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H. S. MADDOCK & J. F. KELLY.

LAVATORY BASIN.

APPLICATION FILED JAN. 4, 1904.

NO MODEL.

Fig. 1.

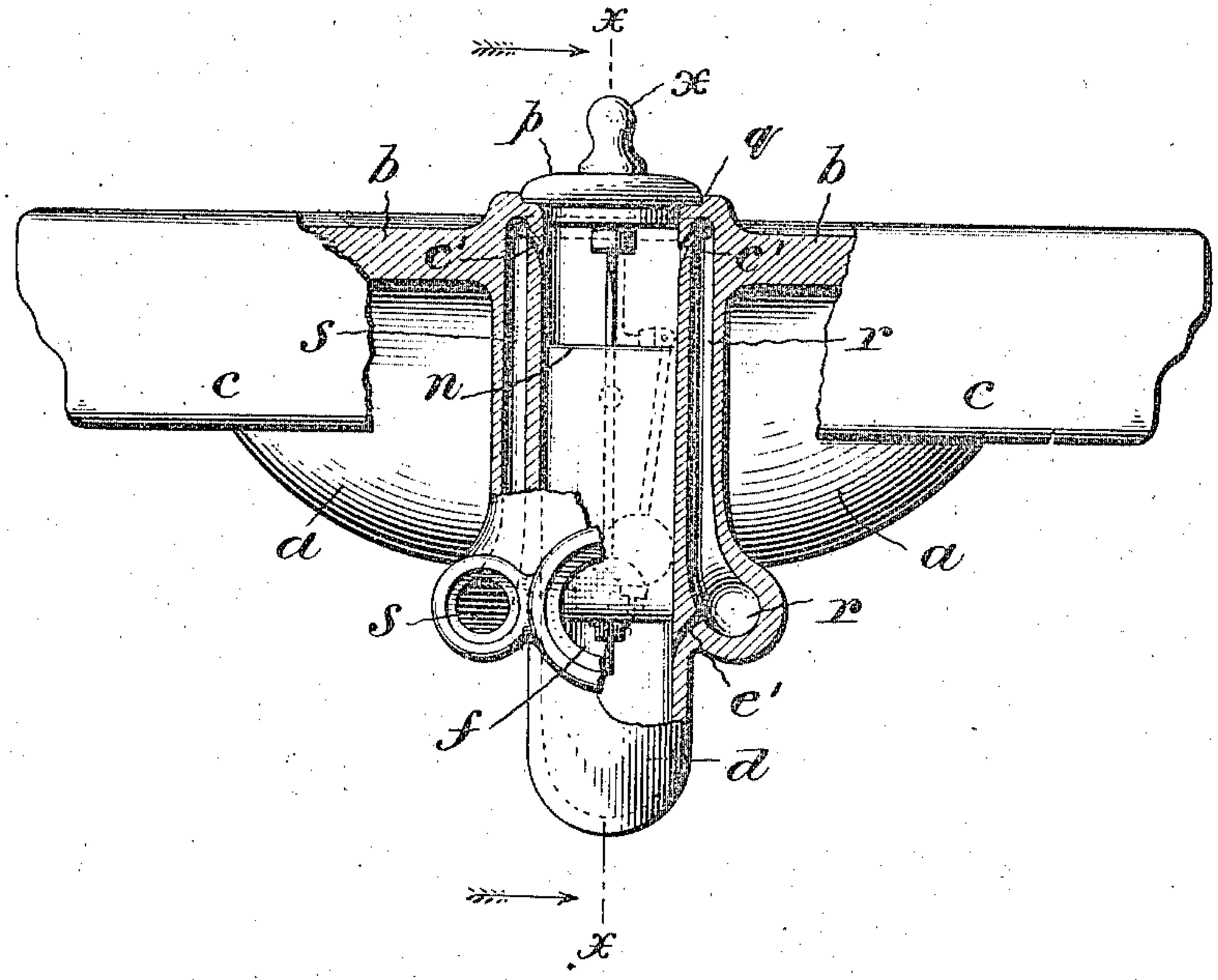


Fig. 2.

