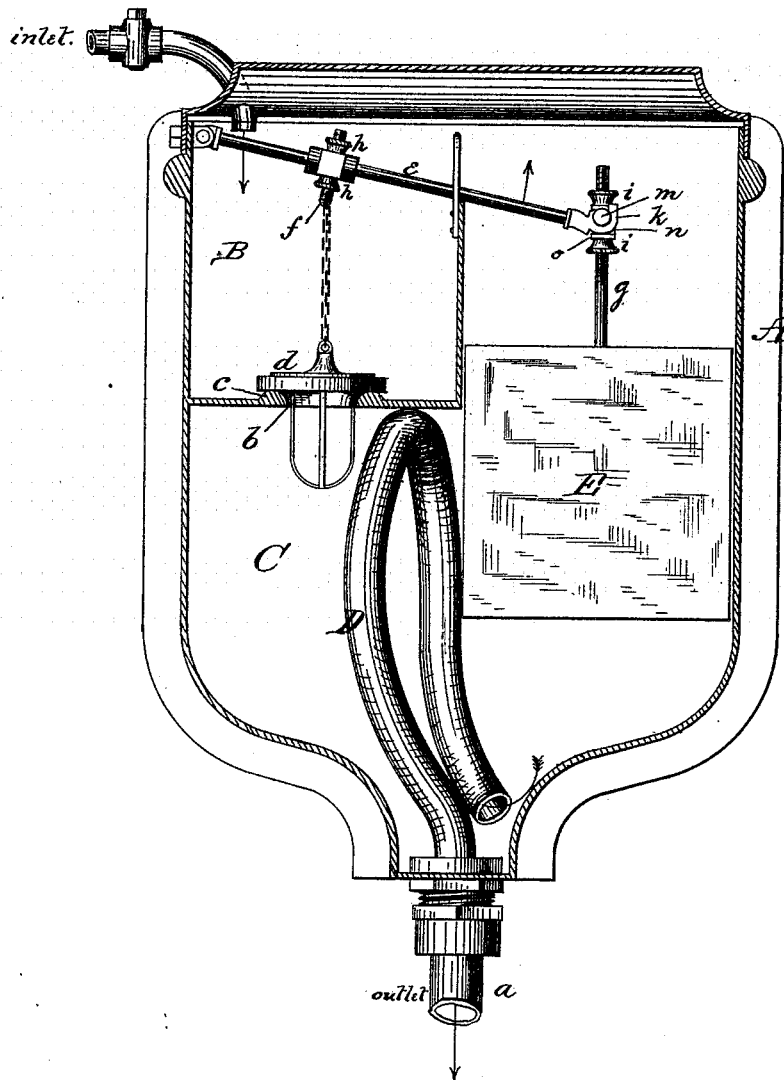


S. McKISSOCK.
Automatic Water-Closet Cistern.

No. 213,920.

Patented April 1, 1879.



Witnesses.

F. A. Collier.
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UNITED STATES PATENT OFFICE.

SAMUEL MCKISSOCK, OF ALLEGHENY, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JAMES HAY, OF SAME PLACE.

IMPROVEMENT IN AUTOMATIC WATER-CLOSET CISTERNS.

Specification forming part of Letters Patent No. **213,920**, dated April 1, 1879; application filed February 14, 1879.

To all whom it may concern:

Be it known that I, SAMUEL MCKISSOCK, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Automatic Water-Closet Cisterns, of which the following is a specification, reference being had to the accompanying drawing, which is a vertical central sectional view of an apparatus embodying my improvement.

The object of this invention is to provide an automatic overflow-cistern for water-closets and other purposes, that can be so regulated as to discharge at any desired recurring interval of time, never get out of order, and give a sudden discharge which will effect a thorough washing of the bowl.

The invention consists in the construction and arrangement of parts, substantially as hereinafter fully described and claimed.

At a point a suitable distance above the closet I place a box, A, set off into the overflow-chamber B and siphon-chamber C, as shown. The inlet pours into chamber B, and the outlet is connected to the bottom of chamber C through the siphon D, which is much larger in diameter than the stream coming in at the inlet. Pipe *a* leads the contents to the closet. In the bottom of the overflow-chamber B, which extends down about half-way in box A, is a large opening, *b*, surrounded by a valve-seat, *c*, and to this is fitted a valve, *d*, which is suspended by a chain or pendulum-rod to a long lever, *e*, which is pivoted to one wall of the box, and extending across the overflow-partition to the upper portion of chamber C. Here it is attached to a rod which carries a float, E, which is preferably as large as the dimensions of that part of chamber C will allow. The points of attachment of both valve-chain and float to the lever *e* are adjustable by means of threaded rods *f g* and nuts *h i*, respectively. The lever *e* is connected to the float-rod *g* as follows: A bifurcated hook, *k*, takes in under two opposite pins, *m*, on a sliding sleeve, *n*, movable up and down the rod. Two flanges or lips, *o*, extend out from sleeve *n*, and the relations are such

that the lever *e* can be attached or detached from sleeve-pins *n* only by swinging it up in line with float-rod *g*, when it can be freely moved in or out of connection. This allows a ready detachment of parts when desired, while during operation it keeps them in reliable connection.

Operation: A cock is fitted to the inlet-pipe to govern the supply of water to the desired extent. The water pours into chamber B, valve *d* remains shut by the pressure above it, and the water gradually fills the chamber B. As soon as it rises above the overflow-partition it passes over it, and falls into chamber C, and gradually rises in this till it begins to buoy up float E. As soon as it moves the float a very slight distance the valve *d* is opened correspondingly by the action of lever *e* and chain. Instantly some water rushes out of the valve opening into chamber C. This causes the float to rise suddenly and pull the valve full open, when the chamber B is suddenly emptied, chamber C as speedily filled, and the water rising quickly completely fills the area of the siphon D at its top, and then, by reason of the large area of the siphon, the water contained in chamber C is discharged with a rush through the pipe *a* to the closet. Float E falls with the outgoing water, valve *d* drops to its seat, and the operations are repeated at regularly-recurring intervals. The float is so adjusted with relation to the opening of valve *d* that the valve is not suddenly opened to its full extent until the water in chamber C has almost reached the apex of the siphon, which can be readily effected by means of the nuts *h i* and rods *f* and *g*.

In this manner I can have a small stream constantly flowing into the cistern, and at desired intervals it will all be suddenly discharged.

I claim as my invention—

1. A water-closet cistern consisting of a box partitioned into two compartments, one located above the other, and communicating therewith by a valve-controlled opening, and a siphon located in and forming the outlet from the lower compartment, and interposed

mechanism, substantially as described, whereby the upper compartment is first slowly filled, then the lower one partially, and finally the contents of the upper are precipitated into the lower compartment, and the siphon put in action to suddenly drain it.

2. The combination of chamber B, siphon-chamber C, siphon D, float E, and lever e, at-

tached thereto, and carrying a valve, *d*, in chamber B, substantially as described.

In testimony whereof I have hereto set my hand in presence of two witnesses.

SAMUEL McKISSOCK.

Witnesses:

JAMES HAY,

T. J. MCTIGHE.