

June 7, 1938.

I. WILLIAMS

2,120,060

SKYLIGHT

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2 Sheets-Sheet 1

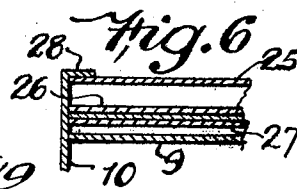
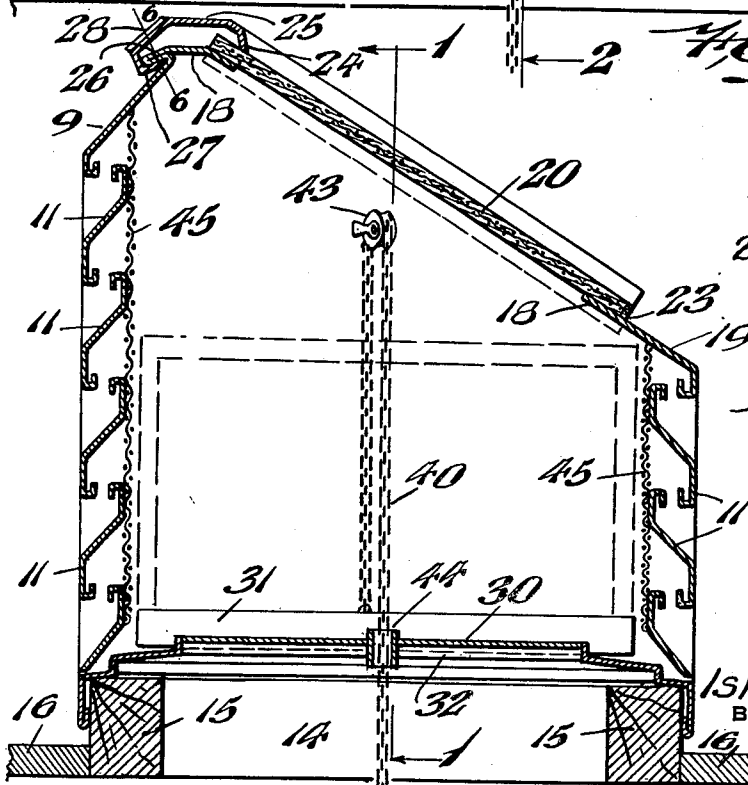
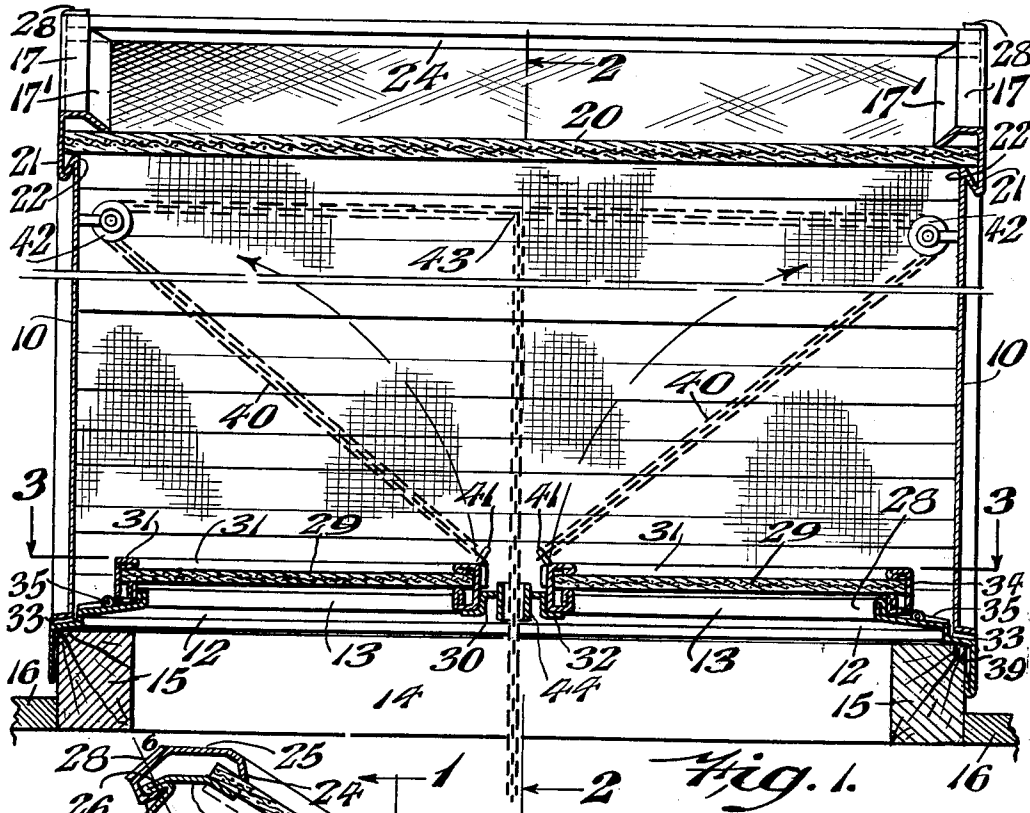