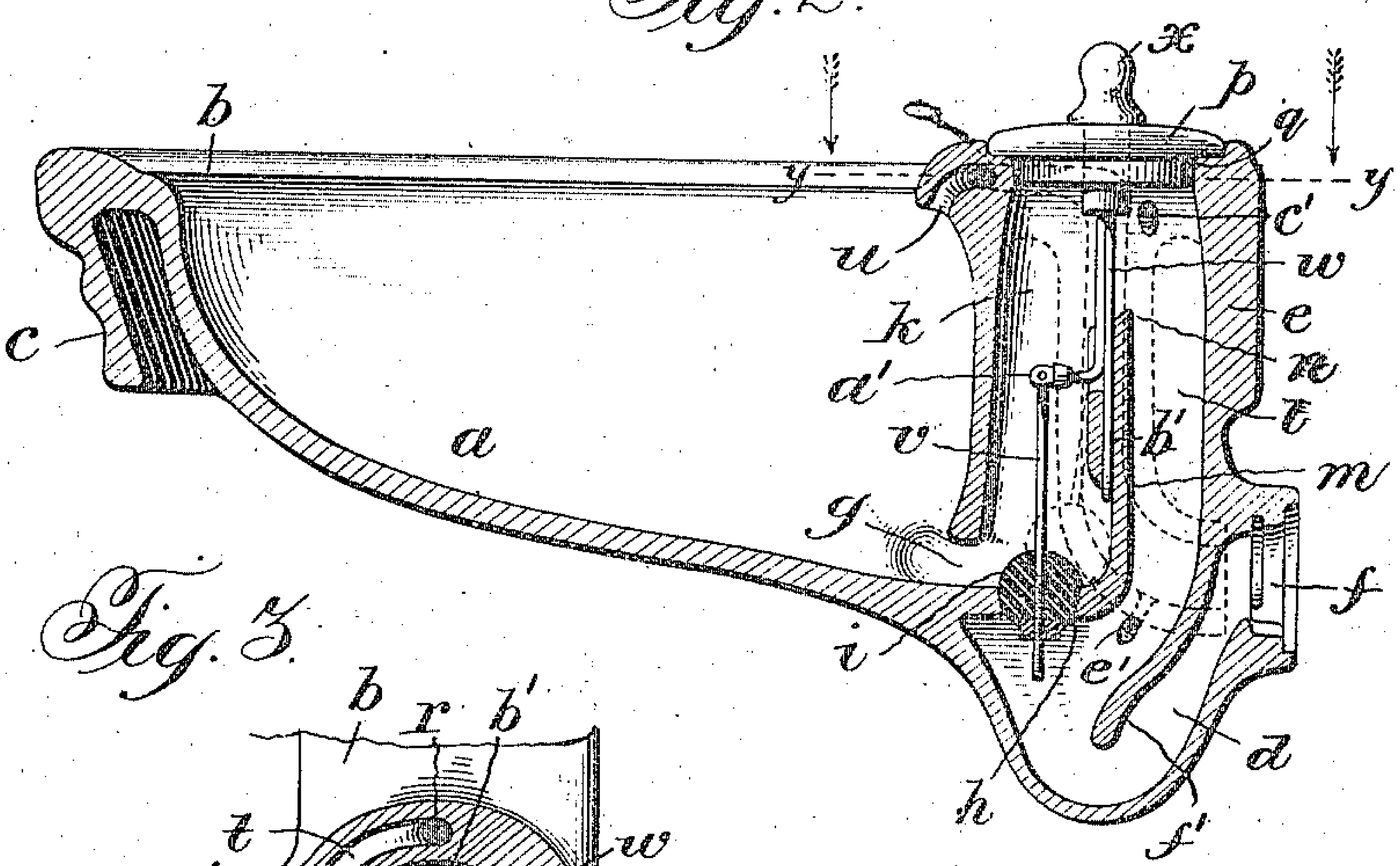
