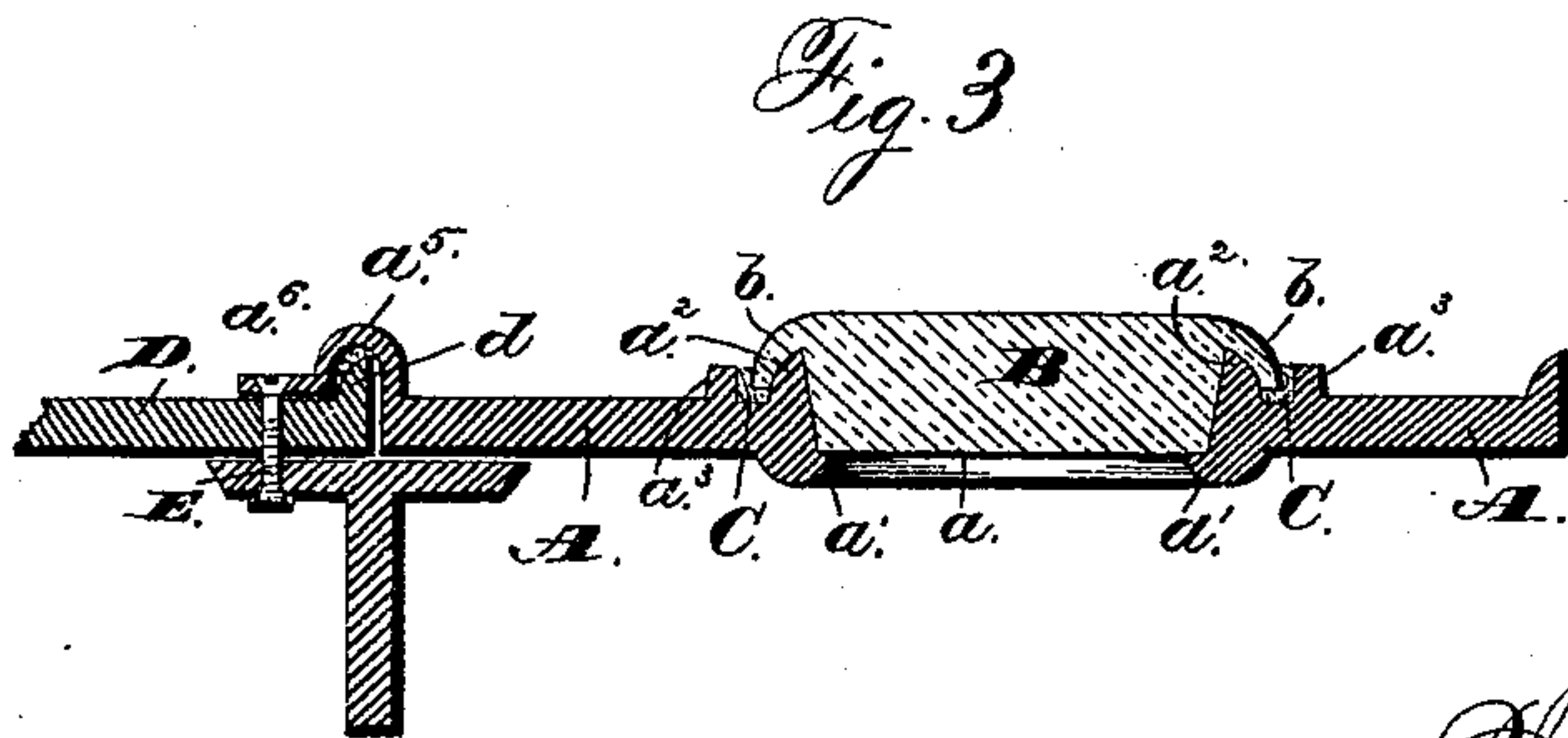
