

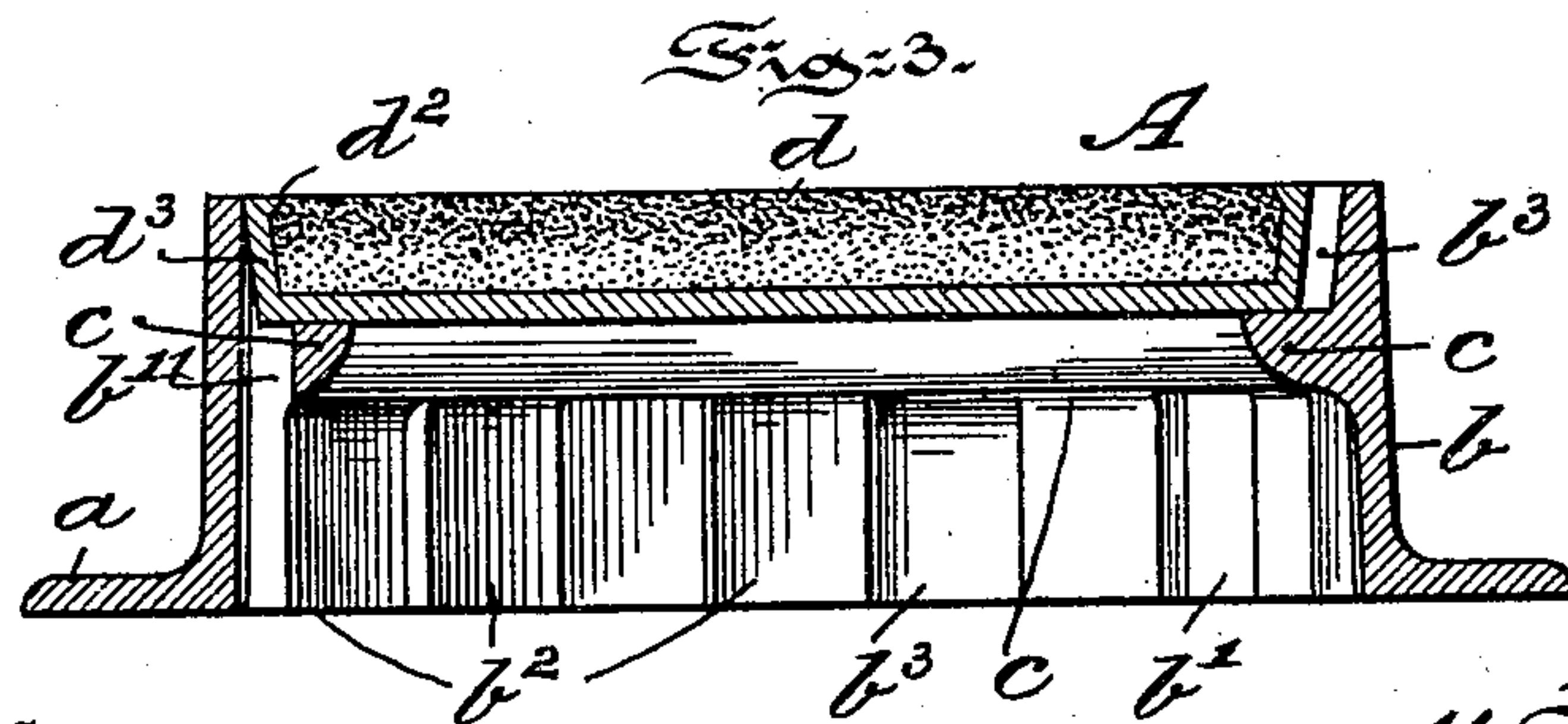
