

(No Model.)

I. SCHOENBERG.

INCIDENCE WINDOW FOR LIGHTING BASEMENTS, VAULTS, &c.

No. 354,440.

Patented Dec. 14, 1886.

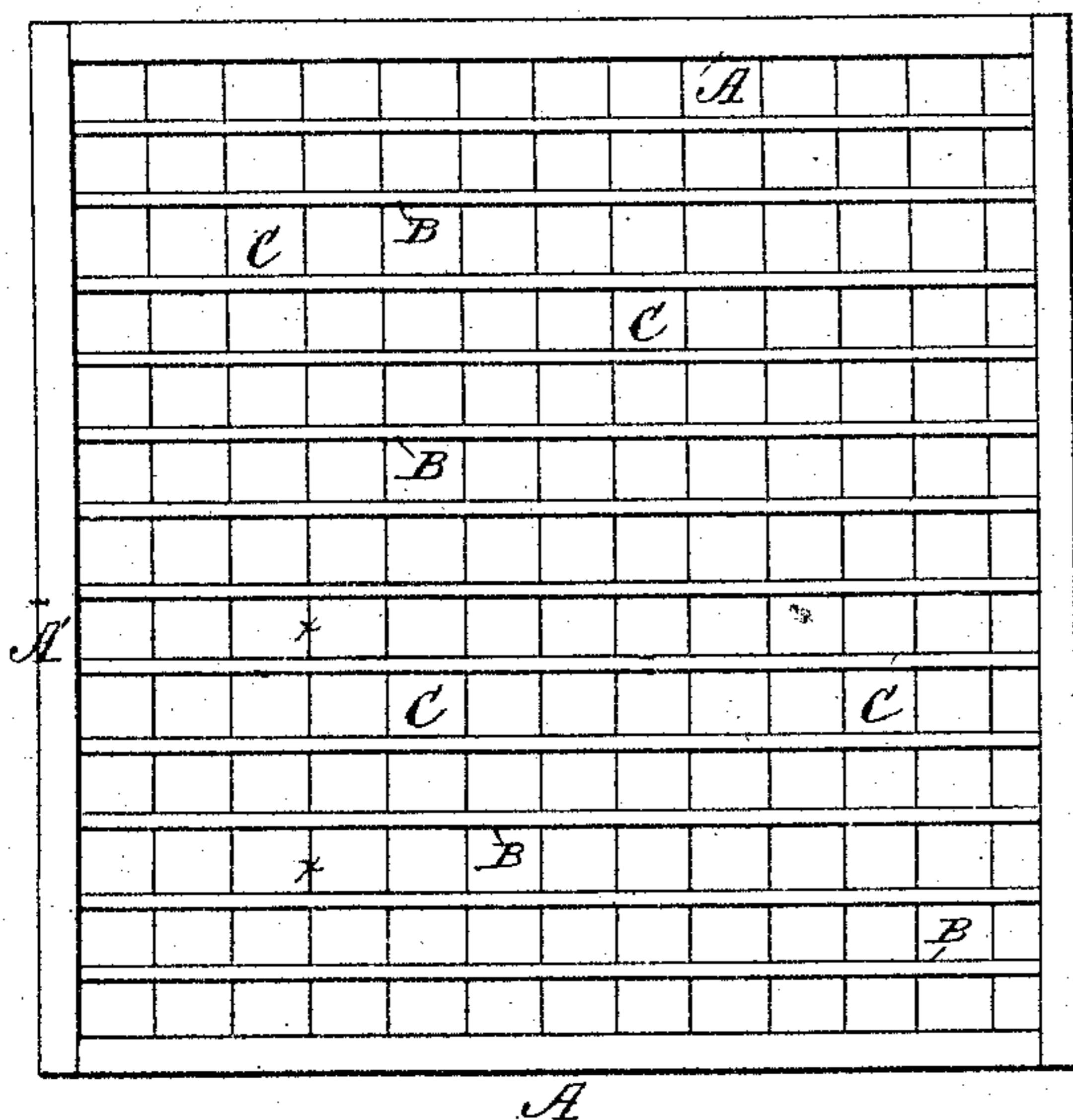


Fig. 2.

