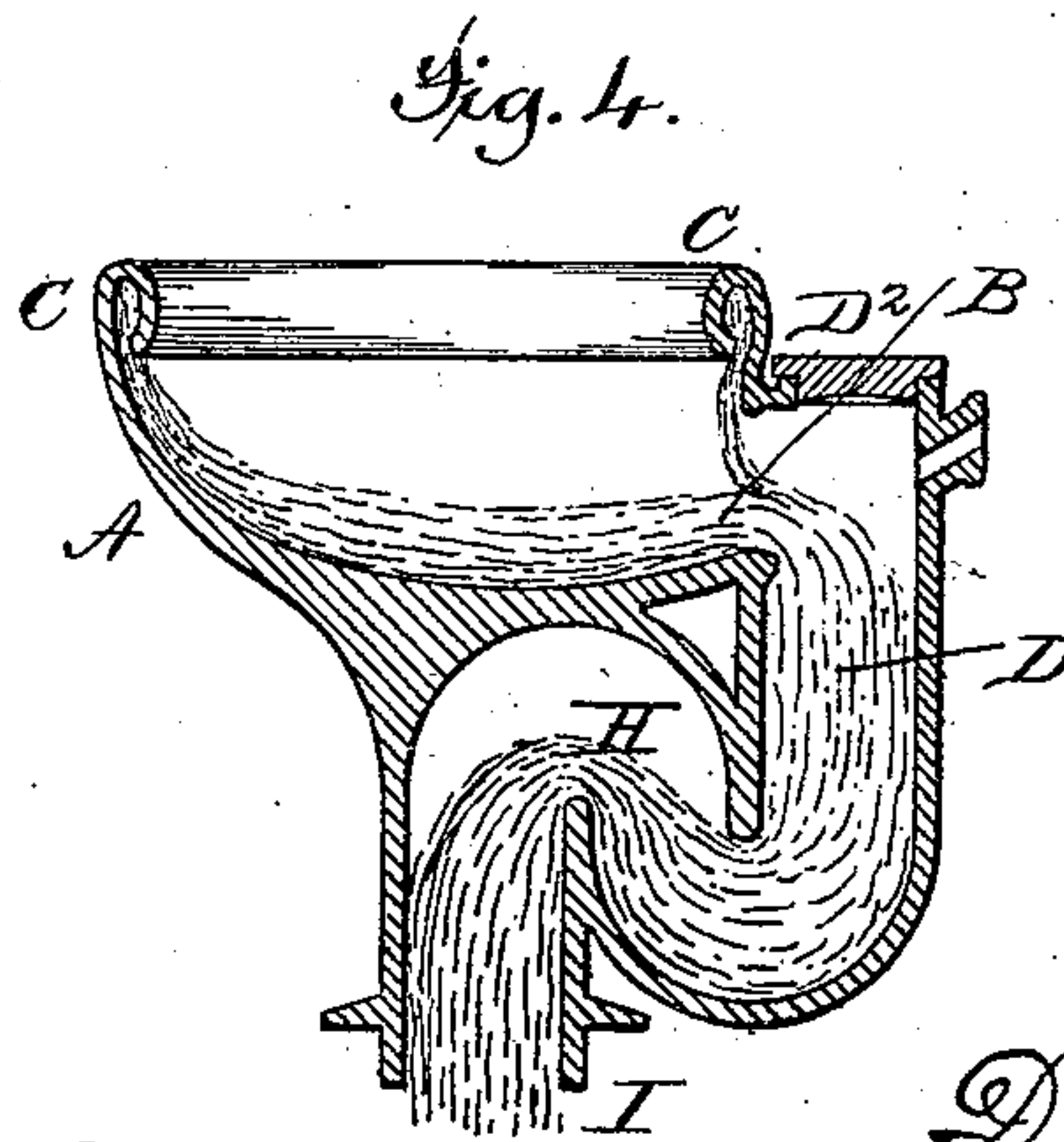
