

A. A. DRAPER.  
Sewer Ventilator and Drain.

No. 214,894.

Patented April 29, 1879.

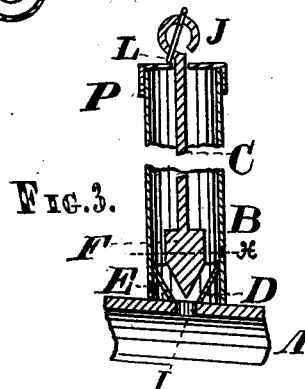
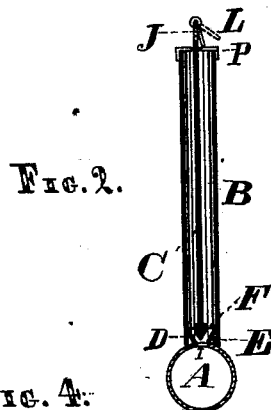
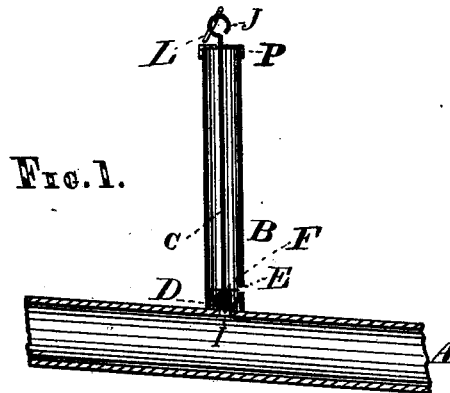
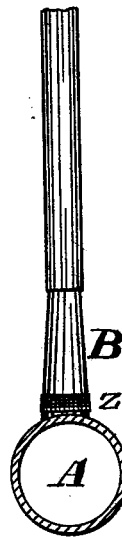


FIG. 5.



WITNESSES.

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INVENTOR

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# UNITED STATES PATENT OFFICE.

ABIGAIL A. DRAPER, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN SEWER VENTILATORS AND DRAINS.

Specification forming part of Letters Patent No. **214,894**, dated April 29, 1879; application filed March 7, 1879.

*To all whom it may concern:*

Be it known that I, Mrs. ABIGAIL A. DRAPER, of the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sewer-Ventilators and Sewer-Drains, of which the following is a specification, reference being had to the accompanying drawings, illustrating the device, in which—

Figure 1 is a broken longitudinal sectional elevation of an ordinary sewer-pipe to which my improvement is attached; Fig. 2, a view taken transversely to Fig. 1; Fig. 3, a broken enlarged view of Fig. 1; Fig. 4, a section of Fig. 3 on line *x*. Fig. 5 represents an elongated pipe, attached to pipe B, for the purpose of conducting sewer-gas high up into the atmosphere.

The object of the present invention is to provide safe and effectual means for draining surface-water into sewers.

As sewers connected with buildings are usually constructed, there is no communication with their interior parts between the traps and the street-sewer; consequently such sewers form no drain for the surface-water which is contained in the soil.

I propose to drain surface-water into the sewer-pipes by the following-described means, to wit: A represents a section of an ordinary sewer-pipe, in which a hole, I, is tapped, of any suitable size. Surrounding said hole, and secured to the sewer-pipe A, is a funnel-shaped device, D, which may be made of the same material as the sewer-pipe, and attached to it by cement, or may be molded solid to the sewer-pipe at the manufactory. The latter method of attachment is best where new sewers are to be laid and provided with my device; but where my device is to be attached to sewer-pipes already laid the funnel D will require to be cemented to them. Surrounding the funnel D, and extending to the surface or above the surface of the ground, is a pipe, B, which may be also of the same material as the ordinary clay sewer-pipe. The lower end of this pipe B is formed to fit the top part of the periphery of the pipe A. But in practice there

are to be sufficient open spaces between the pipe B and sewer-pipe to allow of a free escape of water from the surrounding soil into the pipe A; or, if it be deemed more convenient, holes E may be formed in the pipe B, to permit of the escape of water. It is better, however, to allow the water to pass under the lower end of the pipe B, inasmuch as the water has to rise above the funnel before it escapes, which action of the water will soon fill the space between the funnel and pipe B with solid particles of earth, and thus form such a filter as will prevent the passage of fine earth into the sewer, and thereby the clogging of the sewer. A valve, F, is made to closely shut the opening I through the apex of the funnel and through the sewer-pipe, and it is operated by a rod, C, which connects with the valve, and passes through a cap or cover, P, on the top end of pipe B. The weight of the valve is to be sufficient to close the opening I; and the means for holding the valve open for the passage of water consists of a strut, L, jointed to the ring or loop J of the rod C. When the valve is to be raised up, as shown at Fig. 3, the strut is brought down so as to rest on the cap P, and when the valve is to be closed the strut is swung to one side, as shown in Figs. 1 and 2.

The funnel forms a guide for valve F always to find its seat.

Where it is desired to use the device as a sewer-ventilator, an extension-pipe may be placed on the top end of B, so as to carry the sewer-gas above the point where it can be taken into the lungs.

I claim and desire to secure by Letters Patent of the United States—

The combination of the sewer and funnel D with the pipe B, the funnel extending into the pipe, the pipe being filled around the funnel with filtering material, as and for the purpose set forth.

MRS. ABIGAIL A. DRAPER.

Witnesses:

G. L. CHAPIN,  
A. G. MOREY.