July 5, 1927. 1,634,288

F. HOEFEL

SKYLIGHT

Filed July 23, 1925 2 Sheets-Sheet 1

Fig. 1.

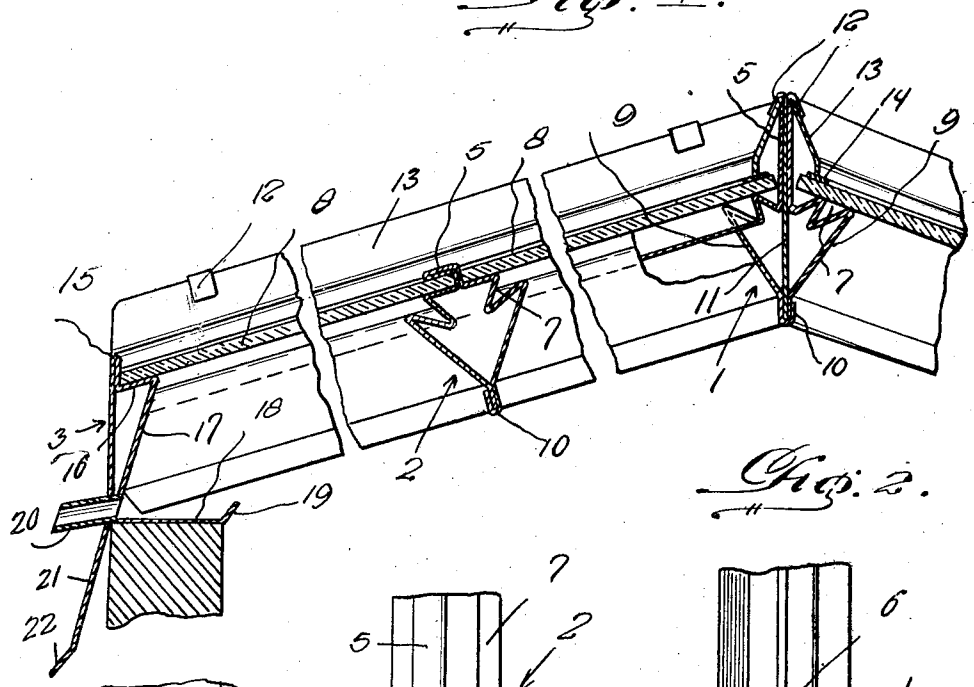
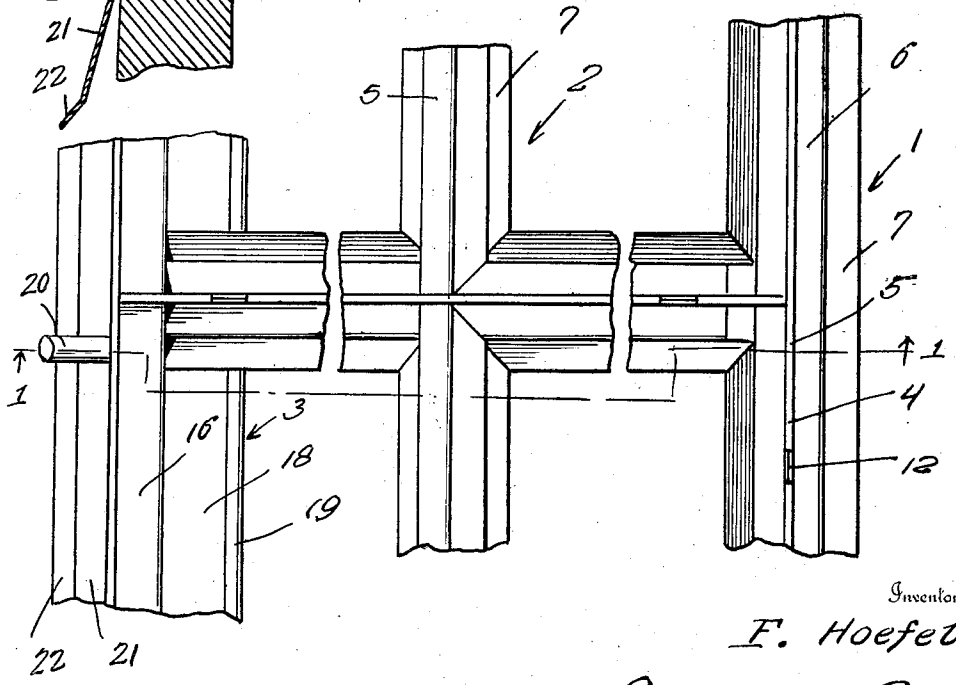


Fig. 2.



