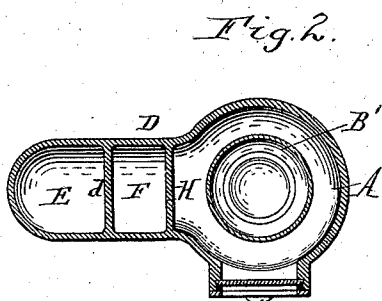
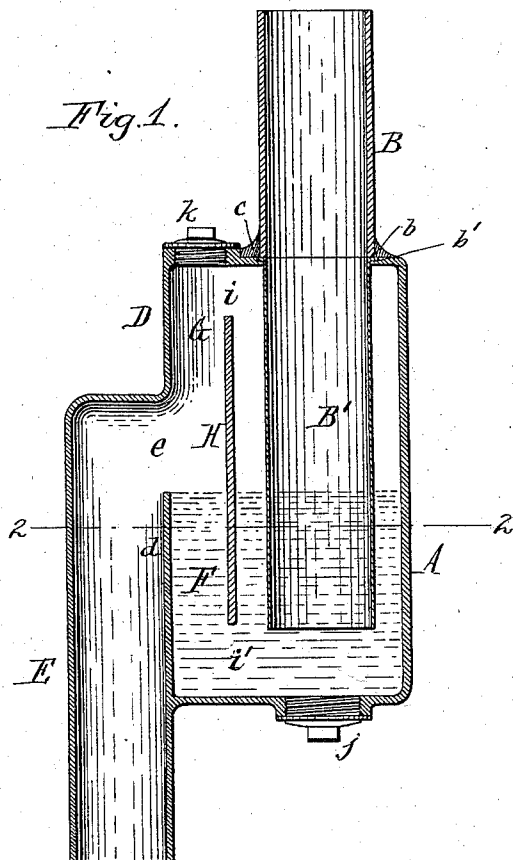


(No Model.)

F. B. MEYERS.
WASTE TRAP.

No. 576,319.

Patented Feb. 2, 1897.



Witnesses:

F. Gustav Wilhelm.
Henry L. Deck.

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UNITED STATES PATENT OFFICE.

FRANK B. MEYERS, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO
JOSEPH IRR, OF SAME PLACE.

WASTE-TRAP.

SPECIFICATION forming part of Letters Patent No. 576,319, dated February 2, 1897.

Application filed April 9, 1896. Serial No. 586,830. (No model.)

To all whom it may concern:

Be it known that I, FRANK B. MEYERS, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Waste-Traps, of which the following is a specification.

This invention relates to waste-traps for sinks, washbasins, and bath-tubs, and has for its object to produce a simple and inexpensive non-siphoning trap of this kind which will always retain a sufficient quantity of water to form an effectual gas seal.

In the accompanying drawings, Figure 1 is a sectional elevation of my improved trap. Fig. 2 is a horizontal section thereof in line 2 2, Fig. 1.

Like letters of reference refer to like parts in the two figures.

A is the reservoir or inlet-chamber of the trap, which is comparatively deep and constructed of cylindrical or any other suitable form.

B is an inlet-pipe, which in the construction shown in the drawings is connected with the upper end of the reservoir A, and B' is a continuation of said pipe which extends nearly to the bottom of the reservoir. The outer portion B of the inlet-pipe is preferably constructed of lead and connected at its upper end to the nipple of the sink, washbasin, or other appliance by the usual collar or union or any other suitable connection which is not shown in the drawings. The inner portion B' of the inlet-pipe is constructed of copper or other suitable non-corrosive material and is provided at its upper end with an outwardly-extending flange *b*, which is seated in an annular recess or rabbet *b'*, formed in the edge of the opening through which the inlet-pipe passes. The flange *b* is retained in its seat by the lead pipe B, which rests upon the flange and is soldered to the top of the reservoir A, as shown at *c*.

If preferred, a single continuous lead pipe may be used in place of the pipes B and B'.

The body or reservoir of the trap is formed with a lateral extension or enlargement D, extending throughout the length thereof, and with this enlargement is connected the discharge-pipe E of the trap. The inlet *e* of this

discharge-pipe is arranged between the upper and lower ends of the enlargement D.

