No. 850,361.

PATENTED APR. 16, 1907.

J. FLYNN.

SKYLIGHT.

APPLICATION FILED JAN. 30, 1905.

4 SHEETS—SHEET 1.

Fig. 1.

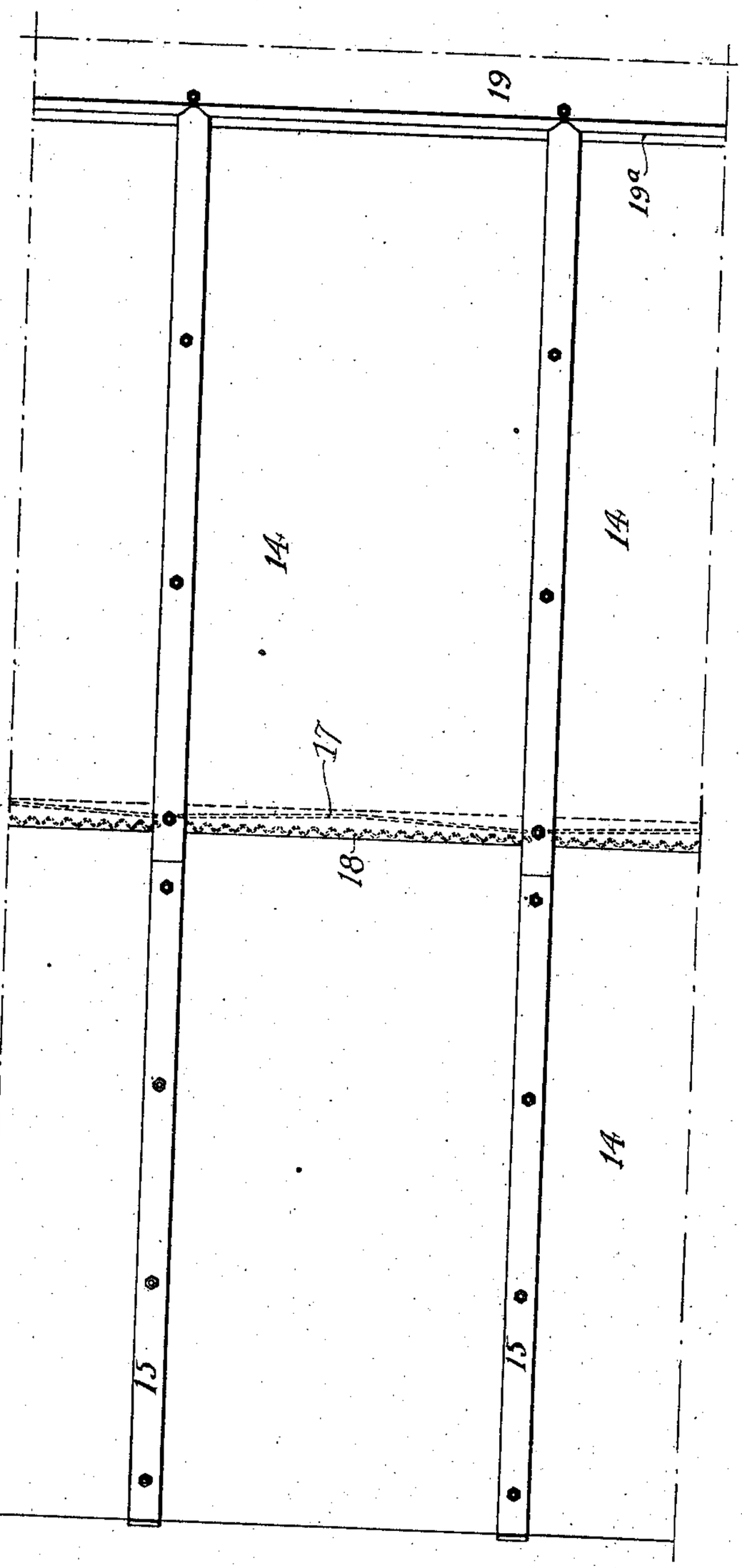
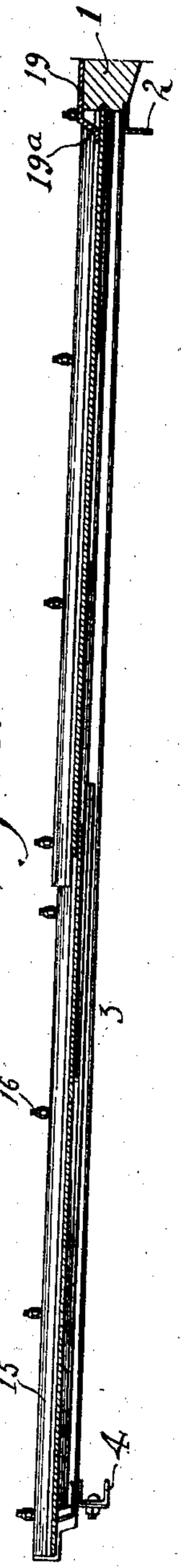


Fig. 2.



WITNESSES:

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4 SHEETS—SHEET 2.

Fig. 3.