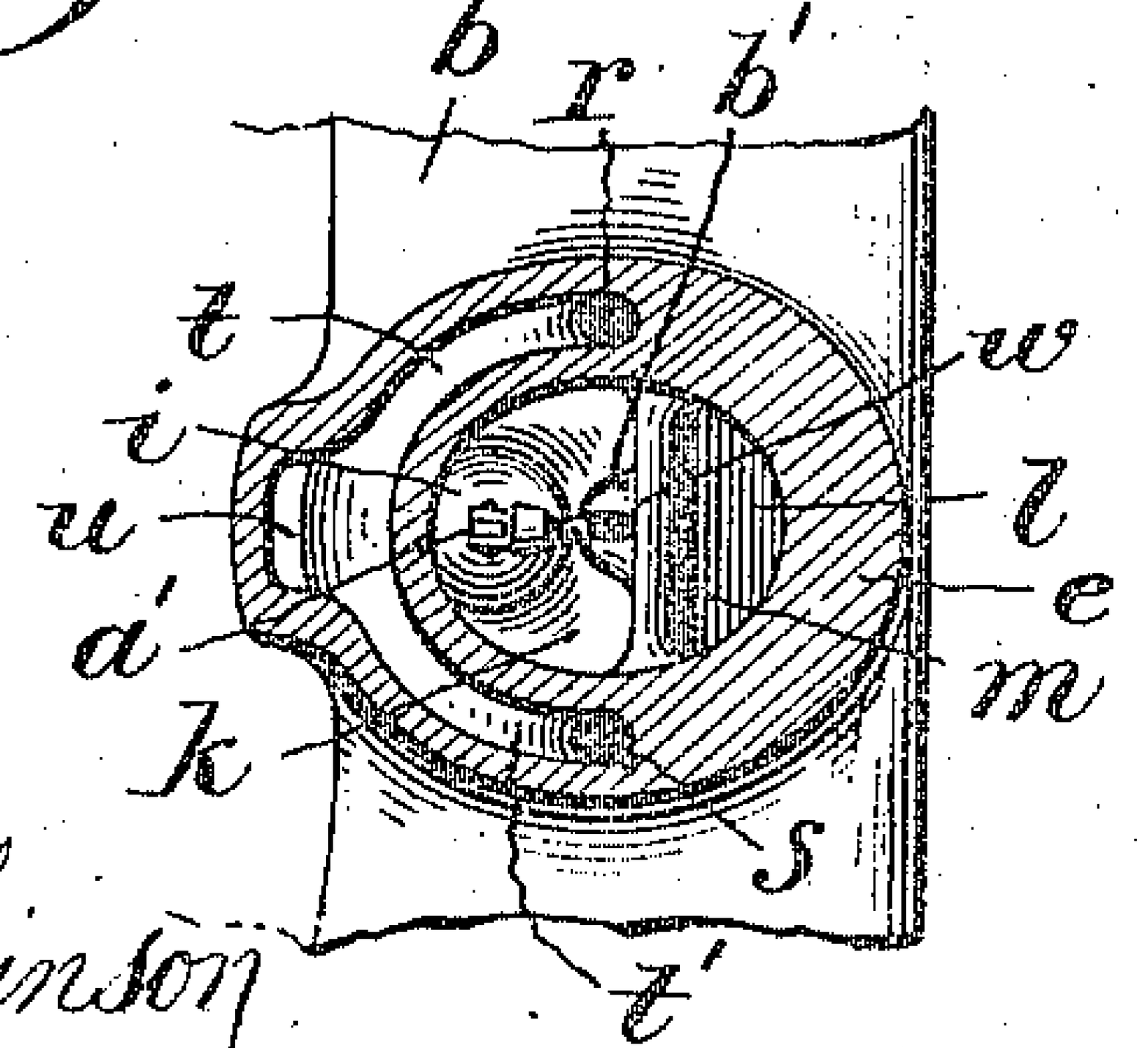