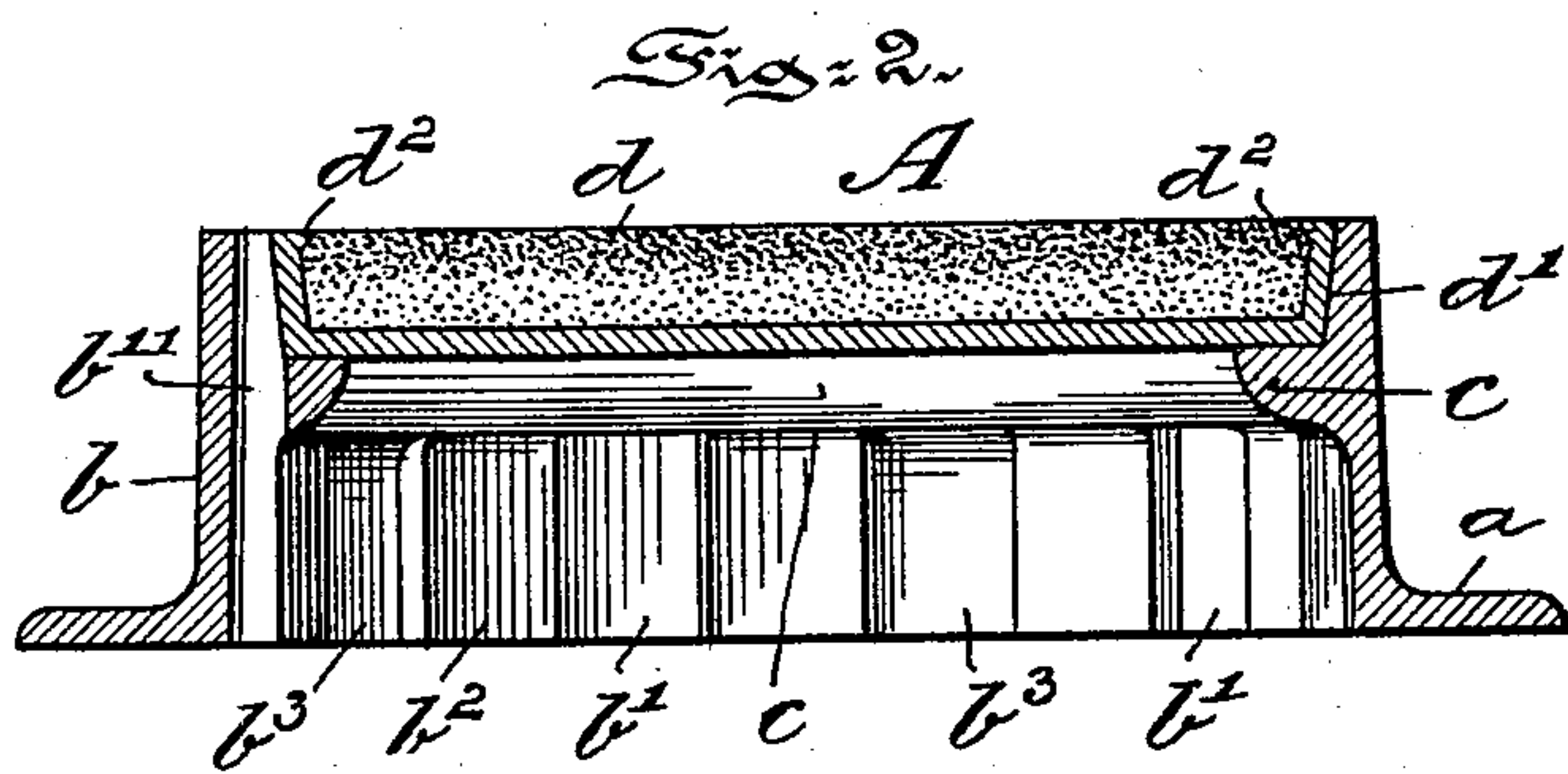