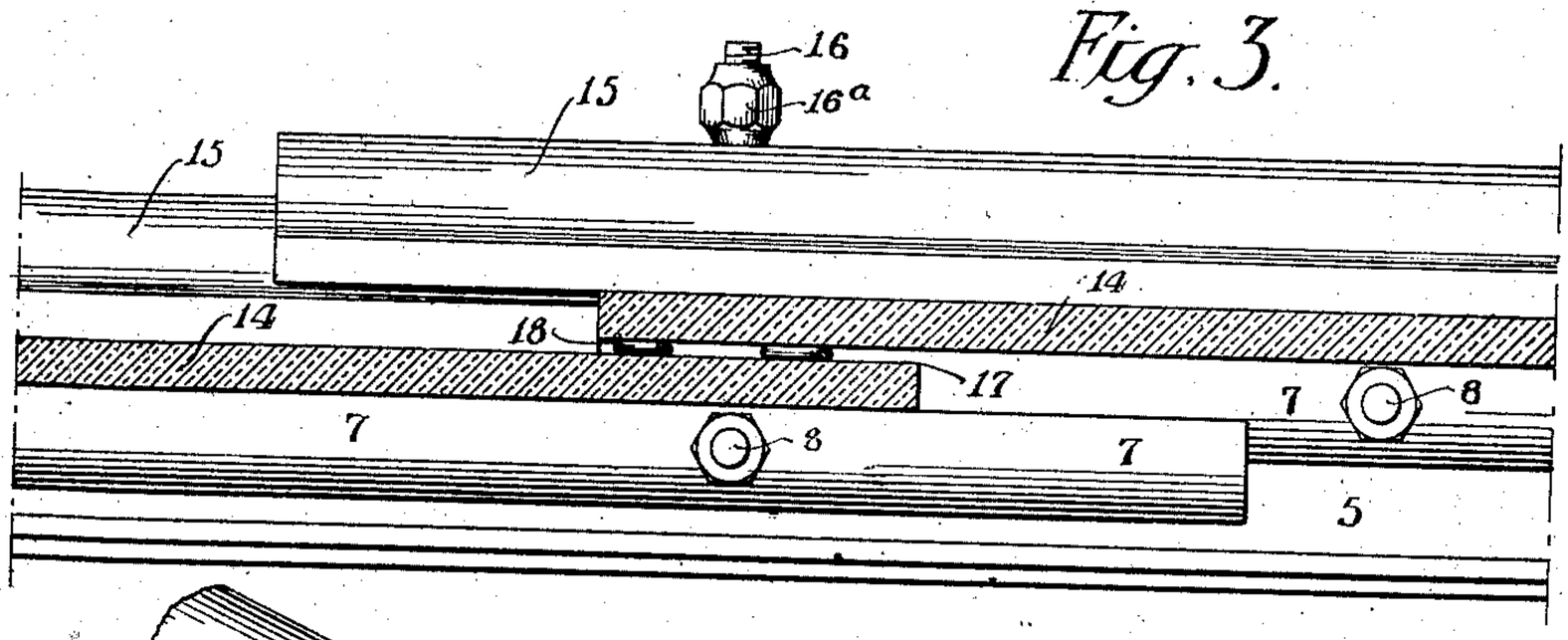


Fig. 4.