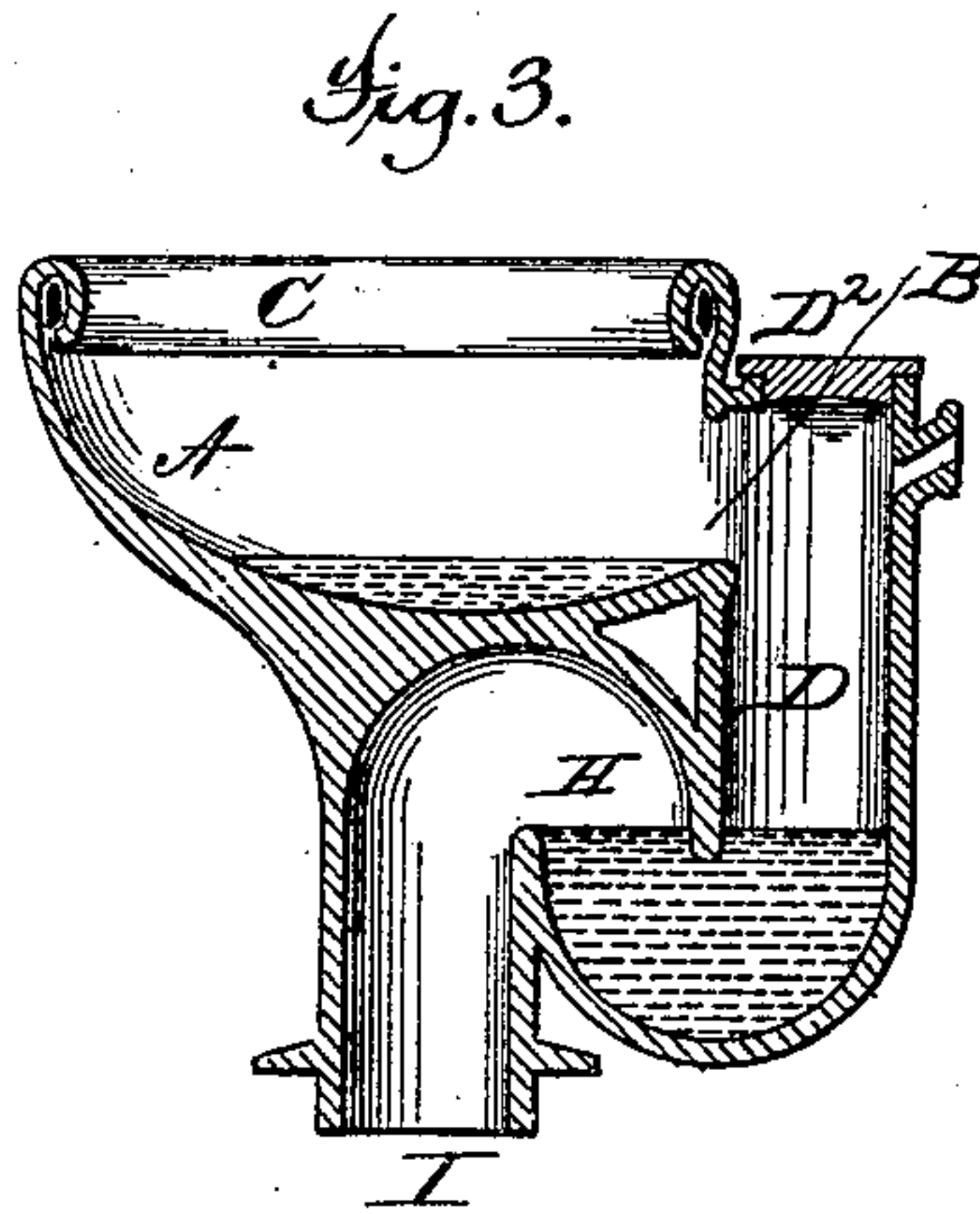
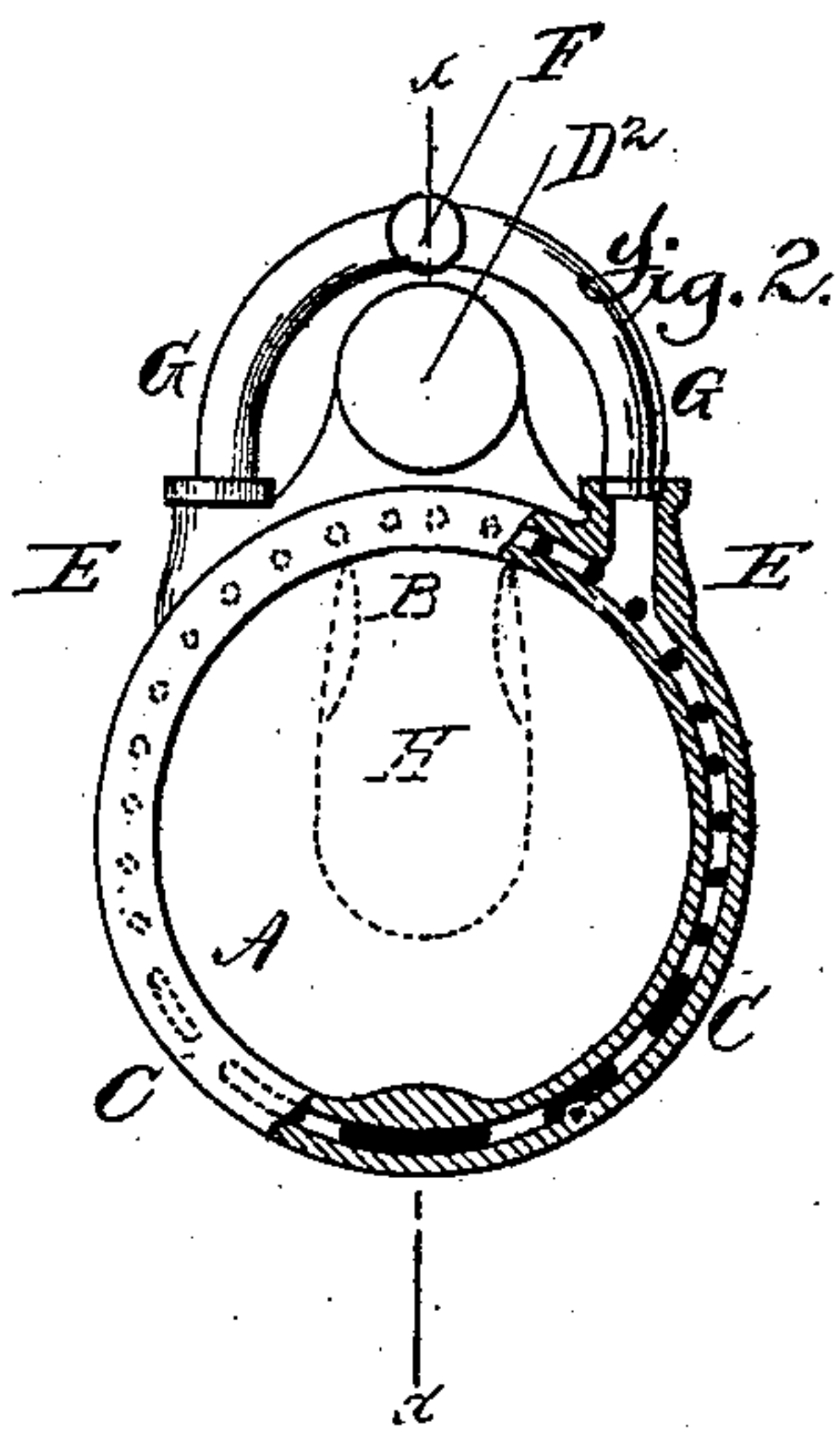
