

No. 668,853.

Patented Feb. 26, 1901.

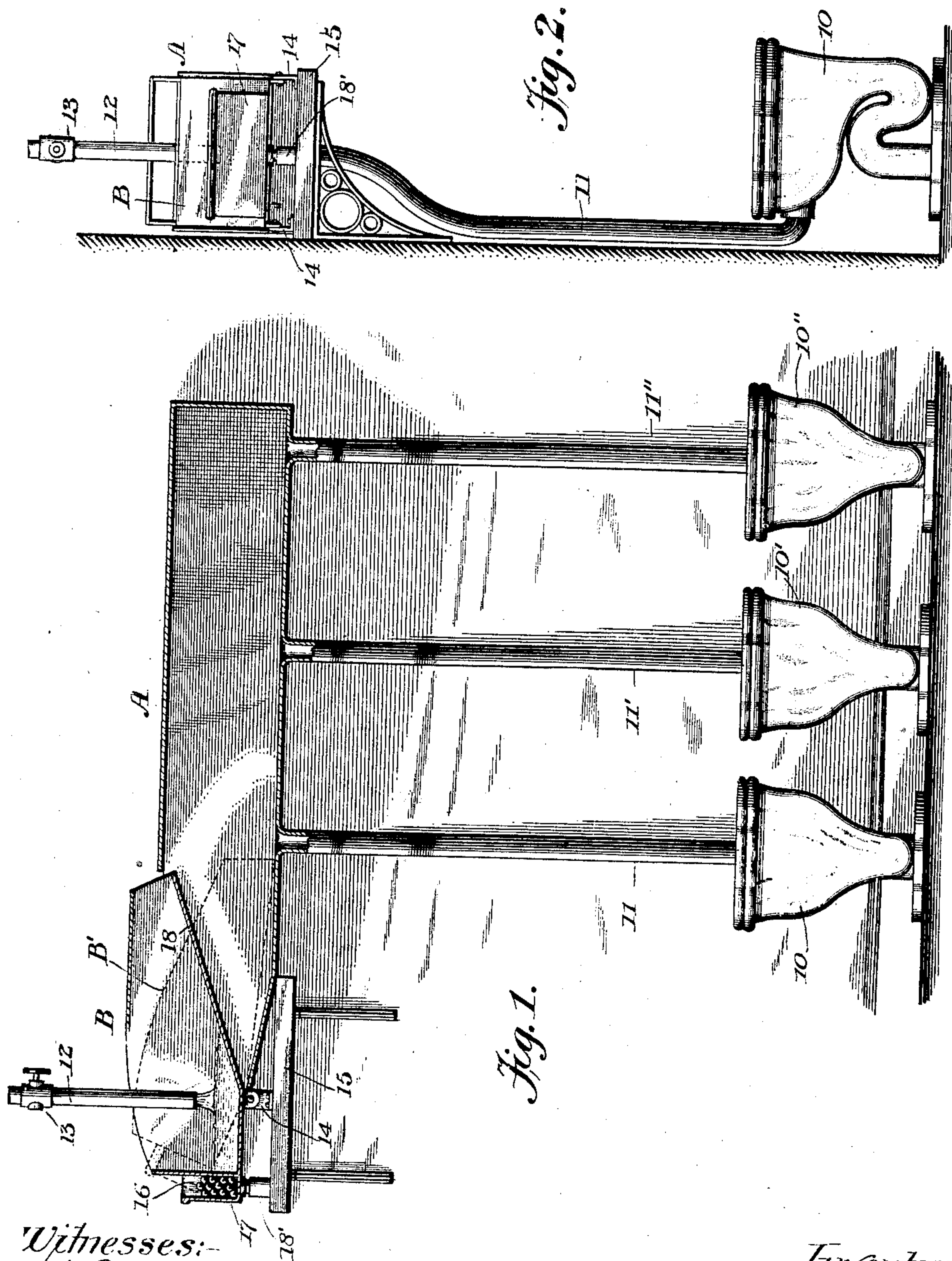
R. J. GATLING.

FLUSHING APPARATUS FOR WATER CLOSETS.

(Application filed Aug. 4, 1899.)

No Model.)

2 Sheets--Sheet 1.



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UNITED STATES PATENT OFFICE.

RICHARD J. GATLING, OF NEW YORK, N. Y.

FLUSHING APPARATUS FOR WATER-CLOSETS.

SPECIFICATION forming part of Letters Patent No. 668,853, dated February 26, 1901.

Application filed August 4, 1899. Serial No. 726,109. (No model.)

To all whom it may concern:

Be it known that I, RICHARD J. GATLING, a citizen of the United States, residing in New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Flushing Apparatus for Water-Closets, of which the following is a specification.

This invention relates to flushing apparatus for water-closets, and more especially to that kind which are generally known as "periodical" apparatus—in other words, mechanisms by which a certain amount of water is periodically delivered into bowls in an automatic manner; and my invention has for its object the provision of an apparatus of this kind which is simple in construction and may be readily adjusted to the amount of water to be delivered at each discharge of a bucket or similar receptacle, as will hereinafter appear and as illustrated in the accompanying drawings, forming part of this specification, and in which—

Figure 1 represents a front view of a series of bowls connected with a flushing apparatus embodying my invention, such apparatus being shown in longitudinal section. Fig. 2 is an end view of the same looking from the left in Fig. 1; and Figs. 3 and 4 represent a modification of my invention, Fig. 3 being a section and Fig. 4 an end view of the same.