Fig. 3.



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No. 756,257. Patented April 5, 1904.

UNITED STATES PATENT OFFICE.

HARRY S. MADDOCK AND JOHN F. KELLY, OF TRENTON, NEW JERSEY, ASSIGNORS TO THOMAS MADDOCK'S SONS COMPANY, A CORPORATION OF NEW JERSEY.

LAVATORY-BASIN.

SPECIFICATION forming part of Letters Patent No. 756,257, dated April 5, 1904.

Application filed January 4, 1904. Serial No. 187,682. (No model.)

To all whom it may concern:

Be it known that we, HARRY S. MADDOCK and JOHN F. KELLY, both citizens of the United States, residing at Trenton, county of Mercer, State of New Jersey, have invented certain new and useful Improvements in Lavatory-Basins; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to porcelain, clay, or other lavatory-basins, and has for its particular object to construct such a basin having a sealing-trap formed integrally with the basin, and all the ports, pipes, inlets, and passages also formed in the material out of which the basin is composed instead of being made out of metal or other material dissimilar from that of the basin and attached or secured thereto.

The invention is illustrated in the accompanying drawings, forming part of this specification, wherein—

Figure 1 is a fragmentary view of the rear side of a porcelain lavatory-basin constructed in accordance with our invention, part of the figure being cut away, so as to show the interior construction of the overflow-pipe and the inlet connections for hot and cold water. Fig. 2 is a vertical cross-section of such a basin on the line x x, Fig. 1; and Fig. 3 is a sectional plan on the line y y of Fig. 2.

Referring to the views, a denotes the bowl, b the horizontal slab projecting outward from the upper edge thereof, and c the flange or curtain running around and extending down from the edge of the slab.

The sealing-trap is best shown at d, Figs. 1 and 2. Instead of being separate from the basin, as usual, it is formed integrally therewith out of the material of which the basin is composed. It is located at the foot of a pipe e, of ample dimensions, that extends vertically down from the slab at the back of the basin and is made integral with the slab and bowl. It opens rearwardly, as shown at f, Figs. 1 and 2, and the bowl communicates directly with it through the space g and the opening h, controlled by a valve i. The bowl has also an indirect communication with the sealing-trap through the pipe e, this pipe having an uptake k and a downtake l, separated from each other by a partition m, which divides the pipe into two pipes. The upper edge n of the partition is considerably below the upper edge of the basin a, so as to prevent the latter from overflowing. The pipes k and l constitute an open overflow communication from the bowl to the trap, and communication is made with the bowl and its overflow by means of the same opening g through which the water passes directly to the trap when the valve i is lifted from the opening h. The pipe e is made of large diameter in order that its two divisions k l may be large enough to permit ready access thereto for cleaning. The pipe extends vertically along the rear side of the bowl immediately above the trap and has a large opening o through the slab at its upper end, so as to permit the hand or a brush or cloth to be introduced for cleaning purposes, and the outlet-opening h is located in line with the uptake k of the overflow in order that access may be readily had to the valve and the opening h. As will be seen in Fig. 2, the uptake k is a straight pipe without grooves or bends, and the downtake l is also straight and parallel with the uptake, both said passages being included in the pipe l, and the opening at the top of the pipe being closed by a porcelain cover p, which when removed exposes the whole interior diameter of both the uptake and the downtake and affords ready access to the trap and all the outlet-ports and passages of the basin.

In furtherance of the object of dispensing as far as possible with all metal fittings and separate parts the basin is provided with two inlet-pipes r and s for hot and cold water, respectively. These pipes are integral with the basin, like all the other parts, and are preferably formed on the exterior of the pipe l, at opposite sides thereof, and extend from a point preferably though not necessarily about level with the exit from the trap upward to a passage t, which is formed in the ledge part way

around the opening to the pipe *e* and which communicates with the bowl by the orifice *u*, located centrally of the passage and constituting the filling-opening for the bowl.

The valve *i* is preferably a ball of rubber, but may be of any other form of material. It is suspended by a rod *v* from an offset *a'* on a stem *w*, which has a handle or knob *x*, that extends up through an opening in the cover *p*, and by means of which the valve may be lifted from or lowered to its seat without raising the cover *p*. The handle or knob has an extension passing freely and loosely through the opening in the cover *p*, and the valve-stem *w*, which is connected to the extension, is continued down beyond the offset *a'* into a vertical guideway *b'*, formed in the partition *m*, so that the stem may be raised and lowered to operate the valve without being disconnected from its guide. The partition is preferably located centrally in the pipe *e*, so that the guideway for the valve-stem comes immediately under the central opening in the cover *p*, and the offset *a'* from the stem not only enables the valve *i* to be hung from a point centrally over the discharge-opening *h*, but cooperates with the upper edge *n* of the partition *m* to form a means for holding the stem raised and the valve locked in open position. This is best illustrated in dotted lines in Fig. 1, where it will be seen that the valve-stem has been lifted and given a partial turn to the right until the offset *a'* overhangs and rests upon the upper edge of the partition *m*, the valve at this time hanging freely against the lower side of the partition above the opening *h*, as indicated in dotted lines in the second figure.

