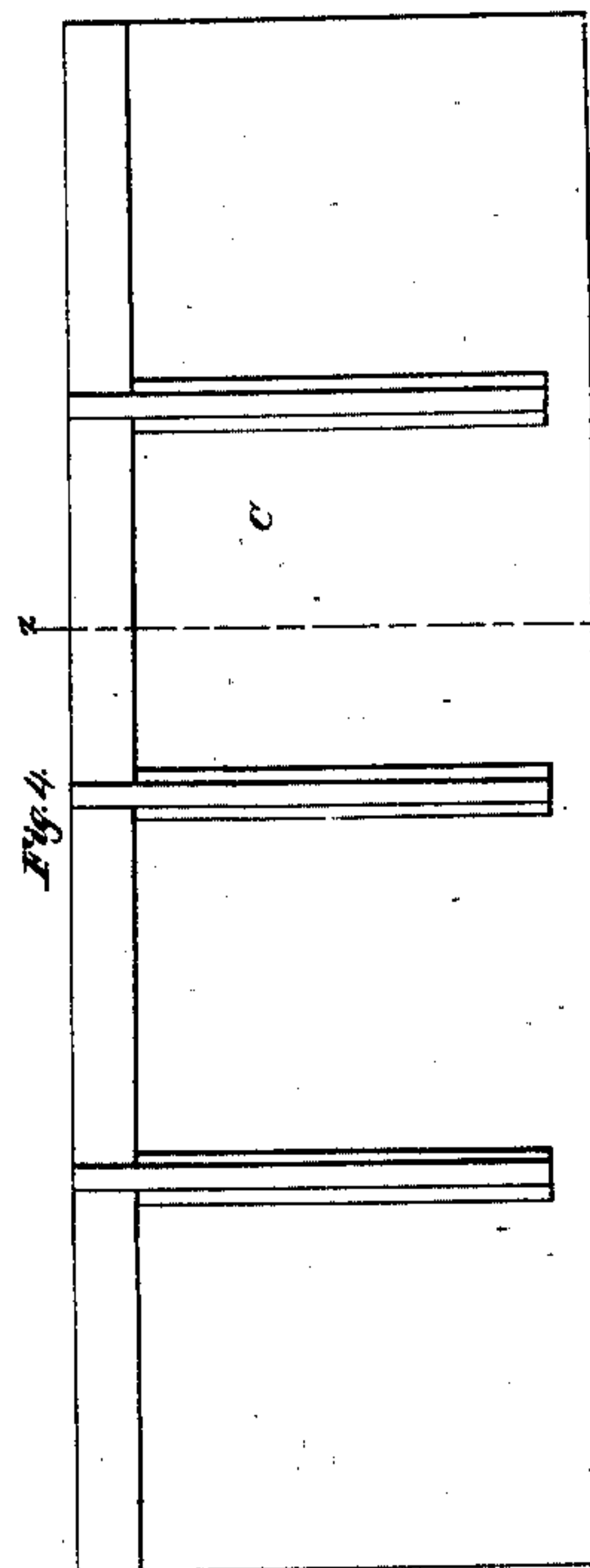