Similar characters of reference designate like parts in all the figures of the drawings.

In Figs. 1 and 2 of the drawings my invention is shown in its simplest form, 10, 10', and 10'' designating bowls of a toilet-room, and 11, 11', and 11'' pipes whereby water is conducted to the bowls from the flushing-tank (designated in a general way by A) and having near one end thereof a receptacle or bucket B in communication with the discharge end of a pipe 12, said pipe constituting the water-supply means and provided with a valve 13, whereby the flow of the water through said pipe 12 may be regulated as desired. The receptacle is pivotally supported on brackets 14, which are secured to a shelf 15, suitably held on the wall of the room, and the receptacle B is so supported on the brackets 14 that the bulk of the water received thereby will tend to overpoise the same and at the same time overbalance a counterweight

placed at the end of said receptacle, said counterweight being herein represented as shot 16, contained within a box 17. This receptacle or tank is shown as partly covered and provided with a flat bottom at one part thereof and is also shown tapering toward one side thereof to form an inclined wall and a walled-in open-ended spout. By constructing the receptacle in this manner it will be readily seen that the splashing of the water is prevented, which is a frequent source of annoyance in the use of many flushing-tanks, while at the same time the provision of a spout enables the water to be supplied in a stream of small area, but of considerable force. It will be understood that by increasing the shot in the box 17 the amount of water to be received by the receptacle B and before the discharge therefrom may be varied at will, and in order to obviate the premature return of the receptacle B to its normal position after the water has been discharged therefrom the bottom plate 18 is made comparatively long and will assume during the discharge of the receptacle a nearly horizontal position, when a comparatively thin sheet of water covering said plate 18 will be sufficient to retain the receptacle in its tilted or discharging position, as indicated by dotted lines B', so that an approximately complete discharge of the contents is assured. Upon the return of the receptacle B to its normal position the under side of the box 17 may strike against a buffer 18', held on the upper side of the shelf 15, and remain in that position until a sufficient amount of water has accumulated therein to cause another discharge. The water as it is discharged from the receptacle B is allowed to flow into the tank A, from which it will be carried under a "head" depending upon an altitude of the tank A above the bowls, which are in this manner flushed.

In Figs. 3 and 4 is illustrated a modification of my invention, in which the tank A is dispensed with and a flaring chamber C is formed at the upper end of the flushing-pipe 11 and into which the contents of the receptacle B' may be discharged through the nozzle N. The supply-pipe 12' is provided with a valve 13' of ordinary construction, the plug 20 of which carries an arm 21, whereby said

plug may be turned to admit or shut off the water from the receptacle B'' by means of a float F, connected with said arm 21 through a rod or pitman 22. In the present instance the receptacle B'' is suspended by ears 23 from a fitting 24, secured to the lower end of the pipe 12', and may be retained in its receiving or normal position by means of a chain 18'' in lieu of the stop 18' above referred to.

While it is obvious that the receptacle B'' may be counterbalanced to retain a certain amount of water and then to discharge the same automatically therefrom, the position of the float F may be adjusted to shut off the water in the pipe 12' completely before the necessary amount of water has been received in said receptacle to cause an automatic discharge therefrom. I therefore provide a pull 25, whereby the receptacle B'' may be oscillated by hand to discharge the contents, such position being indicated by dotted lines b, after which and upon the release of said pull it will be returned to its normal position by the counterweight contained in the box 17.

Having described my invention, I claim—

1. The combination, with a soil-bowl, of a stationary water-receiving receptacle located above the same and connected by a pipe therewith; a tiltable partly-covered water-tank located above and emptying into such stationary water-receiving receptacle, said tiltable tank having a flat bottom at its rear part and a part inclined upwardly from such bottom toward the front end of said tank to form a spout inclosed at all sides thereof and projecting forwardly of said tiltable tank with its mouth normally located and shiftable in said stationary water-receiving receptacle, said tiltable tank being pivotally supported at or near the flat bottom and having its movement limited by a stop at or near the opposite end thereof; a chamber attached to the tank in proximity to the stop and adapted to receive a changeable weight; and a valve-controlled supply-pipe delivering to said tank over the flat bottom.

2. The combination, with a soil-bowl, of a stationary water-receiving receptacle located above the same and connected by a pipe therewith; a tiltable partly-covered water-tank located above and emptying into said stationary water-receiving receptacle; said tiltable tank having a flat bottom at its rear part and a part inclined upwardly from such bottom toward the front end of said tank to form a spout inclosed at all sides and projecting forwardly of said tiltable tank with its mouth normally located, and shiftable, in said stationary water-receiving receptacle, said tiltable tank also having a weight-receiving chamber provided with a changeable weight; water-supply means discharging into said tank; a valve located in said supply means; a float located in said tank and adjustably connected with said valve; a swinging pull connected to the under side of said tank for tilting the same; and flexible means connected to the rear end of said tank and to a fixture for limiting the movement of said tank in one direction.

3. In combination, with a soil-bowl and with a supply-pipe connected therewith and provided with a rigid flaring chamber at its upper end, of a tiltable, partly-covered water-receptacle located above said flaring chamber and having a flat bottom terminating in an inclined wall forming one part of a walled-in, open-ended spout movable in said flaring chamber, said receptacle having a weight-receiving chamber provided with a changeable weight; a water-supply pipe discharging into said receptacle; a valve located in said supply-pipe; a float in said receptacle and connected with said valve by an adjustable device; a flexible pull secured to the under side of said receptacle; and flexible means for limiting the movement of said receptacle in one direction.

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