(No Model.)

G. HAYES.

METALLIC SKYLIGHT.

No. 280,034. Patented June 26, 1883.

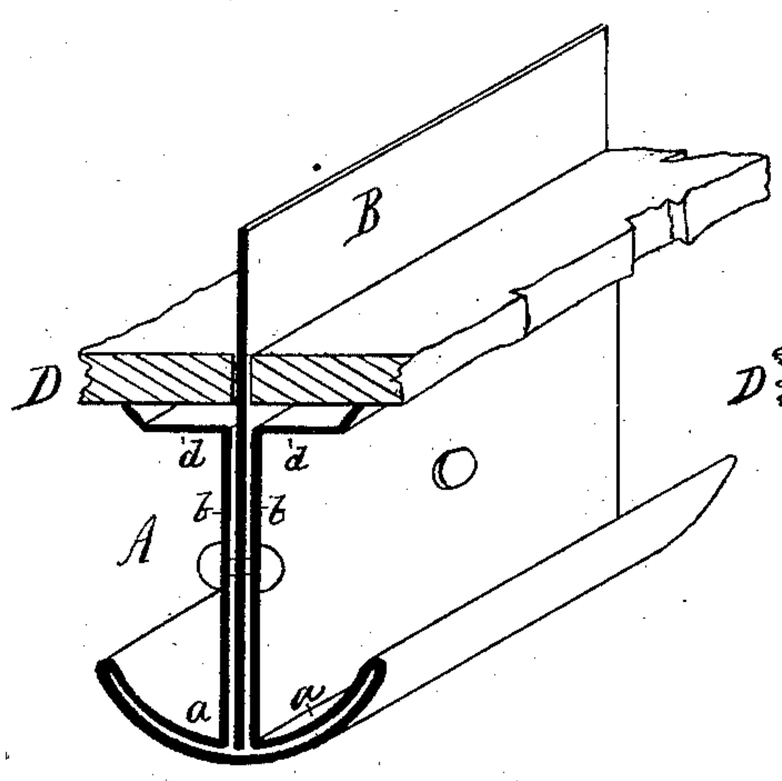

Fig. 1.

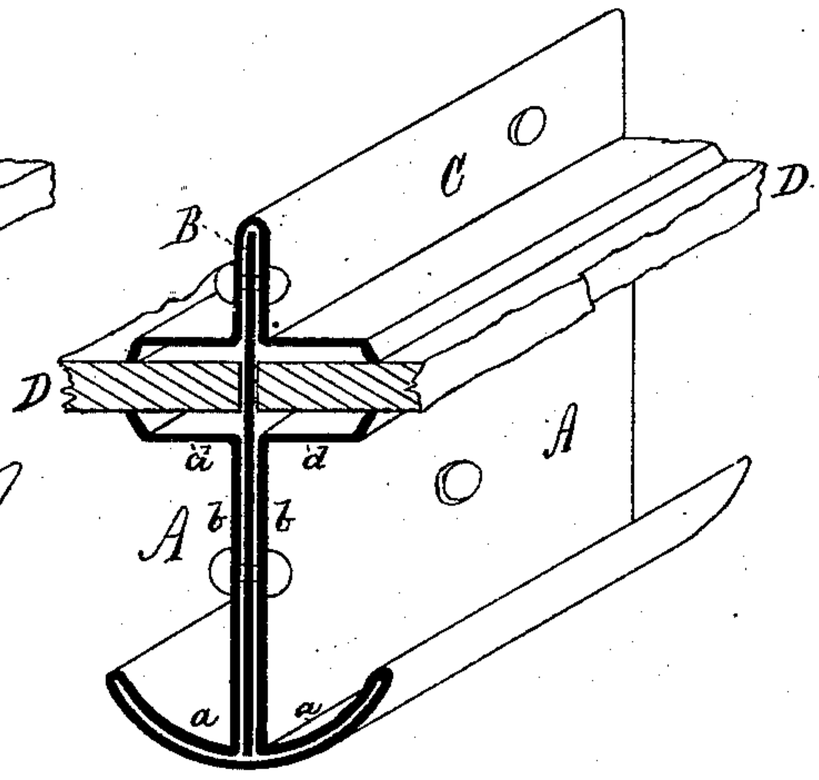

Fig. 2.