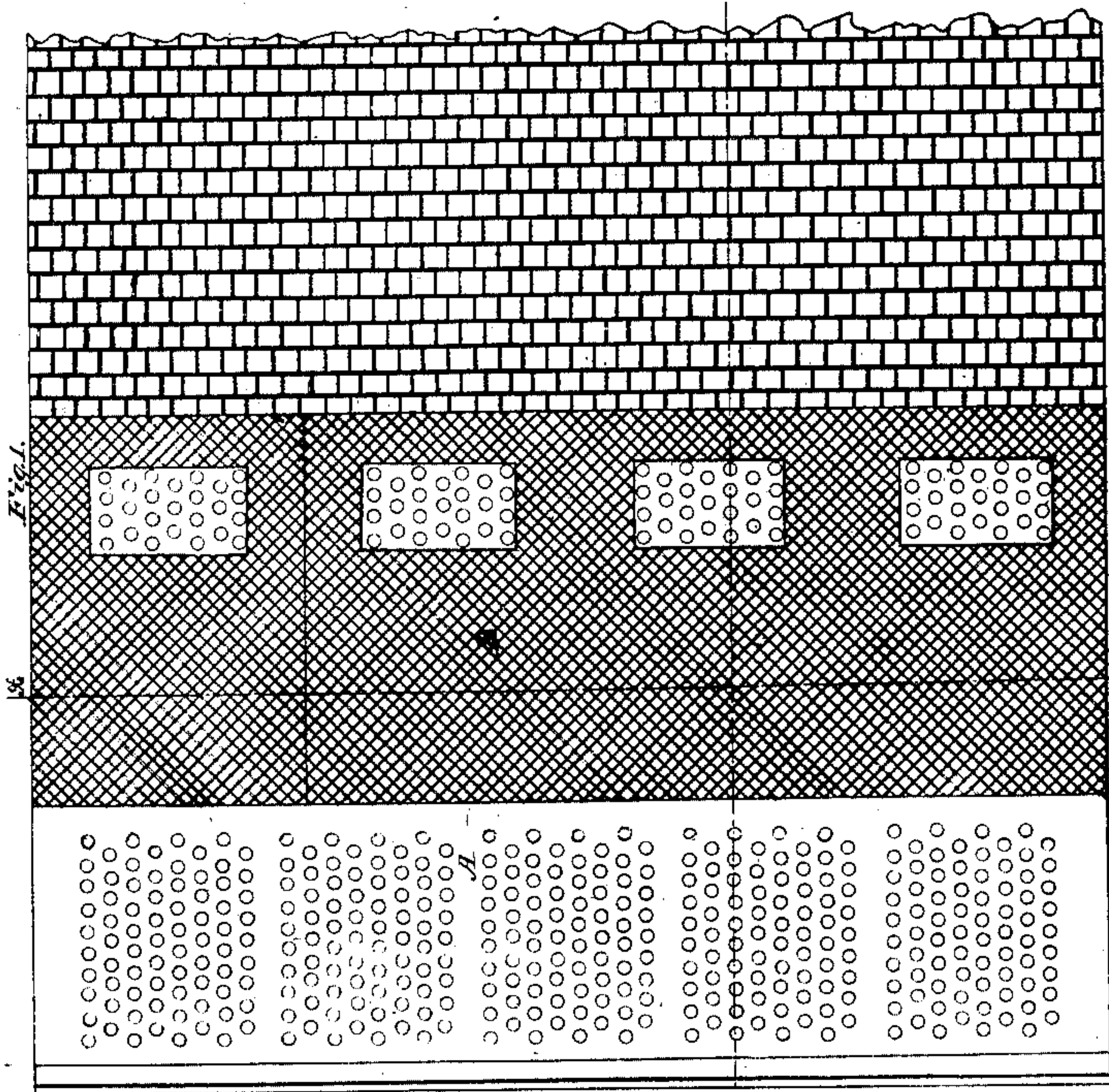
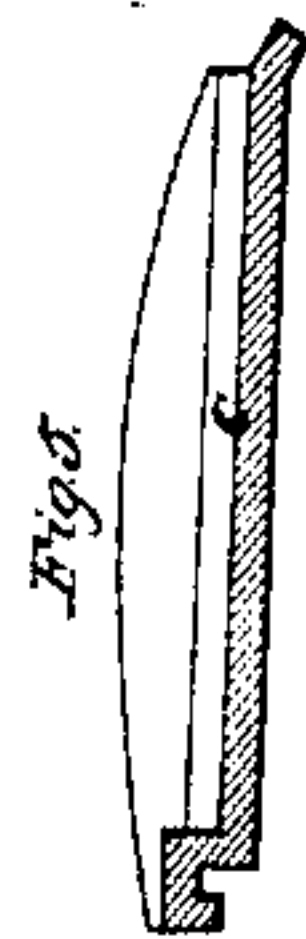
