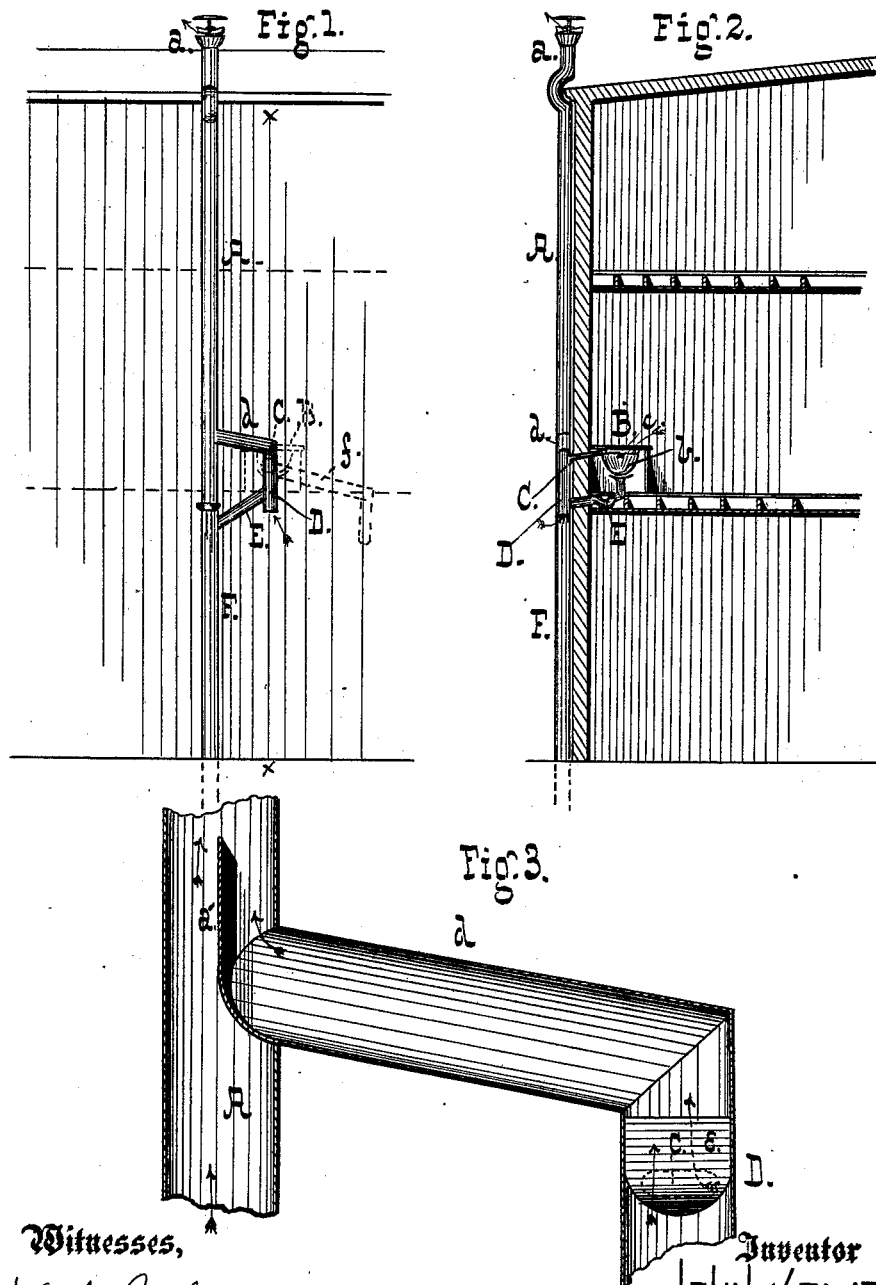


J. Y. SLATER.
Water-Closet Ventilation.

No. 214,961.

Patented April 29, 1879.



Witnesses,
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JOHN Y. SLATER, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN WATER-CLOSET VENTILATION.