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Filed July 23, 1925 2 Sheets-Sheet 2

Fig. 3.

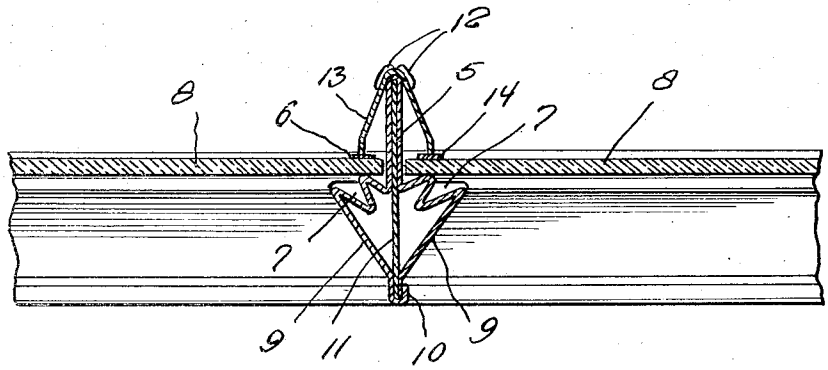

Fig. 4.

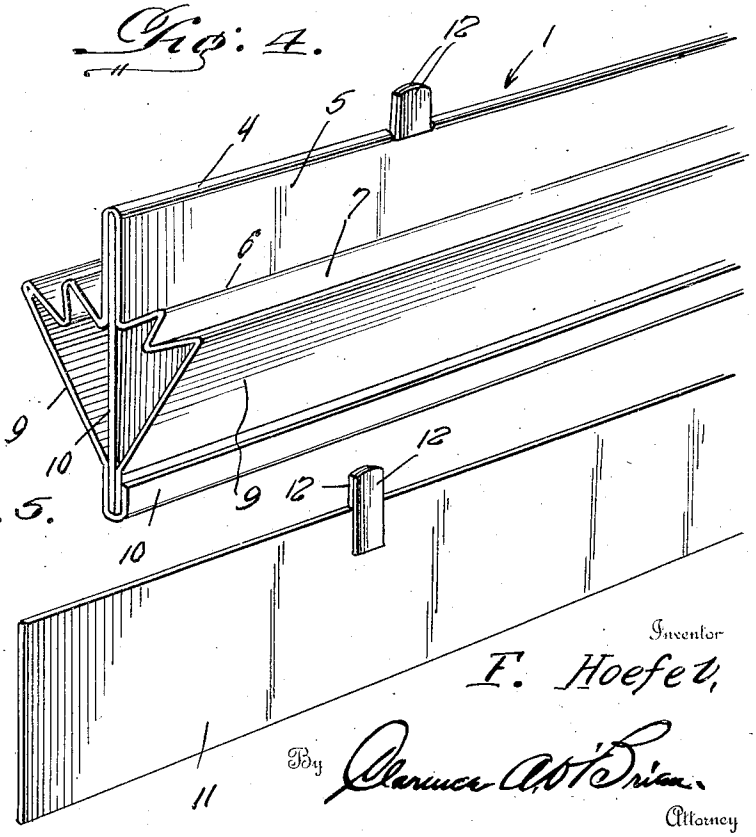

Fig. 5.

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UNITED STATES PATENT OFFICE.

FREDERICK HOEFEL, OF POTTSVILLE, PENNSYLVANIA.

SKYLIGHT.

Application filed July 23, 1925. Serial No. 45,658.

This invention relates to an improved skylight wherein the bars are of special construction and are made to embody condensation collecting troughs communicating with each other and leading to a novel discharge for moisture down onto the main roof.

I am aware that it is not new to provide a skylight wherein the bars which support the panes of glass are of hollow formation and are designed to provide means for conducting condensation and moisture to an appropriate discharge.

Accordingly, the broad proposition of a hollow skylight bar embodying a condensation trough is not herein claimed, the improvement being directed more particularly to a hollow bar which is formed of a single piece of metal and is bent in an unusual way to formulate troughs and to provide a rigid bar capable of withstanding considerable strain and pressure.

An outstanding feature of the invention is a hollow bar of this kind embodying a central reinforcing web equipped with retaining tongues by means of which a movable cap is held firmly in place.

Another feature is the improved side bar of the frame of the skylight wherein the same is provided with a means for effectively collecting the water, together with an apron and spout by means of which the water is literally passed outwardly and downwardly onto the main roof below the skylight.

