Aug. 9, 1932. L. ABT 1,870,549

SKYLIGHT CONSTRUCTION

Filed July 18, 1930 4 Sheets-Sheet 1

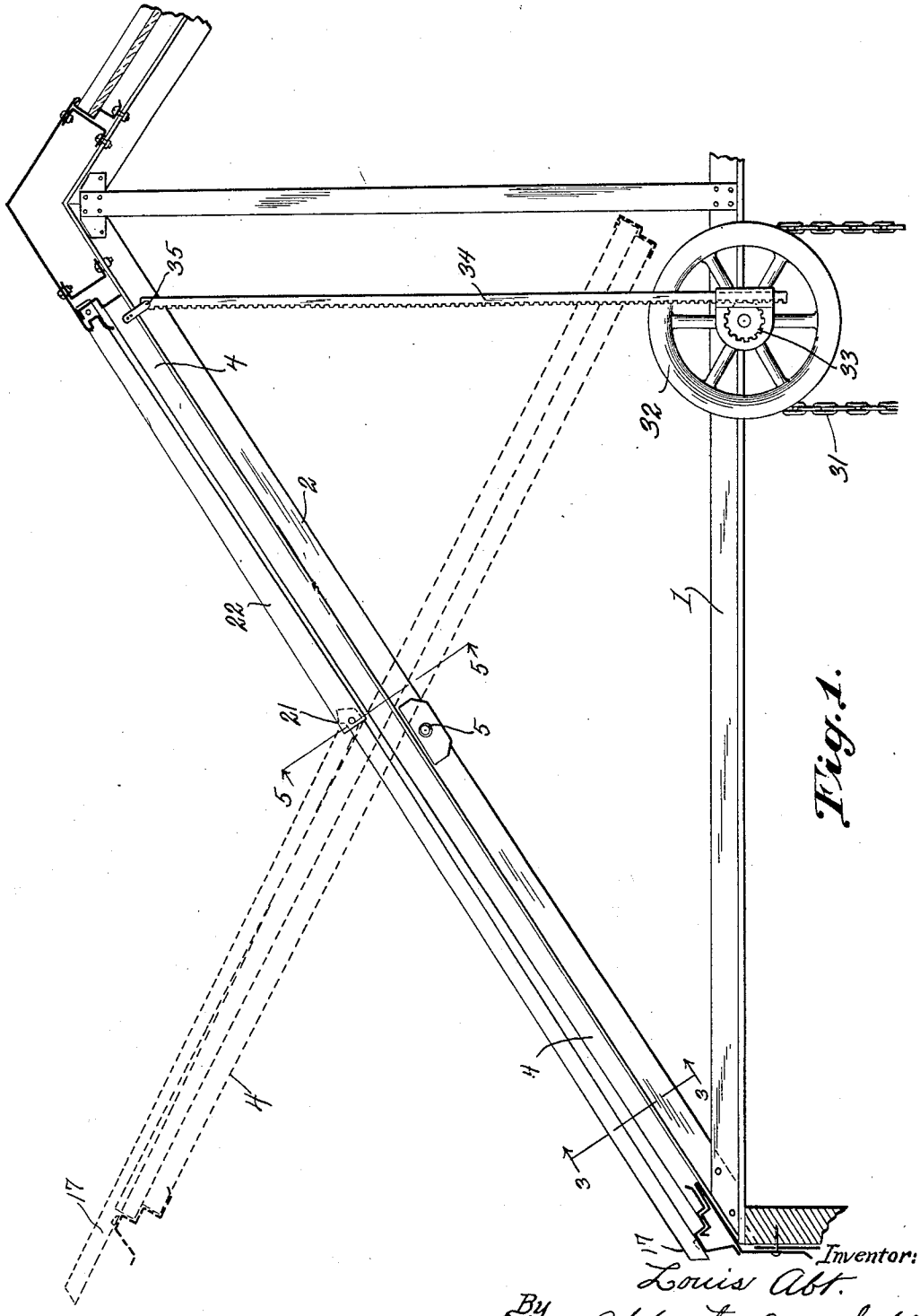


Fig. 1.

