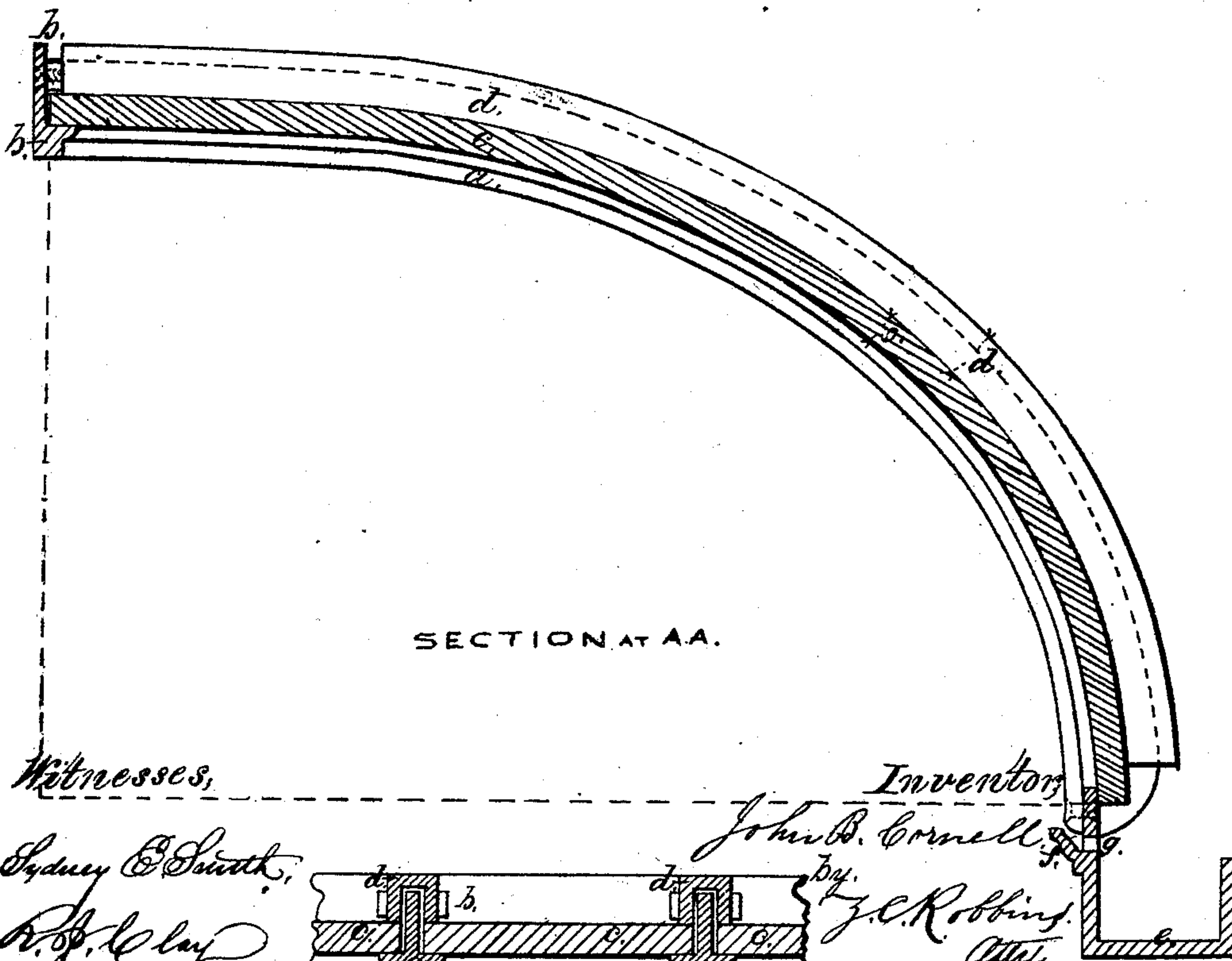
