

(No Model.)

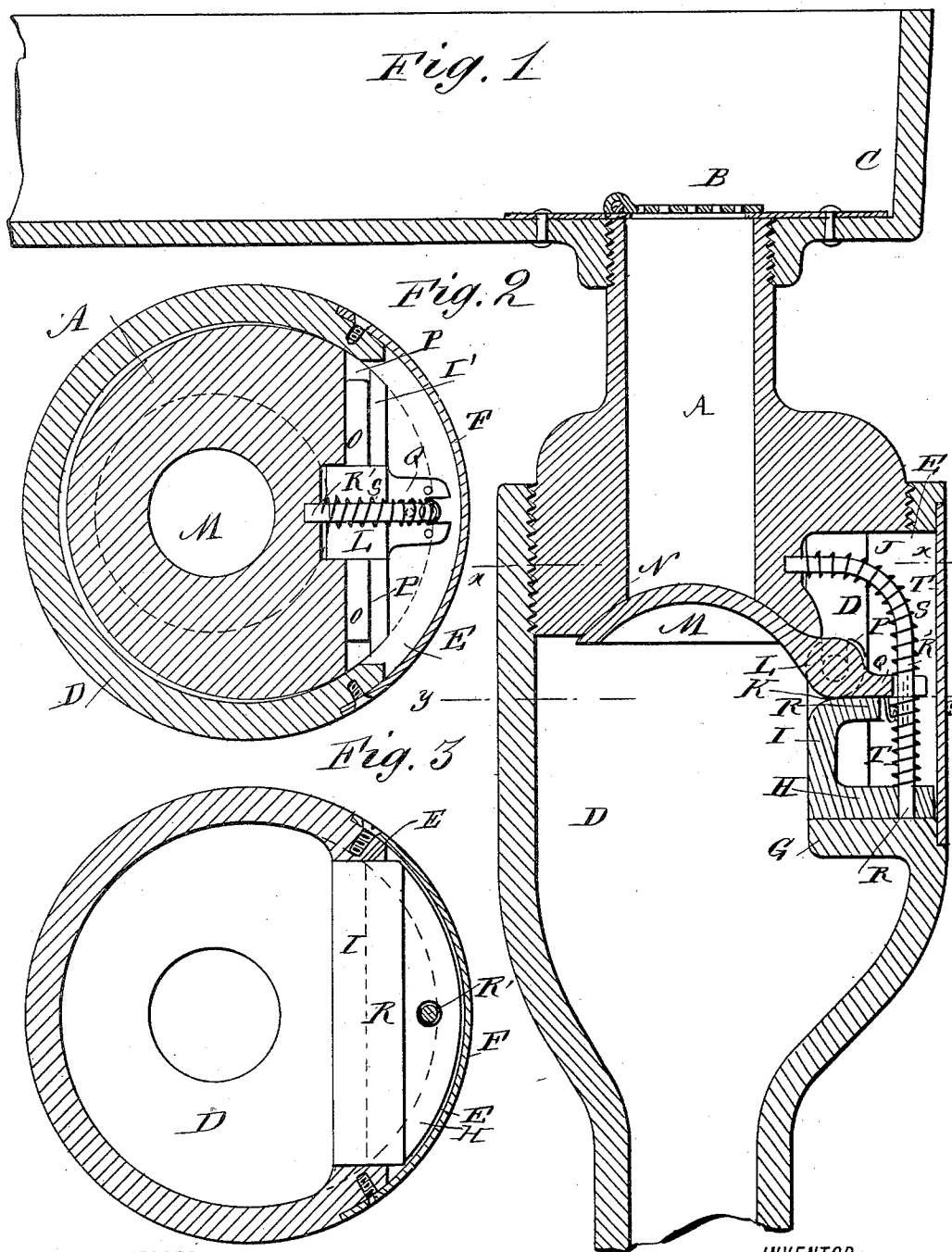
2 Sheets—Sheet 1.

H. B. EARECKSON.

GAS CHECK FOR WATER PIPES.

No. 399,390.

Patented Mar. 12, 1889.



WITNESSES:

C. Neveu
C. Sedgwick

INVENTOR:

H. B. Eareckson

BY

Munn & Co

ATTORNEYS.

