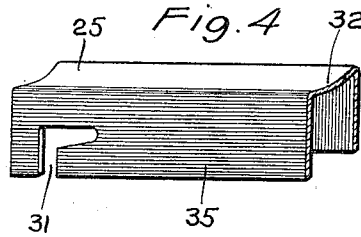
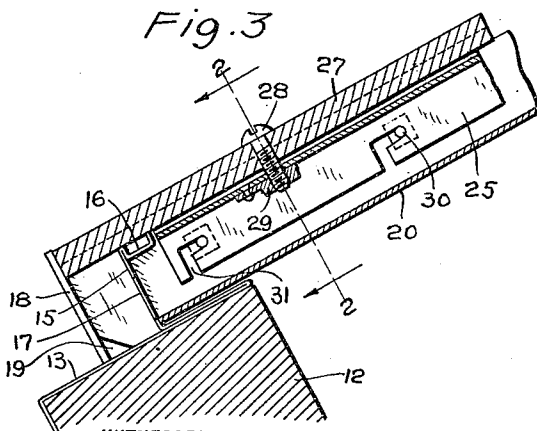
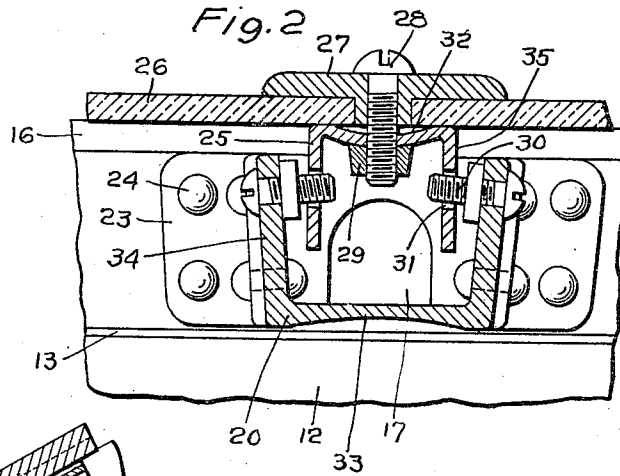
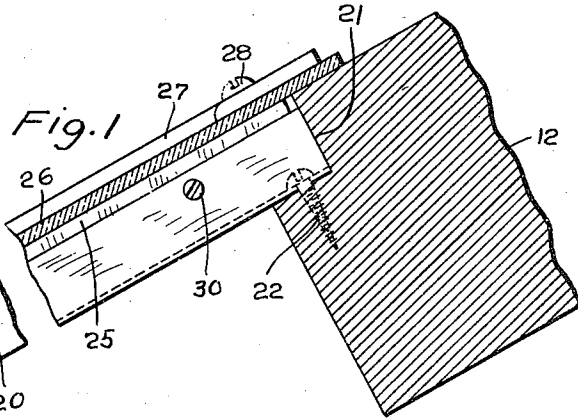
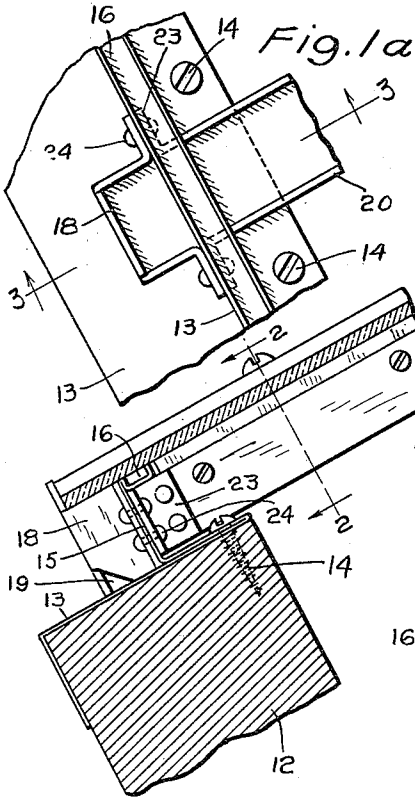


C. SCHROEDER.
SKYLIGHT BAR.

APPLICATION FILED JULY 31, 1911.

1,016,856.

Patented Feb. 6, 1912.



WITNESSES:

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CHARLES SCHROEDER, OF BRIDGEPORT, CONNECTICUT.

SKYLIGHT-BAR.

1,016,856.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed July 31, 1911. Serial No. 641,465.

To all whom it may concern:

Be it known that I, CHARLES SCHROEDER, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented an Improvement in Skylight-Bars, of which the following is a specification.

This invention relates to bars for supporting the glass in skylights, particularly in metallic structures, and has for its object to provide a skylight bar in which the use of putty, felt, or other packing or cushioning material, in which the glass is usually embedded, is avoided and at the same time injury to the glass, due to unequal expansion and contraction under the changes of temperature, is prevented, the improved construction having also provision for carrying away such water of condensation as may accumulate upon the underside of the skylight and which might otherwise be retained in the joints and cause rust or rot. These and other objects of the invention, together with means whereby the same may be carried into effect, will best be understood from the following description of one form or embodiment thereof illustrated in the accompanying drawing. It will be understood however that the construction described and shown has been chosen for illustrative purposes merely and that many changes may be made therein without departing from the spirit and scope of the invention.