Fig. 2

INVENTOR
ISRAEL WILLIAMS,
BY Robert M. Barr
ATTORNEY

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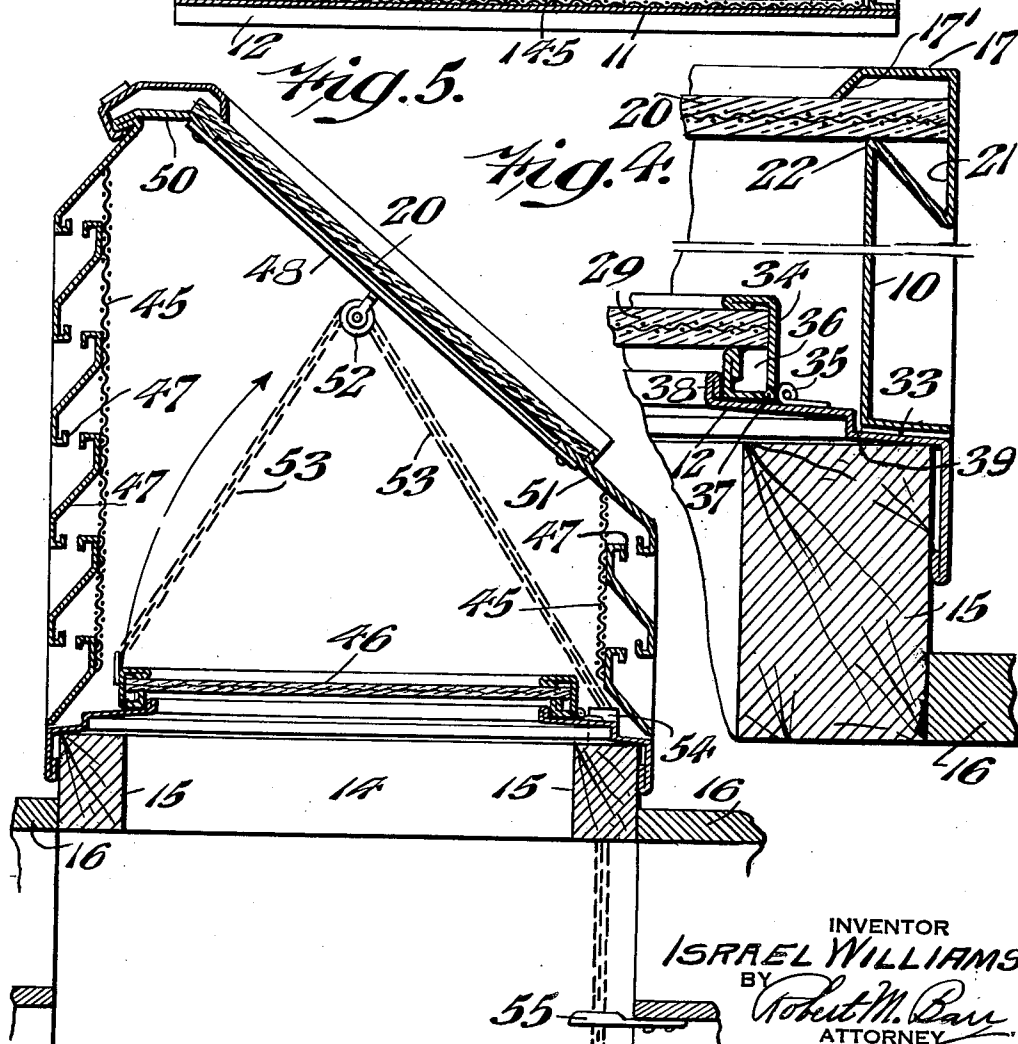
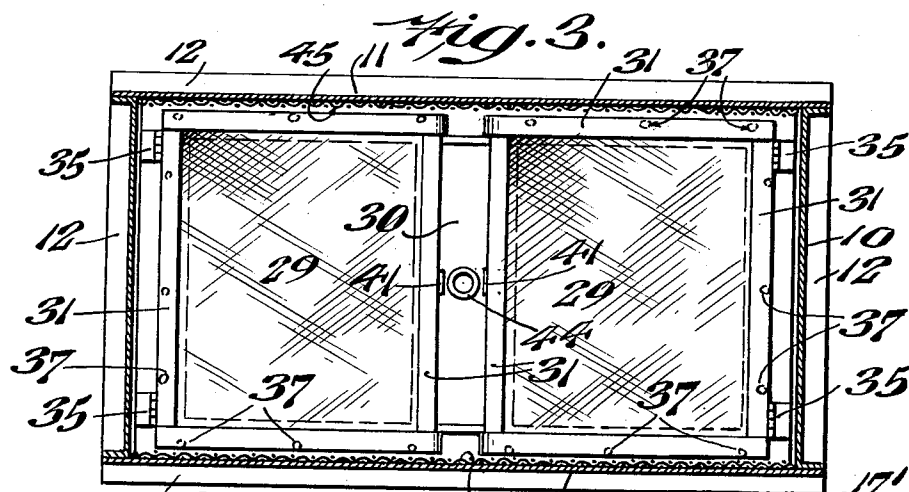
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INVENTOR
ISRAEL WILLIAMS
BY *Robert M. Barr*
ATTORNEY

