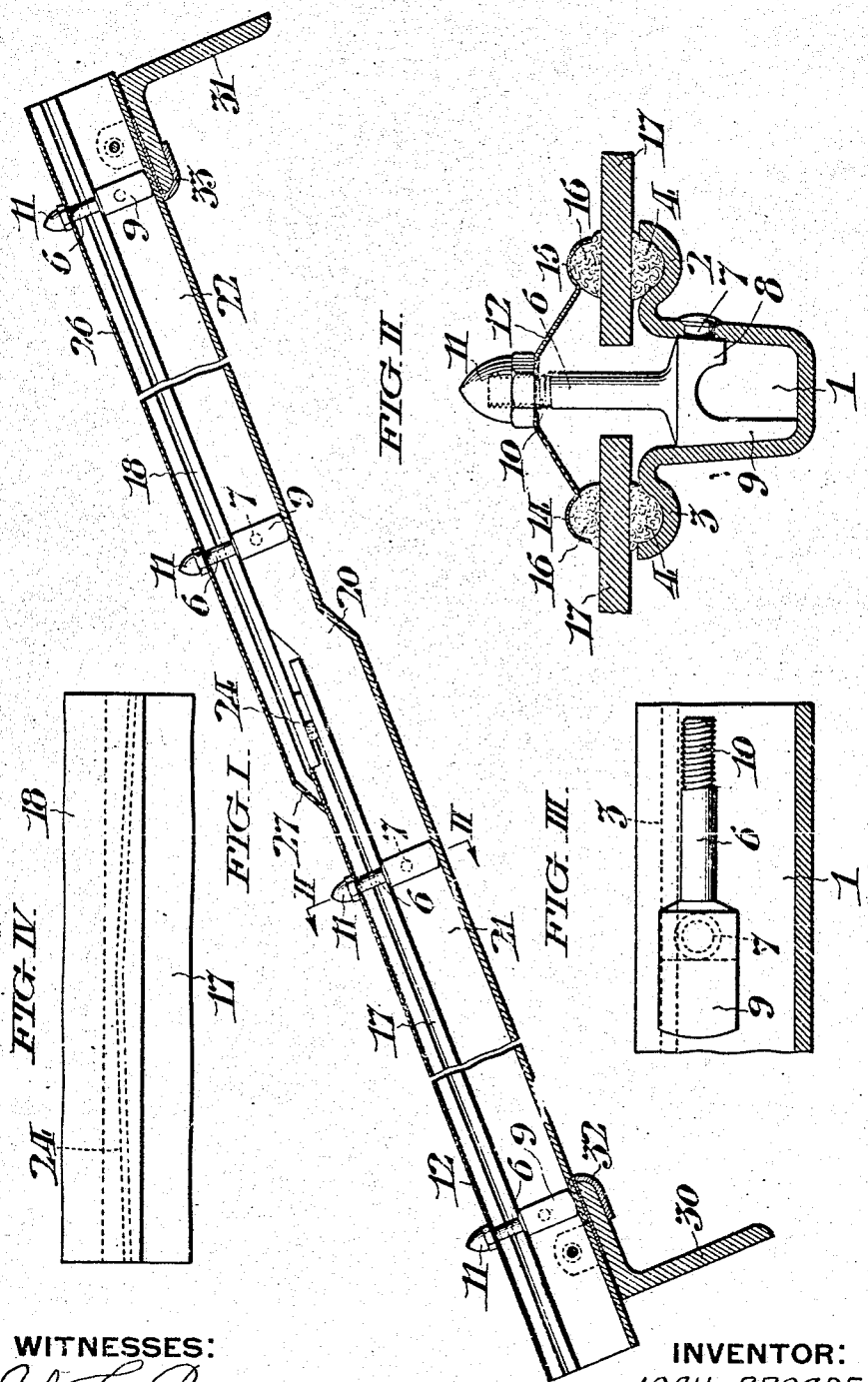


J. BROGDEN.
 SKYLIGHT BAR.
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968,737.

Patented Aug. 30, 1910.



