

E. HENNESSEY.

Brick for Curved Masonry Work.

No. 72,734.

Patented Dec. 31, 1867.

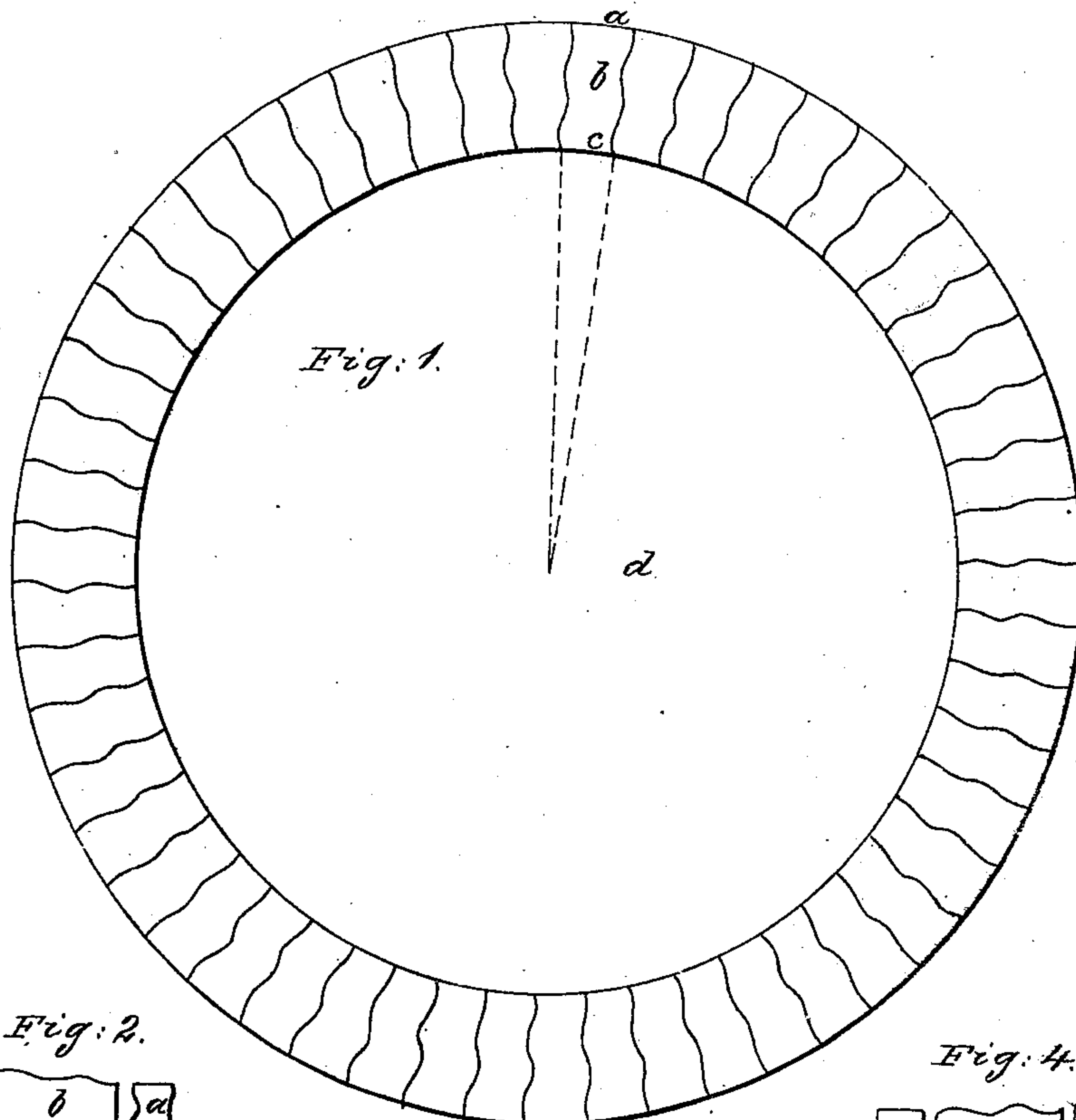


Fig. 1.

Fig. 2.

