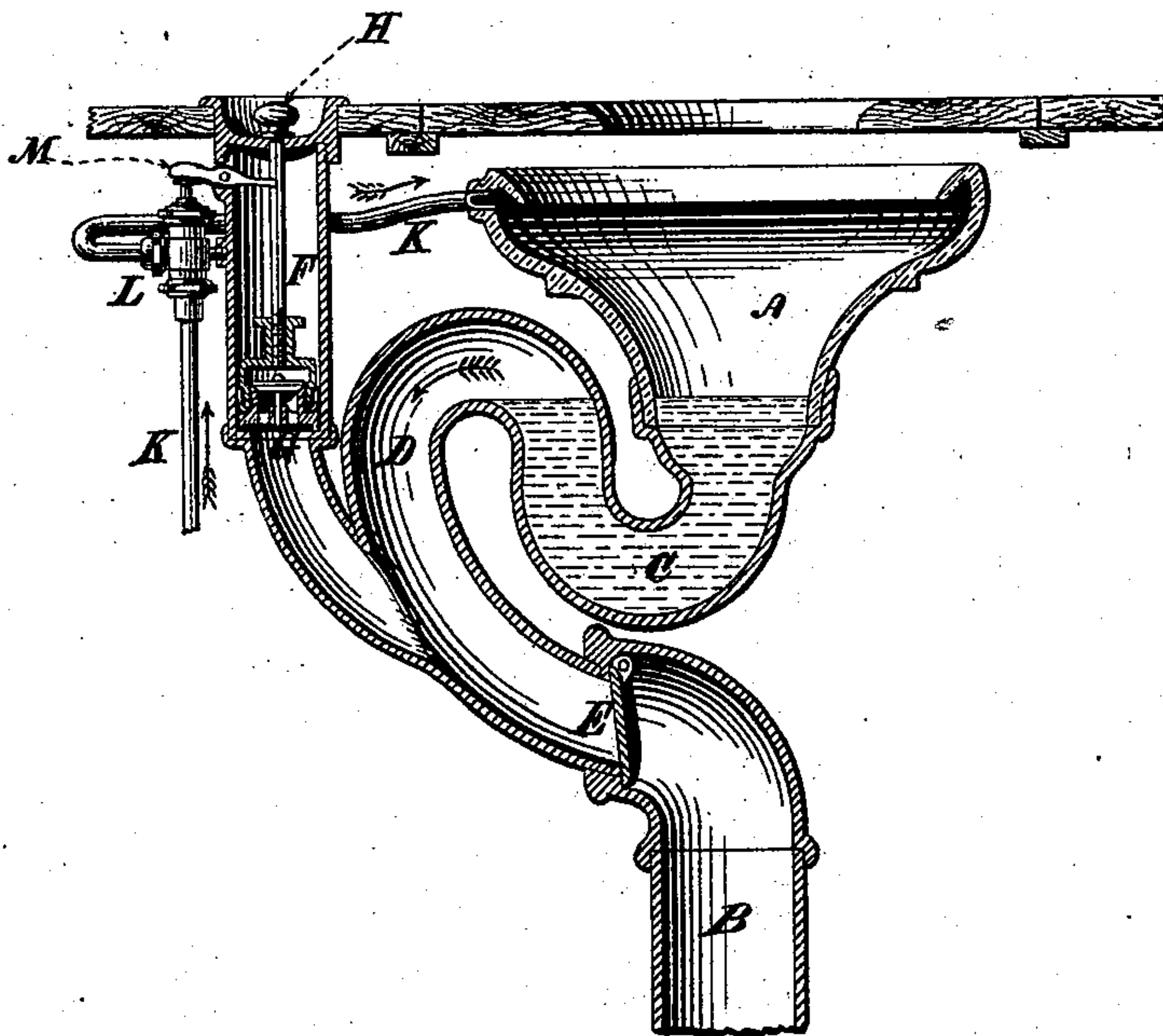


W. BUNTING, Jr.  
Water-Closet.

No. 210,003.