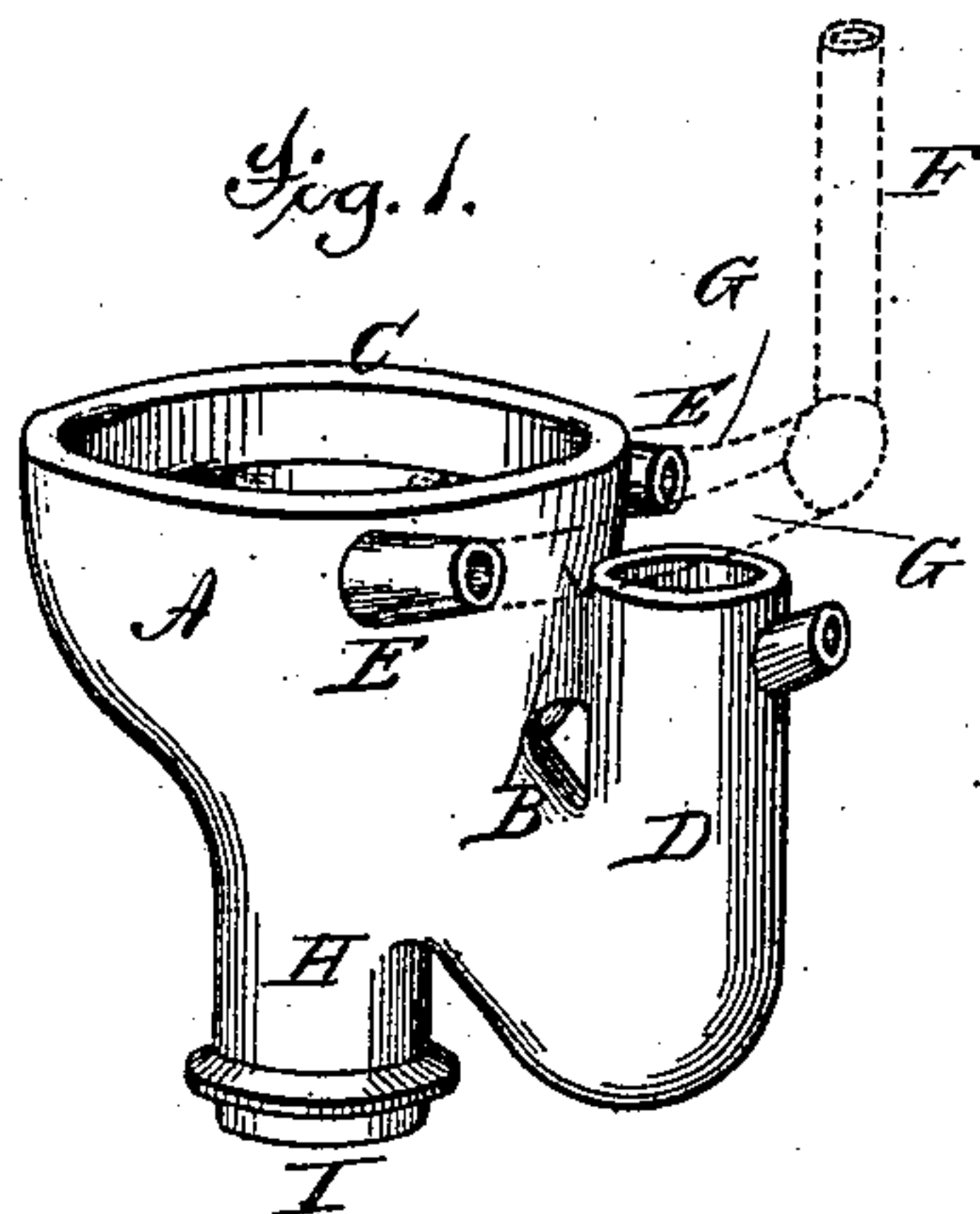