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SKYLIGHT-BAR.

968,737.

Specification of Letters Patent. Patented Aug. 30, 1910.

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To all whom it may concern:

Be it known that I, JOAH BROGDEN, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Skylight-Bars, whereof the following is a specification, reference being had to the accompanying drawings.

My invention relates to sheet metal skylight bars. I have illustrated and will describe it as applied to what is termed the common bar of a skylight.

It is the object of my invention to produce a skylight bar within which the panes are so mounted as to rest on strong U-shaped packed supporting members upon which the panes are maintained by a water-tight connection without the use of putty. For this purpose I employ a trough-shaped structural bar made of heavy sheet metal with grooved wings integral with the edges thereof, which provide the means for maintaining the packing material. The other member consists of a lighter and more flexible metallic cap provided with corresponding grooved wings for packing materials. The two members are united by means which adjustably maintain them in proper relation to each other, the cap portion by reason of its thinner structure supplying the elasticity to control and permit the adjustment of the pressure between the parts, necessary to compensate for that flattening of the packing which time produces. The means for uniting the cap member to the bar are swiveled at the sides of the latter, instead of being fastened to the bottom of the trough-shaped bar, which latter construction is objectionable because it involves piercing the bottom of the trough, thus affording a possibility of leakage of the drip. The swiveled construction affords the further advantage that when the bar is packed for transportation, the uniting means may be turned down within the bar from its projecting position, so that it is not likely to be broken off.

In the accompanying drawings. Figure I, is a longitudinal vertical section through a skylight bar. Fig. II, is a section on the line II, II, of Fig. I. Fig. III, is a fragmentary section of a skylight bar and also showing a swiveled bolt in side elevation. Fig. IV, is a partial plan view showing the

joint formed by two overlapping panes, and the packing material between them.

As shown in the drawings, the main structural or body member of the skylight bar is substantially U-shaped or trough-shaped in cross section, and is formed along its upper edges with two lateral wings 2, and 3, shaped into semicircular grooves for the purpose of holding the packing material 4, such as oakum. The bar with its wings is rolled from a single sheet of metal.

At intervals along the length of the skylight bar swiveled bolts 6, are located. Each bolt is provided with a stud or rivet 7, on one side 8, which passes through one side only of the body portion 1, of the skylight bar, and is headed over sufficiently to maintain the bolt in position. The lower end of the bolt 6, is provided on the other side with a friction extension 9, adapted to conform to the interior contour of the body portion 1, of the skylight bar, thus aiding to maintain the bolt in its upright position, although the body is pierced only once for each bolt. The upper end 10, of the bolt 6, is screw threaded to receive the nut 11, by means of which the cap member 12, is held in position. The bolts 6, are swiveled to the body portion 1, so that they may be turned down into the position shown in Fig. III, when the bars are to be packed for shipment. This construction affords the double advantage of avoiding any piercing of the bottom of the trough shaped bar along which the drip passes, through which leakage might occur, and also of preventing the bending of projecting parts during transportation.

The cap member 12, is formed of sheet metal much thinner than the body portion and in the shape of an inverted trough or arch, more shallow than the body member, having lateral wings 14, and 15, which are formed into semi-circular grooves for the purpose of holding packing material 16, in proper position against the upper surface of the panes 17. Thus the grooves formed in the wings of the cap member are opposed to the grooves formed in the wings of the body member, and when the two are screwed down together by means of the nut 11, a perfectly water-tight joint may be produced without the use of putty. The comparatively flat angle of the wings of the cap member, and

their thinner structure, renders them sufficiently elastic to permit of an adjustment of the pressure between the parts by screwing down the nut 11, whenever the flattening of the packing material by reason of age renders such increased pressure desirable.