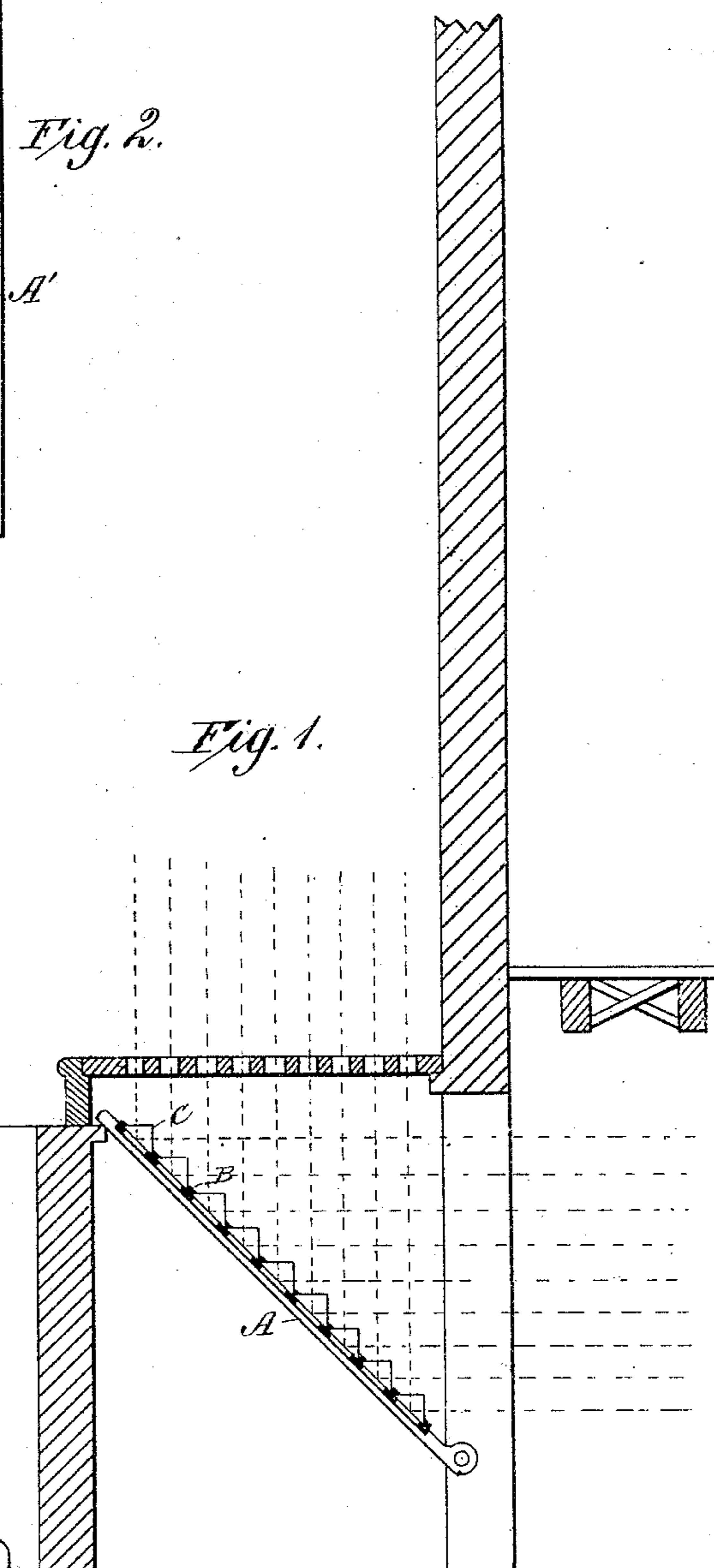