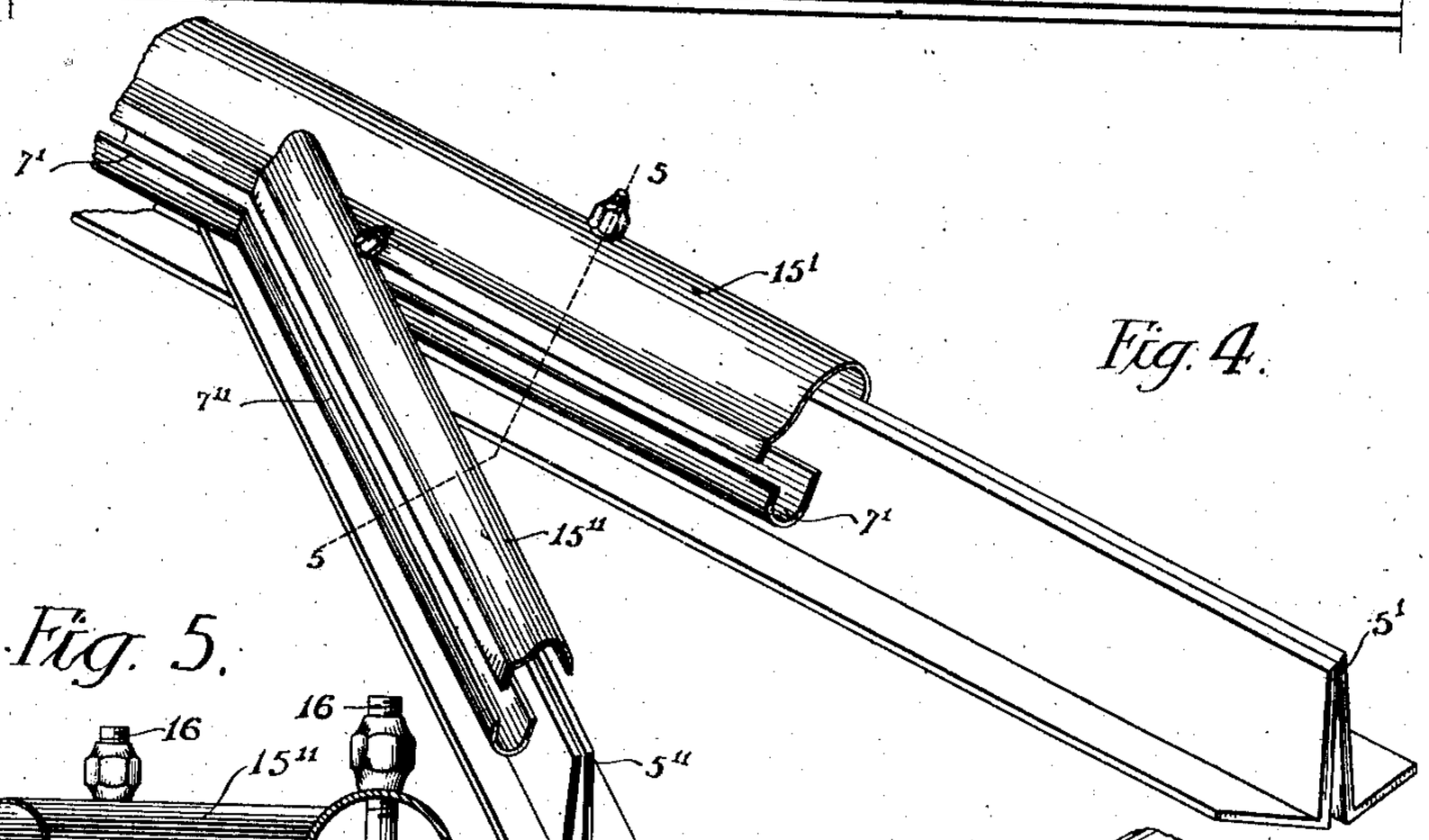


Fig. 5.

