Sept. 25, 1923. 1,468,898

J. D. CANDLER

SKYLIGHT

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Fig. 5.

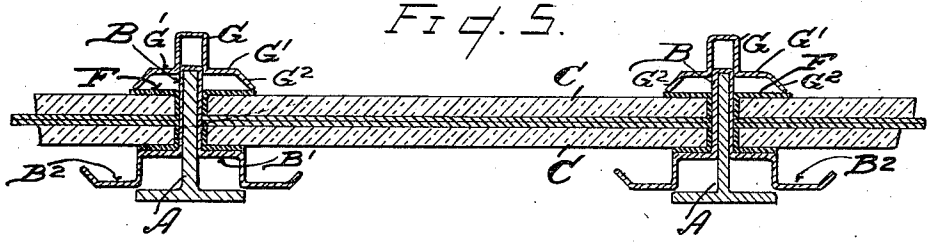


Fig. 6.

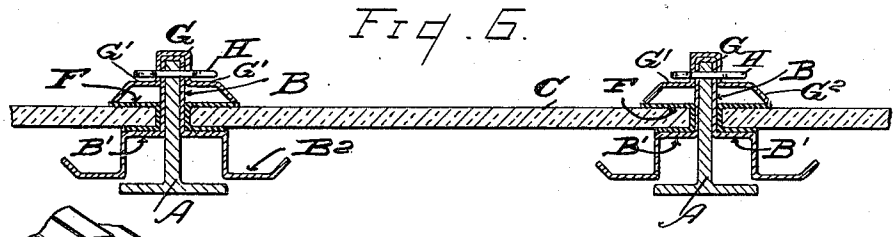


Fig. 1.

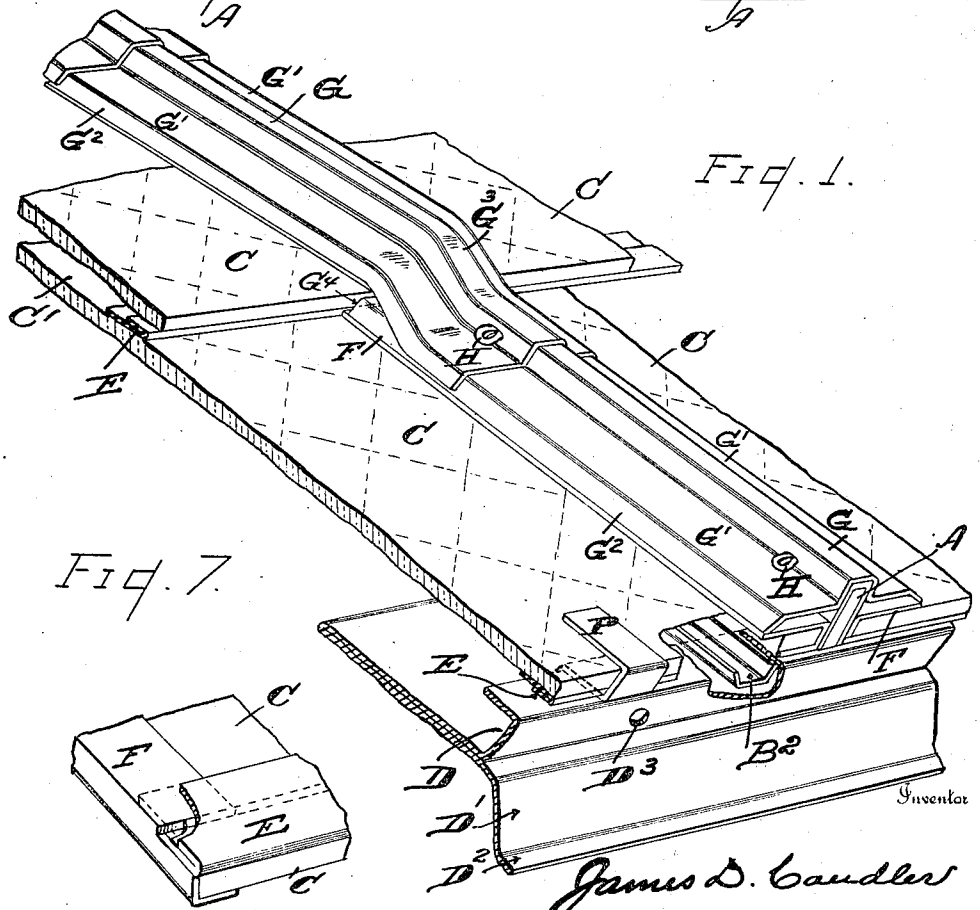


Fig. 7.