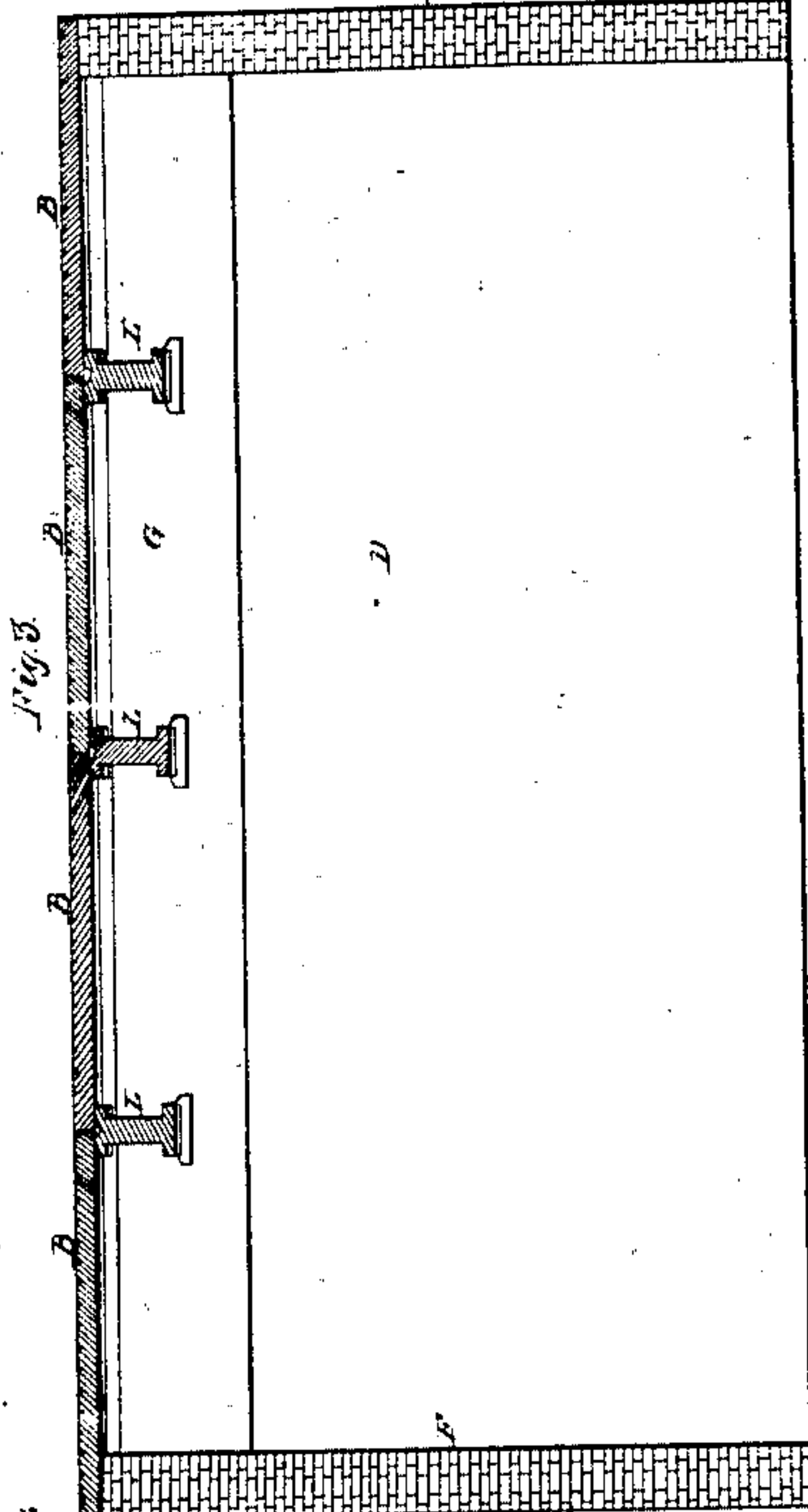