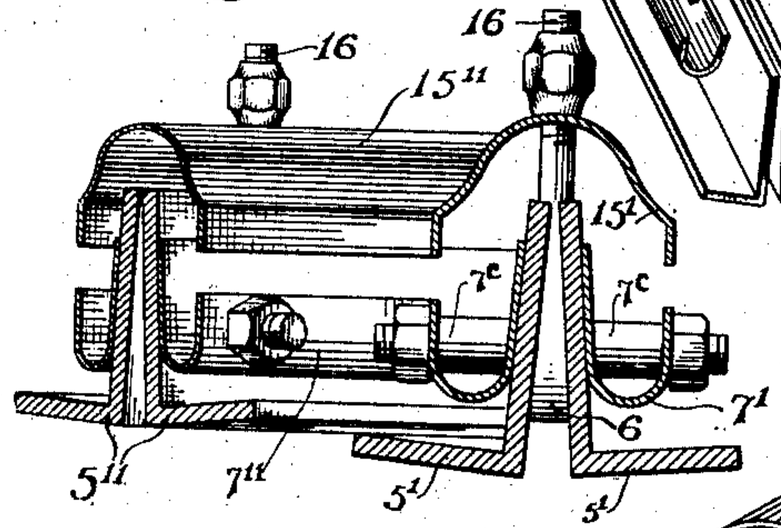
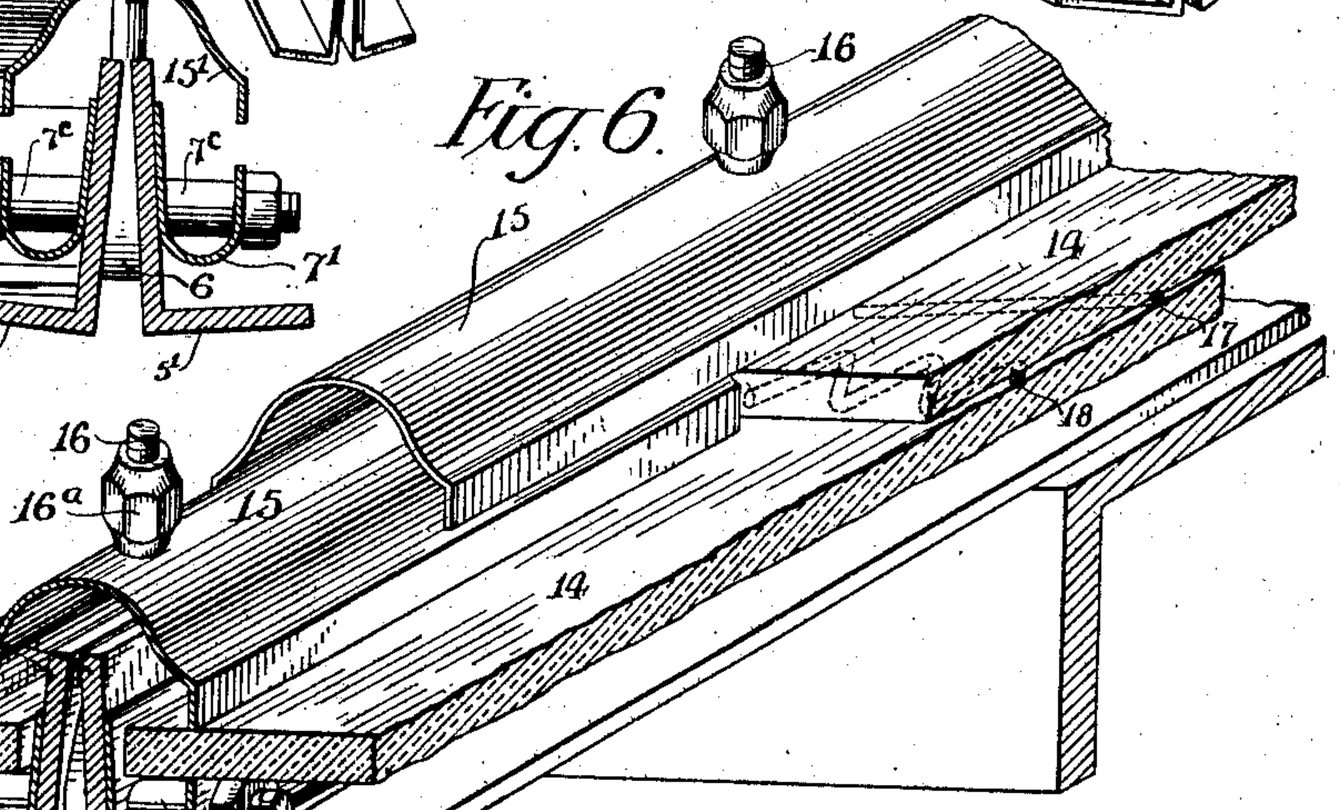