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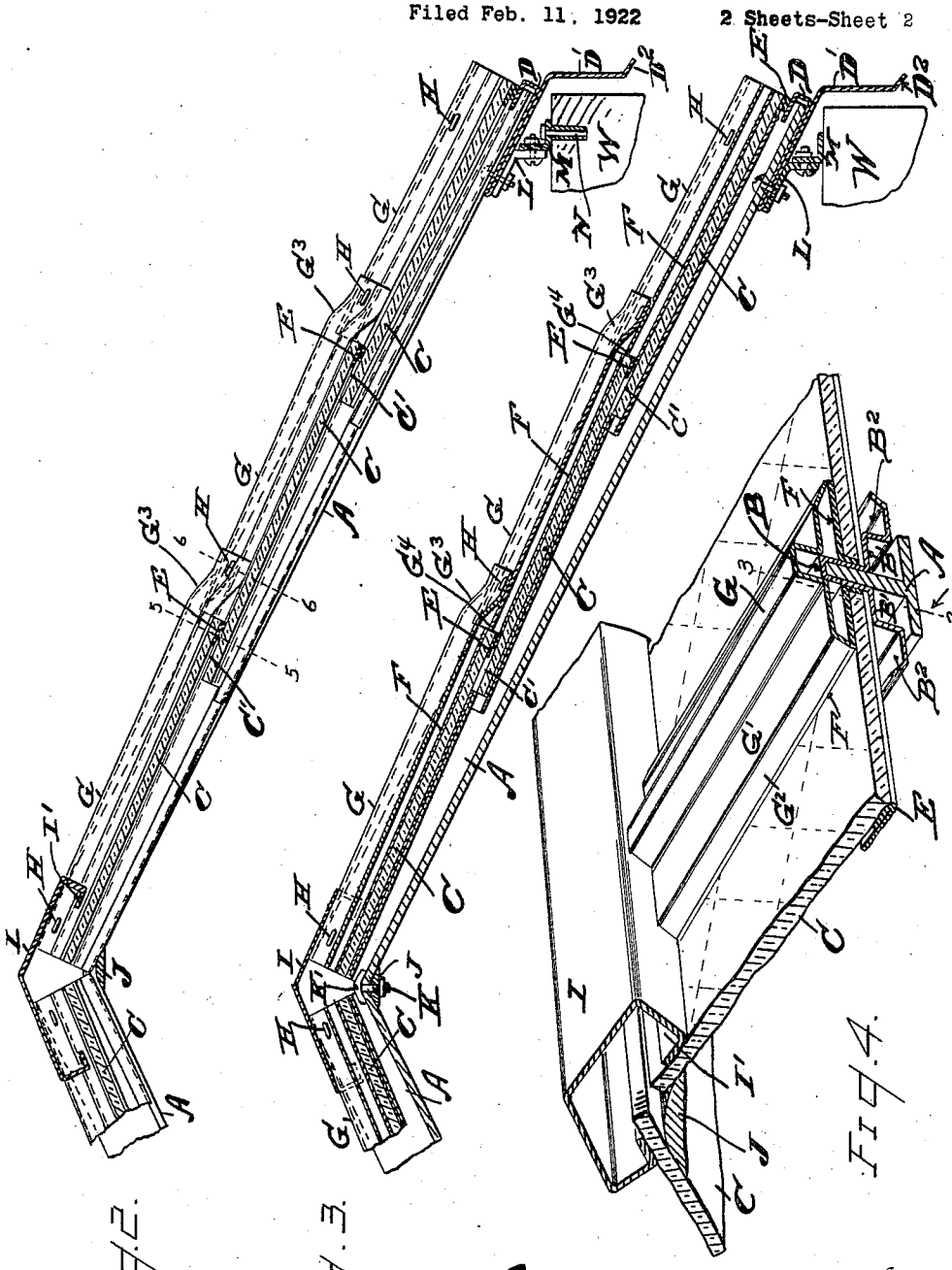


Fig. 2.

Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

JAMES D. CANDLER, OF DETROIT, MICHIGAN.

SKYLIGHT.

Application filed February 11, 1922. Serial No. 535,708.

To all whom it may concern:

Be it known that I, JAMES D. CANDLER, citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Skylights, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to skylights shown in the accompanying drawings and more particularly described in the following specification and claims.

One object of this invention is to provide a skylight which will be thoroughly waterproof and which is adapted to convey to the outside of the building any moisture which may have penetrated to the inside of the structure or collected in the form of condensation upon the underside of the glass.

A further object of the invention is to provide a standardized series of elements adapted to be connected together that a skylight of any desired dimension may be erected on the building site as distinguished from the usual method of assembling the parts at a shop to be subsequently transferred to the building site.

