

A. H. THORP.

FLUID TRAP.

No. 174,874.

Patented March 14, 1876.

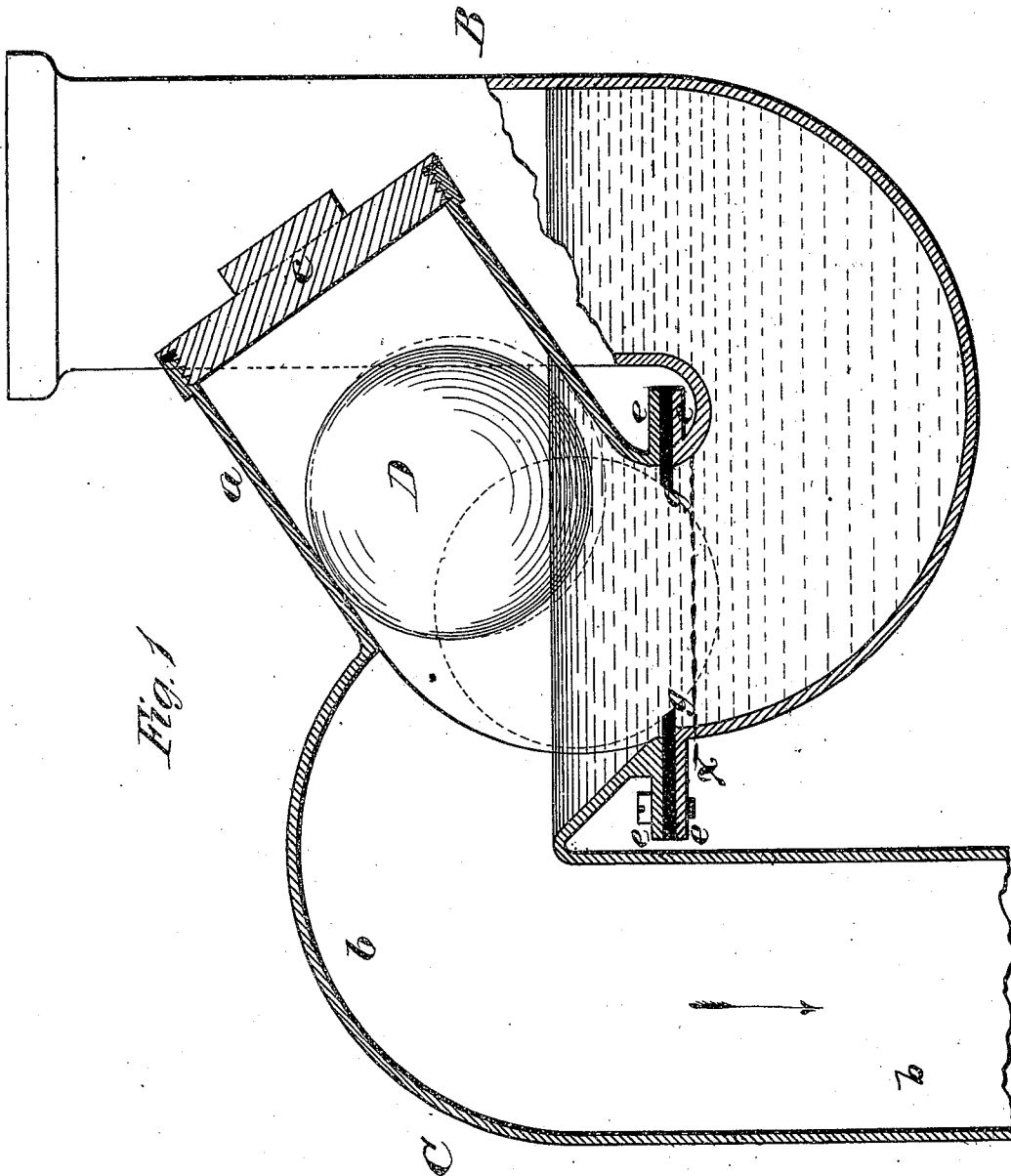


Fig. 1

WITNESSES

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ALFRED H. THORP, OF NEW YORK, N. Y.

IMPROVEMENT IN FLUID-TRAPS.

Specification forming part of Letters Patent No. **174,874**, dated March 14, 1876; application filed February 5, 1876.

To all whom it may concern:

Be it known that I, ALFRED H. THORP, of New York, in the county of New York, and State of New York, have invented a new and valuable Improvement in Fluid-Traps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a vertical section of my fluid-trap.

This invention has relation to fluid-traps which are designed for preventing foul gases from escaping into water-closets and other places; and the nature of my invention consists in a novel combination and arrangement of a valve-chamber for a ball-valve, and a valve-seat for the same, applied to a two-part trap, as will be hereinafter explained.

The trap is cast in two parts, B and C. The part B is of a uniform internal diameter of, say, four (4) inches, the usual size for water-closets. The part C is composed of a curved pipe, *a*, about five (5) inches in diameter, and a pipe, *b*, four (4) inches in diameter. The pipe *a* of part C is inclined at an angle of about forty-five degrees, so that when the ball-valve D is forced upwardly therein by the pressure of the water, a free and uninterrupted passage is allowed to the escape-pipe *b* to the sewer, and, in consequence of the inclination of the pipe *a* in contradistinction to its being vertical, a less pressure of water is required on the ball-valve D to hold it in its position in the pipe *a*, thus rendering the valve more sensitive and less liable to become choked. Each part has a flange, *e*, with holes for screws, by which the two parts of the traps are fastened together. A packing or rubber washer is inserted between said flanges to

make the joint air-tight, and also to form a valve-seat, *g*, for a ball, D. The upper end of the branch pipe *a*, which forms a chamber for the valve D, is closed by the ordinary screw-cap *e*, as shown. The valve D may be made of rubber or any other suitable material. This valve is sufficiently small to have free play in the part *a*, but too large to pass into either one of the parts B C.

When the trap is in repose the water stands at the level indicated in section, and the valve D floats up out of the way of the passage of water through the trap. When the trap is in use the level of the water will of course rise before it flows over on the side next to the sewer, and this floats the ball still further up out of the way; but, when the trap is not in use, and there is a pressure of gas from the sewer, the level of water in the part *a* is pressed down and the ball sinks simultaneously, but before the level of water reaches the dotted line *x* the ball is pressed upon its seat *g* and prevents the escape of gas into the water-closet or other apartment. A similar action takes place when, from a suction from the side toward the sewer, the trap is "siphoned out."

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

In a fluid-trap, the part C, having an inclined pipe, *a*, in contradistinction to a vertical pipe, for the reception of a ball-valve, in combination with the part B, whereby the valve is rendered more sensitive and less liable to become choked.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALFRED H. THORP.

Witnesses:

LEML. D. MACK,
JAMES McILRATH.