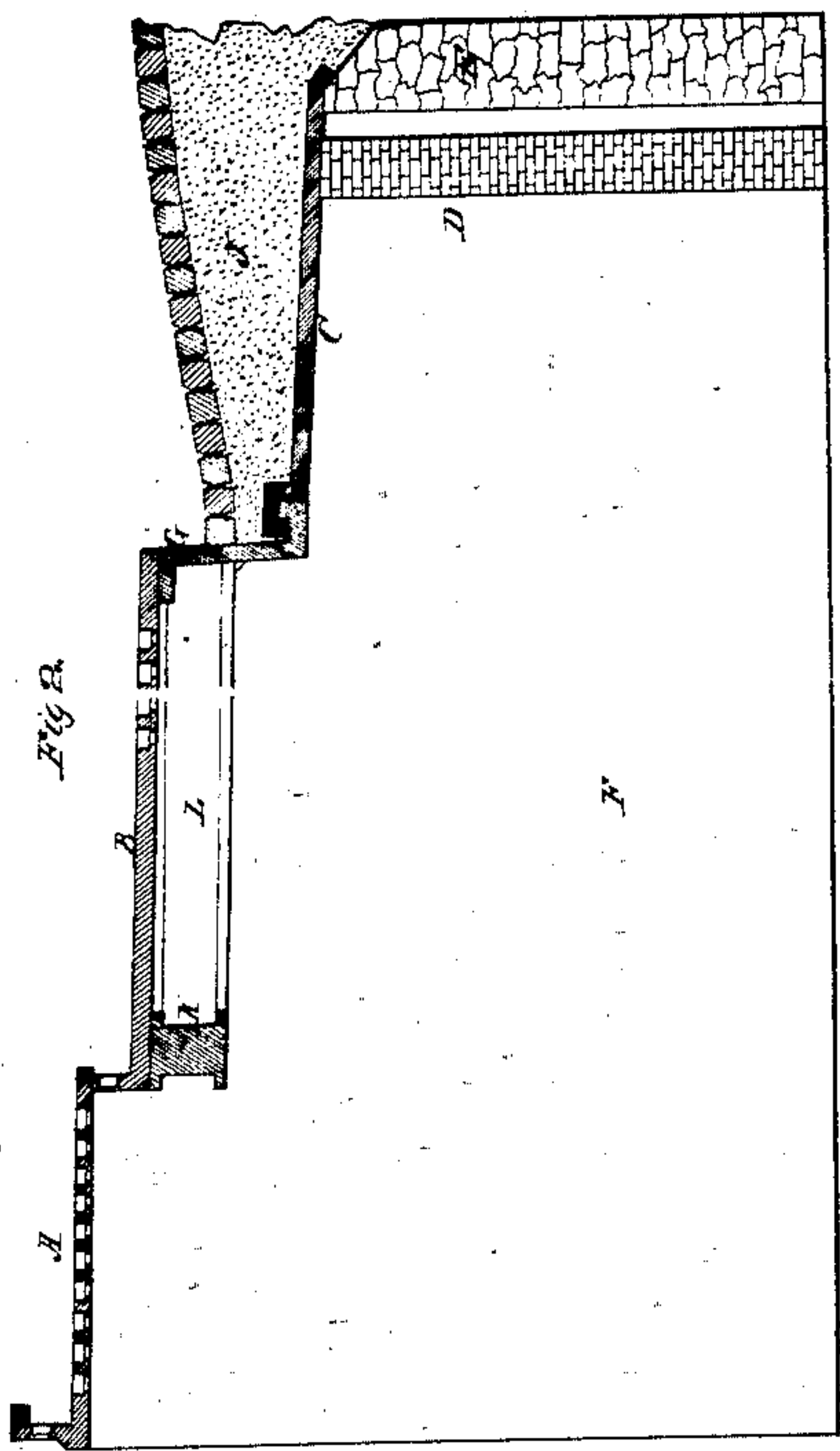