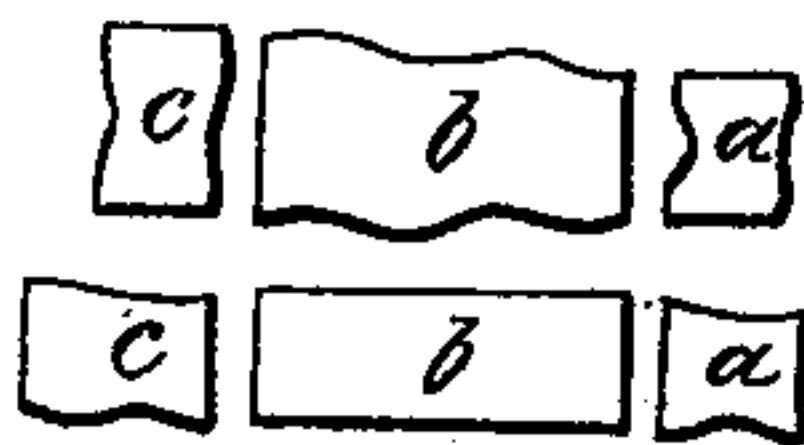


Fig. 3.

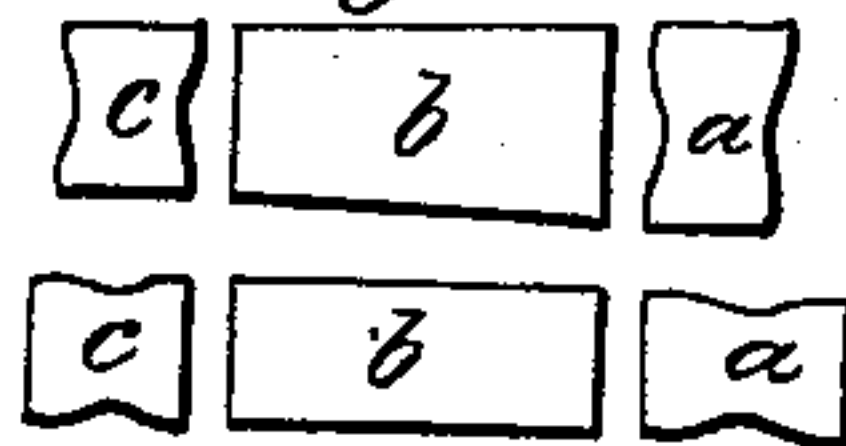


Fig. 4.

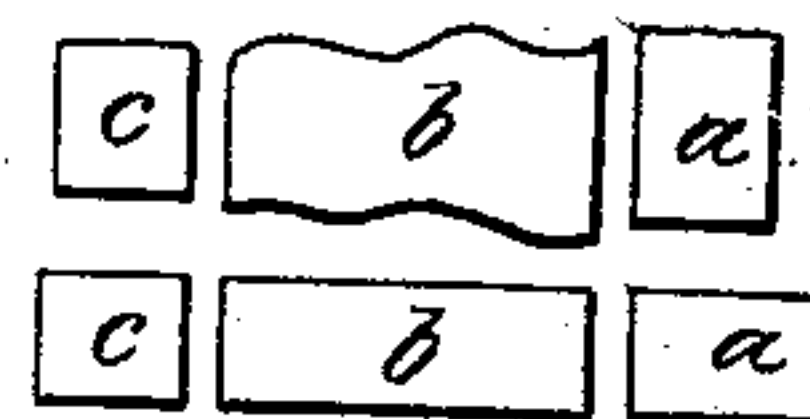


Fig. 5.