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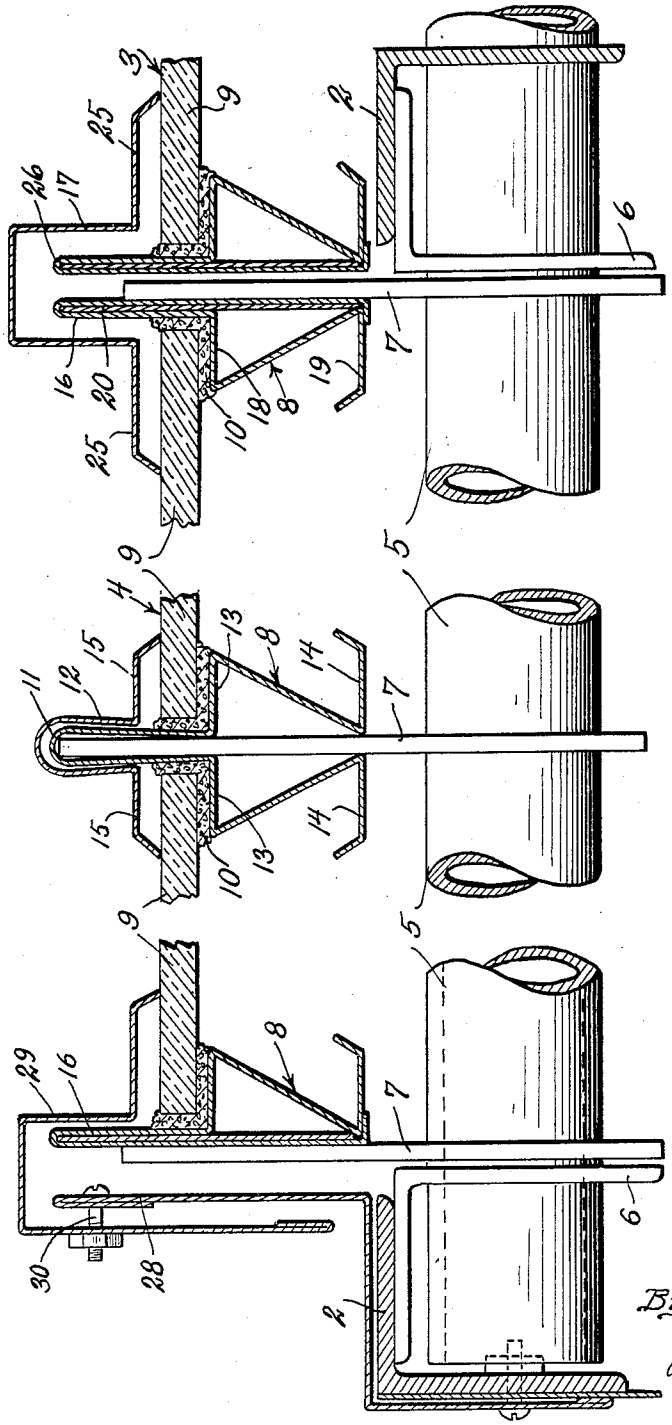


Fig. 3.

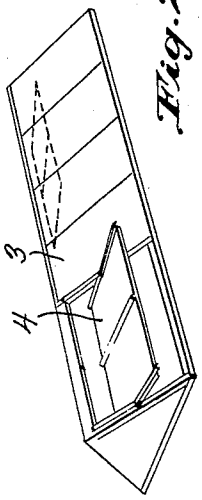


Fig. 2.

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SKYLIGHT CONSTRUCTION

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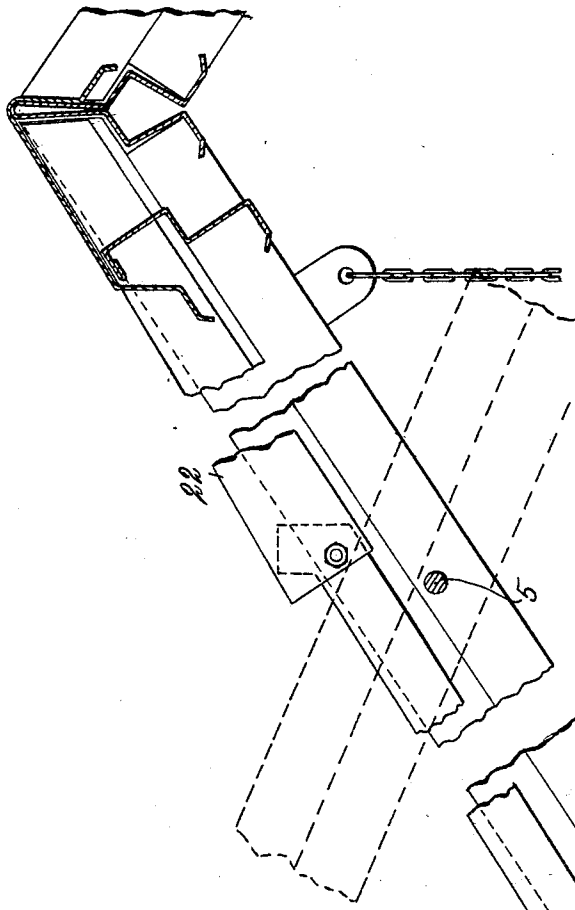


Fig. 6.