A further object of the invention is to provide a construction in which supporting rails of usual commercial form may be employed as distinguished from the especially rolled rails commonly employed in structures of this character, the cost of manufacture being thereby materially reduced.

With the foregoing and other objects in view which will appear as the description proceeds the invention further resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes may be made in the precise embodiment of the invention herein disclosed without departing from the spirit of the same.

In the drawings accompanying this specification:

Figure 1 is a fragmentary perspective view of the lower portion of the skylight adjacent the side walls of the building.

Figure 2 is a vertical transverse sectional view through the skylight, showing the supporting frames and overlapping lights of glass, with the cap covering the supporting T-bar in elevation.

Figure 3 is a similar view taken through the flange of the supporting T-bar or on or about line 3—3 of Figure 4.

Figure 4 is a fragmentary perspective view of the ridge showing the supporting T-bar, cap and a portion of two adjacent upper lights of glass.

Figure 5 is a longitudinal sectional view through the skylight with the T-bar in cross-section taken on or about line 5—5 of Figure 2.

Figure 6 is a similar view taken on or about line 6—6 of Figure 2.

Figure 7 is an inverted perspective view showing the construction of the overlapping lead joints, respectively parallel with the side and lower edges of the glass.

Referring now to the letters of reference placed upon the drawings:

A, denotes a glass-supporting bar of the usual T-rail type, the web of which is divided at the ridge that it may be bent at the flange to conform to the angle of the roof. B, indicates a saddle strip straddling the web of the inverted T-rail, provided with a step B′, on each side of the web to receive the edges of the glass supported thereby. Below the steps B′ the saddle strip is shaped to form gutters B^2, B^2 to receive condensation from the underside of the glass C or other moisture which may have penetrated to the inside of the skylight. The lower ends of the inverted T-rails extend into a sheet metal channel member D, terminating in a flashing D′ beyond the supporting wall W of the building, the lower edge of the flashing terminating in an outwardly bent flange D^2 that the drip may not follow the wall of the building. Upon reference to Figure 1 it will be noted that the gutters B^2 of the saddle strip B extend into the channel member D that the moisture delivered thereto may pass to the outside of the building through the "weep holes" D^3.

One of the features of the present invention resides in the fact that relatively small lights of glass may be employed if desired thereby reducing the original cost for erection and replacement of broken glass where required. To this end the lights of glass are overlapped as shown in Figures 1, 2 and 3

and between the lights of glass are strips of lead E which serve the dual purpose of preventing moisture entering from the outside and in conjunction with the projecting edge C′ of the glass below, serves as a channel to conduct the condensation formed on the inside of the glass to the gutters B^2 of the saddle strips B that it may pass therefrom through the weep holes D^3 in the channel member D to the outside of the building. Overlapping the side edges of the glass C—see Figures 5 and 6—and forming a "bed" for the glass upon the stepped portion B′ of the saddle strips B are lead strips F, these strips also serve to insure a tight joint to prevent entry of moisture from the outside of the building.

In the inverted detail view shown in Figure 7 is indicated as a matter of preferred construction the jointure of the lead strips at the sides and lower edges of the glass. Mounted upon and overlapping the saddle strips B, are cap strips G having outwardly projecting flanges G′ with downwardly extending rims G^2 impinging upon the lead strip F. The cap strips G are secured to the web of the T-rail by cotter pins H extending through apertures provided in the rail and also in the saddle strips—the cotter pins thus serving to secure the latter and the cap strips from displacement. The upper edge of the respective cap strips serve as an abutment for the lower edge of the light of glass above the strip—as indicated at G^4 in Figure 3—thus the glass is held against slippage. So also the cap strip G covering the side edges of the respective lights of glass is bent downwardly as at G^3—see Figures 1, 2 and 3 that it may receive the upper portion of the cap strip below to which it is secured by the cotter pins H as before explained. I, denotes a ridge member formed of sheet metal having its marginal edges bent downwardly and inwardly as at I′;—its marginal edges being slotted to receive the upper end of the T-rails including the upper edge of the saddle and cap strips. J, is a spaced bar to which the flanges of the respective T-rails are secured by bolts K, preferably formed with relatively long transverse heads K′.

Bolted to the lower ends of the T-rails is an angular bracket bar L, in turn bolted to an angle iron M secured by suitable drift bolts N to the supporting wall W.

To assist in securing the lower lights of glass suitable clips P are provided, having return bends overlapping the edge of the channel member D, into which the edge of the lower lights of glass project.

