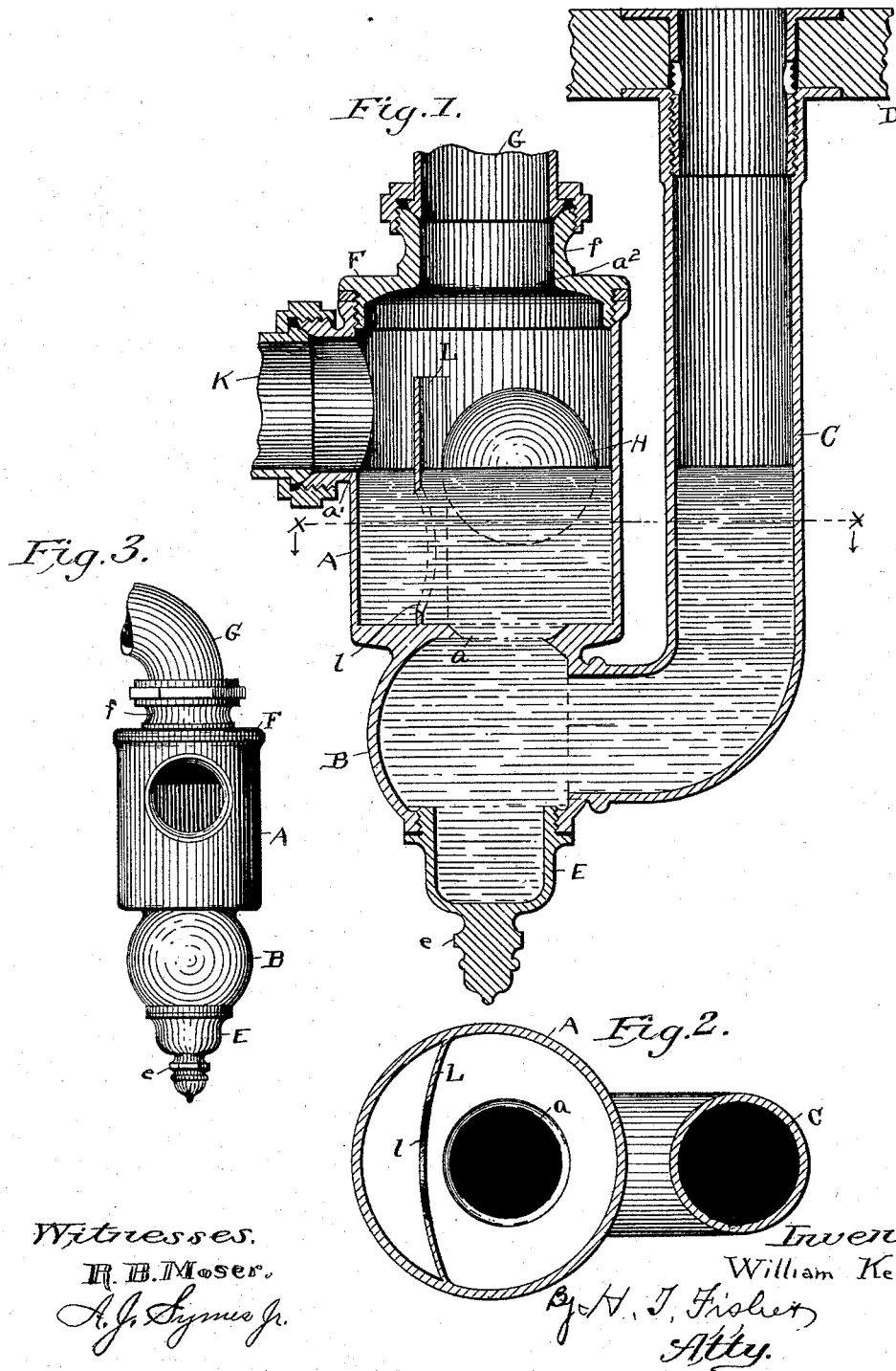


(No Model.)

W. KERR.
SINK OR BASIN TRAP.

No. 489,639.

Patented Jan. 10, 1893.



Witnesses.
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UNITED STATES PATENT OFFICE.

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SINK OR BASIN TRAP.

SPECIFICATION forming part of Letters Patent No. 489,639, dated January 10, 1893.