Specification forming part of Letters Patent No. **214,961**, dated April 29, 1879; application filed March 18, 1879.

To all whom it may concern:

Be it known that I, JOHN Y. SLATER, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Water-Closet Ventilation; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of the side of a house, showing the disposition of the pipes. Fig. 2 is a sectional view of the same on the line *x x*, Fig. 1. Fig. 3 is an enlarged sectional view, illustrating the internal construction of the pipes.

My present invention has reference to means for more perfectly and effectually ventilating water-closets or kitchens in dwelling-houses than has heretofore been done; and it consists in certain details of construction and arrangements of the air and waste pipes, as hereinafter described.

In the accompanying drawings, A is the main ventilating-pipe, which terminates above in a suitable ventilating or exhaust cowl, *a*, and enters the soil-pipe F at a point just above that at which it enters the wall of the building. A short distance above this point it is provided with a lateral pipe, *d*, which communicates with the pipe C, leading to the closet B, and terminating in an annular rim, *c*, extending around the upper edge of the bowl *b*. Below the point of junction of the pipe C the air-inlet pipe D extends a short distance downward, as shown.

E is the waste-pipe from the bowl, trapped as usual, and entering the soil-pipe F outside the building.

Within the pipe A, and opposite the junction of the pipe *d*, is a deflector, *a'*, of the shape shown in Fig. 3, curved, as shown, at the bottom, and extending completely across the pipe A; and a precisely similar deflector, E, is inserted in the pipe D opposite the opening of the pipe C.

Such is in general terms the construction and arrangement of the parts.

In operation, the cowl *a* induces an upward draft in the pipe A, ventilating the sewer and

soil-pipe F. The passage of the air past the deflector *a'* induces, on the atomizer principle, apart from the natural draft therethrough, a strong current of air through the pipes D *d*, and the passage of the current entering at the opening of the pipe D past the deflector *e*, also on the same principle, thoroughly ventilates the bowl *b*.

A pipe, *f*, may, if desired, be led to the kitchen, which will by the same means be thoroughly ventilated, preventing the entrance of the odors from cooking into the house.

Preferably the pipe A is led up the wall of the house against the kitchen-flue, whereby the upward draft will be augmented.

It will be seen that by no possibility can the air be forced back into the house through the pipe C, as any currents of air from the sewer pass up the pipes F and A and out at the top. Even should a current of air be forced down the pipe A, but one-fourth of it would pass out through the closet, as the deflectors *a'* and *e* would halve the current twice.

In cities situate near the coast or tide-water, and especially near the Atlantic coast, an unusually high tide, due to an easterly gale, has heretofore caused backward currents of fetid and noxious gases from the sewers due to the rise of the water therein. These backward currents, with the described arrangement of pipes and deflectors, so far from being a source of trouble and annoyance, actually conduce to a more perfect ventilation of the closets, since the draft through the closet is in proportion to that through the pipe A.

What I claim as new, and desire to secure by Letters Patent, is—

1. The apparatus herein described for ventilating water-closets, consisting of a draft-pipe, terminating above in an exhaust-cowl, and opening directly into the soil-pipe, and having an offset communicating with an annular ventilating-rim upon the bowl, substantially as set forth.

2. In an apparatus for ventilating water-closets, a main draft-pipe communicating directly with the soil-pipe, and having a lateral offset-pipe leading to the bowl, and provided

- with a fresh-air-inlet pipe, D, the junctions of the pipes being provided with deflectors *a' e*, substantially as set forth.

3. In combination with the soil-pipe F, the ventilating or draft pipe A, communicating directly and in a right line therewith, and having deflector *a'*, the lateral pipe *d*, and inlet-pipe C, substantially as set forth.

4. In combination with the soil-pipe F, the pipe A, communicating directly therewith, pipes *d* C D, deflectors *a' e*, and exhaust-cowl *a*, substantially as described.

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Witnesses:

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