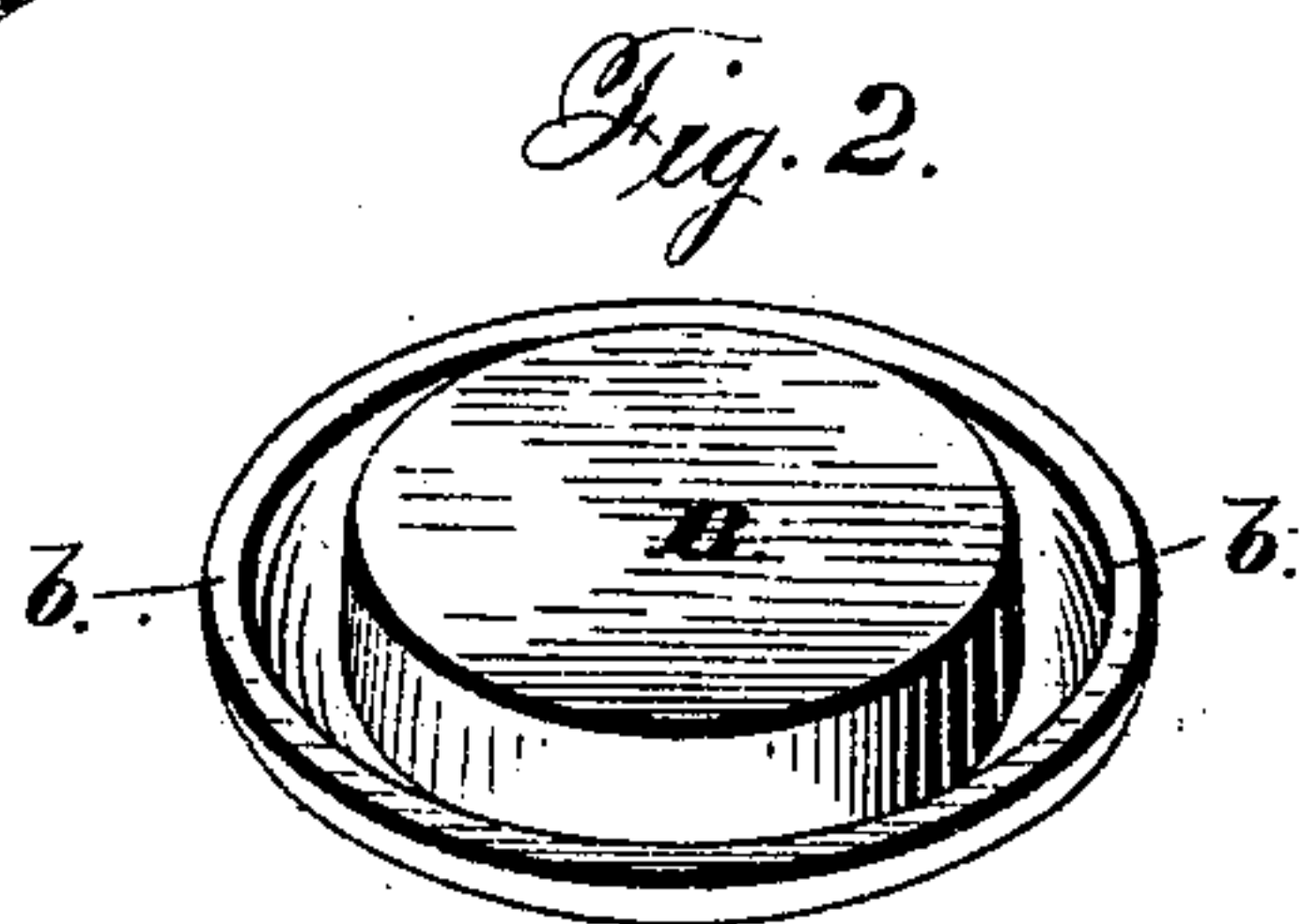