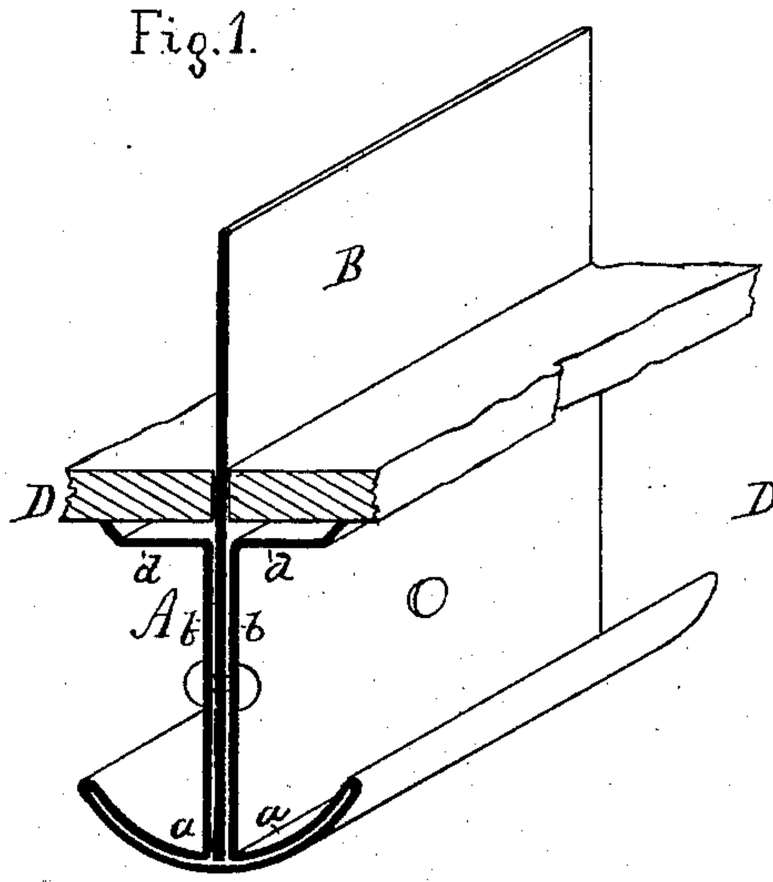

Fig. 3.

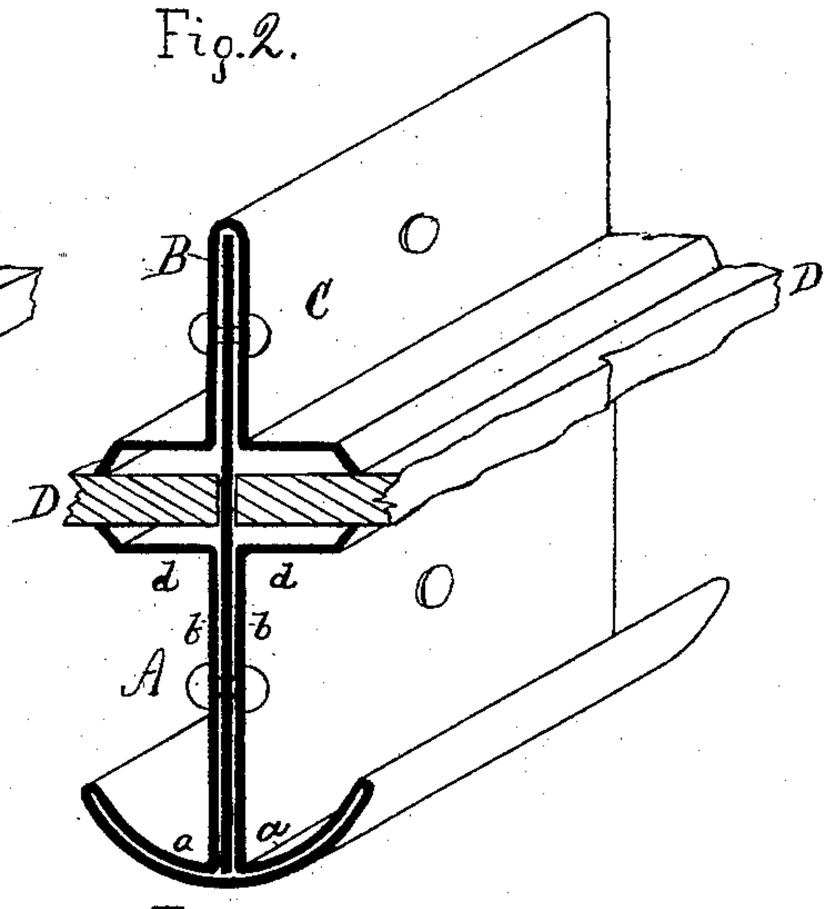

Fig. 4.

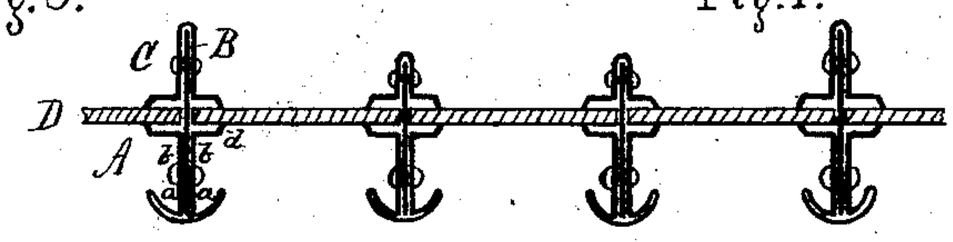

Fig. 5.