F is an ascending water-passage arranged in the enlargement D and leading from the lower portion of the reservoir A to the inlet of the discharge-pipe E, and G is a descending air-passage leading from the upper portion of the reservoir to the inlet of the discharge-pipe. In the construction shown in the drawings these water and air passages are formed between the outer wall *d* of the enlargement D and an internal upright partition H, arranged at the junction of the enlargement with the cylindrical reservoir, as shown. This partition extends across the entire width of the enlargement, as shown in Fig. 2, and its upper and lower ends terminate at a distance from the upper and lower ends or heads of the reservoir, so as to leave intervening passages or openings *i i'*, whereby the ascending water-passage F and the descending air-passage G respectively communicate with the reservoir.

In the use of the trap the waste water entering the reservoir through the inlet-pipes B B' ascends in the reservoir, and the ascending water-passage F descends through the air-passage G and escapes through the discharge-pipe E. During the flow of the waste water the trap is wholly filled with water; but as soon as the flow into the trap ceases the water-level falls and the air which follows the descending water in the inlet-pipe rises to the top of the reservoir, passes over the upper edge of the partition H, and descends through the air-passage G into the discharge-pipe. The vacuum created in the trap during the passage of the water through the same is thus filled by the air, and by the time that the water-level falls to about the lower edge of the discharge-pipe inlet the siphoning action of the trap is destroyed, thereby preventing the further suction or discharge of water from the trap, leaving an ample quantity of water in the bottom of the trap and forming a reliable seal, which effectually prevents the backflow of sewer-gas.

By extending the partition H above the upper edge of the discharge-pipe inlet *e*, as shown, the water-level in the trap is maintained under ordinary conditions at about the lower edge of the discharge-pipe inlet, thus

leaving a sufficient quantity of water in the trap at all times to prevent siphoning of its entire contents by other traps connected with the same drain or waste pipe.

- 5 The trap is provided in its bottom with the usual cleaning-opening closed by a plug *j*, and in its top the same is preferably provided with a similar plugged opening *k*, with which the hose-bib of a force-pump may be attached for
10 thoroughly flushing the trap.

I claim as my invention—

1. A waste-trap comprising an inlet-chamber or reservoir, an inlet which opens into the lower portion of the reservoir, a discharge-
15 pipe having its inlet arranged between the upper and lower ends of the reservoir, an ascending water-passage arranged below the inlet of said discharge-pipe and leading from the lower portion of the reservoir to the dis-
20 charge-pipe inlet, and a descending air-passage arranged above the discharge-pipe inlet and leading from the upper portion of the reservoir to the last-named inlet, said descending air-passage and ascending water-passage
25 being both arranged between said reservoir and said discharge-pipe, whereby the discharge-pipe has no direct connection with the reservoir or main chamber of the trap, substantially as set forth.

- 30 2. A waste-trap comprising an inlet-chamber or reservoir having a lateral extension or enlargement, an inlet-pipe which opens into the lower portion of the reservoir, a discharge-pipe having its inlet connected with said enlargement between the upper and lower ends
35 thereof, and an upright partition arranged in said enlargement and extending upwardly above the upper edge of the inlet of the dis-

charge-pipe and separated at its lower end from the bottom of the enlargement by an intervening space, forming a descending air-
40 passage arranged above the inlet of the discharge-pipe and leading from the upper portion of the enlargement to the discharge-pipe inlet and an ascending water-passage ar-
45 ranged below the discharge-pipe inlet and leading from the lower portion of said enlargement to the discharge-pipe inlet, said ascending water-passage and descending air-passage being both located between the reservoir of
50 the trap and said discharge-pipe, substantially as set forth.

3. A waste-trap comprising a reservoir, an inlet composed of an outer lead pipe connected with the top of the reservoir and an inner cop-
55 per pipe terminating near the bottom of the reservoir, a discharge-pipe having its inlet arranged between the upper and lower ends of the reservoir, an ascending water-passage arranged below the inlet of said discharge-pipe
60 and leading from the lower portion of the reservoir to the discharge-pipe inlet and a descending air-passage arranged above the discharge-pipe inlet and leading from the upper
65 portion of the reservoir to the last-named inlet, said descending air-passage and ascending water-passage being both arranged between said reservoir and said discharge-pipe,
70 whereby the discharge-pipe has no direct connection with the reservoir or main chamber of the trap, substantially as set forth.

Witness my hand this 1st day of April, 1896.

FRANK B. MEYERS.

Witnesses:

JOSEPH IRR,

CARL F. GEYER.