H. W. CLAPP.

STENCH-TRAPS FOR CATCH BASINS AND SEWERS.

No. 189,549. Patented April 17, 1877.

Fig. 1.

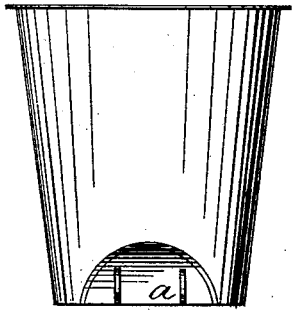


Fig 2.

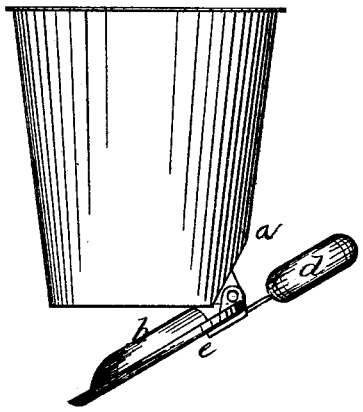
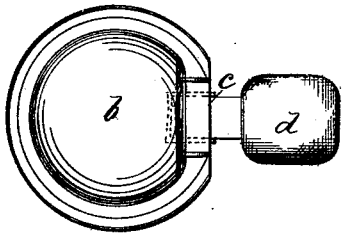


Fig. 3.



Witnesses.

Chas. L. Young
Chas. L. Stann

Inventor

Henry W. Clapp

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY W. CLAPP, OF CONCORD, NEW HAMPSHIRE.

IMPROVEMENT IN STENCH-TRAPS FOR CATCH-BASINS AND SEWERS.

Specification forming part of Letters Patent No. **189,549**, dated April 17, 1877; application filed November 10, 1875.

To all whom it may concern:

Be it known that I, HENRY W. CLAPP, of Concord, in the county of Merrimack and State of New Hampshire, have invented certain Improvements in Stench-Traps for Catch-Basins and Sewers, of which the following is a specification, reference being had to the accompanying drawings.

My invention consists in providing a conical cylinder, (shown at Figure 1,) the larger end of which is provided with a flange fitting into the base-ring of my sewer-grate, and by which said cylinder is suspended in the base-ring, as shown in Fig. 2. The lower end of said cylinder is beveled on one side, as shown at *a*, Fig. 1, and to which a flap-valve (shown at *b*, Fig. 3) is hinged. The valve *b* is provided with a slot, (shown at *c*, Fig. 3,) which receives a weight, *d*, Fig. 3, into which a tenon is inserted, fitting the slot in the valve. It is also provided with a raised central portion on its inner side for fitting within the lower end of the conical cylinder, and is grooved or channeled around the outside edge, in the fashion shown, to fit the bottom of the cylinder, to which it is to be attached, so that when said valve is in place, as shown at *e*, Fig. 2, the weight *d* will press said valve up against the edges of the cylinder.

When water passes through the grating into the trap, it accumulates until a sufficient quantity is gathered to overbalance the weight *d*, whereupon the valve opens and discharges the accumulated water into the catch-basin or sewer, and the weight *d* then brings the valve back to place again. The channeled edges of the valve will hold sufficient water to make an air-tight joint, and as the water which flows through the trap is always dirty, and holds more or less sand in suspension, the sediment which will be deposited will make an air-tight joint, even after the water is evaporated.

When storm waters are flowing rapidly into the catch-basin, of course the valve will be held open by the volume of water. As the flow ceases the weight *d* comes into play and closes the valve, gathering and retaining a small quantity of water in the channels around the edge of the valve. As this water evaporates sediment will be deposited, as before explained, sufficient to close the joint against the passage of air or sewer-gas.

The weight *d* is fashioned so as to take the least room possible in the catch-basin, and so that by removing the grating the trap may be lifted bodily out of the base-ring, in case it may become necessary, for repairs or for any other purpose.

I am aware that weighted valves have been used in stench-traps, in connection with some elastic substance, to form the packing of the joint; but this I do not claim. Such packing is liable to decay, and may easily become detached, thereby impairing the efficiency of the trap. By employing a channeled valve, as above described, all packing may be dispensed with except that afforded by the water or sediment, which will always be retained in the channel, and thus assist in forming a perfectly air-tight joint.

I claim as my invention—

The conical frustum *a*, in combination with the channeled flap-valve *b*, having a raised central portion, and provided with the weight *d*, all arranged and operating as and for the purpose set forth.

HENRY W. CLAPP.

Witnesses:

CHAS. C. LUND,

CHAS. L. STONE.