The body portion of the skylight bar may be offset at intervals, as at 20, depending upon the length of the pane which is to be supported by the bar. As seen in Fig. 1, the pane 17, rests upon the packing contained in the wings 2, and 3, of the section 21, of the body portion. The pane 18, rests similarly upon the packing material in the section 22, of said body portion, and these two sections 21, and 22, are offset with relation to one another sufficiently to allow the pane 18, to overlap the pane 17, and also provide for a strip of packing material 24. By reference to Fig. IV, it will be seen that this packing is inclined from the center toward each edge of the pane so that any water of condensation collecting on the under side of the pane 18, will trickle down upon the upper side of the pane 17, and encounter the water shed formed by the packing 24, and be deflected to each side into the gutters formed by the body portion 1, of the skylight bar.

The cap 12, extends over the contiguous edges of the panes 17, and maintains these panes in position against the packing material. The cap 26, extends over the contiguous edges of the panes 18, and overlaps the cap 12, as shown in Fig. 1. The lower end 27, of the cap 26, is bent downwardly to meet the upper surface of the cap 12. Thus the moisture on the outside of the cap 26, is transmitted to the overlapping panes or to the outer side of the cap member 12.

As shown in the drawings, the skylight bars are secured to their purlins 30, and 31, by means of metal clips 32, and 33, which are bent to include the purlins and are secured to the sides of the body portion of the bar, but any other suitable means of securing the bar to its supporting member may be employed.

The joint between the overlapping ends of the panes may be rendered water tight by means of a strip of lead bent into a suitable form and placed between the overlapping faces of said panes in place of the oakum strip 24, indicated in the drawings.

By the construction above set forth the skylight is rendered absolutely water tight without the use of putty, which tends to harden and deteriorate with age.

Having thus described my invention, I claim:—

1. In a skylight support, the combination with an integral U-shaped supporting bar having along each edge a laterally extending wing which is formed integral with the body portion of the bar, each of said wings having a recess facing the part to be supported, and adapted to receive a packing

material, a sheet metal cap in the form of an inverted arch and means for adjustably securing said cap to said supporting bar.

2. In a skylight support, the combination with an integral U-shaped supporting bar having along each edge a laterally extending wing which is formed integral with the body portion of the bar, each of said wings having a recess facing the part to be supported, and adapted to receive a packing material, a sheet metal cap in the form of an inverted arch, having laterally projecting portions formed integral therewith, each of said laterally projecting portions having a recess facing the part to be supported, and located substantially over the recess formed in the supporting bar, said recess in said metal cap being adapted to receive a packing, and means for adjustably securing said cap to said supporting bar.

3. In a skylight support, an integral U-shaped supporting bar made of such proportions as to form the sole support for the members to be supported, said supporting bar being provided along each edge with integral wings having a recess in their upper faces for the reception of a packing material, a sheet metal cap arched in cross section and so proportioned as to yieldingly clamp the members to said supporting bar, said cap having laterally projecting portions provided with a recess facing the members to be supported, said recess in the cap being substantially over the recess in the supporting bar, and said recesses being adapted to receive a packing material and means for adjustably securing the sheet metal cap to said supporting body portion.

4. In a skylight bar, a supporting member substantially U-shaped in cross section, an arched cap member, a uniting bolt swiveled to one of the sides of the U-shaped supporting member, and provided on its opposite side with an extension for frictional engagement with the opposite side of the body of said supporting member.

5. In a skylight bar, a supporting member which is substantially U-shaped in cross section, a uniting bolt swiveled to one side of the U-shaped supporting member, and provided at its opposite side with a comparatively narrow extension which engages the opposite side of said supporting member, and the bottom thereof, whereby the friction of the extension on the bottom of the supporting member, maintains said bolt erect.

In testimony whereof, I have hereunto signed my name, at Philadelphia, Pennsylvania, this twenty-third day of December 1907.

JOHN BROGDEN.

Witnesses:

JAMES H. BELL.

E. L. FULLERTON.