a double support for each edge of the glass, the one support being the outer edge, *f*, and the other the inner edge, *g*, of the trough *e*. The troughs *e e* lead into the trough *b*, and are open at their lower ends, so as to discharge any water that may collect within the troughs *e* into the trough *b*.

We attach great importance to the arrangement of the double supporting-edges *f g*, which are formed by the trough *e*, and which increase the strength of the skylight, render the fracture of the glass less probable, and, furthermore, enable us to dispense with the use of putty for forming tight joints.

The lower end of every pane of glass rests on a lip, *h*, which projects inwardly from the outer face of the trough *b*, as shown in Fig. 3, and the lower edge of each pane bears against the outer face, *i*, of the trough *b*, as also indicated in the drawing, so that thus all danger of displacement of the glass is avoided.

We claim—

1. In a skylight, the combination of the ribs B B, which have the troughs *e e*, with the frame A, having the trough *b* and inwardly-projecting lip *h*, all arranged so that the glass E is directly supported on the edges *f g* of the troughs *e* and on the lip *h*, and bears against the face *i* of the frame A, substantially as specified.

2. The combination, in a skylight, of the supporting-frame A, converging ribs B, covering-plate F, ventilating-funnel C, and damper G, all arranged substantially as herein shown and described.

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