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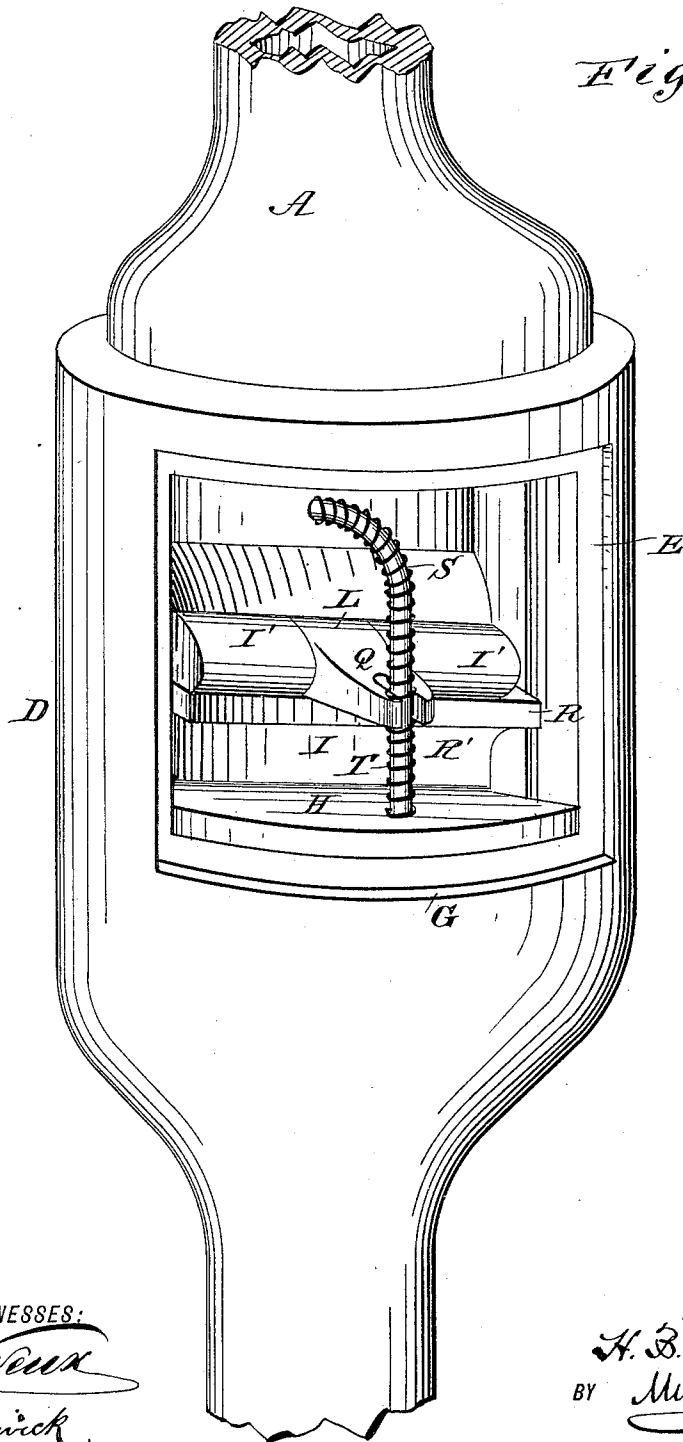
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UNITED STATES PATENT OFFICE.

HENRY B. EARECKSON, OF NEW YORK, N. Y.

GAS-CHECK FOR WATER-PIPES.

SPECIFICATION forming part of Letters Patent No. 399,390, dated March 12, 1889.

Application filed June 15, 1888. Serial No. 277,208. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. EARECKSON, of the city, county, and State of New York, have invented a new and useful Improvement in Gas-Checks for Water-Pipes, of which the following is a full, clear, and exact description.

This invention relates to an improvement in that class of appliances used on the waste-pipes of wash-basins and other water-fixtures to permit the discharge of the waste water while automatically preventing the backflow of sewer-gas, in which a self-closing flap-valve is arranged to be opened by the weight of the waste water to allow the same to escape, and to be closed the more tightly against its seat by the pressure of gas from the drain.

The object of the improvement is to provide for the ready inspection and removal of the flap-valve and its operating connections for cleaning or repairs, and to secure greater simplicity and efficiency than have been heretofore generally attained in devices of this character.

