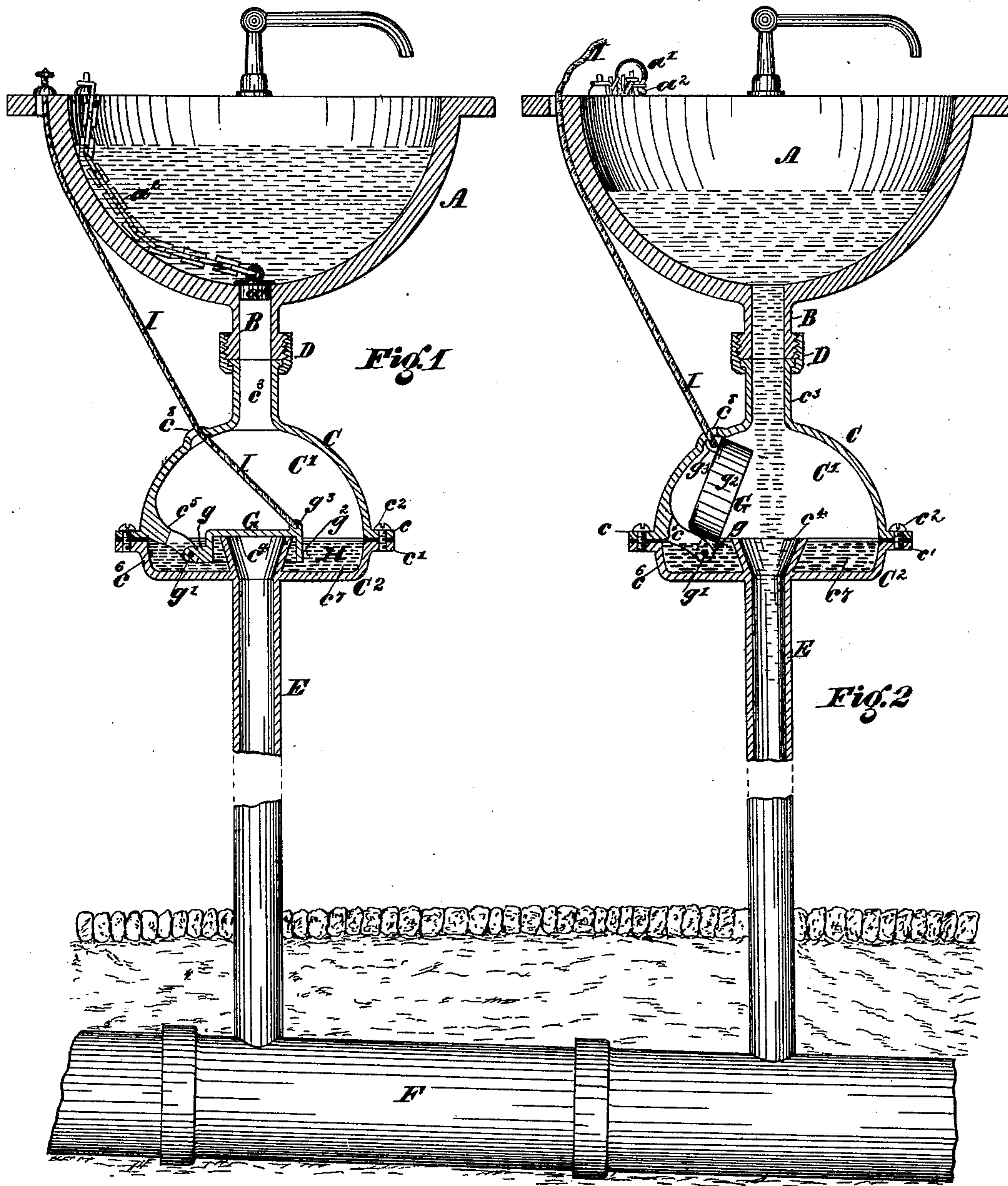


O. B. EVANS.
Trap for Wash-Basins, &c,

No. 220,064.

Patented Sept. 30, 1879.



