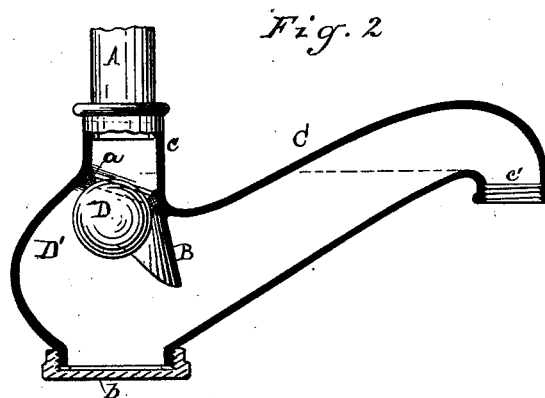
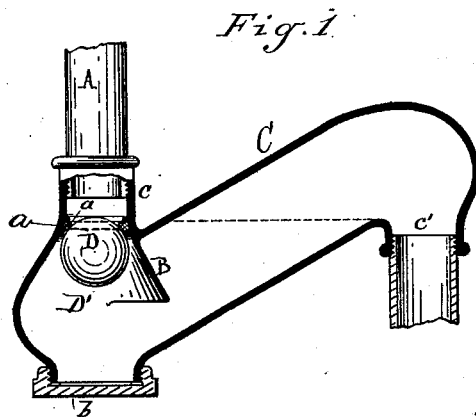


E. B. WARD.
Sewer-Traps.

No. 213,716.

Patented Mar. 25, 1879.



Attest:
A. Barthel
Charles J. Hunt,

Inventor:
E. B. Ward
By Atty
Thos. S. Sprague

UNITED STATES PATENT OFFICE.

ELECTUS B. WARD, OF DETROIT, MICHIGAN.

IMPROVEMENT IN SEWER-TRAPS.

Specification forming part of Letters Patent No. **213,716**, dated March 25, 1879; application filed January 7, 1879.

To all whom it may concern:

Be it known that I, ELECTUS BACKUS WARD, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Sewer-Traps, of which the following is a specification:

The nature of my invention relates to certain new and useful improvements in the construction of that class of devices employed to prevent the escape of sewer-gases through the pipes or conduits discharging into said sewers, while such discharge is unimpeded.

The invention consists in the peculiar construction and combination of the various parts, as more fully hereinafter described.

In the accompanying drawings, Figure 1 is a view, principally in central section, of my improved sewer-trap; and Fig. 2, a similar view of a modified form of the same.

A is the inlet or soil pipe, which is connected to the vertical neck *c* on the upper side of the upwardly inclined or curved pipe C, and at the lower end of such inclined or curved pipe. The pipe C is rounded or bulged out at its lower end below the neck *c*, and is provided with a concavo-convex plate, B, projecting down from the neck *c* opposite the bulged end of the pipe C, and forming, with such bulged end, an inverted funnel-shaped chamber, D', within which the ball float-valve D is confined, such chamber guiding the ball-valve to its seat in the opening of the neck *c*, in which is secured a rubber or other elastic ring or gasket, *a*, so that the valve will be seated air-tight. The ball-valve D is preferably a hollow copper sphere, and is introduced into the chamber D' through the opening covered by the screw-cap *b*, which opening is also used to clean the

trap or to replace the valve or the packing-ring *a*, when it becomes necessary.

The inclination of curvature of the pipe C is such that the lowest line at which water will flow out of the neck *c'*, at its elevated end, will keep the ball-valve seated air-tight except when opened by pressure from above through the pipe A.

The great trouble in sewer-traps heretofore has been that when the valve is unseated for discharge through the pipe A the sewer-gas escapes upward through said pipe. To prevent this is another function performed by the plate B, which projects nearly to the bottom of the pipe C, and is constantly immersed in the water.

What I claim as my invention is—

1. A sewer-trap having the inverted funnel-shaped chamber D', in combination with a ball-valve situated in said chamber for closing the inlet, substantially as described and shown.

2. The combination of the inclined or curved pipe C, having inlet and outlet necks, *c c'*, the inverted funnel-shaped chamber D', formed by the bulged lower end of said pipe and by the plate B, and the ball-valve D, constructed and arranged substantially as described and shown.

3. In a sewer-trap, the inclined or curved pipe C, having inverted funnel-shaped chamber D', in combination with the ball-valve D and the elastic gasket *a*, constructed and arranged substantially as described and shown.

ELECTUS BACKUS WARD.

Witnesses:

H. S. SPRAGUE,
CHARLES J. HUNT..