The invention comprises certain novel features of construction and arrangement, which will be hereinafter described in detail, and then particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation of a sewer-gas check embodying my improvement applied to the waste-pipe of a sink. Fig. 2 is a sectional plan view of the said device on the line *x x*, Fig. 1. Fig. 3 is a sectional plan view of the same on the line *y y*, Fig. 1; and Fig. 4 is a perspective view on an enlarged scale, and with the glass cover removed.

In constructing the gas-check thus illustrated a trap-body is formed of an upper pipe-section, A, adapted at its upper end for connection to the discharge B of a sink, C, or like fixture, and a lower pipe-section, D, screwing on the outside of the lower end of the upper section, A. The lower section, D, is formed with a rectangular opening, E, in its side, which is closed by a detachable glass plate, F, forming a window, whereby the interior of the trap may be readily observed from the outside, and on removing which convenient access may also be had to the interior.

The lower section, D, is also formed with a flat rest, G, projecting inward from the bottom of the opening E, on which rest is accurately fitted a correspondingly-shaped foot, H, which is formed integrally with and projects outward from the lower edge of a removable filling-block, I, which is fitted between the sides of the opening E, at the lower part thereof. The block I is also formed at the top with an outward-projecting lip, R, which sets up closely against the bottom of an extension, I', formed integrally with and projecting downward from the upper pipe-section, A.

The downward extension I' is formed with a transverse slot, K, in the middle of its lower edge, in which, and against the lip R, is securely fitted to turn, while at all times closing the slot, a cylindrical hub, L, which is formed integrally with a spherical flap-valve, M, adapted to corresponding seat N in the lower end of the upper section, A.

The opposite ends of the valve-hub L are formed with pivots O, which are mounted to turn in upward opening transverse groove-bearings P, formed on the outer side of the extension I' within the closed chamber J, which is formed between the glass plate F and the extension I' and filling-block I. The construction and arrangement are such that the valve can swing freely downward or upward to open or close the trap, according as waste water accumulates above or sewer-gas below, and on removing the block I and lifting the valve-pivots O from their bearings P the whole valve can be withdrawn and taken out for inspection, repairs, or renewal, the glass plate F being of course previously removed. The valve-hub L is also formed with an arm, Q, projecting outward into the chamber J, and adapted, when the valve is closed, to bear upon the lip R of the block I, so as to more completely cut off communication between the chamber J and the interior of the trap.

The inner end of the arm Q is forked to embrace, while working freely on, a guide-rod, R', which is fixed removably at its ends in the top of the foot H and in the side of the upper section, A, above the valve-pivot, respectively, and extends in a straight line from the foot to the forked arm Q, and in a curved line therefrom to its upper fixing-point.

On the rod R', above the forked arm Q, is

coiled a spring, S, to tend to keep the valve normally closed, and on the said rod, between the forked arm Q and the foot H, is coiled another spring, T, which is connected at its upper end to the arm and at its lower end to the foot H, to co-operate with the spring S and secure greater durability and certainty of action. The guide-rod and springs with this arrangement are capable of easy removal and adjustment with the valve.

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

1. A trap of the character described constructed with a closed side chamber, J, having a transverse slot, K, in its inner wall, and provided with a flap-valve, M, having a pivot-hub, L, adapted to turn in while closing the slot K, substantially as shown and described.

2. A trap of the character described formed of an upper pipe-section, A, having a downward extension, I', provided with open bearings P, a lower pipe-section, D, having a side opening, E, and rest G, an internal flap-valve

pivoted in the bearings P, and removable filling-block I, interposed between the rest G and extension I', substantially as shown and described.

3. A trap of the character described provided with a closed side chamber, J, having a transverse slot, K, in its inner wall, and a lip, R, at the bottom of the slot K, and a flap-valve, M, having a pivot-hub, L, mounted in said slot, and a bearing-arm, Q, adapted to the lip R, substantially as described.

4. The combination, with a trap-body provided with a side chamber, J, separate from the interior, and having a slot, K, in its inner wall, of an internal flap-valve, M, pivoted to turn in while closing the slot K, and having an outward-projecting arm, Q, a fixed guide, R', on which the arm Q works, and a valve-operating spring on the guide R', substantially as described.

HENRY B. EARECKSON.

Witnesses:

JAMES HAYDEN,

CHAS. H. OVERBECK.