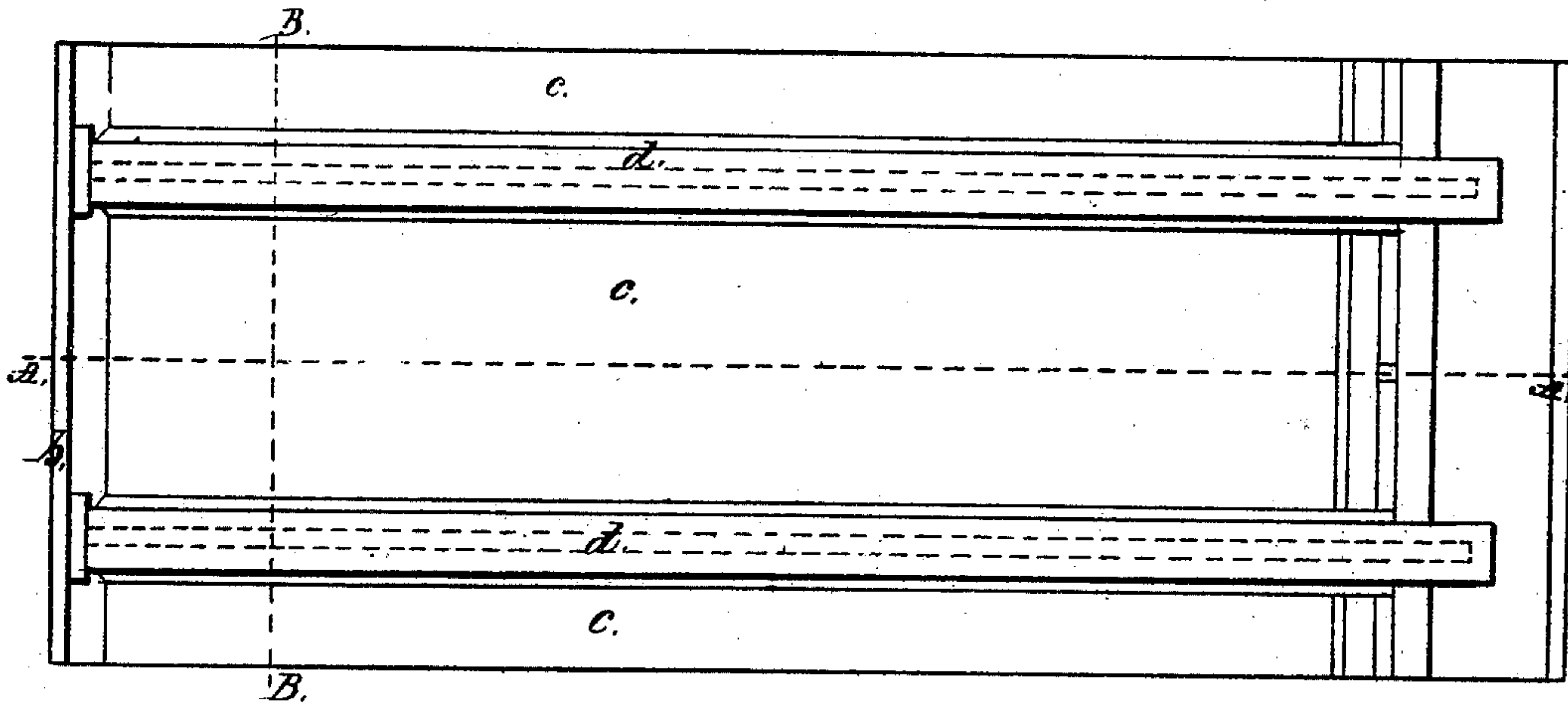


