

(No Model.)

J. W. REID.

DISCHARGE ATTACHMENT FOR WASH BASINS, &c.

No. 439,687.

Patented Nov. 4, 1890.

Fig. 1.

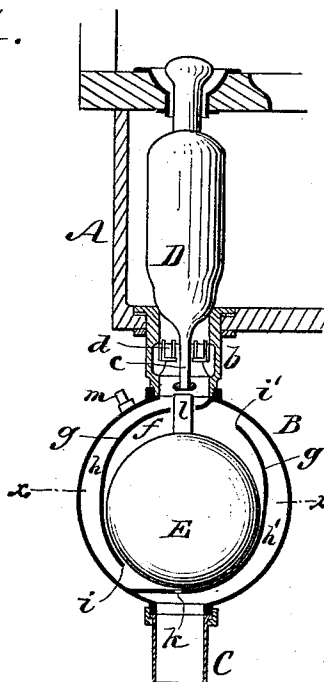


Fig. 2.

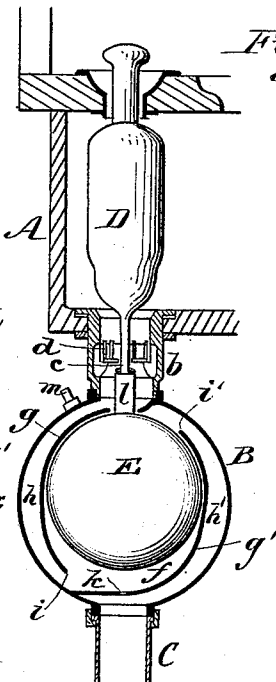


Fig. 3.

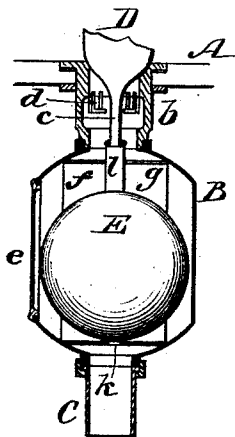


Fig. 4.

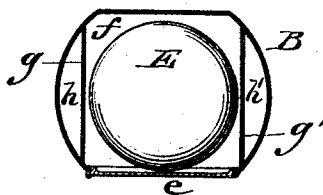
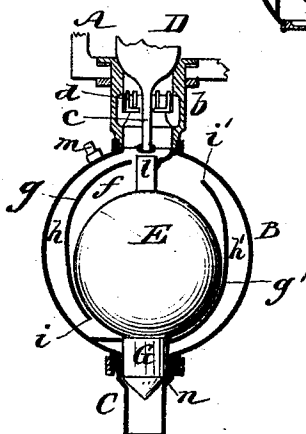


Fig. 5.



WITNESSES:

C. Sedgwick
J. M. Pitter

INVENTOR:

J. W. Reid

BY

Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

JAMES W. REID, OF SAN FRANCISCO, CALIFORNIA.

DISCHARGE ATTACHMENT FOR WASH-BASINS, &c.

SPECIFICATION forming part of Letters Patent No. 439,687, dated November 4, 1890.

Application filed March 3, 1890. Serial No. 342,390. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. REID, of the city of San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Discharge Attachments for Wash-Basins, Sinks, and other Structures, of which the following is a full, clear, and exact description.

This invention is designed to be applied to stationary wash-basins, sinks, bath-tubs, and other water or liquid holding vessels or receptacles.

It has for its object the automatic emptying of said receptacles of the water or other fluid contained in them, likewise the protecting of such receptacles against overflow, as well as against freezing, and, in the case of receptacles or vessels connected with sewers or cesspools, the securing of a certain guard or trap against the inlet of offensive or deleterious gases.

The invention consists in an attachment or appliance for these purposes of novel construction, and which shall be always and conveniently accessible for cleansing or repairs, substantially as hereinafter described, and 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.

Figures 1 and 2 are vertical sections of my improved attachment applied to a stationary wash-basin or other stationary receptacle, said view showing, respectively, the attachment in closed and open positions. Fig. 3 is a vertical sectional view of the same in a plane at right angles to Figs. 1 and 2. Fig. 4 is a partly sectional plan view, on the line *xx* in Fig. 1, of the lower chamber of the appliance with float therein, and Fig. 5 is a vertical section of the appliance with an additional plug or valve attachment for more effectively excluding sewer or other gas.

Referring in the first instance to the first four figures of the drawings, A indicates a stationary wash-basin or other receptacle in part, provided with a lower discharge-aperture and having arranged below it a chamber B. This chamber B may be of any convenient shape, but is preferably of the form shown in the drawings, and has a waste or

discharge pipe C secured to its bottom. Said chamber B is connected above by a throat or neck tube *b* with the receptacle A, said tube or passage *b* here forming the discharge-aperture from the receptacle, which discharge-aperture is opened or closed by a plug D, in this case a buoyant one, within the receptacle A. On the lower end of this plug is a rod or stem *c*, which projects a proper distance down within the tube or passage *b*, that has arranged within it a strainer *d* of any suitable description, but preferably made removable, and through a hole in the center of which the rod *c* passes. A bulb or projection is provided on the lower end of the rod *c* larger than the hole in the center of the strainer, so that when the buoyant plug D is withdrawn from the receptacle A for cleaning or repairing the appliance the strainer *d* is also removed for like purposes.

