

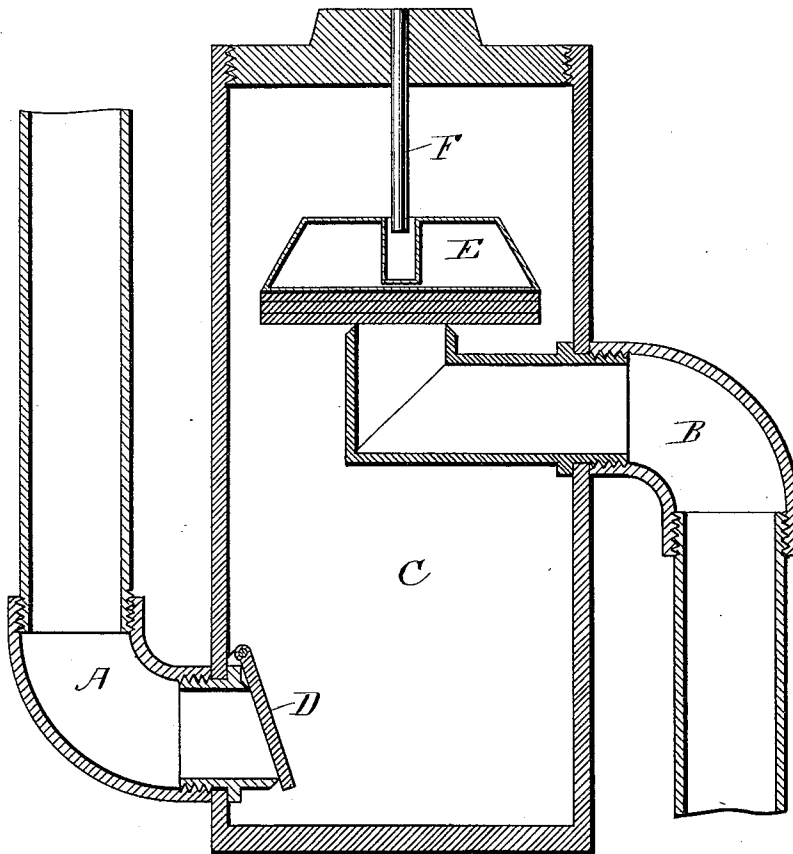
(No Model.)

H. C. WEEDEN.

TRAP.

No. 360,128.

Patented Mar. 29, 1887.



WITNESSES

J. Henry Taylor.
E. B. Tomlinson.

INVENTOR

Henry C. Weedon
by Alex. P. Browne
attorney.

UNITED STATES PATENT OFFICE.

HENRY C. WEEDEN, OF BOSTON, MASSACHUSETTS.

TRAP.

SPECIFICATION forming part of Letters Patent No. 360,128, dated March 29, 1887.

Application filed December 29, 1886. Serial No. 222,879. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. WEEDEN, of Boston, in the county of Suffolk and State of Massachusetts, a citizen of the United States, have invented certain new and useful Improvements in Traps for the Discharge-Pipes of Basins, Bath-Tubs, Sinks, and Analogous Structures, of which the following is a specification.

The object of my present improvement is to provide a water-trap the seal of which shall be proof against being broken either by back-pressure or siphonage, even though no ventilating or air-supply pipe be used in connection with it; and in the accompanying drawings I have represented in vertical section a trap embodying my present improvements, which I will now proceed to point out.

My improved trap contains, as is customary in structures of this class, an inlet-pipe, A, connecting with the fixture to be trapped, an outlet-pipe, B, connecting with the sewer or other receptacle into which the contents of the fixture are to be discharged, and an interposed water-chamber, C, with which both the inlet and outlet pipe communicate, the latter at the higher level, so as to form a water seal in the ordinary manner. My improvement consists in providing the inlet-pipe with a valve arranged to open a passage from the inlet-pipe to the trap-chamber, and outlet-pipe, but to close the passage in the reverse direction. An ordinary flap-valve on the end of the inlet-pipe will accomplish this purpose, and such a valve is represented at D in the drawing. I also provide a valve arranged to bear upon and close the orifice of the outlet-pipe, but to open by flotation when the water in the trap-chamber has risen to a sufficient height. An ordinary float-valve—that is to say, a valve provided with a float which normally rests upon and covers the mouth of the outlet-pipe, but which will float up and open the same when the water rises in the trap-chamber—is a convenient form of valve for the purpose described; and I have represented such a valve at E in the drawing. In connection with a valve of this form, should a central guide be desired, it can be conveniently obtained, as shown in the drawing, by a stem, F,

passing down into a hole in the upper part of an annular float-chamber, of thin metal—as, for example, copper—made water-tight, the guide F entering the space in the center of the annulus to guide the valve as it rises and falls.

The operation of the trap is as follows: The parts normally stand as represented in the drawing, the outlet-pipe valve bearing upon and closing the mouth of the outlet. In case, now, that water is discharged from the fixture through the trap, the valve D on the inlet-pipe opens and allows the water to pass into the trap, and this water rising causes the valve E to rise and open the orifice of the outlet-pipe, thus allowing the flow of water through the trap to the drain or soil pipe. As soon as the flow of water ceases, the subsidence of water in the trap-chamber allows the valve E to close the orifice of the outlet-pipe. Should a tendency to siphonage occur—as, for example, by the sudden passage of a body of water through the drain past the mouth of the outlet-pipe, thereby producing an outward draft in it—the valve E will press even more tightly against the orifice of the outlet-pipe, thereby preventing the siphonage or drawing off of the contents of the trap. On the other hand, the valve D on the mouth of the inlet-pipe will, in like manner, prevent the displacement of the water in the trap by back-pressure.

I prefer to make the water-chamber cylindrical and to provide it with a clean-out cover at the top in the ordinary manner, as shown.

I claim—

The improved trap herein described, having an inlet-pipe, an outlet-pipe, and an intermediate water-chamber, the orifice of the inlet-pipe being provided with a valve opening toward the water-chamber, and the orifice of the outlet-pipe being provided with a float-valve located within the water-chamber, all substantially as set forth, and for the purposes herein specified.

In testimony whereof I have hereunto subscribed my name this 23d day of December, A. D. 1886.

HENRY C. WEEDEN.

Witnesses:

J. HENRY TAYLOR,
E. B. TOMLINSON.