(No Model.)

D. T. BOSTEL.  
WATER CLOSET.

No. 253,152.

Patented Jan. 31, 1882.



Attest;  
Geo. H. Graham  
Jacob Felbel.

Inventor,  
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Per  
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Atty.



# UNITED STATES PATENT OFFICE.

DANIEL T. BOSTEL, OF BRIGHTON, COUNTY OF SUSSEX, ENGLAND, ASSIGNOR  
TO HENRY C. MEYER AND SAMUEL F. SNIFFEN, OF NEW YORK, AND  
FREDERICK R. SMART, OF BAY SIDE, N. Y.

## WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 253,152, dated January 31, 1882.

Application filed August 4, 1881. (No model.) Patented in England April 11, 1877.

*To all whom it may concern:*

Be it known that I, DANIEL THOMAS BOSTEL, of Brighton, in the county of Sussex, England, have invented certain new and useful Improvements in Water-Closets; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this application.

My invention relates to that kind of water-closets in which what are known as "side-delivery" basins or bowls are employed, and has for its main objects to more effectually flush out the bowls of this kind of closets, and to render the apparatus more easy of clearance in case of any obstruction in the trap or exit-pipe, and less liable to get fouled.

To these main ends and objects my invention consists, first, in the combination, with a bowl having a side delivery and provided at its top with a flushing-rim, of two inlets for the supply of water to the flushing-rim, arranged so that the supply-streams enter the rim and meet at a point about opposite to that side of the bowl at which its contents is discharged, whereby a more efficient cleansing of the bowl and discharge of its contents are insured, as hereinafter set forth; second, in the combination, with a side-delivery bowl, of a flushing-rim having a series of discharge-apertures, in which those located opposite to the side at which the bowl discharges its contents are largest, and two inlets for the water-supply, arranged so that the supply-streams to the flushing-rim will meet in the vicinity of the largest discharge-apertures, all as will be hereinafter more fully explained; third, in a water-closet composed of a side-delivery basin and a discharge trunk or pipe which extends nearly or quite up to the top of the bowl and has a removable cover, all in the manner and for the purposes to be hereinafter more fully explained.

To enable those skilled in the art to make and use my invention, I will now proceed to more fully explain it, referring by letters of reference to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of the earthenware portion of a closet made according to my invention. Fig. 2 is a top view of the same

with the water-supply pipes attached or connected to the flushing-rim. Fig. 3 is a vertical section of the same at the line *x x* of Fig. 2, showing the closet in a condition of disuse. Fig. 4 is a similar section, illustrating the action of the closet when the water is let in to flush it and discharge it of its contents.

In the several figures the same part will be found designated by the same letter of reference.

A is the basin or bowl, formed with a side delivery at B—in this instance at the rear side of the closet—and having a flushing-rim at C. The delivery opens into a vertical trunk or chamber, D, the top of which is nearly or quite level with the top of the bowl, as shown, and the flushing-rim C has two water-supply inlets, E E.