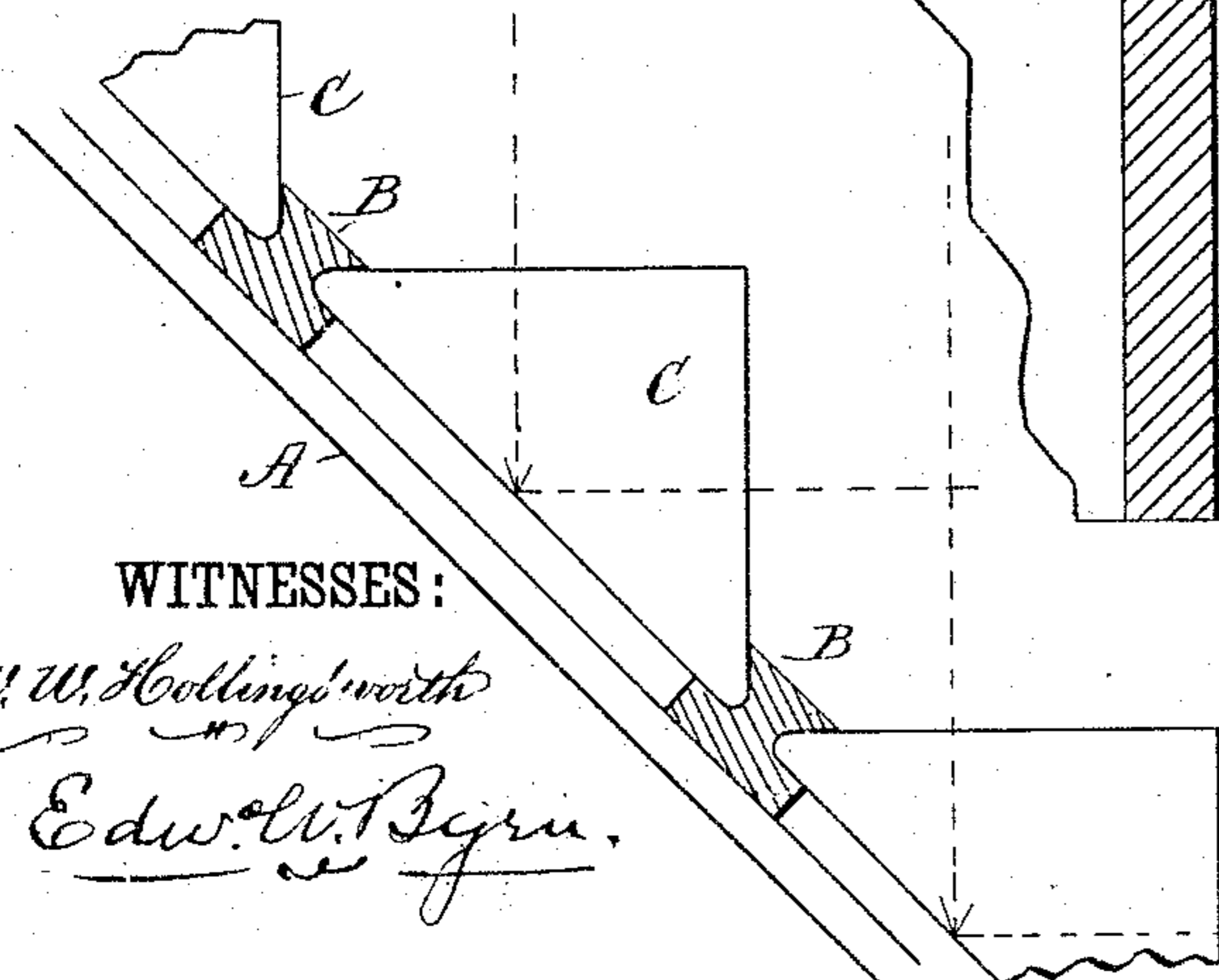