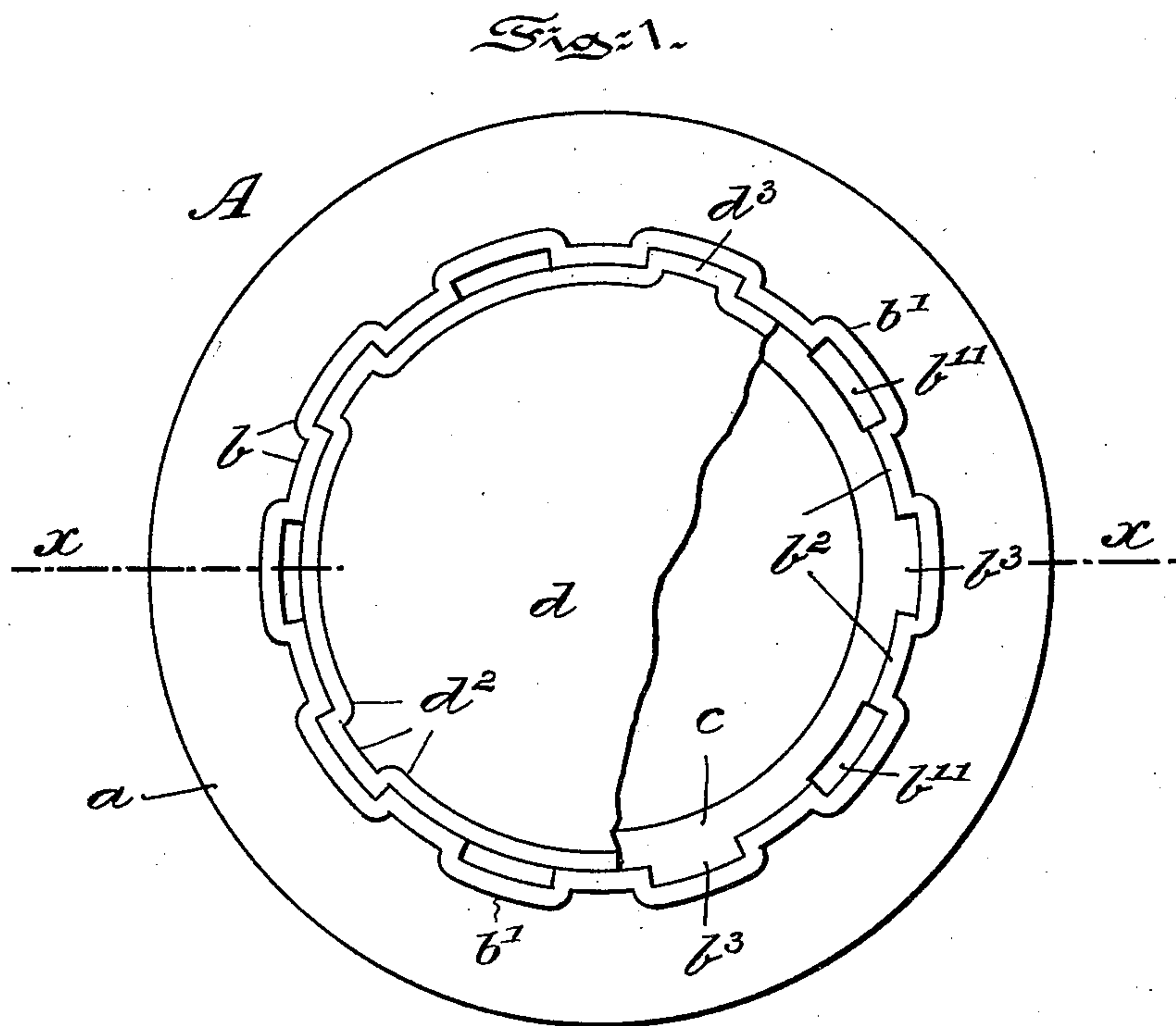
No. 681,994.

