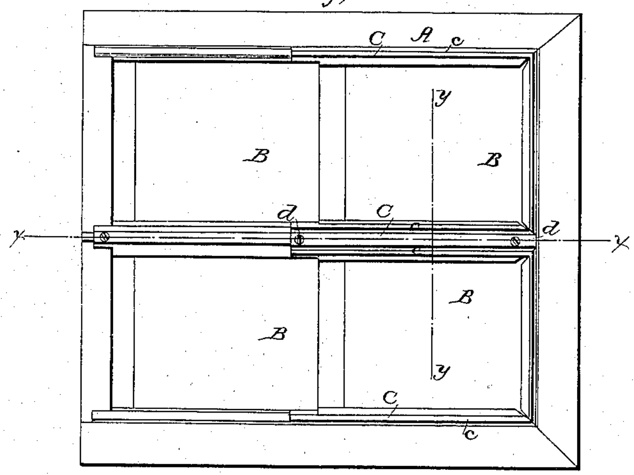
Woodward & Holden.

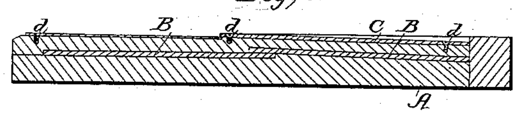
Window Sash.

No. 48,126. Patented Jan. 6, 1865.

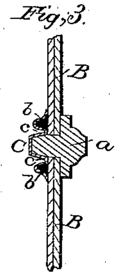
Fig; 1.



Fig; 2.



Fig; 3.



Witnesses;
Wm. Trevin
C. L. Topliff

Inventors;
J. N. Woodward
W. Holden
per Munn & Co
Attorneys

UNITED STATES PATENT OFFICE.

J. N. WOODWARD AND W. HOLDEN, OF AURORA, ILLINOIS.

IMPROVEMENT IN SASHES FOR ROOFS OF HOT-HOUSES.

Specification forming part of Letters Patent No. 48,126, dated June 6, 1865.

To all whom it may concern:

Be it known that we, JOHN N. WOODWARD and W. HOLDEN, of Aurora, in the county of Kane and State of Illinois, have invented a new and useful Improvement in Sashes for Hot-House Roofs, Skylights, &c.; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan or top view of our invention; Fig. 2, a section of the same, taken in the line *x x*, Fig. 1; Fig. 3, a transverse section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention consists in covering the upper or outer portion of the sash with sheet-metal strips constructed as herein described, and using in connection therewith putty or other suitable cement or material, whereby the sash is rendered perfectly tight and weather-proof and far more durable than the sashes as now glazed.

A represents a sash, which may be constructed in much the usual way, and the glass B set in the sash and bedded as usual, and putty applied. The portions *a* of the sash above the glass B are covered by sheet metal C. Tin would answer the purpose, but other metal might be used. This sheet metal is cut into strips of the desired width, and by means of a swage or otherwise is bent in a form corresponding to the portions of the sash it is designed to cover, the metal covering the putty *b*, as well as the wood portions of the sash, as shown clearly in Fig. 3.

We design to have the metal C swaged or bent so as to form gutters *c c* at each side of the wooden bars *a*, and have the ends of the metal strips overlap each other just below where the lights of glass B overlap. The metal strips C are secured to the wooden parts *a* by screws *d*.

We do not confine ourselves to any particular form for bending the sheet metal, as that depends solely on the shape or style of the sash or the bars thereof.

The metal, it will be seen, protects both the wood and the putty from the action of the weather, and renders the sash very durable.

The ordinary sashes are very liable to have the putty shelled off from them, especially in winter, if the wood shrinks a trifle, and allows water to pass in between the wood and the putty, as the expansion of the water in freezing will most generally start the putty.

Our invention will not augment in an appreciable degree the cost of the construction of the sashes, while the durability obtained by its adoption renders it extremely valuable.

We claim as new and desire to secure by Letters Patent—

The sheet-metal strips C, constructed with gutters *c c*, and employed in combination with the sash A, glass B, and putty or luting *b*, in the manner and for the purposes described.

JOHN N. WOODWARD.
W. HOLDEN.

Witnesses:
H. F. VAN WORTRUCK,
W. B. GILLETT.