WITNESSES:

Saml. J. VanStavoren.
R. D. Allen

INVENTOR,

Orniel B. Evans,
By Connolly Bros,
ATTORNEYS

UNITED STATES PATENT OFFICE.

OTHNIEL B. EVANS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN TRAPS FOR WASH-BASINS, &c.

Specification forming part of Letters Patent No. **220,064**, dated September 30, 1879; application filed February 11, 1879.

To all whom it may concern:

Be it known that I, OTHNIEL B. EVANS, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Seals and Traps for Wash-Basins, Water-Closets, &c.; and I 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a longitudinal vertical section of my invention, showing the waste-water pipe sealed; and Fig. 2 is a like view with the sealing-valve raised, thereby affording a free outlet for the waste-water.

My invention has for its object to provide a trap or seal joint in connection with wash-basins, water-closets, &c., which will effectually prevent the admission through the pipes leading therefrom of sewer and other deleterious gases and vapors into dwelling-houses and other abodes.

My invention relates to the provision and use of a mercury seal in the waste-pipe of wash-basins, water-closets, &c.; and consists in the peculiar construction and arrangement of such seal and its combination with appurtenant parts, as hereinafter set forth.

Referring to the accompanying drawings, A designates the wash-basin of a stationary stand, the bowl of a water-closet, or equivalent part of any similar structure; and B, the waste pipe leading therefrom. C is a bulb or enlargement, forming a part of said pipe or constituting a joint therein, and is preferably made in two sections, C¹ C², having flanges c¹, fastened together by screws c². The upper section, C¹, is nearly hemispherical in form, having a neck, c³, which is united by means of a union, D, with the throat B of the basin. The lower section, C², is in the form of a trough, with central hollow boss, c⁴, the bore or opening through which is flaring, as shown. The continuation of this boss is connected, by a screw-coupling or equivalent means, with a pipe, E, which leads to the sewer or other

conduit or receptacle indicated by the part marked F.

The section C¹ is formed with two parallel lugs, c⁵, which extend down into the channel in the section C², between the boss c⁴ and the surrounding wall c⁶. Within said lugs is pivoted an ear, g, on a cap, G, which latter is so arranged as to fit snugly on the top of the boss c⁴, as shown in Fig. 1, with freedom of upward motion on its pivot g¹, as shown in Fig. 2. When said cap is down its annular or edge flange g² passes below the upper surface of the boss c⁴, and enters a body of quicksilver, H, held in the trough or channel c⁷, between said boss and the wall c⁶, thereby forming a perfectly tight seal, through which gases or vapors ascending through the pipe E cannot pass.

The cap G is formed with an eye, g³, for the reception and fastening of the end of a cord or chain, I, that passes through an opening, c⁸, in the upper section, C¹, of the trap, and thence upwardly, as shown, through the fixture in which the basin A, or its equivalent, is located, being there secured to a button, stopple, handle, or equivalent device.

The operation is briefly as follows: The trough C² is duly charged with mercury, as indicated in the drawings. The cap G, when resting, as it normally does, on the boss c⁴, has its flange g² submerged, as shown, in the mercury, a perfectly tight seal being thereby formed, which will prevent the ascent to the basin A of any gases or vapors through the pipe E.

When it is desired to empty the basin, its stopple a¹ is drawn out and the cap G at the same time raised to the position shown in Fig. 2, the stopple-chain a² and the cap-cord I being so connected, if desired, that one motion will lift both said cap and stopple. This allows free egress to the water from the basin through the pipe E.

Should the cap G fail to be raised when the stopple a¹ is lifted, no injury will be done, as the water will simply be collected above the mercury without displacing the latter, and will find its way out when said cap is duly elevated.

What I claim as my invention is—
The trap consisting of the sections C¹ C², the latter having boss c⁴ and trough for holding mercury, with cap G, adapted to fit over said boss and have its flange g² enter the mercury held in said trough, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of February, 1879.

OTHNIEL B. EVANS.

Witnesses:

S. J. VAN STAVOREN,
CHAS. F. VAN HORN.