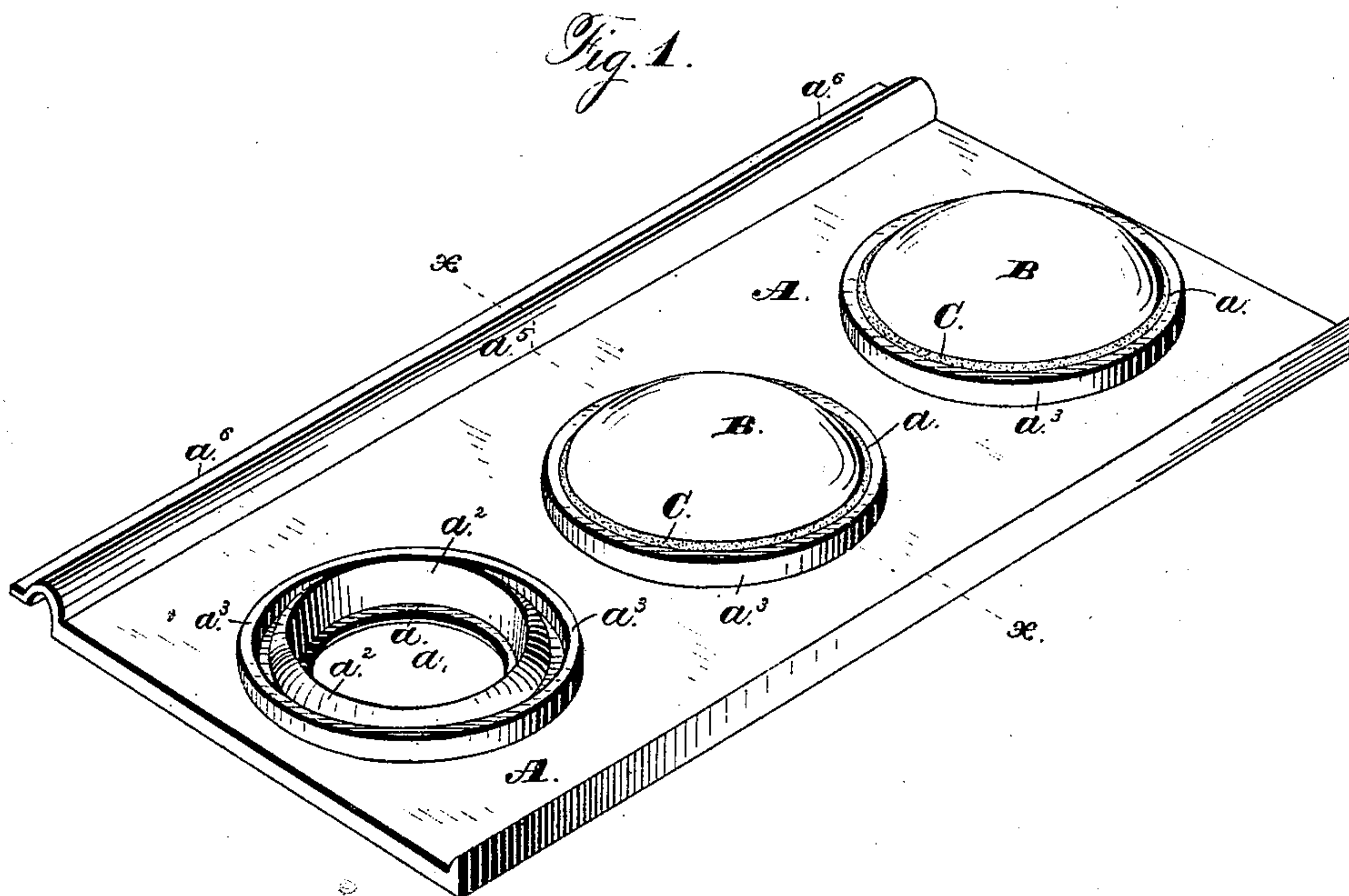