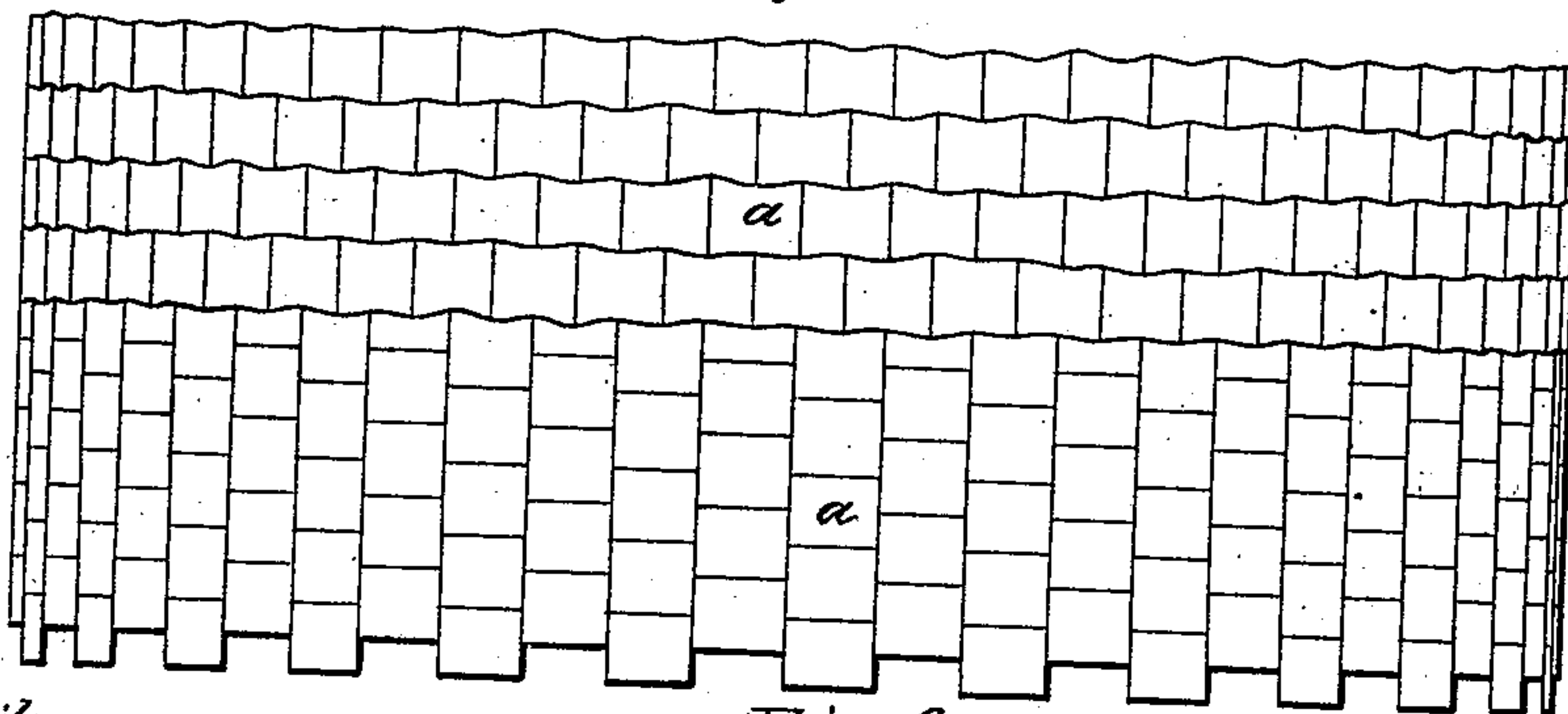


Fig. 6.

Witnesses:

H. A. Pierce.
Geo. Burgess.

Inventor:

Edward Hennessey.

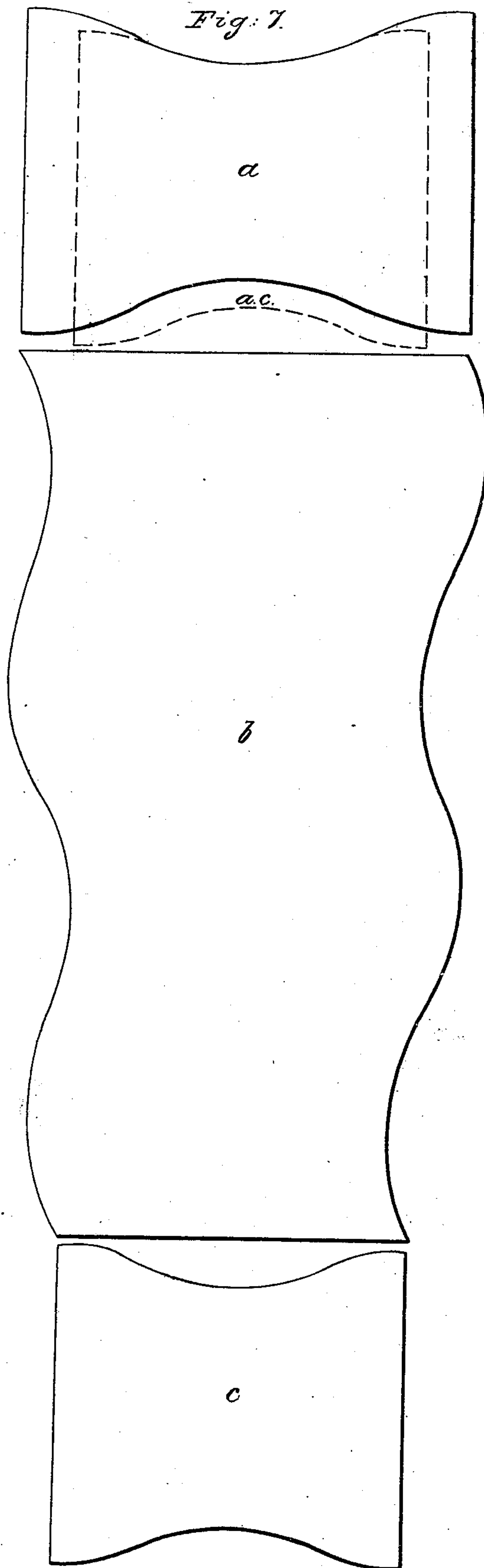
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2 Sheets—Sheet 2.