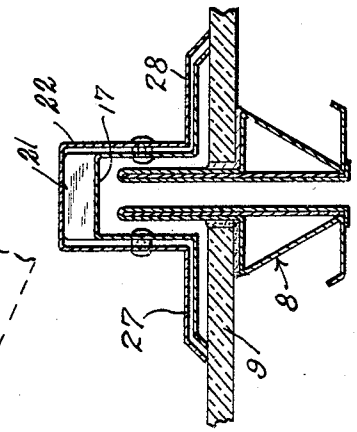


Fig. 5.

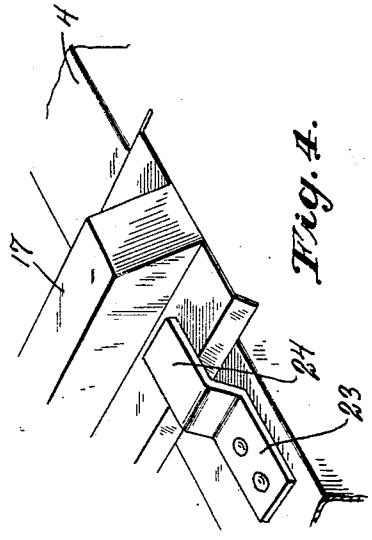
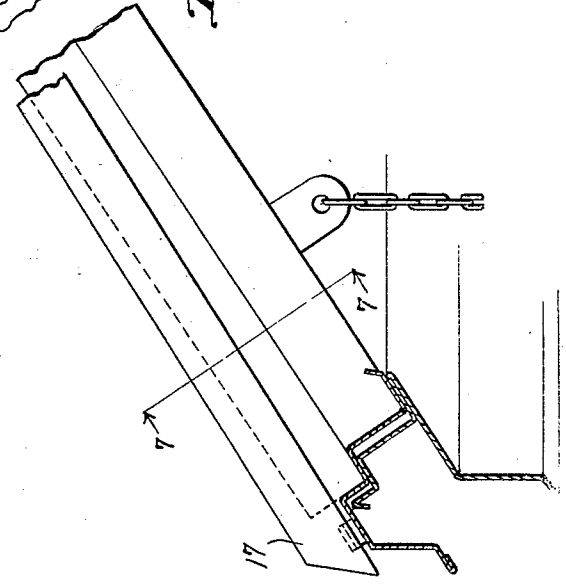


Fig. 4.



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SKYLIGHT CONSTRUCTION

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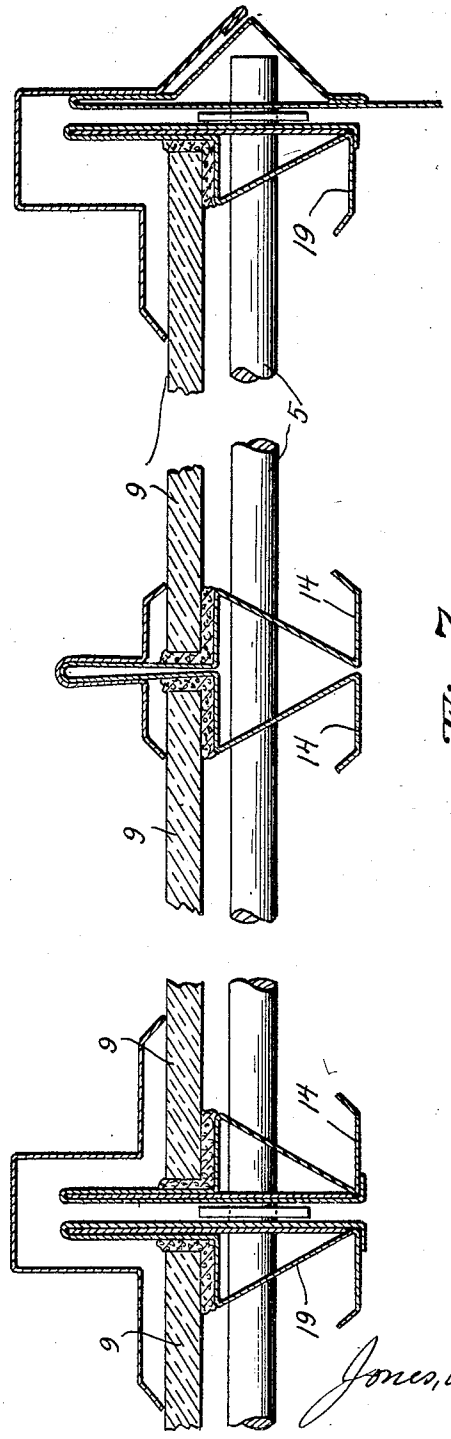


Fig. 7.