Patented Nov. 19, 1878.



Witnesses:

*Geo. H. Miatt*

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*Wm Bunting Jr*  
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*att.*

# UNITED STATES PATENT OFFICE.

WILLIAM BUNTING, JR., OF FLUSHING, NEW YORK.

## IMPROVEMENT IN WATER-CLOSETS.

Specification forming part of Letters Patent No. **210,003**, dated November 19, 1878; application filed September 30, 1878.

*To all whom it may concern:*

Be it known that I, WILLIAM BUNTING, Jr., of Flushing, in the county of Queens and State of New York, have invented a new and useful Improvement in Water-Closets, of which the following is a specification:

My invention relates to a simple and effective device for voiding the bowl or hopper of a water-closet by siphonal action.

It consists in connecting a discharging-siphon with a trap arranged to maintain a proper depth of water in the bowl, and in combining therewith an air-exhausting device and check-valve to produce an exhaust of air from the siphon, and thereby cause an immediate automatic discharge of the contents of the bowl and trap by atmospheric pressure.

In the accompanying drawing, A represents the bowl of a water-closet; B, the soil-pipe; C, a trap, interposed between the soil-pipe and bowl, and so arranged as to maintain a proper depth of water in the bowl, as indicated by the dotted lines in the drawing, and whose outer arm, D, is extended to form the longer leg of a siphon, C D, which is connected to the soil-pipe B; E, a simple valve, so combined with the longer leg, D, of the siphon C D as to close automatically and prevent an upward flow of air into the pipe; F, a piston-cylinder, whose lower end is connected by a suitable short branch pipe with the longer leg, D, of the siphon between its check-valve E and the overflow or sealing-level of the trap; G, a piston, properly packed, and fitted with a rod and terminal knob or pull, H, by means whereof it is operated. K is a water-supply pipe, connected to the upper end of the bowl A in the usual manner, and L a slow-closing automatic valve governing said pipe. M is a short centrally-pivoted lever, whose outer arm bears upon the stem of the valve L, and whose inner arm projects within the upper end of the piston-cylinder F, so as to be struck and thrown up by a lug on the piston-rod when the piston is elevated.

I contemplate connecting the outer end of the lever M, by means of a cord or rod, with a valve or siphon in a flushing box or tank of any approved construction, having suitable

connection with the bowl A, so that the movement of the lever M shall produce a discharge from the tank into the bowl whenever the pull H is lifted, the flushing-tank and valve serving as an equivalent in such case for the supply-pipe K and valve L.

The operation of my improved apparatus is as follows: The trap C being filled with water, the shorter leg of the siphon C D is thereby sealed, while its longer discharge-leg is closed by the valve E. If, now, the pull H be lifted the movement of the piston in the cylinder F will, to the extent of its stroke, exhaust the air in the longer leg, D, of the siphon above the valve, and consequently produce an overflow of the sealing contents of the trap sufficient to bring the siphon C D into action, and thus complete the discharge of the trap and bowl. In the meantime the elevation of the piston will tilt the lever M, cause it to open the supply-valve L, and thus allow a flow of water into the closet-bowl to cleanse it and refill the trap.

A flexible diaphragm or its equivalent may be substituted for the cylinder F and piston G to produce a vacuum or partial vacuum in the siphon C D.

I claim as my invention—

1. The method of producing an automatic discharge of the bowl of a water-closet by exhausting the air from a siphonal discharge-pipe connected therewith, substantially in the manner herein set forth.

2. The combination, with the trap and bowl of a water-closet, of a siphonal discharge-pipe, C D, air-exhausting device F G, and check-valve E, substantially as and for the purpose herein set forth.

3. The combination of the pull H and air-exhausting device F G, operating to produce a discharge of the bowl A and trap C of a water-closet, with a lever M and valve L, operating to supply a flow of water to said bowl, all substantially as and for the purpose herein set forth.

WM. BUNTING, JR.

Witnesses:

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