UNITED STATES PATENT OFFICE

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SKYLIGHT

Israel Williams, Philadelphia, Pa.

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3 Claims. (Cl. 108—16)

The present invention relates to skylights and more particularly to a skylight including a sash as a unitary part thereof.

Some of the objects of the present invention are to provide an improved skylight; to provide a skylight wherein provision is made for directly controlling the aperture or opening with which the skylight is to be associated; to provide a skylight wherein provision is made to eliminate leaks into the light opening by means causing water of condensation, rain water, melting snow and the like to be directed away from the skylight and onto the adjoining roof; to provide a novel mounting for the glass of a skylight; to provide a skylight with controllable light and ventilating sashes; and to provide other improvements as will hereinafter appear.

In the accompanying drawings Fig. 1 represents a sectional elevation, taken on line 1—1 of Fig. 2 of a skylight embodying one form of the present invention; Fig. 2 represents a section on line 2—2 of Fig. 1; Fig. 3 represents a section on line 3—3 of Fig. 1; Fig. 4 represents a portion of the section taken on line 1—1 but on an enlarged scale; Fig. 5 represents a sectional elevation of another form of the invention; and Fig. 6 represents a structural detail of the light panel frame.

Referring to the drawings one form of the present invention embodies a skylight preferably made of sheet metal wherein plates 10 form the closed end walls thereof and louvers 11 form the open front and rear walls thereof. The bottom of the skylight is formed by a rectangular frame 12 here having two openings 13 to provide communication with the roof or ceiling aperture 14, which is formed by the beams 15. These beams 15, preferably project upwardly above the roof or ceiling 16 in order to provide an effective means to support and anchor the skylight in operative position. The top of the skylight is here shown as an annular rectangular frame formed of two opposite end extensions 17 of the respective plates 10, and two opposite prolongations 18 of the two uppermost louver strips 9 and 19 respectively. This top frame provides the sight opening which is closed by a transparent or translucent glass 20 which is here shown as of the wired glass construction. Preferably one of the louver walls is higher than the other so that the glass 20 and its supporting parts take an operative position as an inclined plane.

For supporting the glass 20 each of the end plate extensions 17 includes a reverse bend 21 forming an inclined ledge 22 upon which the

ends of the glass 20 are seated. When so seated the extremities of the two extensions 17 are bent to form a lip 17' in bearing contact with the upper face of the glass 20 and thus lock it securely against the aforesaid ledges 22. The lowermost side edge of the glass 20 seats against a flange 23 formed as a part of the louver strip 19, while the uppermost side edge seats on the extension 18 and is there held fast by the inturned lip 24 of an anchor strip 25. A reverse bend in the extension of the louver 9 forms a linearly disposed flange 26 which acts as an interlock with the inturned edge 27 of the strip 25 to retain the lip 24 firmly bearing against the upper face of the plate 20. It should also be noted that the respective ends of the extensions 17 terminating adjacent the strip 25 are bent inward as shown at 28 to thereby firmly clasp the strip 25 at both ends to form a rigid structure.