As before stated, the passage *t*, into which the upper ends of the hot and cold water inlet pipes *r* and *s* open, partially surrounds the opening to the pipe *e*, forming a semicircular chamber, and the supply-orifice to the basin is located in the center of this chamber, so that when one inlet-pipe is being used the opposite end of the chamber next the other pipe might form a sort of trap for the air and might cause the aspiration or hissing sound which is so objectionable in other basins. We therefore provide air-vents *c' c'* from the chamber *t* at each end into the upper end of the pipe *e*, so that any air which may happen to be entrapped in the chamber, as well as any that may be carried along by the water, may find a free vent into the overflow and permit the immediate emission of solid water into the bowl. We also prefer to form at the lower ends of the hot and cold water pipes flushing-orifices *c'*, directed downwardly along the sealing-partition *f''* of the trap, as best shown in Fig. 2, so as to cause a cleaning-jet of the inlet-water to pass into the trap and set up a circulation therein whenever the water is turned into the bowl.

Such being the construction of the basin and the arrangement of its trap, its ports, pipes, and passages, it is to be noted that the valve, its stem and knob, and the cover *p* are the only removable parts in the whole structure and that all these parts have no permanent connection with the basin, but are entirely removable therefrom by simply lifting the valve by its knob or handle *x*, when the cover *p* will also be removed by the engagement of the offset on the valve-stem. This opens up the whole interior structure, permitting easy access to the trap, the up and down take of the overflow, and all the orifices leading to and from the bowl.

Having thus described our invention, what we claim, and desire to secure, is—

1. In a porcelain lavatory-basin, the combination of a sealing-trap, an overflow leading from the bottom of the bowl to the trap, a discharge-opening leading from the bottom of the bowl directly into the trap, a water-supply passage at the top of the bowl, a water inlet or inlets leading to said supply-passage, and a vent leading from the supply-passage to the overflow, all of said passages, inlets, openings and vents being formed integrally with the basin out of the material of which it is composed.

2. In a porcelain lavatory-basin, the combination of a sealing-trap, a pipe extending vertically at one side of the bowl above the trap, a partition dividing the pipe into two parts, one of which communicates directly with the trap and indirectly with the bowl and forms the overflow from the bowl, and the other of which communicates directly with both trap and bowl, an opening at the top of the pipe having a removable cover through which access may be had to both parts of the pipe and to the trap through either part of the pipe, a water-supply passage exterior to and at the top of the pipe, a vent leading from the supply-passage to the overflow, and a water inlet or inlets extending along the pipe to the supply-passage, the trap and all of said pipes, inlets and passages being formed integrally with the basin out of the material of which it is composed.

3. In a porcelain lavatory-basin composed of a bowl and an integral ledge or table-like slab, the combination of a sealing-trap, a pipe extending vertically at one side of the bowl above the trap, a partition dividing the pipe into two parts, one of which communicates directly with the trap and indirectly with the bowl and forms the overflow from the bowl, and the other of which communicates directly with both trap and bowl, an opening in the ledge at the top of the pipe having a removable cover through which access may be had to both parts of the pipe and to the trap through either part of the pipe, a water-supply passage in the ledge exterior to and at the top of the pipe, a vent leading from the supply-passage to the overflow, and hot and cold water inlets extending upward along the pipe to the supply-passage, the trap and all of said pipes,

inlets and passages being formed integrally with the bowl and ledge out of the material of which the basin is composed.

4. In a lavatory-basin, the combination of a sealing-trap, a pipe extending vertically above the trap, a partition dividing the pipe into two parts, one of which forms the overflow from the bowl, and in the bottom of the other of which is formed an opening for discharging the bowl directly into the trap, a valve for the bowl-discharge opening, a stem for the valve sliding in a guideway in the pipe-partition, and a lateral projection from the stem to which the valve is pivotally connected, whereby the valve may be lifted from and suspended above the discharge-opening by turning the stem in its guide until the lateral projection overhangs the partition.

5. In a porcelain lavatory-basin, the combination of a rearwardly-opening trap integral therewith, an inlet water-pipe adjacent to the trap, and a jet-opening leading from the inlet-pipe downwardly into the downtake of the trap.

In testimony whereof we affix our signatures in presence of two witnesses.

H. S. MADDOCK.
JOHN F. KELLY.

Witnesses:
FRANK D. HOLMES,
CHARLES S. MADDOCK.