(No Model.)

D. G. BEECHING.
ILLUMINATING TILE.

No. 272,629.

Patented Feb. 20, 1883.



Witnesses:

Jas. E. Hutchinson.
Henry C. Hazard

Inventor.

D. G. Beeching, by
Geo. S. Prindle, his Att'y

UNITED STATES PATENT OFFICE.

DAVID G. BEECHING, OF NEW YORK, N. Y.

ILLUMINATING-TILE.

SPECIFICATION forming part of Letters Patent No. 272,629, dated February 20, 1883.

Application filed December 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, DAVID G. BEECHING, of New York city, in the county of New York, and in the State of New York, have invented certain new and useful Improvements in Illuminating-Tiles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the upper side of my improved tile, one of the lenses being removed to show the form of illuminating-opening. Fig. 2 is a like view of the lower side of a lens detached from its tile, and Fig. 3 is a section of said tile upon line $x x$ of Fig. 1.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to render practicable and certain the formation of a water-tight joint between an illuminating roofing or sidewalk tile and its lens; and to this end said invention consists principally in an illuminating-tile provided around its light-opening with an annular groove, in combination with a lens which has an annular flange around its edge, that is adapted to fit downward into said groove when said lens is in place, substantially as and for the purpose hereinafter specified.

It consists, further, in an illuminating-tile having a light-opening that is surrounded by two concentric curbs, in combination with a lens which is adapted to fit within said opening, and is provided with a flange that extends over the inner curb and into the space between the same and the outer curb, substantially as and for the purpose hereinafter shown.

It consists, further, in an illuminating-tile having a light-opening that is surrounded by two concentric curbs, the innermost of which curbs is higher than the outer curb, in combination with a lens which is adapted to fill said opening, and to project over said inner flange into the space between the same and said outer flange, substantially as and for the purpose hereinafter set forth.

It consists, finally, in the combination of an illuminating-tile having a light-opening that is surrounded by two concentric curbs that are separated by an annular space or groove,

a lens adapted to fill said opening, and to extend over the inner curb and into said annular groove, and cement or other material which is adapted for use within the latter in sealing the space between the projecting flange of said lens and said flanges, substantially as and for the purpose hereinafter shown and described.

In the annexed drawings, A represents a metal tile provided with a series of illuminating-openings, a , each of which is provided at its lower end with an inward-projecting flange, a' , for the reception of the lower end of a lens, B, and upon which said lens rests. Surrounding each opening a are two concentric curbs, a^2 and a^3 , which are separated by an annular groove, a^4 . The inner of said curbs, a^2 , is higher than the outer curb, and has its outer face preferably formed upon an upward and inward curve.

Within the opening A is placed a lens, B, which corresponds to and loosely fills the same, and extends upward beyond the curb a^2 , and is provided around its upper end with a flange, b , which projects outward and downward over said curb a^2 into the groove a^4 . The space between the flange b and the contiguous sides of the curbs a^2 and a^3 is filled with a cement, C, which is applied in a plastic state, and when hard effectually locks the lens B in place, and prevents water or air from passing between the same and the tile A into the opening a . Should the seal between said flange and said curbs become accidentally broken or prove defective in construction, the elevation of the inner curb above the outer curb will prevent water from passing into the opening a , as the height to which water will rise within the groove a^4 is governed by the height of said outer curb.

At the edges of the tile A, where the same is joined to other tiles or to the supporting-frame, I produce a water-proof joint by furnishing the contiguous plate D with a rib or flange, d , and providing upon the edge of said tile a lip, a^5 , which extends in a curve over said rib, and preferably terminates in a horizontal flange, a^6 , through which bolts E may be passed into said plate D. The space between said rib d and said lip a^5 being filled with suitable cement, an air and water tight joint is produced; but should such joint become defective the height of said rib above

the surface of said plate will prevent water from passing over the same.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. An illuminating-tile provided around its light-opening with an annular groove, in combination with a lens which has an annular flange around its edge, that is adapted to fit downward into said groove when said lens is in place, substantially as and for the purpose specified.

2. An illuminating-tile having a light-opening that is surrounded by two concentric curbs, in combination with a lens which is adapted to fit within said opening, and is provided with a flange that extends over the inner curb and into the space between the same and the outer curb, substantially as and for the purpose shown.

3. An illuminating-tile having a light-opening that is surrounded by two concentric curbs, the innermost of which curbs is higher than

the outer curb, in combination with a lens which is adapted to fill said opening, and to project over said inner flange into the space between the same and said outer flange, substantially as and for the purpose set forth.

4. The combination of an illuminating-tile having a light-opening that is surrounded by two concentric curbs that are separated by an annular space or groove, a lens adapted to fill said opening and to extend over the inner curb and into said annular groove, and cement or other material which is adapted for use within the latter in sealing the space between the projecting flange of said lens and said flanges, substantially as and for the purpose shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of October, 1882.

DAVID G. BEECHING.

Witnesses:

JAMES M. LA COSTE,
CHARLES O'CONNOR.