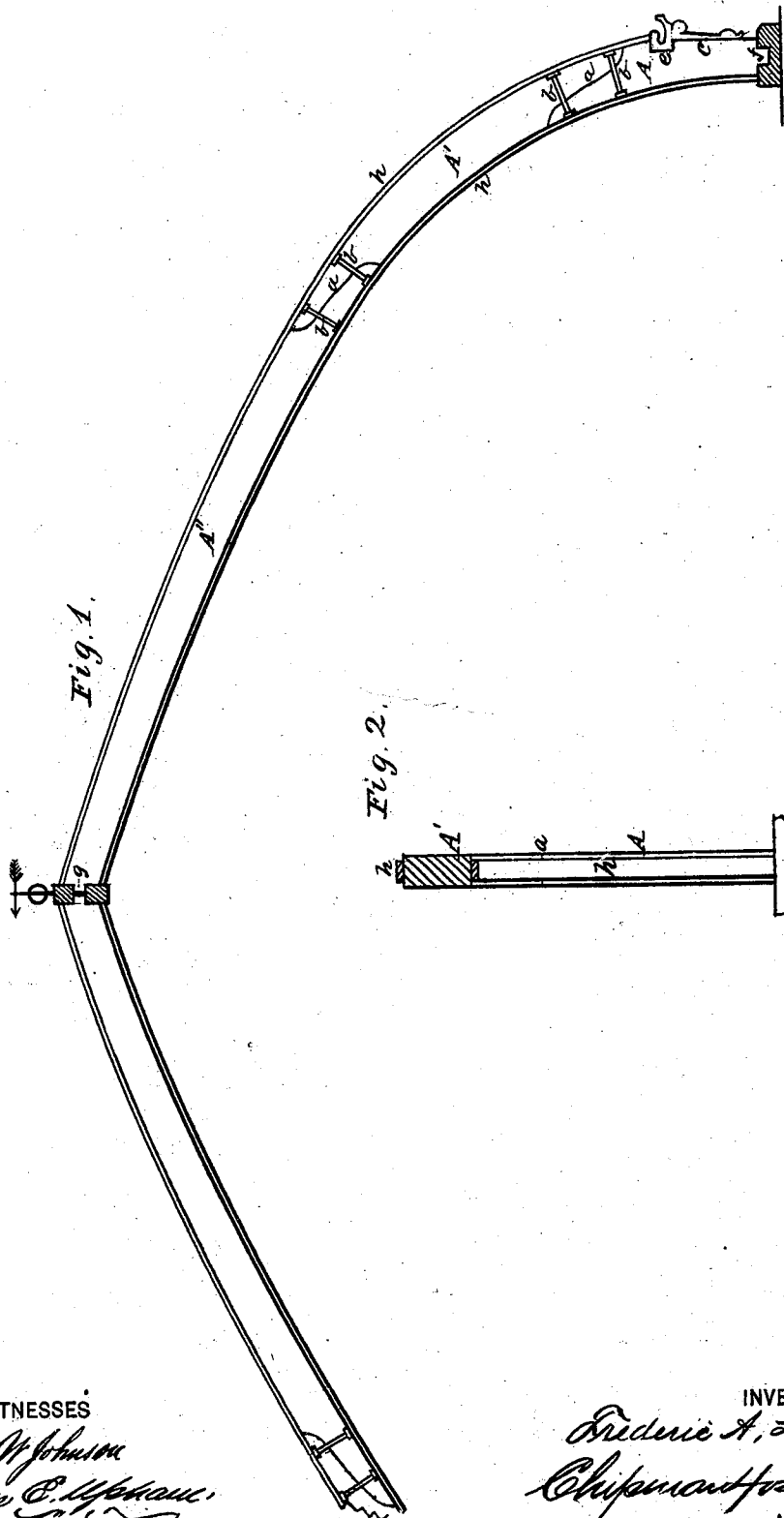


F. A. LORD.
GREEN-HOUSE RAFTER.

No. 173,029.

Patented Feb. 1, 1876.



WITNESSES

Edw. W. Johnson
George C. Johnson

INVENTOR

Frederic A. Lord,
Chipman and Johnson & Co.,
ATTORNEYS

UNITED STATES PATENT OFFICE.

FREDERIC A. LORD, OF IRVINGTON-ON-HUDSON, NEW YORK.

IMPROVEMENT IN GREEN-HOUSE RAFTERS.

Specification forming part of Letters Patent No. **173,029**, dated February 1, 1876; application filed January 22, 1876.

To all whom it may concern:

Be it known that I, FREDERIC A. LORD, of Irvington-on-Hudson, in the county of Westchester and State of New York, have invented a new and valuable Improvement in Green-House Rafters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my rafter, and Fig. 2 is a sectional view of the same.

This invention has relation to the construction of green-houses; and it consists in the novel formation of a rafter rising vertically from the sill, and running, first, upon a sharp curve, and, secondly, upon an arc of longer radius to the ridge, said rafter being formed of two or more pieces jointed together and bolted at the joints, and edged inside and outside with continuous strips nailed to the body of the rafter, and reaching on the inside from the ridge to the sill, and on the outside from the ridge to the seat for the plate and gutter attachments, as hereinafter shown and described.

Green-house rafters are made of comparatively thin stock, in order not to obstruct the light more than is absolutely necessary, while securing the necessary rigidity and strength. For curvilinear roofs they are commonly formed upon a continuous single arc, reaching from the ridge to upright supporting-posts, which extend downward to the sill.

In the accompanying drawings, wherein I have illustrated my invention, the letters A A' A'' designate the sections of which the rafter is formed. Each section is cut with the grain of the wood, and the three sections are jointed together with beveled abutting ends, as shown at *a*, and secured by means of bolts *b* passing through the depth of the rafter. The lower section A, on its inner edge, is continuous with the curve of the other sections; but its outer edge is designed to stand vertical, as indicated at *c*, for the greater portion of its length. At the uppermost portion the first or sharp curve of the rafter begins on the

outside, the notch or seat for the ventilator-plate and gutter-fastening being located below the initial point of this curve, and at the top of the vertical portion, as shown at *e*. At the lower end of the section A is formed the sill-tenon *f*. The sharp curve is continuous for the most part through the middle section A', the main or long flat curve of the uppermost portion commencing in its upper portion, and continuing throughout the section A', at the upper end of which is the ridge-tenon *g*. On the inner edge of the rafter a continuous strip, *h*, of wood is nailed, reaching from the ridge to the sill. This strip serves materially to strengthen the rafter, and prevents sagging. On the exterior edge a similar strip is nailed, reaching from the ridge to the plate seat or notch. The strip is not so wide as the edge of the rafter, and is centrally located, so as to leave an angular groove or rabbet on each side. When the curvilinear roof is not very wide the rafter may easily be made in two sections.

I am aware that a dome-shaped skylight composed of curved rabbeted metallic rafters, thick plates of curved glass, curved metallic caps, a ridge and double-gutter piece, as shown in Letters Patent granted to J. B. Cornell, dated May 18, 1869, numbered 90,240, has heretofore been employed, and I therefore lay no claim to such invention.

What I claim as new, and desire to secure by Letters Patent, is—

A green-house rafter consisting of the sections A A' A'', rising upward vertically from the sill, and extending to the ridge in a continuous curve of two circles, having different radii, and secured together with bevel-joints and bolts, and provided with mortise-and-tenon joints at the sill and ridge, and with exterior and interior binding-strips *h h*, substantially as described, and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

FREDERIC A. LORD.

Witnesses:

JOHN O'CONNOR,
WM. A. BURNHAM.