Fig 6.



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4 SHEETS—SHEET 3.

Fig. 7.

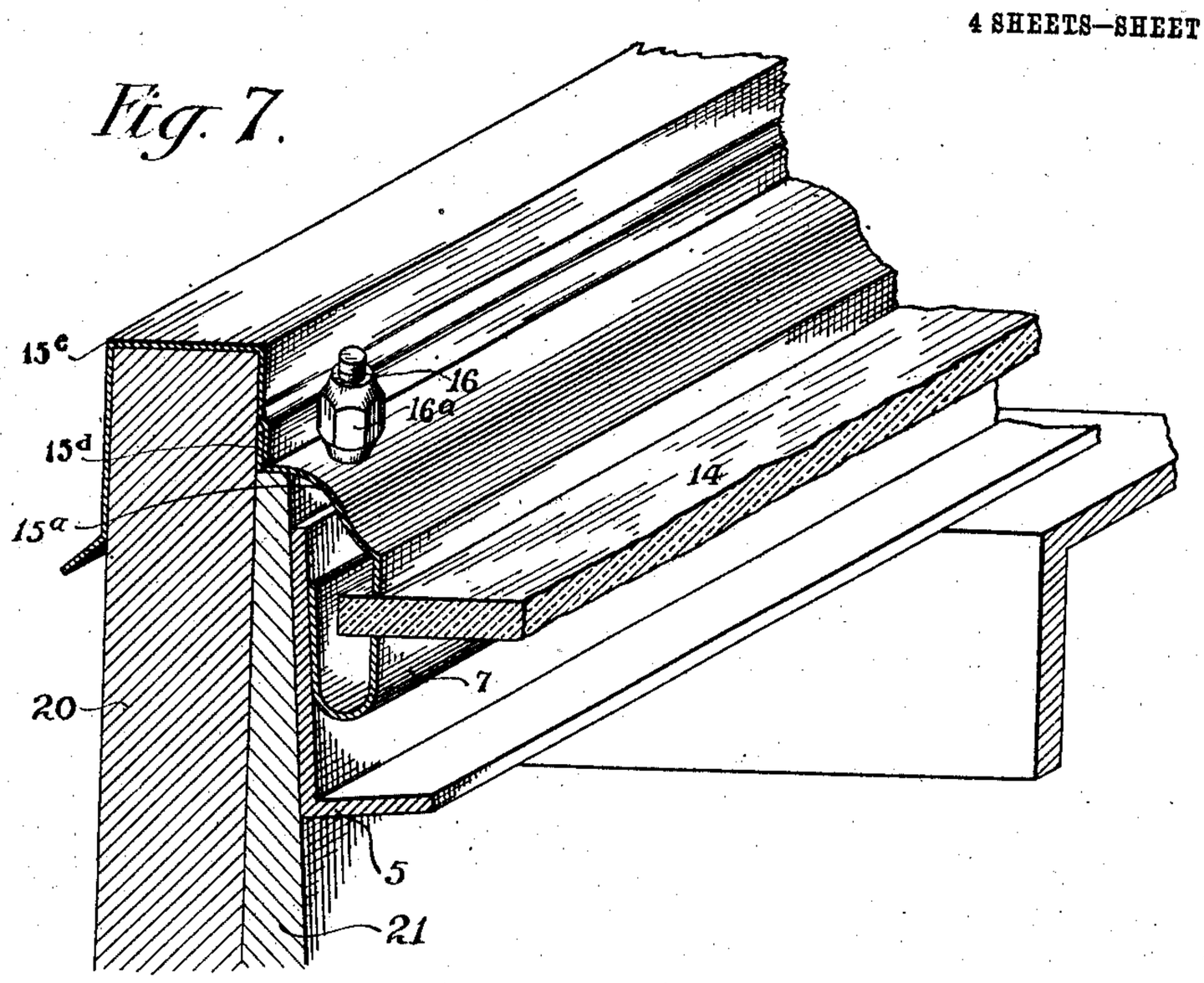
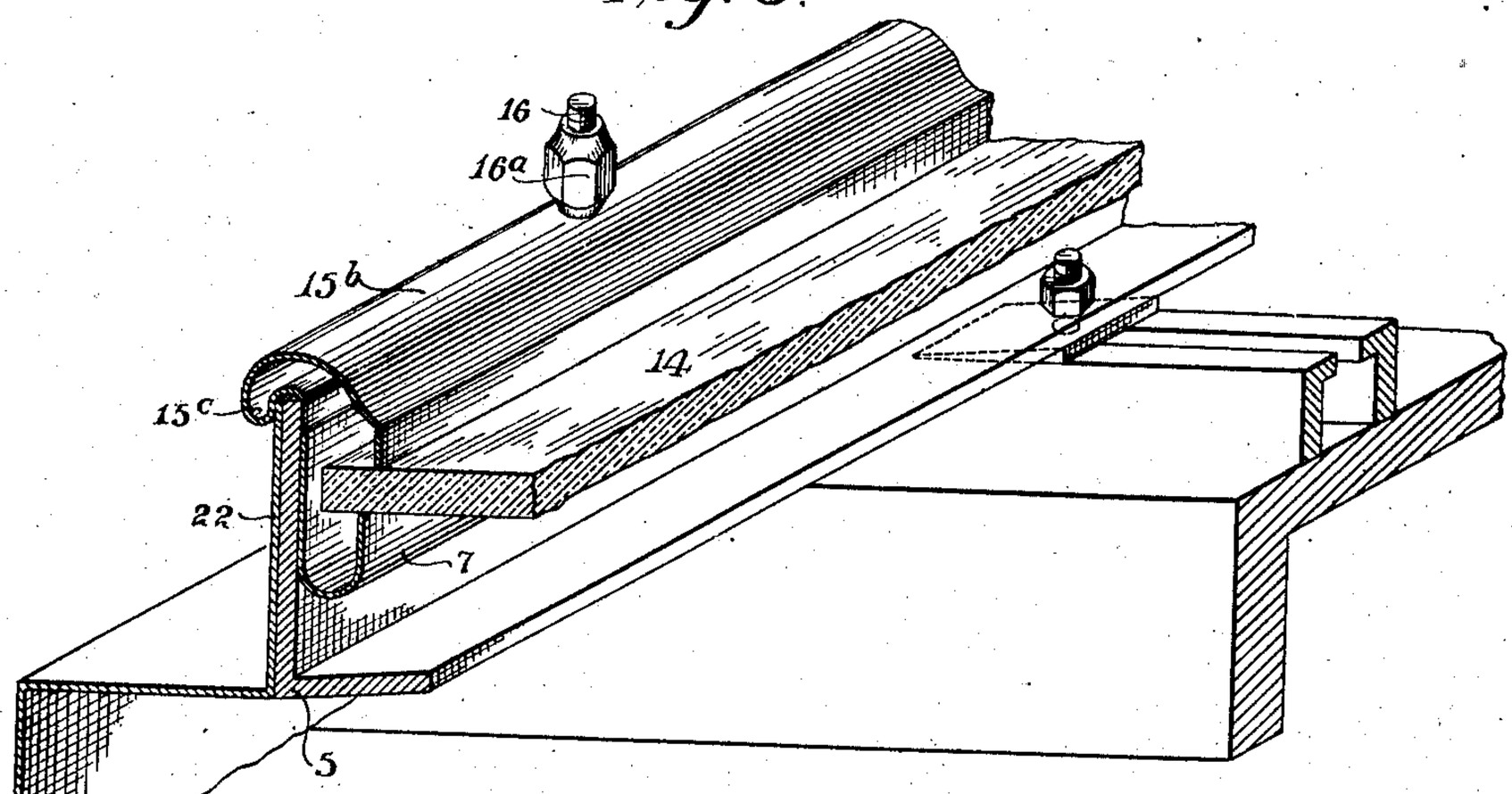