The upper end of the trunk D is provided with a removable cover, D<sup>2</sup>, for the purpose of conveniently getting at the interior and lower part of said trunk in case of the collection therein of any material which may operate to obstruct the free discharge of the closet, and for the purpose of easily cleaning out the said trunk and the trap beneath it, if one be used.

The two inlets E E to the flushing-rim are arranged nearly tangentially to the curve of the rim, project therefrom about in parallel directions, and have connected to them, in the usual manner of making connections, the branch pipes G G, which latter, as shown, converge at and are connected to the lower end of the water-supply pipe F.

The flushing-apertures of the rim C, as will be seen by reference to Fig. 2, where a portion of the rim is broken away to show those apertures, are formed and arranged so that some of them—those about opposite to the vicinity of the delivery side of the bowl—are considerably larger than the rest. The object of this is to insure the discharge from the rim C of more water at those portions about opposite the delivery of the bowl, where the rushing-in supply-columns meet in the rim, and hence a greater rush of water from the side where these larger apertures exist toward the delivery than in any other direction.

The entrances of the supply-columns at E E being in directions nearly tangential to the



curve at either side of the rim C, little or none of the head or force of the water is dissipated by its entrance into the rim, and hence the action of the water is very forcible.

5 By reference to Fig. 4 it will be observed that in the flushing and discharge operations of the closet the water from the rim C not only sweeps down over the walls of the bowl from all parts of the rim, but that a larger supply  
10 comes from the part opposite the delivery-point B, and that therefore there is a sort of sweeping of the contents of the bowl toward the point B by a cataract of water, which rushes in a sort of horseshoe-falls fashion from the top of the  
15 bowl over its walls and bottom toward its delivery side. Although the apertures of the flushing-rim are of greatest capacity at the locality pointed out to effect the purpose explained, yet the meeting of the two supply-  
20 columns of water in the rim C at the vicinity of the larger flushing-apertures causes a superabundant water supply and pressure in this part of the rim, from which a sort of back-pressure arises within the rim C, sufficient to  
25 insure the rush of the supply-water from all parts of the flushing-rim (both the larger and smaller apertures) with nearly or quite the same force. Thus all parts of the walls of the bowl are thoroughly washed, and while a sort of  
30 vortex action occurs, at the same time the tendency of this action is to sweep the whole contents of the bowl toward the delivery or discharge B. The lower end of the trunk D communicates with the trap H, that in turn  
35 communicates with the soil-pipe connection I of the closet.

As to the general operation of the closet, it is only necessary to explain that the water-supply to the pipe F and its branches G G  
40 may come from an overhead tank or other source and be let on and cut off by any of the known and suitable means, and that after the use of the closet the occupant causes the water to be supplied as usual.

45 It will be seen that in a side-delivery closet made according to my invention only a small quantity of water need stand in the bottom of the bowl, and that the latter may be made so shallow that not only are its side-walls en-

tirely out of the way of catching any of the 50 excrementitious deposits, but the latter have so short a distance to fall that no unpleasant splashing up of the water in the bowl onto the occupant of the closet will be experienced.

Of course many of the details of structure 55 may be varied without departing from the gist of my invention, and one or more of the several described features of my invention may be used without the rest, and a closet be thus produced embodying to a certain extent the 60 advantages of my invention.

Having sufficiently explained the nature of my invention to enable those skilled in the art to understand and practice it, what I claim as new, and desire to secure by Letters Patent, 65 is—

1. In combination with the bowl of a side-delivery closet provided with a flushing-rim, the two water-inlets E E, arranged to supply the flushing-rim with two streams of water 70 directed into the rim from points near that opposite the front part of the bowl, as and for the purpose set forth.

2. In combination with a side-delivery bowl having a flushing-rim formed with apertures 75 largest at the point opposite the delivery side of the bowl, and of diminishing capacities from said point toward the delivery side of the bowl, the two water-inlets E E, arranged to supply the flushing-rim with two streams of 80 water directed into the rim, as hereinbefore described.

3. The combination, with the side-delivery bowl having a flushing-rim and an open communication with the trap, of a trunk, D, ex- 85 tended upward from the trap nearly or quite to the level of the top of the bowl, and provided with a removable top, D<sup>2</sup>, all in substantially the manner and for the purpose set forth. 90

In witness whereof I have hereunto set my hand and seal this 13th day of July, 1881.

DANL. THOS. BOSTEL. [L. S.]

In presence of—

W. A. GREEN,

H. G. BISHOP,

Both Clerks to Messrs. Duff, Bridges & Watts,  
5 Nicholas Lane, London.