In said drawing: Figure 1 is an elevation of the skylight bar, certain parts associated therewith being shown in section. Fig. 1^a is a plan view of the parts shown at the lower or left hand end of Fig. 1, the glass and parts attached thereto being removed. Fig. 2 is an enlarged sectional view on the line 2—2, Figs. 1 and 3. Fig. 3 is a longitudinal section substantially on the line 3—3 Fig. 1^a. Fig. 4 is a detail perspective view of a portion of the saddle bar.

12 denotes the skylight frame and 13 the curb attached to the lower side of said frame as by screws 14. Said curb is formed of sheet metal suitably folded or bent to provide a covering for the frame, an upstanding portion 15 to which the skylight bars are attached, and an open trough 16 immediately beneath the glass to form a storm or wind break as will be familiar to those skilled in the art. The upright portion 15 of the curb is provided with a drainage

opening 17, and to prevent the entry of wind and rain through said opening there is provided a shield or cap piece 18 secured to the outer face of the portion 15 and having 60 lateral outlets 19.

20 denotes one of the main supporting bars of the skylight, the same comprising a channel bar secured at its upper end to one of the frame members 12, as by being seated in a rabbet 21 and secured therein by a screw 22, or if preferred said bar may be seated upon and attached to a suitable angle iron (not shown) secured to said frame member. At its lower end the bar 20 is provided with 70 laterally projecting flanges 23 which, as shown in Fig. 1^a, are formed integral with the bar 20, and as shown in Figs. 1 and 2 comprise angle plates riveted thereto, said flanges being secured to the upright portion 75 15 of the curb 13 by means of rivets 24 which serve also to secure the cap piece or shield 18 to said curb.

25 denotes a saddle bar to which the glass 26 is clamped by means of a cap bar 27 80 secured to said saddle bar by bolts or screws 28 whose threaded ends may be provided with nuts 29 or may be received directly in threaded openings in the saddle bar 25 as may be preferred. The saddle bar 25 is of 85 relatively light construction as compared with the supporting bar 20 and is loosely connected therewith at a plurality of points throughout its length by the engagement of bolts or studs projecting inwardly from the 90 raised sides 34 of the channel bar 20 with angular slots 31 in the depending sides 35 of said saddle bar 25 which lie between and adjacent to the sides 34 of the channel bar.

The bar 25, to which the glass is clamped, 95 being of relatively light construction, the necessity of a packed or cushioned joint is avoided inasmuch as the expansion and contraction of this relatively light bar under the influence of heat and cold will have no 100 injurious results.

The engagement of the studs 30 with the angular or L-shaped slots 31, each of which has a transverse portion extending to the edge of the corresponding side 35 and a 105 communicating longitudinal portion extending parallel to said edge, serves to connect the bars 20 and 25 and to support the latter bar. The parallel bars 20 and 25, when in place, are usually arranged at an 110 angle to the horizontal, and the slots 31 are so arranged that the studs 30 will nor-

5 mally be held by gravity at the ends of the longitudinal portions of said slots away from the transverse portions thereof. This connection effectually prevents the lateral separation of these two bars under normal conditions but permits a limited longitudinal movement of one with respect to the other. The connecting means therefore permits differential expansion and contraction of the two bars, that is to say the bars may expand and contract independently of one another, so that the expansion and contraction of the relatively heavy bar 20, which imparts the necessary strength to the structure, does not injuriously affect either the glass itself or the joint between the glass and the saddle bar. The form of the angular slots 31 is such that the supporting and saddle bars may be easily and quickly connected and disconnected by moving them into an abnormal position longitudinally of one another so that the studs 30 can enter the transverse portions of the slots. Normally, however, the glass is firmly anchored to the supporting bar as above described. Moreover the bar 25 contributes to the strength of the bar 20 by bracing the same and imparting additional rigidity thereto.

30 The central portion of the bar 25 is preferably formed with a longitudinal depression or gutter 32, while the lower surface of the bar 20, particularly at the lower end thereof, is raised at the center to form a similar groove or gutter 33. The purpose of these gutters is to carry away any water of condensation which may form on the underside of the skylight and prevent the same from being held in the joints by capillarity and resulting in rusting or rotting of the parts. Any water finding its way into the joints between the saddle bar 25 and glass 26 will accumulate in the gutter

32 and be discharged thereby at the lower end of the saddle bar into the channel of the bar 20 from which it may escape through the opening 17 in the upright portion 15 of the curb. In a similar manner any water which may tend to accumulate beneath the lower end of the bar 20 will be discharged from beneath the raised portion 33 of said bar through said opening 17.

Having thus described my invention, I claim:

1. In a skylight, in combination, a relatively heavy supporting bar having raised sides, a relatively light glass carrying bar having depending sides lying adjacent the sides of said supporting bar, the sides of one of said bars being provided with angular slots having portions extending to the edges of said sides and communicating portions extending parallel to said edges, and studs projecting from the sides of the other of said bars and entering said slots.

2. In a skylight, in combination, a supporting bar arranged at an angle to the horizontal and having raised sides, a glass carrying bar arranged parallel to said supporting bar and having depending sides lying adjacent the sides of said supporting bar, the sides of one of said bars being provided with L-shaped slots having transverse portions extending to the edges of said sides and longitudinal portions, studs projecting from the sides of the other of said bars and entering said slots, said slots being arranged to cause said studs to be normally held at the ends of the longitudinal portions thereof away from said transverse portions.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES SCHROEDER.

Witnesses:

A. M. WOOSTER,
S. W. ATHERTON.