Witnesses:
Richard H. Reilly
George A. Hayes

Inventor:
George Hayes

UNITED STATES PATENT OFFICE.

GEORGE HAYES, OF NEW YORK, N. Y.

METALLIC SKYLIGHT.

SPECIFICATION forming part of Letters Patent No. 280,034, dated June 26, 1883.

Application filed October 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HAYES, of the city, county, and State of New York, have invented a new and useful Improvement in Metallic Skylight-Bars, of which the following is a specification.

The nature of my invention consists in the combination of a metallic vertical plate with a certain and peculiar form of skylight bars or rafters. The bar is bent upward from the bottom and of one piece of sheet metal—as, for instance, that known as "galvanized iron" or "black iron"—to be galvanized after the bar is completed. In forming this bar the metallic sheet is bent to form lateral gutters at the base, a vertical central portion above the gutters, and at the top lateral flanges or ledges for the reception and support of the glass plates, the two sides of the bar fully corresponding. The gutters—one on each side—collect and carry off the moisture from condensation and drip resulting from leakage, should any occur through the joints at the edges of the glass plates above. The two sides in the center extending upward, back to back, from gutters at the bottom to the ledges or flanges at the upper part form the vertical central portion of the bar. The metallic vertical plate is inserted between these two sides down into the vertical portion of the bar to its bottom, its upper part extending vertically above the ledges and between the glass plates, to any suitable distance above the same, to receive a cap, whereby the joining of the glass is covered. The angle formed with the ledges as a base and the vertical plate on each side form rebates, (or rabbets,) into which the glass plates are set. The vertical plate above the glass forms a high ridge, and to this is applied a cap straddling the ridge, and riveted thereto in such manner as to protect the joint and be readily removable for reglazing. The cap is added after the glass is in place. The vertical plate extends the length of the bar, and may be of any width desired. The bar is riveted thereto at its lowest part. The object of the vertical plate is to give strength to the bar, and its width and thickness may be varied according to the strength requisite.

Hitherto vertical plates have been used, but completely incased by the bar and the width limited to the height of the bar; but the width in this instance is unlimited, as well as the thickness.

In the drawings, Figure 1 is a perspective view of a bar without cap, showing the end as a section. Fig. 2 is a similar view with a cap. Fig. 3 is a perspective of a bar with wider core-plate and no cap. Fig. 4 is a similar view of the same bar with cap. Fig. 5 shows a sectional view of an arrangement of bars where some have higher core-plates than others.

A is the bar, B the core-plate, C the cap, D the glass plates, *a a* the gutters of the bar, *b b* the vertical central portion, and *d d* the ledges or flanges supporting the glass plates.

The bar thus constructed with all its elements in combination makes a very strong, serviceable, yet cheap bar, the strength of which may be readily varied to suit the size of skylight, span, and weight of glass plates without varying the portion below the glass, or the bar proper, by simply inserting core-plates of the width required. When made of black iron, this bar as completed may be readily galvanized, the zinc filling all the pores, folds, and joints, affording complete protection, which cannot be done with any other bar so effectually and to protect the metal so thoroughly, as the galvanizing material will not enter and properly coat a hollow bar with the same facility, it being disposed to choke or fill up, making the bar heavy and expensive through the waste of this material.

In certain localities it is necessary to arrange the bars so that some will have wider core-plates than others, forming what is called "principal bars" or "rafters," and lighter bars intermediate. In this way the ridges of some will rise higher above the glass than others—that is, the intermediates. There is no alteration in the "bars proper" below the glass, thus presenting uniformity from below, while the cores of the principal bars project above, strength being given thereby to the structure, with lightness and also cheapness, avoiding the unsightly appearance which would result if some bars were protruding downward into the apartment more than others. Fig. 5 shows in section this manner of arranging bars.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In combination with bar A, formed of one piece of sheet metal, to constitute gutters *a a*, central portion, *b b*, and flanges *d d*, constituting ledges for glass plates, the internal or core plate, B, inserted between the central portion, *b b*, of the bar A, and extending upward through and above the glass plates, to form rabbets, (with ledges *d d*,) and high ridge, substantially as shown and described.

2. In combination with bar A and core-plate B, constructed as described, the cap-plate C, as and for the purpose specified.

GEORGE HAYES.

Witnesses:
RICHARD H. REILLÈ,
GEORGE A. HAYES.