The chamber B, which contains a float E within it, is, as here represented, of partly globular form with two opposite flattened sides, the one *e* of which is constructed to form a lid to facilitate repair or cleaning and the putting in or out of the float E. Said chamber B is constructed internally with what may be termed an "inner chamber" *f* for the float, the same being composed in part of the opposite flattened sides of the main chamber B and of bent partitions or diaphragms *g g'*, which are constructed to leave passages *h h'* between them and the curved outer walls of the chamber B, and the one *g* of which is constructed to form an opening *i* at its lower end to connect by the passage *h* the tube *b* with the interior of the inner chamber *f* below, and the other *g'* constructed to form an opening *i'* at its upper end to connect by the passage *h'* the inner chamber *f* at its top with the waste or discharge pipe C. In the bottom of the diaphragm *g'* is a small aperture *k*, the use of which will be hereinafter explained. The float E may be of any desired shape, but preferably of spherical form, and is provided with a post *l* on top, which passes freely through the diaphragm *g* and is of such a length as that when the float E is at rest in the bottom of the chamber *f* the upper end of said post almost touches or engages with the stem or rod *c* of the plug D. Applied to the upper

portion of the passage *h* is a ventilating tube or nozzle *m*.

The operation is as follows: When the plug D is lifted from its seat, either by the hand
 5 or by an undue height of water in the receptacle A, the water passes out through the tube *b* over the strainer *d*, which serves to exclude foreign matter, and down the passage *h* into the chamber *f*, and fills the latter
 10 up to the level of the mouth formed by the opening *i'* of the outlet-passage *h'*. The float E is thus caused to rise, as shown in Fig. 2, to the top of the chamber *f*, and, engaging by its post *l* with the rod *c*, lifts the plug D and
 15 holds it off its seat until all the water has passed from the receptacle A into the chamber *f*, thence through the outlet-passage *h'* and waste-pipe C to the sewer or elsewhere. When there is no longer a supply from the
 20 receptacle A, the water in the chamber *f* wastes rapidly through the aperture *k*, thereby allowing the float E to sink to the bottom of said chamber, which, leaving the plug D unsupported, causes said plug to fall and
 25 close the discharge-aperture in the bottom of the receptacle A. So often as this operation is repeated the same result will follow. Fig. 5 shows a like construction of parts and for like operation, as above described; but
 30 the float E has attached to it a lower plug G, which, when the float E is down, closes on a seat *n* in the waste-pipe C, and thereby acts as an additional trap or guard against the influx of sewer-gas. In this case the mouth of
 35 the waste-pipe C is of much larger diameter than the plug G; but the seat *n* is constructed so that the plug G fits it closely. This plug G passes down through a circular hole in the diaphragm or partition *g'* and through the
 40 outlet-passage *h'*, and stands directly over the mouth of the waste-pipe C, and is of such length that when the float E is at rest in the bottom of the chamber *f* said plug takes a firm bearing on the seat *n*. When, however,
 45 the water flowing into the chamber *f* from the receptacle A causes the float, as hereinbefore described, to rise to the top of the chamber *f* and the plug D is held off its seat in said receptacle, the water in the chamber *f* rapidly
 50 settles through the space around the lower

plug G until the latter has resumed its position on the seat *n*. At this stage the post *l* on top of the float E is no longer in contact with the plug D, which has again closed the outlet in the bottom of the receptacle A, and
 55 the plug G closed the outlet to the waste-pipe C, which action occurs every time the operation is repeated.

The combined chambers B *f* constitute what may be termed a "water-trapping chamber."
 60 ber."

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

1. The combination, with a receptacle having a discharge-aperture in its bottom, a
 65 plug for closing the same, and a discharge-pipe, of an intermediate chamber between the receptacle and discharge-pipe in communication with said receptacle and by a leakage
 70 aperture or duct in communication with said discharge-pipe, and a float in the intermediate chamber engaging the plug of the receptacle, substantially as specified.

2. The combination, with the receptacle A,
 75 the discharge duct or tube *b*, and the buoyant plug D, of the water-trapping chambers B *f*, having a lower leakage aperture or duct, the float E, and the discharge-pipe C, essentially as described.
 80

3. The combination, with the water-trapping chambers B *f* and sewer connecting or
 85 discharge pipe C, of the float E, the independent basin or receptacle plug having a lower stem or rod *c* and adapted to be raised by said float, and the stationary screen *d*, substantially as specified.

4. The combination, with a receptacle having a discharge-aperture in its bottom, a plug
 90 for closing the same, and a discharge-pipe, of an intermediate chamber between the receptacle and discharge-pipe, a float in the said chamber engaging the plug of the receptacle, and a plug carried by said float for closing the
 95 discharge-pipe, substantially as shown and described.

JAS. W. REID.

Witnesses:

WM. J. GRAHAM,
 J. H. BLOOD.