J. B. CORNELL.

Skylight.

No. 90,240.

Patented May 18, 1869.



Witnesses,

Sydney E. Smith,

R. J. Clay

Inventor,

John B. Cornell, Jr.

by J. C. Robbing,

att'y



# UNITED STATES PATENT OFFICE.

JOHN B. CORNELL, OF NEW YORK, N. Y.

## IMPROVED FIRE-PROOF SKYLIGHT.

Specification forming part of Letters Patent No. 90,240, dated May 18, 1869.

*To all whom it may concern:*

Be it known that I, JOHN B. CORNELL, of the city, county, and State of New York, have invented a new and improved burglar-proof and fire-proof curved or dome-shaped skylight for mercantile establishments, &c.; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, which form a portion of this specification.

The curved skylights which have been placed at the rear ends of the elongated store-rooms in the city of New York have heretofore been made in accordance with the plans set forth in the patents of Thaddeus Hyatt, or, in other words, those sky-lights are composed of plates or disks of glass set in small apertures in strong iron plates, and are liable to the following objections: First, the under surface of the Hyatt skylight being diversified by a series of isolated cavities and projections, the water that condenses thereupon must necessarily drip from each of said projections upon whatever may be placed beneath the same, and sometimes valuable goods are seriously damaged from this cause; second, the light which passes through the Hyatt skylight falls in broken masses upon the merchandise that may be exhibited beneath the same, and gives to some descriptions of goods a mottled and damaged appearance.

Now the afore-enumerated defects in the Hyatt skylight are perfectly obviated by the peculiar construction of my improved skylight, and without in any degree diminishing the fire-proof and burglar-proof qualities of said skylight.

My said improved curved skylight is composed of curved and rabbeted iron rafters *a a*, thick plates of curved glass *c c*, holding metallic caps *d d*, a ridge-piece, *b*, and a gutter-piece, *e f*, all arranged and combined with each other substantially as represented in the accompanying drawings. The curved rafters *a a* are arranged at a safe and proper distance from each other, their upper ends being strongly and securely fastened to the ridge-piece *b*, and the lower ends of the same to the gutter-piece *e f*. The gutter-piece *e f* is of such a shape as to form an inner gutter, *f*, and an outer or main gutter, *e*. The said inner gutter, *f*, receives all the water that may be condensed upon the inner surface of the skylight

and discharges the same through the series of apertures *g* into the main gutter *e*, which receives the water that falls onto the exterior surface of the skylight. Every portion of each of the rafters *a a* must have a sufficient degree of inclination to insure the downward flow of all the water that may be condensed thereupon. A corresponding inclination must also be given to the plates *c c* of thick glass for the purpose of insuring the discharge of all the water that may be condensed on the under surface of the skylight into the gutter *f*. The thick plates of curved glass *c c*, having been fitted between the raised ledges of the rafters *a a* in such a manner as to insure their resting securely upon the shoulders thereof, the protecting and holding metallic caps *d d* are then placed upon the said rafter-ledges and secured thereto in the strongest and most reliable manner. To produce water-proof joints between the edges of the glass plates *c c*, the rafters *a a*, and the caps *d d*, any suitable soft-metal or cementing composition may be employed.

This construction of skylight, it will therefore be perceived, enables the illuminating glass plates to extend the entire length thereof, and leaves so narrow a space between said plates that the light will pass as perfectly through my improved skylight as it does through an ordinarily-shaped window; and if the series of curved rafters and cap plates of said skylight be properly proportioned as to depth, this skylight will possess greater powers of resistance against the operation of burglars than is possessed by any Hyatt skylight.

What I claim as my invention, and desire to secure by Letters Patent, as a new manufacture, is—

My improved burglar-proof and fire-proof curved or dome-shaped skylight, composed of curved and rabbeted metallic rafters *a a*, thick plates of curved glass *c c*, curved metallic caps *d d*, a ridge-piece, *b*, and a double gutter-piece, *e f*, all combined with each other substantially in the manner herein set forth.

The foregoing specification of my improved burglar-proof and fire-proof curved or dome-shaped skylight signed and witnessed this 15th day of February, 1869.

JOHN B. CORNELL.

Witnesses:

H. W. REDFIELD,  
EDMUND A. SMITH.