Fig. 8.



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4 SHEETS—SHEET 4.

Fig. 9.

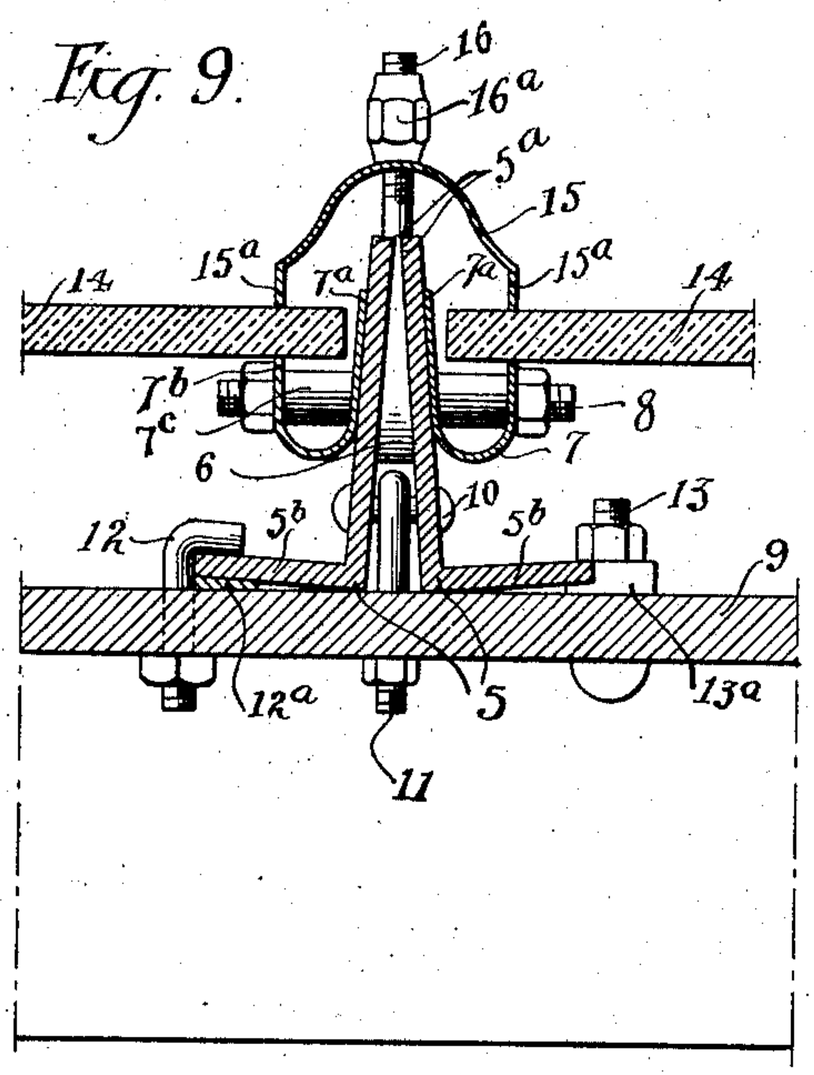


Fig. 10.

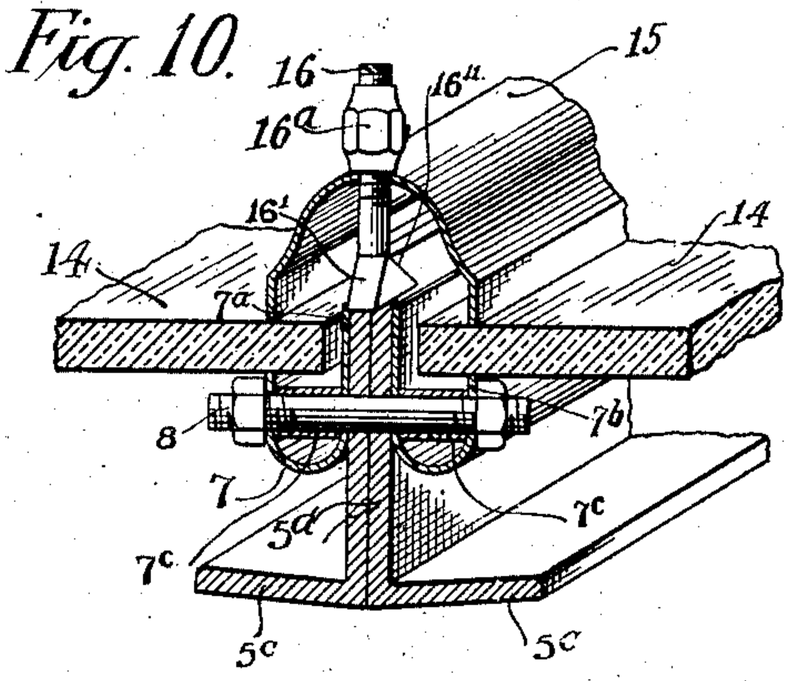


Fig. 12.

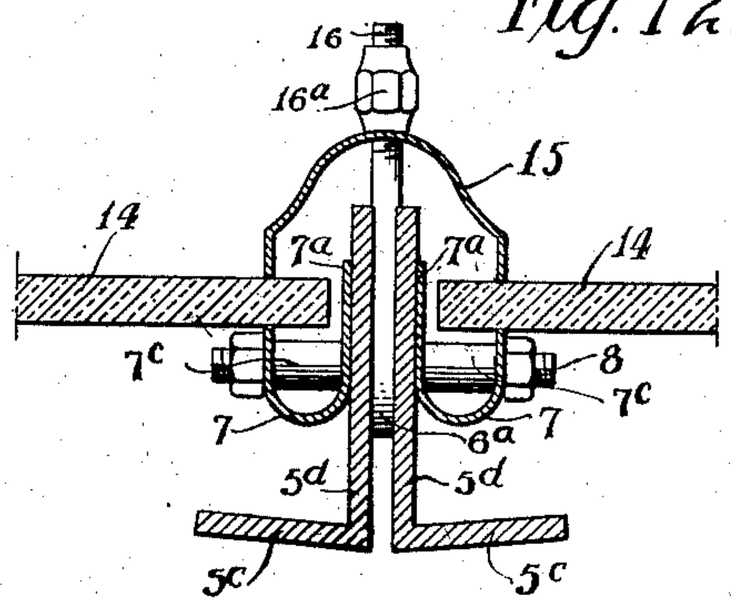


Fig. 11.