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UNITED STATES PATENT OFFICE

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SKYLIGHT CONSTRUCTION

Application filed July 18, 1930. Serial No. 468,878.

My invention relates to ventilating skylight construction.

One of the objects of my invention is to provide a ventilating skylight construction in which the tiltable sections are counterbalanced so as to be easily operated, requiring a minimum of power and enabling a long section to be operated as a unit.

A further object is to provide an improved weather-proof connection at the edges of the tiltable sections.

Further objects will appear from the description and claims.

In the drawings, in which two forms of my invention are shown—

Figure 1 is an end elevation of a skylight construction showing the tiltable section and operating means;

Fig. 2 is a somewhat diagrammatic perspective view showing a staggered arrangement of tiltable sections;

Fig. 3 is an enlarged sectional view substantially on the line 3—3 of Fig. 1;

Fig. 4 is a perspective view showing the sliding connection at the lower end of the tiltable hood;

Fig. 5 is a section on the line 5—5 of Fig. 1;

Fig. 6 is an end elevation, partly in section, of another form of my invention showing the tiltable section; and

Fig. 7 is a section substantially on the line 7—7 of Fig. 6.

Referring to the drawings in detail, the construction shown comprises a triangular truss having a horizontal member 1 and an inclined member 2, these being shown as an angle iron construction, a fixed skylight section 3 extending between a pair of truss members 2 and a tiltable skylight section 4 swung between a pair of truss members 2.

The tiltable section 4 is rockably mounted on an axle or fulcrum member 5 supported by angle clips 6 secured to the inclined truss members 2. The pivotal mounting of the tiltable section 4 is effected by means of metal journaled clips 7 having bearing openings therein through which the fulcrum member 5 extends, the glass supporting rib members 8 being rigidly secured to these journaled clips 7 in any suitable manner. The tiltable section 4 itself, as shown in Fig. 3, may comprise a plurality of panes of glass 9 mounted on and extending between the sheet metal supporting rib members 8, the panes being mounted in any suitable setting material 10. The intermediate supporting rib member 8 may be formed as an integral piece of sheet material bent to provide the loop portion 11 which extends up into the weather-proofing hood or cap 12 and two laterally extending flange portions 13 extending along and underneath the edges of the panes of glass 9, and two downwardly extending drip gutters 14 for receiving and carrying off any moisture of condensation or slight leakage. The bearing clip 7 extends up into this loop portion 11 so that the clip 7 is thus held in proper position and so that the rib 8 is properly supported by the clip 7. The cap or hood portion 12 has the two laterally extending flange portions 15 engaging and forming a weather-proof joint with respect to the edges of the panes of glass 9.

The supporting rib members 8 adjacent the ends of the tiltable section each comprises a sheet metal section having a flange portion 16 extending up into the weather-proofing cap or hood 17, a flange portion 18 extending along and underneath the edge of the pane of glass 9 and a drip gutter portion 19 extending downwardly from the flange portion 18. A stiffening strip of metal 20 may be provided, held between the layers of the upwardly extending flange 16 and extending downwardly to the drip gutter portion 19.

In order to provide a weather-proof joint between the tiltable section 4 and the fixed section 3, as shown at the right-hand end of Fig. 3, a cap or hood member 17 is pivotally mounted at 21 (Fig. 1) with its upper end lying inside the fixed cap or hood member 22 (Fig. 5), this latter hood member being mounted on the fixed section 3. Since the tiltable hood member 17 swings about a different axis from that about which the tiltable section 4 itself swings, it is necessary to provide for some slight sliding motion between the lower end of the swinging hood member 17 and the lower edge of the tiltable section 4 as shown in Fig. 4. For this pur-

pose a clip 23 is secured to the lower edge of the tiltable section 4 having an overhanging finger 24 lying against the laterally extending flange 25 of the hood member 17 which permits the hood member 17 to have a sliding motion with respect to the edge of the tiltable section 4 to enable the parts to be moved to the position shown in dotted lines in Fig. 1. The upper stationary hood section 22 provides a channel for receiving the upwardly extending flange 16 of the tiltable section 4 when the skylight is closed, and also to receive the upwardly extending flange 26 of the fixed section 3.