Patented Sept. 3, 1901.

W. O. STEELE.
MANHOLE FRAME AND COVER.

(Application filed Mar. 18, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM O. STEELE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO CHARLES T. WRIGHT, OF SAME PLACE.

MANHOLE FRAME AND COVER.

SPECIFICATION forming part of Letters Patent No. 681,994, dated September 3, 1901.

Application filed March 18, 1901. Serial No. 51,610. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM O. STEELE, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Manhole Frames and Covers, of which the following is a specification.

My invention has relation to a manhole frame and cover of the type or character illustrated and described in the Letters Patent No. 636,201, granted October 3, 1899, to Thomas P. Greger; and in such connection it relates to an improved construction and arrangement of such a frame and cover.

The principal object of my invention is to provide an interlocking and interchangeable manhole frame and cover of simple construction, and the said frame and cover being so constructed and arranged as to be used either as a non-ventilating or a ventilating frame and cover.

My invention, stated in general terms, consists of an interlocking and interchangeable manhole frame and cover constructed and arranged in substantially the manner hereinafter described and claimed.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a top or plan view of a frame and cover embodying main features of my invention, showing the cover partially broken away to expose to view the manhole-frame and also showing the ventilating features of the cover with respect to the frame, which latter is adapted to support the cover in required position. Fig. 2 is a vertical sectional view on the line $x x$ of Fig. 1, showing the vertical recesses or channel-ways in the inner wall of the manhole-frame and the filled cover, the periphery whereof is provided with projections adapted to register with recesses of the frame to lock the cover to the frame and with recesses or openings in the frame between the same and the cover for constituting such a ventilating manhole-frame, and the said frame and cover being shown in an open position; and Fig. 3 is a similar view

showing the filled cover and frame with the recesses or channel-ways provided in the inner wall of the frame, but in this view the frame and cover being shown in a closed position.

Referring to the drawings, the frame A for the manhole has a base a , from which projects upward the wall b , the outer periphery of which is preferably smooth. From the interior of the wall b projects the flange or ledge c , forming a seat for the cover d of the manhole. The interior of the wall b above the ledge c is substantially fluted—that is to say, there are formed on the interior of the wall b a series of indentations b' and b^3 , separated by a series of projections b^2 . Certain of the indentations— b' , for instance—are continued through the ledge c in the form of an oblong recess or slot b'' , whereas the other indentations are closed at their base by said ledge c . To strengthen and support the ledge c , it is preferable that the alternate series of indentations b' and b^3 and projections b^2 be continued from below the ledge c to the base a of the frame, as illustrated in the drawings.

The cover d is dish-shaped and arranged with an inwardly-inclined upper edge d^2 to its rim, so that the material, usually granolithic matter, placed in the cover may be retained therein. The exterior periphery d' of the cover d is of a diameter closely approximating the diameter of the frame A from one projection b^2 to another diametrically-arranged projection b^2 . At intervals the periphery of the cover d is provided with outwardly-projecting wings d^3 of a number corresponding to those of the indentations b' , which extend through the ledge c in the form of a slot b'' . These wings d^3 are formed complementary to and are designed to interlock with either the indentations b' or b^3 . When they interlock in the indentations b' , they close the slots b'' , extending through the ledge c , as illustrated in Fig. 3, and the cover is interlocked with the frame. When the cover is raised from the frame and the wings d^3 turned to interlock with the indentations b^3 , then the slots b'' and indentations b' are uncovered, and the cover is a ventilating one to permit air to pass through the indentations b' and

slots *b''* from the top of the frame through the ledge *c* into the interior of the frame below said ledge.

5 Having thus described the nature and object of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a frame having a wall, a flange or ledge projecting therefrom to form the seat for the cover, a series of indentations formed in the interior of the wall
10 above the ledge and a series of projections separating said indentations, certain of the indentations being continued through the ledge in the form of an oblong slot, of a cover
15 adapted to be supported by said ledge and of a diameter approximately the same as the distance between diametrically opposite projections, and a series of wings projecting from the periphery of the cover and corresponding
20 in number with the number of slots in the ledge, said wings formed complementally to the indentations of the frame and adapted to interlock therewith.

2. The combination with a frame having a

wall the interior of which is fluted, a flange or ledge projecting from the wall to form a seat
25 for the cover, said flange or ledge being slotted vertically at intervals to form continuations of certain of the indented flutings of the wall of the frame through the ledge, of a
30 cover adapted to be supported by said ledge and of a diameter approximately the same as the distance between diametrically opposite projecting flutings of the frame, and a series
35 of wings formed on the periphery of the cover and corresponding in number with the number of slots in the ledge, said wings being formed complementally to and adapted to interlock with the indented flutings of the
40 frame.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

WILLIAM O. STEELE.

Witnesses:

J. WALTER DOUGLASS,
THOMAS M. SMITH.