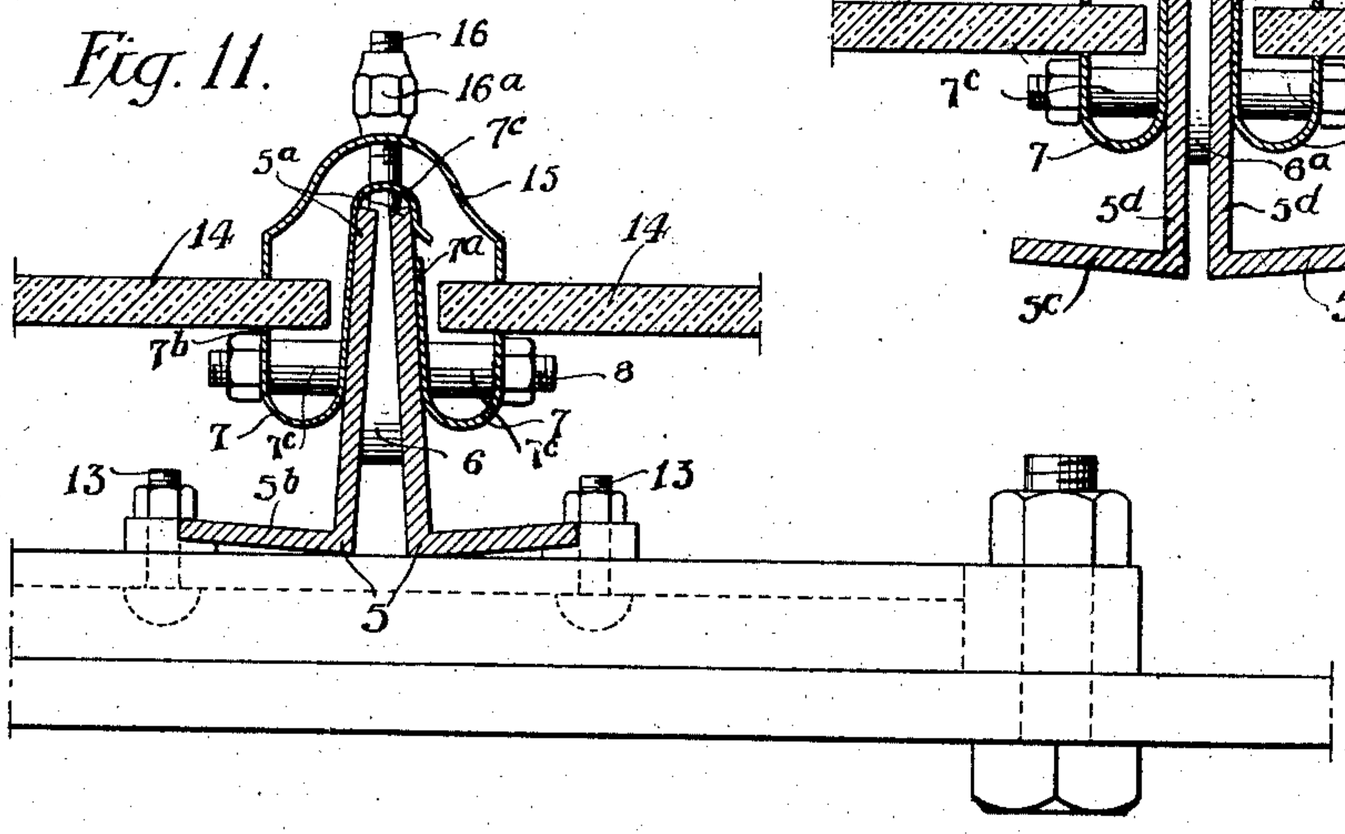
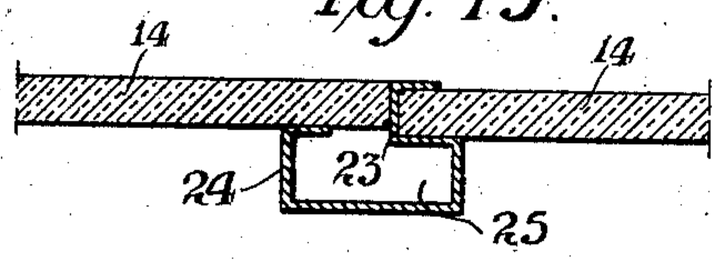


Fig. 13.



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UNITED STATES PATENT OFFICE.

JOHN FLYNN, OF NARBETH, PENNSYLVANIA.

SKYLIGHT.

No. 850,361. Specification of Letters Patent. Patented April 16, 1907.

Application filed January 30, 1905. Serial No. 243,182.

To all whom it may concern:

Be it known that I, JOHN FLYNN, a citizen of the United States, residing at Narbeth, in the county of Montgomery and State of Pennsylvania, have invented certain Improvements in Skylights, of which the following is a specification.

This invention relates particularly to the framing and joints of skylights; and it has as its leading purposes to secure a strong structure from shapes that are usual or readily formed and easily assembled or dissociated to provide for holding the glass in a satisfactory manner by devices of such flexibility as will permit them to conform to the surfaces upon which they bear, avoiding the irregular strains and imperfect joints that otherwise obtain, and to provide for collecting and conducting away the water of condensation or that which may work through the joints.

In the accompanying drawings, Figure 1 represents a plan view of a section of skylight made in accordance with my invention. Fig. 2 represents a sectional elevation thereof, taken on the line 2 2 of Fig. 1. Fig. 3 represents a side elevation, on an enlarged scale, of the intermediate or lap-joint shown in Fig. 2. Fig. 4 represents a perspective view of the jack-bar and its connection with the hip-bar. Fig. 5 represents a sectional view taken on the line 5 5 of Fig. 4. Fig. 6 represents a perspective view showing the details of the construction involved in the lap-joint of the skylight. Fig. 7 represents a perspective view of a side or end flashing construction. Fig. 8 represents a second form of side or end flashing construction. Fig. 9 represents a vertical transverse section through a bar and a purlin or sill supporting it. Fig. 10 represents a sectional perspective view of a modified form of bar and connections. Figs. 11 and 12 represent further modified forms of bars and connections, and Fig. 13 represents a sectional view of a butt-joint and condensation-gutter that may be employed.