Other features and advantages of the invention will become apparent from the following drawings and description.

In the accompanying drawings forming a part of this application and in which like numerals are employed to designate like parts throughout the same:—

Figure 1 is a sectional view of a fragment of a skylight embodying a frame, and a bar constructed in accordance with the present invention.

Fig. 2 is a top plan of Fig. 1 with the window pane removed.

Fig. 3 is a view contemplated upon the central hollow bar construction showing the details more plainly.

Fig. 4 is a perspective view of one end of the hollow bars.

Fig. 5 is a perspective view of a reinforcing web plate.

In the drawings, I have shown what may be referred to as a central bar 1 and an intermediate bar 2, together with one of the side or end pieces 3 of the frame. Attention is first directed to the center bar construction which is more plainly visible from Fig. 2 of the drawings. Referring more particularly to Fig. 4, it will be seen that the bar is formed from a single piece of metal which is bent between its ends as at 4 to provide a central upstanding partition piece 5. The bight portion of this partition is formed at longitudinally spaced parts with elongated slots serving a purpose to be hereinafter described.

The side portions of the metal plate are bent to provide substantially V-shaped gutters or troughs 6 and 7, there being a pair of such troughs on each side of the bar. It will be noted that the apices of the bends serve as rests for inclined glass panes 8. The end portions of the metal are now bent downwardly toward each other as at 9 with the extremity of one end brought around and bent over the other end as indicated at 10, thus connecting the two ends together and providing a substantially triangular hollow bar, the top portion of which embodies a central partition on the opposite sides of which are pairs of condensation conducting gutters. As previously intimated, a reinforcing web 11 is disposed at the center of this hollow bar. The bottom edge of this web rests between the end portions of the bar while the upper edge rests in the seat provided by the bight portion of the partition 5. As observed from Fig. 5, the web is provided with upstanding tongues 12, and these tongues are extended upwardly through the slots in the partition 5 and then are bent over the apex of an inverted U-shaped cap 13. This cap is disposed over the adjacent ends of the window panes as shown in Fig. 1 and strips of packing material 14 are interposed between the glass, the cap, and the seats formed by the apices of the bar gutters. It is obvious that the cap is provided with slots through which the tongues are extended and then the tongues are bent downwardly and clinched against the top as shown.

The intermediate bar 2 is substantially identical with that described except that the so-called partition 5 is here bent over in a manner to serve as a clamp for an adjacent edge 1 of the glass pane. A more detailed description of this bar is deemed to be unnecessary.

Attention is now directed to the end piece

of the frame designated generally by the reference character 3. This is formed of a single metal plate which is bent upon itself as at 15, then bent as at 16 to provide a ledge for reception of one edge of the glass and then downwardly as at 17, horizontally as at 18, and up as at 19. The parts 17, 18 and 19 form a collecting valley for the condensation after it has been conducted through the various communicating gutters with which the bars are formed. A discharge spout 20, or any number of them, extend downwardly from this valley. One end portion of the plate forming this side of the frame is directed outwardly and downwardly as at 21 with its extremity 22 bent outwardly upon a further incline. This forms an apron upon which water passing through the spout 20 is thrown and guided down onto the roof.

It is believed that a careful consideration of the description in conjunction with the drawings will set out clearly that while the novelty is not directed to a skylight generally considered, it is restricted more particularly to a bar, in one instance, which is used in connection with such a contrivance and second, to a frame therefor wherein each side of the frame is of the specific construction stated. The construction of both of such details seems to be clear and a more lengthy description is deemed unnecessary.

While the preferred embodiment of the invention has been shown and described it is to be understood that minor changes coming within the field of invention claimed may be resorted to if desired.

Having thus described my invention, what I claim as new is:—

In a skylight structure, a bar formed from a single sheet of material bent between its ends to provide a lower triangular portion of hollow form and a central upstanding vertical partition of U-shaped cross section, the free ends of said sheet being bent and connected together to form a channel at the apex of said triangular portion, the top portions on opposite sides of the partition of the triangle being bent to provide inner and outer condensation collecting and conducting gutters, a vertical reinforcing plate disposed within said bar and having its upper edge portion fitted into said U-shaped partition and its lower edge portion fitting into the apex channel, the crest of said U-shaped portion being formed with openings, and retaining tongues carried by the upper edge of said plate and extending through said opening.

In testimony whereof I affix my signature.

FREDERICK HOEFEL.