Having now indicated the several parts by reference letters the construction of the skylight will be understood, it being evident that standardized lengths of the cap and saddle strips may be used with glass of predetermined size and a skylight may be thus constructed of any desired dimensions directly upon the building site.

Having thus described my invention what I claim is:

1. In a skylight, the combination of an inverted T-rail, a plurality of sheet metal saddle strips mounted upon the web of the rail and having laterally extending stepped portions for supporting lights of glass with gutters beneath the stepped portion, a plurality of lights of glass supported at the sides upon the stepped portions of the saddle strips and overlapping each other at the ends, and a channel member adapted to be supported upon the wall of a building and receiving the lower ends of the gutters within its channel and having weep holes communicating with the gutters, said channel member also receiving the lower end of the T-rail within the said channel and having a downwardly extending flange overlapping the wall.

2. In a skylight, the combination of an inverted T-rail, a plurality of sheet metal saddle strips mounted upon the web of the rail and having laterally extending stepped portions to support lights of glass and provided with gutters below the stepped portions and integral therewith to receive and discharge condensation or moisture, a plurality of lights of glass supported at the sides upon the stepped portions of the saddle strips and overlapping the ends of adjacent lights of glass, glazing strips overlapping the side marginal edges of the glass between the latter and the stepped portions of the saddle strips, glazing strips between the lower and upper edges of the overlapping glass, and a channel member adapted to be supported upon the wall and receiving the lower end of the T-rail and the lower ends of the gutters and having weep holes communicating with the said gutters, said channel member being also provided with a downwardly extending flashing everlapping the wall.

3. In a skylight, the combination of an inverted T-rail, a plurality of sheet metal saddle strips mounted upon the upturned web of the T-rail having laterally extending stepped portions to support lights of glass and provided with gutters below the stepped portions and integral therewith to receive and discharge condensation or moisture, a plurality of lights of glass supported at the sides upon the stepped portions of the saddle strips and overlapping the ends of adjacent lights of glass, sheet lead glazing strips overlapping the side marginal edges of the glass between the latter and the stepped portions of the saddle strips, sheet lead glazing strips between the lower and upper edges of the overlapping glass, a plurality of cap strips overlapping the saddle strips and ex-

tending beyond the lower edge of the glass, said strips being bent downwardly to connect the adjacent cap strips below, cotter pins extending through the cap strips and web of the T-rail to connect the parts together, and a channel member comprising an intermediate inwardly extending portion to overlie the top of the wall, a front downwardly and outwardly extending flange portion and a front upwardly extending portion cooperating with the intermediate portion to form a channel, said channel receiving the lower ends of the gutters and the T-rail, weep openings being provided in the upwardly extending portion communicating with the gutters.

4. In a skylight, the combination of an inverted T-rail, a plurality of saddle strips mounted upon the web of the rail and having laterally extending stepped portions for supporting lights of glass and also provided with integral gutters beneath the stepped portions to receive and discharge moisture from the glass, a plurality of lights of glass supported at the sides upon the stepped portions of the saddle strips and overlapping each other at the ends, a plurality of cap strips overlapping the saddle strips and bent downwardly beyond the ends of the glass to couple with the adjacent cap strips, means for securing the cap strips and saddle strips to the web of the T-rail, a ridge member overlapping the upper ends of the T-rail and cap and saddle strips, a channel member adapted to be supported upon the wall and receiving the lower ends of the gutters and the lower end of the T-rail within its channel and having weep holes communicating with the gutters for the discharge of moisture to the outside of the building, a bracket member secured to the T-rail, and means for securing the bracket member to a building wall.

5. In a skylight, the combination of an inverted T-rail, a plurality of sheet metal saddle strips mounted upon the web of the rail and having laterally extending portions to receive lights of glass and provided also with gutters below the laterally extending portions to receive and discharge moisture, a plurality of lights of glass supported at their side marginal edges upon the laterally extending portions of the saddle strips with their ends overlapping the ends of adjacent lights of glass, metallic glazing strips between the sides of the glass and said laterally extending portions of the saddle strips and overlapping said side marginal edges of the glass, metallic glazing strips between the upper and lower faces of the adjacent lights of glass forming with the underlying portion of the adjacent lights of glass lateral channels to conduct moisture to the gutters, and a channel member adapted to be mounted upon a wall and having a channel at its inner side receiving the lower ends of the gutters and the lower end of the T-rail, said channel member being provided with weep holes at the said gutters for the discharge of moisture from the same and having a downwardly and outwardly extending flashing overlapping the wall.

In testimony whereof, I sign this specification in the presence of two witnesses.

JAMES D. CANDLER.

Witnesses:
S. E. THOMAS,
WILLIAM W. CANDLER.