Application filed October 10, 1892. Serial No. 448,339. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM KERR, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful improvements in Sink or Basin Traps; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention has reference to sink or basin traps, and the object of the invention is to provide the public with a trap in which utility and artistic effect are combined, so that while the construction is such as to perform all the functions of a thoroughly good trap, the effect upon the eye is not lost, and the trap is suited to place in the open lavatory work so common and proper at this time.

To these ends the invention consists in the construction, combination and arrangements of parts substantially as shown and described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a central vertical sectional view of my improved trap, and Fig. 2 is a cross-section on line *x, x*, Fig. 1. Fig. 3 is a plain elevation of the trap, reduced in size.

A represents the body of the trap. This body portion or part is in the form of a plain cylinder with a smooth exterior, and is provided with inlet opening *a* in its bottom, outlet or exhaust *a'*, and back vent *a''*. The bottom of the said body or chamber A is closed except the valve opening *a*, and integral with this body, and forming, in this instance a part thereof, is the globe or ball B. The inlet pipe C from the sink or basin D discharges into this globular portion of the trap, and a sediment cup E is screwed into the bottom of said part B, and has an ornamental pendant with a collar *e* constructed to be engaged by a wrench to remove or screw into place the said cup. The opening in the bottom of the globe B is purposely quite large so as to facilitate cleansing the trap when this becomes necessary.

A cap F covers the entire top of the body A and has a neck *f* for attachment of the back vent pipe G. The opening *a''* in this cap is constructed to form a seat for the ball valve H in certain contingencies in the operation of

the valve, as will hereinafter appear, and the said cap F is bodily removable when required.

A diaphragm or division wall L is placed in the body A in front of the exhaust or outlet opening *a'*, and the said wall or plate has an opening *l*, suitable to seat the ball valve H. This opening *l*, however, is below the opening *a'* forming the outlet of the trap, and the plate or diaphragm L does not extend to the top or dome of the trap but some distance above the water level therein. This construction enables the trap to act normally just as it would if no ball valve and diaphragm were present and reliance were placed wholly in the water seal without these auxiliary parts. But the diaphragm and ball are essential to prevent siphoning of the trap, a defect to which all traps seem to be liable and against which precautionary means must be provided. In this instance when suction from the outlet and exhaust pipe K occurs, the ball H is quickly drawn to and seated in the opening *l* in the diaphragm, and this closes said opening and prevents further exhausting of the water from the trap. Then when the siphoning tendency is overcome the ball drops back to its normal position. The diaphragm also serves to prevent ball H from closing the outlet *a'*. Again, in case of back pressure or draft from the direction of the sewer the ball H is in position to be carried down by said pressure and close the opening *a* and thus prevent back flow into the sink or basin. Or, if the tendency be to force the fluid upward into the back vent and the trap gets full, the ball will close the opening *a''*. Thus it will be seen that the said ball valve has a part to perform under certain contingencies with respect to all three of the openings to or from the trap, while normally it so remains as not to interfere with the healthful operations of the trap. In case the trap needs cleaning, the cup E and the cap F are removed, the ball taken out, and then the trap is thrown open from end to end and can be cleaned without trouble. In case it becomes necessary to flush the trap the ball H will be promptly forced to seat *a'* and thus close the back vent, so that flushing will be possible. Otherwise, if the valve H did not close the back vent, flushing would be impossible.

Having thus described my invention, what

I claim as new and desire to secure by Letters Patent, is,—

1. A sink or basin trap having a cylindrical body with an inlet opening in its bottom and an outlet opening in its side, a diaphragm between said openings having a passage through it, and a ball valve in position to seat in said passage and the inlet opening, substantially as described.

2. The cylindrical body of the trap having an extension on its bottom to connect with the inlet pipe, an outlet in its side near its top and an opening for back vent above said outlet, in combination with a diaphragm before the said outlet and a ball valve before said diaphragm and in position to close the inlet and the back vent openings, substantially as described.

3. The cylindrical body of the trap herein described, the same having an inlet opening in its bottom, an outlet opening in its side, a

back vent opening in its top, and a diaphragm or wall at one side of the center of said body before the outlet opening having a passage for the fluid, and a ball valve in said body; substantially as described.

4. The body A having opening *a* and inlet globe B at its bottom and the outlet *a'* in its side, the cap F closing the top of said body, the diaphragm L extending part way the length of the inside of the said body and having a fluid passage through it, and the ball valve H in position to seat on said passage and the inlet opening *a* and the vent opening *a''*, substantially as described.

Witness my hand to the foregoing specification this 30th day of September, 1892.

WILLIAM KERR.

Witnesses:

H. T. FISHER,
E. C. LATHAM.