Referring to the drawings, the ridge-sill 1 has secured thereto in any suitable manner the angle 2, which acts as a bearing for the upper ends of bars 3, fixed thereto. The lower ends of the bars are secured to and supported by the eaves-sill 4. The bars 3 comprise the angles 5, preferably having the legs 5^a used in the upright position longer than the legs 5^b, which extend laterally as lower flanges. Between the upright legs are the dovetail spacing members 6, whose bearing surfaces incline toward each other in the upward direction to give a corresponding inclination to the upright legs and elevate the outer ends of the laterally-extending legs or lower flanges of the bars to form conducting-gutters thereof. Channels 7, of bent sheet metal, have their legs 7^a and 7^b separated by the spacing-spools 7^c, the legs 7^a being placed against the upright legs of the angles, and a bolt 8 is passed therethrough and through the spacing members to secure the several parts together. The bars may be secured to supporting-sills, as 9, in any suitable manner, as by a bolt 10 passing through the upright members thereof and connected to the sill by a bolt 11 and by connecting the lateral members to the sill by bolts 12 or 13, the outer ends of the lateral members being held in the elevated position by the bearing-pieces 12^a or 13^a.

The outer legs 7^b of the channels serve as bearings for the glass plates 14, the plates being engaged by the legs 15^a of caps 15, which are arched over the tops of the bars and the edges of the glass plates to cover them being drawn down by the nuts 16^a on the bolts 16, connected to the spacing members or the bars. One of the legs 7^b may be carried over the top of the angles to form a cap $7^{c'}$ therefor where this is desirable.

Where the glass plates 14 are lapped, the channels 7 and caps 15 are similarly lapped, so that the channels form continuous conductors and the caps permit ventilation while preventing snow or water from working backward therethrough. Between the overlapping glass plates at the entrance to the joint from within I lay a wire 17, bent to incline from an intermediate point downwardly toward the channels to collect and carry off water of condensation working into the joint from the inner part of the skylight, and at the entrance to the joint from without I lay the coiled wire 18 to prevent moisture from working in.

The hip-bars and the jack-bars joined thereto are similar in construction to the regular bars, excepting that the angles 5′, composing the hip-bars, are of sufficient size to permit the angles 5″, comprising the jack-bars, to pass over the lateral flanges of the hip-bars without extending above the upright members thereof, the upward inclination of the lateral flanges providing a gutter

in the angles of the hip-bars in which water may be carried off beneath the jack-bars joined thereto. The jacks and hips are respectively provided with the channels 7′ and 7″ and the caps 15′ and 15″, which are respectively joined together to provide conductors and covers for the respective joints, as previously described.

Instead of using the dovetail spacing-blocks between the upright members of the bars, whereby gutters are formed by tilting the angles, these gutters may be formed by using a special form of angle in which the laterally-extending legs 5^c form acute angles with the legs 5^d, which are arranged vertically either in direct contact or separated by a spacing member 6^a, connected to the bolt 16. When the vertical legs are placed in direct contact, the bolt 16 is provided with a dovetail head 16′, which engages a dovetail recess 16″, formed in the angles.

The top flashing comprises a piece of sheet metal 19, fastened over the ridge-sill 1 and has the lip 19^a bent down upon the glass plates 14 and the caps 15 to cover the joint which they make with the sill. The side flashings may be formed as shown in Fig. 7, in which the glass 14 is supported by a channel 7, which with the angle 5 is connected to the side sill 20, a wedge-shaped bearing member 21 being placed between the sill and the angle to tilt the latter and form a gutter thereby. The cap 15^a for engaging the glass and covering the joint has the flange 15^d turned up and bearing against the sill, while the sill is covered by a cap 15^e, which envelops the flange 15^d, or, as shown in Fig. 8, the angle 5 may be used as the side sill, the glass plate 14 resting on the channel 7, connected thereto, the cap 15^b for covering the joint having the reversely-curved member 15^c for engaging and covering the top of the angle and the flash-plate 22, connected therewith.

Where it is desirable to use a butt-joint, I employ a union of distorted **S**-shaped cross-section having the part 23 for engaging one of the plates 14, the part 24 for supporting the abutting plate 14 and a channel 25 for conducting moisture that may work through the joint or condense on the inner surface of the plate.

The foregoing constructions provide effectively for taking care of the water and moisture that works through the joints of the usual constructions, while securing thorough ventilation. Skylights thus constructed can be made of any desired width without intermediate supports or purlins, and by the use of the bars employed the framework usually required for ridge skylights is rendered unnecessary.

Having described my invention, I claim—

A skylight comprising a pair of angle-bars each having an upwardly-inclined laterally-disposed member to form conducting-gutters, a block between upright members of said bars, a bolt passing through the upright members of said bars and channels and said block, plates supported by said channels, a cap covering the upright members of said bars and having legs resting on said plates, and a bolt connected with said block for holding said cap in place.

In testimony whereof I have hereunto set my hand, this 7th day of January, A. D. 1905, in the presence of the subscribing witnesses.

JOHN FLYNN.

Witnesses:
WM. C. ARMOR,
MARY E. HAUER.