Brick for Curved Masonry Work.

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United States Patent Office.

EDWARD HENNESSEY, OF WASHINGTON COUNTY, DISTRICT OF COLUMBIA.

Letters Patent No. 72,734, dated December 31, 1867.

IMPROVEMENT IN BRICKS FOR CURVED MASONRY-WORK.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, EDWARD HENNESSEY, of the county of Washington, and District of Columbia, have invented a new and improved Brick for Preventing Conduits, Shafts, or Curved Work in Masonry from Bursting or Collapsing; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the figures and letters of reference marked thereon.

The nature of my invention consists in the form of bricks, stone, composition, or pieces of any material adapted to the construction of conduits, shafts, or curve-work in masonry, securing a greater amount of strength to resist hydrostatic pressure or other force from the inside or outside thereof; and for ordinary circular work in masonry, such as conduits or shafts, my bricks can be used without mortar or cement.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and adaptation.

I construct my conduits in the usual circular form, as shown at Figure 1 in the accompanying drawing, *a* being the large end of a brick, formed like a keystone, with corrugated edges; *b* the body, and *c* the small end thereof. (See also *a b c* in full size outline drawing, Figure 7.) *d*, inside capacity of circular conduit, five feet in diameter. The dotted lines from the top to the centre show the direction of the serpentine lines forming the corrugated edges of the bricks. These edges hold the bricks together in such a manner that if a circle formed (as shown by fig. 1) upon a level plane with such shaped bricks, no one of them could be removed by pressure from the inside without removing a number of the adjoining ones. The corrugated edges are formed by straight lines across, and undulating lines lengthwise of the bricks. (See Figure 4.) *a*, large end, *b*, body, and *c* the small end, the hollows of one side conforming to the rounds of the other side of the same brick, that is, the corrugations correspond with each other, so that the bricks will fit into each other, as shown by drawing, fig. 1.

Having thus described two surfaces corresponding with the edges of the bricks, I will now proceed to describe the other two sides, corresponding with the flat or broadest surface of the bricks. The sides are corrugated by straight lines running lengthwise of the bricks, and undulating lines running crosswise. This is done by making a hollow or concave, extending lengthwise along the centre of the flat surface at each side of said hollow, the surface-rounds towards the edges of the bricks forming a double "ogee." This is done on both sides of the brick just alike. (See full-size outline of end of brick, *a*, fig. 7; also, *a*, fig. 2, and *a*, fig. 3, but *a*, fig. 4, and *a*, fig. 6, show the shape of the end before the ogee is made.) This ogee diminishes as it approaches the small end of the brick, making its curved lines corresponding to sections of a cone, which leaves the small end of the brick thicker through the centre than the large end. (See dotted lines *a c* at *a*, fig. 7.) These dotted lines correspond with the outlines of *c*, fig. 7, so that if the edges of the brick were straight, as shown by Figure 3, it could not be forced outward from the centre of the arch if placed as shown by *a*, Figure 5, for two reasons: first, because the inside end being thicker at its narrowest point than the outside end is, it could not come through a thinner aperture than its own thickness without displacing other bricks; secondly, when they are laid as in fig. 5, the hollow of brick *a* holds the rounds of two of the next tier, and the hollows being narrowest at the small end, would clamp the two bricks on either side of it in such a manner that the resistance against those four bricks would be equal to the force against *a* from the inside.

Fig. 5 shows a section of a conduit intended to resist hydrostatic pressure, and fig. 6 shows a section which would not. Figs. 5 and 6 show how they may be united.

I do not claim the known shape of keys as commonly used in arches, curves, or circles in ordinary masonry, neither do I confine myself to any particular length, thickness, or width of bricks or blocks; as these would be varied according to any required size and nature of the work; but

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

The bricks, made of stone or any material, corrugated and tapering, as herein described, for conduits or curved work, as in masonry, to prevent the bursting or collapsing thereof.

EDWARD HENNESSEY.

Witnesses:

H. A. PIERCE,
GEO. BURGESS.