*J. B. Cornell.*

*Vault Cover.*

*Patented Nov. 24, 1857.*

*N<sup>o</sup> 18,677.*





# UNITED STATES PATENT OFFICE.

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

## METALLIC ROOFING FOR SUBTERRANEAN VAULTS.

Specification of Letters Patent No. 18,677, dated November 24, 1857.

*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 an Improved Metallic Roofing for Apartments Located Under Street-Pavements; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, Figure 1 being a top view of a portion of my said invention (the remainder being covered by a representation of a portion of the carriage-way of the street;) Fig. 2, a vertical section in the line  $x-x$  of Fig. 1; Fig. 3, a section in the line  $y-y$  of Fig. 1; Fig. 4, a top view of the portion of my said invention which supports the carriage-way of a street, and Fig. 5 is a section in the line  $z-z$  of Fig. 4.

Similar letters indicate like parts in each drawing.

The accompanying drawings represent a subterranean apartment which extends under the side-walk and also under a portion of the street in front of the basement of a Broadway store in the city of New York.

F, F, are the brick side-walls and D, is the outer brick wall of the said apartment. A stone wall E, is placed at such a distance outside of the said brick wall D, as to leave an open space of a few inches between them.

The illuminating platform which adjoins the building and is elevated one step above the side-walk, should have a sufficient number of transverse flanches on its under side to give it the requisite degree of strength and stiffness, and should also have a large number of glasses properly secured in apertures therein. The ends of the said platform rest upon the side walls F, F, and its outer edge rests upon the vertical illuminating flanches which rise from the inner ends of the sections B, B, of the side-walk. This said inner ends of the side-walk sections B, B, are supported by the transverse beam K, and the edges of said sections are supported by the longitudinal beams L, L.

The inner ends of the beams L, L, are united to the beam K, and the outer ends of said beams are united to the deep beam G, whose ends rest on the side-walls F, F. An outwardly projecting trough-shaped flanche

from the lower edge of the beam G, receives the correspondingly shaped edge of the plate C, which extends under a portion of the carriage-way of the street, and supports the superincumbent gravel and pavement. The outer edge of the said plate C, rests upon the walls D and E, and the ends thereof rest upon the side-walls F, F.

The deep beam G, rises a sufficient distance above the pavement to serve as the street curb. It will therefore be perceived that the said beam at the same time serves as a support to the side walk and a portion of the carriage-way, and also as the street curb.

A suitable number of illuminating glasses may be properly secured in apertures in the side-walk sections.

The inner uncovered surfaces of the beams G, L, K, the side-walk sections B, B, and the plate C, may be decorated by a great variety of molded ornamental designs cast upon the said surfaces.

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

1. My improved metallic roofing for an apartment located under a side-walk and a portion of a street-carriage-way; the said roofing being constructed of the metallic beams G, K, L, L, the metallic sectional plates B, B, B, and the metallic plate C, in such a manner that the united inner surfaces of the said parts form the ceiling to said apartment, at the same time that the sectional plates B, B, B, form an illuminating water-tight street side-walk, and the plate C, forms a safe support for the portion of the carriage way, immediately over said apartment, substantially as herein set forth.

2. I also claim the arrangement of my improved metallic roofing for subterranean apartments, which enables the beam G, to serve as the main support of said roof at the same time that the exposed portion thereof forms the street-curb, substantially as herein set forth.

JOHN B. CORNELL.

Witnesses:

JOS. W. MANTERSTOCK,

WM. H. MOTT.