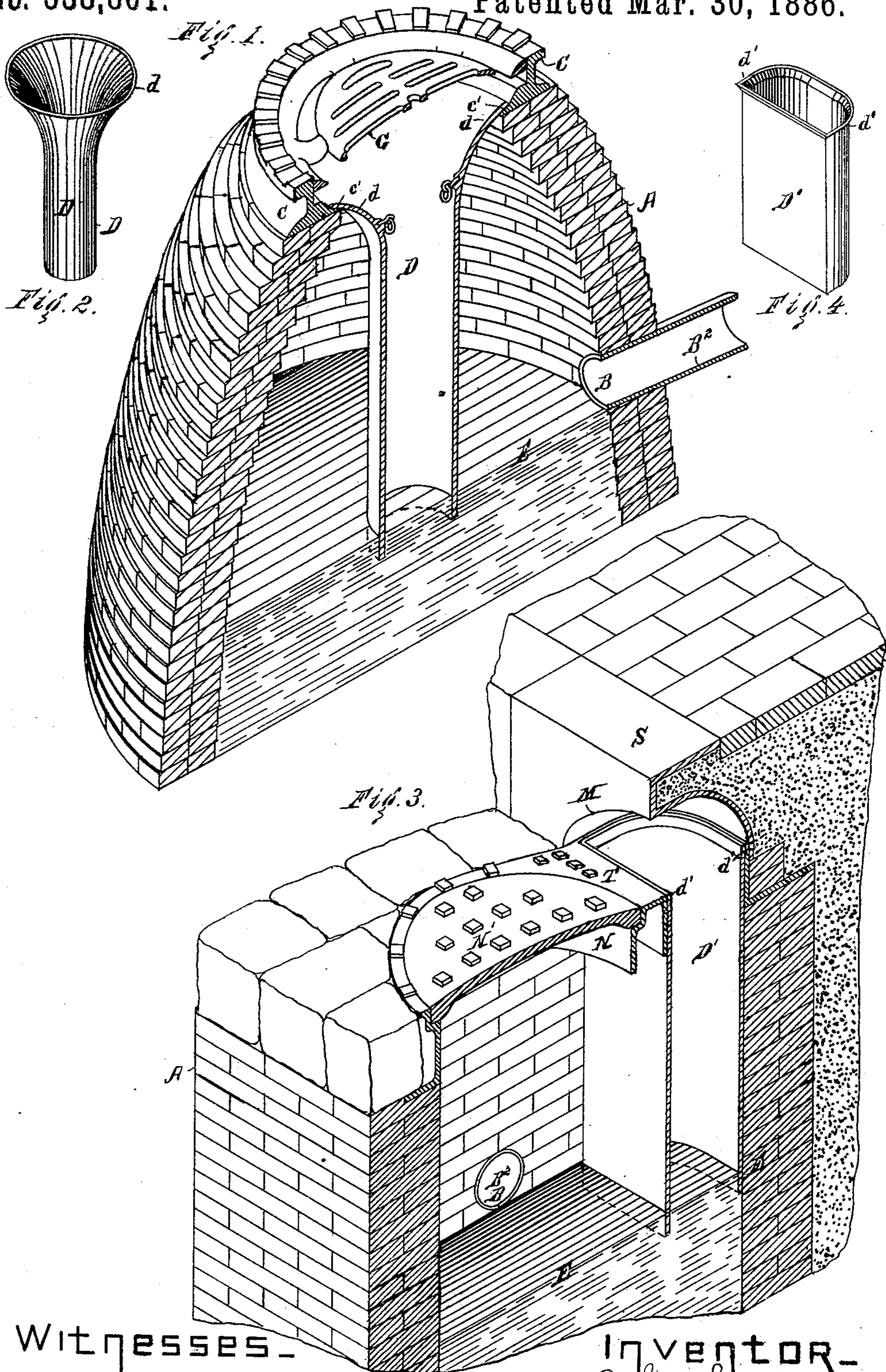


(No Model.)

A. STAPLES.  
CESSPOOL AND CATCH BASIN.

No. 338,801.

Patented Mar. 30, 1886.



Witnesses—

Kirkley Hyde,  
Gestude M. Day.

INVENTOR—

Arthur Staples,  
By Albert M. Moore,  
His Attorney.



# UNITED STATES PATENT OFFICE.

ARTHUR STAPLES, OF LOWELL, MASSACHUSETTS.

## CESSPOOL AND CATCH-BASIN.

SPECIFICATION forming part of Letters Patent No. 338,801, dated March 30, 1886.

