G. W. LA BAW.

TRAPS FOR WASTE-PIPES.

No. 195,137. Patented Sept. 11, 1877.

Fig. 1.

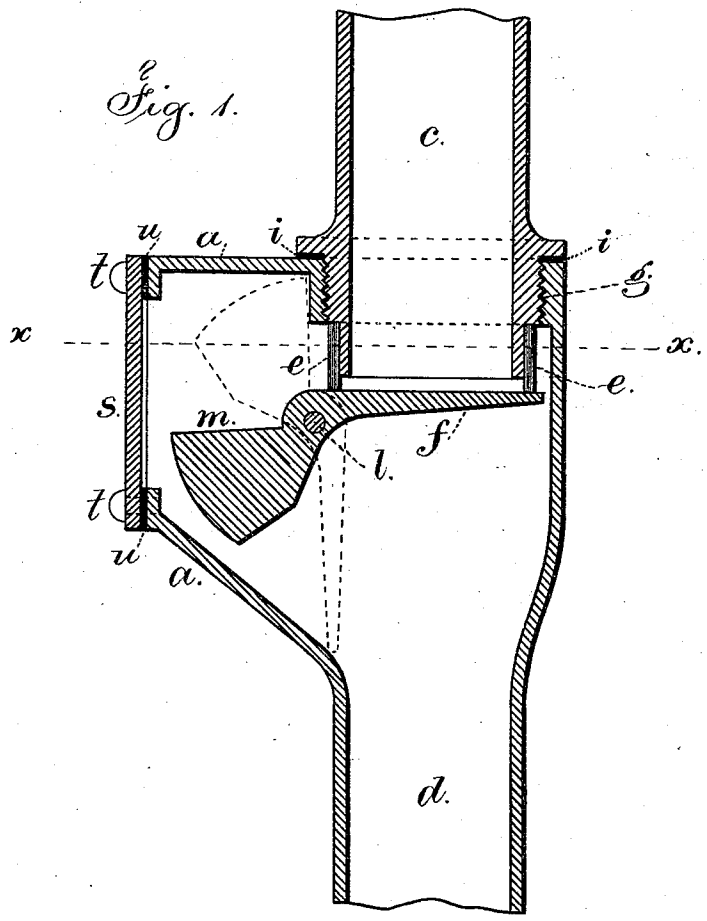
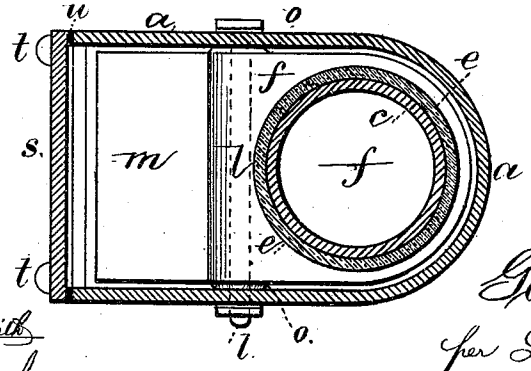


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE W. LA BAW, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN TRAPS FOR WASTE-PIPES.

Specification forming part of Letters Patent No. 195,137, dated September 11, 1877; application filed February 9, 1877.

To all whom it may concern:

Be it known that I, GEORGE W. LA BAW, of Jersey City, in the county of Hudson and State of New Jersey, have invented an Improvement in Traps for Waste-Pipes, of which the following is a specification:

Traps for waste-pipes have been made as a swinging valve, placed in the inclined sewer-pipe, to fall by gravity, and prevent the rise of water in the pipe in case of stoppage of the sewer, or the backing up of the tide in the same. These valves, however, are liable to become obstructed, and are difficult to make gas-tight; hence, the pressure of water frequently causes the noxious gases and vapors from the sewer to pass up into the buildings. Traps have also been made of a valve closing upward at the lower end of a vertical seat, but they are difficult to adjust, clean, or repair.

In my trap there is a valve within a chamber, acting to close the bottom end of a vertical, or nearly vertical, pipe, so as to open by the pressure of the vertical column of water, and close after the water has passed away. There is an elastic end to the vertical pipe, against which the valve closes, and that pipe is adjustable to fit the seat to the valve, and the valve, when open, swings clear of the descending column of water. The flow of the water keeps the seat and face of the valve clean, and when closed the pressure of water or of gases from stoppage in the sewer, or rise of tide therein, only serves to keep the trap tighter, and prevent the same opening until the pressure from the column of water above becomes the greatest.

I remark that the trap should be placed in the lower part of the vertical waste-pipe.

In the drawing, Figure 1 is a vertical section of the trap, and Fig. 2 is a sectional plan at the line *x x*.

The case *a* is of a size and shape adapted to the waste-pipes *c d*, and it is to be connected to the same in any convenient manner. When the pipes are of cast metal there should be a socket at the upper end of the case for receiving the next length above of the pipe *c;* but where the pipes are of soft metal or lead they should be connected to the case *a* by couplings or flanges.

The pipe *c* extends down into the case *a*, or there is a separate extension of the same passing down into said case, and terminating with a thinner lower end, around which the india-rubber tube *e* is forced, and its end projects below the end of the pipe *c*, so as to form an annular cushion or seat for the valve *f*, and I employ a screw, *g*, and elastic washer *i* in connecting the pipe *c* to the case *a* to make it gas-tight, and to adjust the case and valve to the seat.

The valve *f* is upon the axis or stationary bolt *l* that passes horizontally through the case *a*, and is rendered gas-tight by washers *o o*, and the counterpoise *m* of the valve is sufficient to press the valve *f* up tightly against the seat *e*, and prevent water or gas leaking upwardly through the same; and it will be apparent that the valve will open downwardly by a greater or less column of water, according to the weight of the counterpoise.

The case *a* is made with an opening at one side, closed by the cover *s* and screws *t*, and an elastic packing at *u* renders the case gas-tight. This device gives access for cleaning the parts or for repairs.

I claim as my invention—

In a sink-trap containing a flat valve closing upward against an elastic seat, the tube *c*, screwed into the case *a*, so as to adjust the seat to the valve, and the removable cover *s*, secured to the case *a* to give access to the trap without disturbing the valve or seat, substantially as specified.

Signed by me this 8th day of February, 1877.

GEORGE W. LA BAW.

Witnesses:

GEO. T. PINCKNEY,

GEO. D. WALKER.