This hood member 22 is provided with a laterally extending flange 27 on one side for effecting a weather-proof engagement with the stationary pane of glass 9 and with the laterally extending flange portion 28 on the other side for effecting a weather-proof joint with the tiltable glass section 4 when the latter is in closed position.

The tiltable hood section 17 is also provided with laterally extending flanges 25 on its opposite sides, one of these flanges forming a weather-proof joint with respect to the tiltable glass panes 9 and the other forming a weather-proof joint with respect to the stationary glass pane 9 when the tiltable section 4 is in closed position. The channel portion of the hood 17 receives the upwardly extending flanges 26 and 16 of the stationary and movable rib sections when the tiltable section 4 is in closed position.

In order to provide a weather-proof joint at the gable end, as shown at the left-hand end of Fig. 3, a stationary and pivoted hood arrangement is provided similar to that shown at the right-hand of Fig. 3, except that the laterally extending flange is omitted from one side, both of the stationary and movable hood members, the flange portion nearest the gable end of both the fixed and swinging hood section simply extending downwardly alongside and adjacent the upwardly extending flange portion 28 which is mounted on the truss section 2. The swinging hood member 29 may be pivotally mounted on this upwardly extending flange 28 by means of a pivot, screw or bolt 30.

The tiltable section 4 is operated by means of a sprocket chain 31 passing over a sprocket wheel 32, a pinion 33 rotatable with the sprocket wheel 32, and a rack 34 held in proper relation with this pinion 33 and pivotally connected at its upper end 35 with the upper end of the swinging section 4.

In operation, when the skylight is tilted by means of the sprocket chain 31 from the dotted line to the full-line position shown in Fig. 1, the flanges 16 on that part of the tiltable section 4 to the right of the pivotal point 5 swing up into the channels of the fixed upper hood members 22, and the swinging hood sections 17—29 swing down over the upwardly extending fixed flange portions 26—28, and when in final closed position the glass panes 9 of the tiltable section 4 are in weather-proof relation with respect to the fixed laterally extending flanges 28 on the fixed hood sections 22 and the laterally extending flange 25 of the swinging hood section 17 is in weather-proof relation with respect to the fixed pane of glass 9.

The construction shown in Figs. 6, 7 and 8 is substantially similar to that just described except that here the axle or fulcrum member 5 extends through bearing openings in the downwardly extending skirts of the drip channels 14 and 19 thus dispensing with the bearing clips 6 and 7 and the angle iron truss members 2, the shaped sheet metal sections forming the supports for the panes of glass 9 and for the fulcrum member 5.

I claim:

1. A ventilating skylight construction comprising a stationary section and a movable section, and means for effecting a weather-proof joint therebetween comprising a sheet metal member mounted on and running along the edge of said tiltable section and having a channeled hood portion, a flange extending from one side of said hood portion for effecting a weather-proof engagement with the upper face of the tiltable section and a flange extending from the other side of said hood portion for effecting a weather-proof engagement with the stationary section and a sheet metal member mounted on and running along the edge of said stationary section and having a flange extending above the edge of the stationary section into said hood portion.

2. A ventilating skylight construction comprising a stationary section and a tiltable section, and means for effecting a weather-proof joint therebetween comprising a sheet metal member mounted on and running along the edge of said tiltable section and having a channeled hood portion, a laterally extending flange extending from one side of said hood for effecting a weather-proof joint with the tiltable section and a flange portion extending laterally from the other side of said cap portion for effecting a weather-proof joint with the stationary section, a second sheet metal member mounted on and running along the edge of said movable section and having a flange portion extending above the edge of said movable section into said hood portion, and a third sheet metal member mounted on and running along the edge of said stationary section and having a flange portion extending upwardly above the edge of said stationary section into said hood portion.

3. A ventilating skylight construction comprising a stationary section and a tiltable section, and means for effecting a weather-proof joint therebetween compris-

ing a sheet metal member mounted on and extending along the edge of said tiltable section and comprising a channeled hood portion, a flange portion extending laterally from one side of said hood portion for effecting a weather-proof joint with the tiltable section and a flange portion extending laterally from the other side of said hood portion for effecting a weather-proof joint with said stationary section, a second sheet metal member mounted on and extending along the edge of said tiltable section and comprising a flange portion underlying the edge of said tiltable section and a flange portion extending upwardly above the edge of said tiltable section into said hood portion, and a third sheet metal member mounted on and extending along the edge of said stationary section and comprising a flange portion underlying the edge of said stationary section and a flange portion extending above the edge of said stationary section into said hood portion.

In witness whereof, I have hereunto subscribed my name.

LOUIS ABT.