In the present instance the side bars of the frame 12 are divided centrally to receive a transverse brace plate 30 which is preferably welded in place and is arranged to provide a support for the free ends of two window sashes 31. In cross section the plate 30 is of inverted U shape in order to form two oppositely disposed shelves 32 for respectively seating the aforesaid sash end. Also the frame 12, in assembled condition, is inclined towards the outer walls of the skylight, such inclined length having a stepped portion 39 which terminates in a downwardly turned end part arranged to abut the outer face of the beam structure. The stepped portion 39 forms with the plate 10 drain openings 33 at intervals whereby any collected water is discharged by gravity to the outside of the beam structure and thus well away from the roof aperture 14. This construction is made possible by spot welding or otherwise securing the side plates 10 to the upper face of the marginal portion of the base at intervals only, and in consequence a plurality of leak spaces or drain openings 33 are provided.

Each sash 31 consists of a channel shaped frame 34 one side of which is hinged at 35, to the upper face of the frame 12, while the opposite side seats on the adjacent shelf 32. A glass 29 preferably of the wire type is set in the channel frame in leak-proof relation. It should be noted that the channel shape of the frame 34 provides an interior space 36 which has communication with the outside of the sash by a plurality of ports 37. In connection with the mounting of the two sashes, attention is directed to the fact that the inner marginal edge of the frame 12 is upwardly turned to form an abut-

ment wall 38 which effectually prevents any water from reaching the openings 13.

In order to raise and lower the two sashes at will a chain, cord or equivalent 40 is made fast at 41 to each sash and thence directed by pulleys 42 and 43 to a sleeve hole 44 in the plate 30 through which it passes to a conveniently accessible location for operation.

Screens 45 are suitably mounted across the louver openings to prevent insects and the like from reaching the interior of the skylight.

In Fig. 5 a modified form of the invention is shown wherein the skylight is equipped with a single sash 46 instead of two as in the preferred form but otherwise the general details as heretofore explained are the same. Thus the screened louvers 47, mounting for the glass 20, as well as the sash mounting and leak proof details are shown following the details of Fig. 2.

In order, however, to provide for operating the sash 46 a relatively narrow metal strip 48 is fastened to the parts 50 and 51 (corresponding to parts 18 and 19) for the purpose of mounting the pulley 52 which guides the operating chain 53 to the exit opening 54. A keeper plate 55 is attached to a fixed part at a convenient location for latching the chain in any selected position.

It will now be apparent that a complete unitary skylight has been devised ready for installation on any suitable building structure and wherein a light transmitting or light diffusion sash forms an integral part of the assembly. Where the term "diffusion sash" is used in the claims it is to be understood it is in a generic sense and means any form of sash through which light can pass to the interior of the building upon which the skylight is located. Also it should be noted that through the novel gutter construction rain water or water of condensation or melting snow is directed away from the sash and leaking to the interior of the skylight is impossible.

While only two forms are shown in which this invention may be embodied, it is to be understood that the invention is not limited to any specific construction, but might be applied to various forms without departing from the spirit of the invention or the scope of the appended claims.

Having thus described my invention, I claim:—

1. A unitary skylight consisting of a sheet metal base member having an aperture therein and a downwardly stepped marginal portion terminating in an annular seat to rest upon a skylight supporting structure, said aperture being bounded by an upstanding flange on said base member, a sash arranged to interfit with said flange, a light transmitting panel in said sash, means for hinging said sash to said base member, plates forming two sides of said skylight and louvers forming the remaining two sides, and a light transmitting panel attached to said plates to form the top of said skylight.

2. A unitary skylight consisting of a sheet metal base member having an aperture therein and a downwardly stepped marginal portion terminating in an annular seat to rest upon a skylight supporting structure, said aperture being bounded by an upstanding flange on said base member, a sash of channel section arranged to fit over said flange, said sash having ports arranged to discharge on the top of said base member, a light transmitting panel in said sash, means for hinging said sash to said base member, plates forming two sides of said skylight and louvers forming the remaining two sides, and a light transmitting panel attached to said plates to form the top of said skylight.

3. A unitary skylight consisting of a sheet metal base member having an aperture therein and downwardly inclined side portions terminating respectively in seats to rest upon and conform to the shape of a skylight supporting structure, side plates rising respectively from the ends of said base member and forming at the top two tubular frames, each of said frames having a slot therein, said slots being oppositely aligned, a light transmitting panel supported in said slots, louvers connecting said plates to form the other sides of the structure, a light diffusing sash controlling said aperture, and means joining said side plates to said base member at intervals, whereby a plurality of openings are formed to drain water to the outside of said base member.

ISRAEL WILLIAMS.