Application filed June 24, 1885. Serial No. 169,628. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR STAPLES, a citizen of the United States, residing at Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a certain new and useful Improvement in Cesspools and Catch-Basins, of which the following is a specification.

My invention relates to cesspools and catch-basins; and it consists in means of preventing the freezing of the water contained in them, and to means of preventing the escape of stench and gases therefrom.

In the accompanying drawings, Figure 1 is an isometric view of a central vertical section of a cesspool or catch-basin, such as is commonly placed in gullies and in the middle of streets, with my improvement attached thereto; Fig. 2, an isometric view of the central pipe shown in Fig. 1 detached; Fig. 3, an isometric view of a central vertical section of a sidewalk catch-basin provided with my improvement; Fig. 4, an isometric view of the pipe or tube shown in Fig. 3 detached.

Even in the coldest weather the temperature of the air and gases in a sewer ranges from 45° to 55° above zero on the Fahrenheit thermometer. This temperature is considerably above freezing.

The object of my invention is to confine the air and gases which naturally rise from the sewer in the catch-basin, and thereby to prevent the catch-basin from freezing in cold weather, and also to prevent the escape of these gases into the atmosphere.

In Figs. 1 and 3 A represents the brick-work, and B<sup>2</sup> an outlet-pipe, placed at the water-level in each catch-basin. In other respects the catch-basins shown in Figs. 1 and 3 are unlike, but they do not differ from each other in any matter that affects the principle of my improvement.

In Fig. 1 the cesspool is circular in horizontal cross-section and tapers toward the top, and the top is surmounted by a cast-iron ring, C, of the usual form, except that the foot of the ring is provided with an internal annular flange, c', which supports the tube or pipe D. The tube D, Figs. 1 and 2, is preferably circular in cross-section, and the upper end thereof flares outward at d, and is of larger

diameter than the internal diameter of the shoulder c'. The tube D is placed vertically within the ring C, and is supported by its flaring upper end resting upon said shoulder c'. The tube is long enough to reach when in position below the bottom of the outlet B, and its lower end is therefore below the water-level E at all times. The tube or pipe D in Figs. 1 and 2 serves as the inlet of the catch-basin. The top of the pipe D is covered by a grating, G, of any usual form and suitable for that purpose, placed within the ring C and supported thereby. It will be seen that the warm air and gases coming into the catch-basin or cesspool from the sewer through the outlet B will be confined between the brick-work and the tube D and will prevent the water beneath them from freezing. The tube D, reaching below the surface of the water, will also serve as a stench-trap.

In Figs. 3 and 4 the pipe D' serves the same purpose as the pipe D, shown in Figs. 1 and 2, it reaching below the water-level, and thus preventing the escape of noxious gases and vapors from the catch-basin and retaining them within said basin, and thereby preventing the freezing of the contents of said basin. The tube D' is supported by its flaring upper end, d', resting upon the edges of a hole formed in the cast-iron catch-basin top T, but is not surmounted by a grating, being set under the curbstone of a sidewalk, S, provided with a mouth-piece, M, of the usual form, which serves to prevent persons and horses from stepping into it.

The catch-basin in Fig. 3 is provided with a man-hole, N, through which the basin may be entered to repair or clean the same, and the man-hole is closed by a tight cover, N'.

With the construction above described no trap is used between the cesspool or catch-basin and the sewer.

I am aware that traps have been made in which a pipe extends downward from the grating into a basin or tank suspended immediately below the grating, but this is attended with the disadvantage of retaining the water near the surface, where it can be quickly frozen, and of affording contracted passages that are easily stopped by dirt, &c., while in my improved device all the water is kept at

the level of the outlet-pipe B<sup>2</sup>, and space for the dirt is so extended that no passages can be obstructed thereby.

I claim as my invention—

5 1. The combination, with a catch-basin, and with an outlet sewer-pipe, B<sup>2</sup>, communicating therewith at a point above the bottom, of a pipe extending from the mouth of the basin downward below the said pipe B<sup>2</sup>, substan-  
10 tially as and for the purpose set forth.

2. The combination of a catch-basin, a sewer-pipe, B<sup>2</sup>, communicating therewith at a point above the bottom, a pipe, D, extending from the mouth of the basin downward and

below the pipe B<sup>2</sup>, and a perforated cap or 15 grating, G, closing the top of the pipe D, for the purpose set forth.

3. The combination of a catch-basin provided with an opening at the top, and a pipe having an outwardly-flaring upper end 20 resting upon the edges of said opening to support said pipe, and adapted to reach below the level of the outlet-pipe B<sup>2</sup>, as and for the purpose specified.

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Witnesses:

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