Fig. 1.

Fig. 3.



WITNESSES:

W. W. Hollingsworth

Edw. L. Byrne.

INVENTOR:

Isidor Schoenberg

BY

Munn H

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ISIDOR SCHOENBERG, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE
AMERICAN CRYSTAL LIGHT COMPANY, OF BOSTON, MASS.

INCIDENCE-WINDOW FOR LIGHTING BASEMENTS, VAULTS, &c.

SPECIFICATION forming part of Letters Patent No. 354,440, dated December 14, 1886.

Application filed April 24, 1886. Serial No. 200,102. (No model.)

To all whom it may concern:

Be it known that I, ISIDOR SCHOENBERG, of Baltimore city and State of Maryland, have invented a new and useful Improvement in Incidence-Windows for Lighting Basements, Vaults, &c., of which the following is a specification.

My invention relates to what is known as "incidence-windows" for lighting basements, vaults, &c. For this purpose prismatic blocks of glass have heretofore been used; but the isolated character of these blocks, which are generally placed in separate sockets, and the sustaining-shoulders formed on the same, reduced their reflecting-surfaces, so as to give only a partial result, and the blocks were not easily accessible for cleaning, besides requiring a larger amount of glass for each block.

My invention corrects these difficulties by an improved construction, which I will now describe with reference to the drawings, in which—

Figure 1 is a vertical sectional view of a store-basement having a vault light or grating with my incidence-window beneath it. Fig. 2 is a front view of my incidence-window, and Fig. 3 is an enlarged sectional view of the window through line *xx* of Fig. 2.

A A A' A' represent the iron frame of the window. From the sides A' A' there extend the parallel rails B, which are grooved on both sides. Into the adjacent grooves of rails B B are slid the prismatic-glass blocks C, which are right-angled triangular blocks, two of which, when placed together, with their long sides against each other, form a perfect cube, or a right-angled square prism. These blocks are made without shoulders or projections, and are slid between the grooved rails with the long side or hypotenuse in the plane of the frame, the acute angles in the grooves, and with their two shorter sides disposed on the same side of the frame—the one horizontal and the other vertical. These blocks lie flush against each other, forming parallel rows of glass blocks, that make a complete glass window.

The frame A A' is disposed at an angle, and the blocks receive on their horizontal surfaces the vertical rays of light, which, striking

the hypotenuse, are reflected in horizontal direction through the vertical walls of the prism into the basement or vault to be lighted.

The window may be placed beneath the illuminating vault-light of a store, or may be placed above ground for throwing light horizontally into the upper stories, which may be darkened by the proximity of tall adjacent buildings.

As this window has the greatest amount of exposed reflecting-surface without shoulders, it gives the greatest amount of light, and the faces of the prism are readily accessible for cleaning. The window may also be hinged at its lower or upper end, so as to close and form a shutter, if desired.

When the glass blocks are all slid into place between the rails, they are held in place by end cleats or strips, and any tendency to looseness or rattling is prevented by a suitable filling of cement in the grooves.

Instead of using short or square blocks, they may be made long, as prismatic bars, and be slid integral into place between the rails.

Among other useful applications of my invention, I employ the same for the direction and diffusion of electric light.

In rendering my invention more distinctive, I would state that the shutter or frame is arranged at an inclination, with its higher arm most remote from the building, in which position the hypotenuse of the glass blocks, or the side of the block which is in the plane of the frame, forms the reflecting-surface, while the block itself projects upwardly instead of downwardly, thus exposing its two sides, so that they may be readily accessible for removing accumulations of dirt, which interferes with their efficiency.

Having thus described my invention, what I claim as new is—

1. An incidence-window composed of a frame with a parallel series of glass blocks of right-angled triangular shape, having their long sides or hypotenuse in the plane of the frame, with the blocks projecting upwardly, so as to expose their two sides, substantially as and for the purpose described.

2. An incidence-window composed of a

frame having parallel grooved rails, with a parallel series of blocks slid between the rails, with their acute angles in the grooves and the long side in the plane of the frame, substantially
5 as and for the purpose described.

3. An incidence - window composed of an inclined frame with its upper end most remote from the building, and having triangular pris-

matic blocks with one face in the plane of the frame, and with the block itself projecting upwardly, substantially as shown and described.

ISIDOR SCHOENBERG.

Witnesses:

THOS. M. NORRIS,
WM. H. MASSON.