

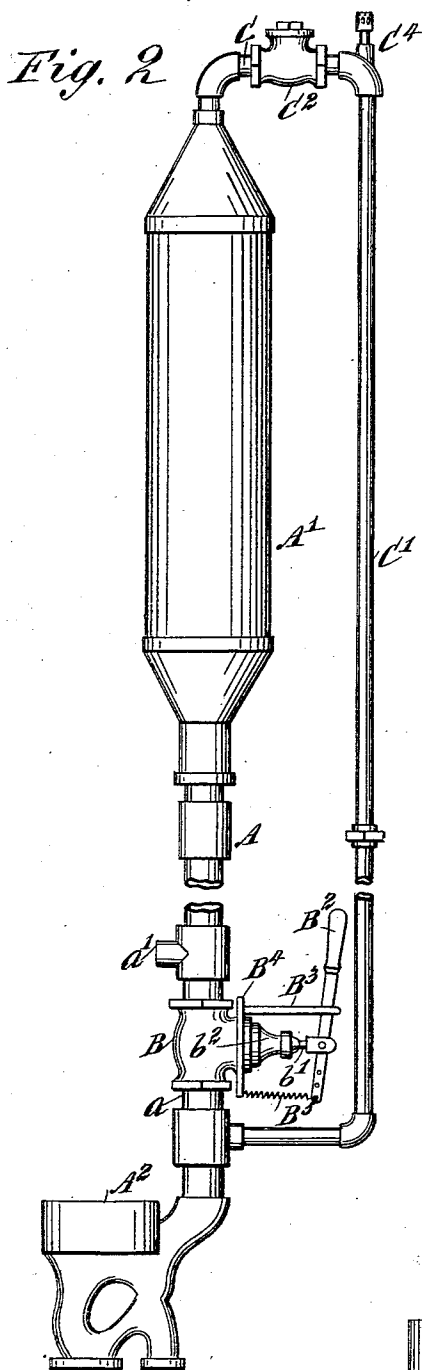
(No Model.)

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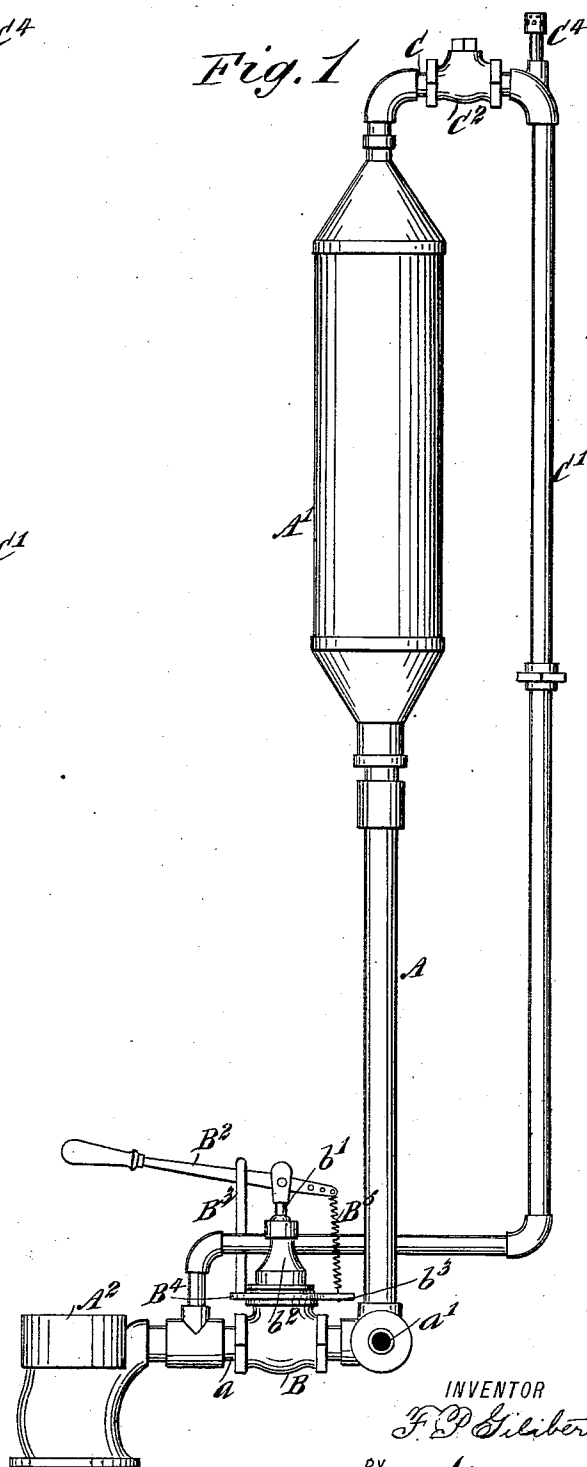
F. P. GILIBERTI.
FLUSHING APPARATUS.

No. 563,161.

Patented June 30, 1896.



WITNESSES:
C. Neveu
C. R. Ferguson



INVENTOR
F. P. Gilberti
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ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

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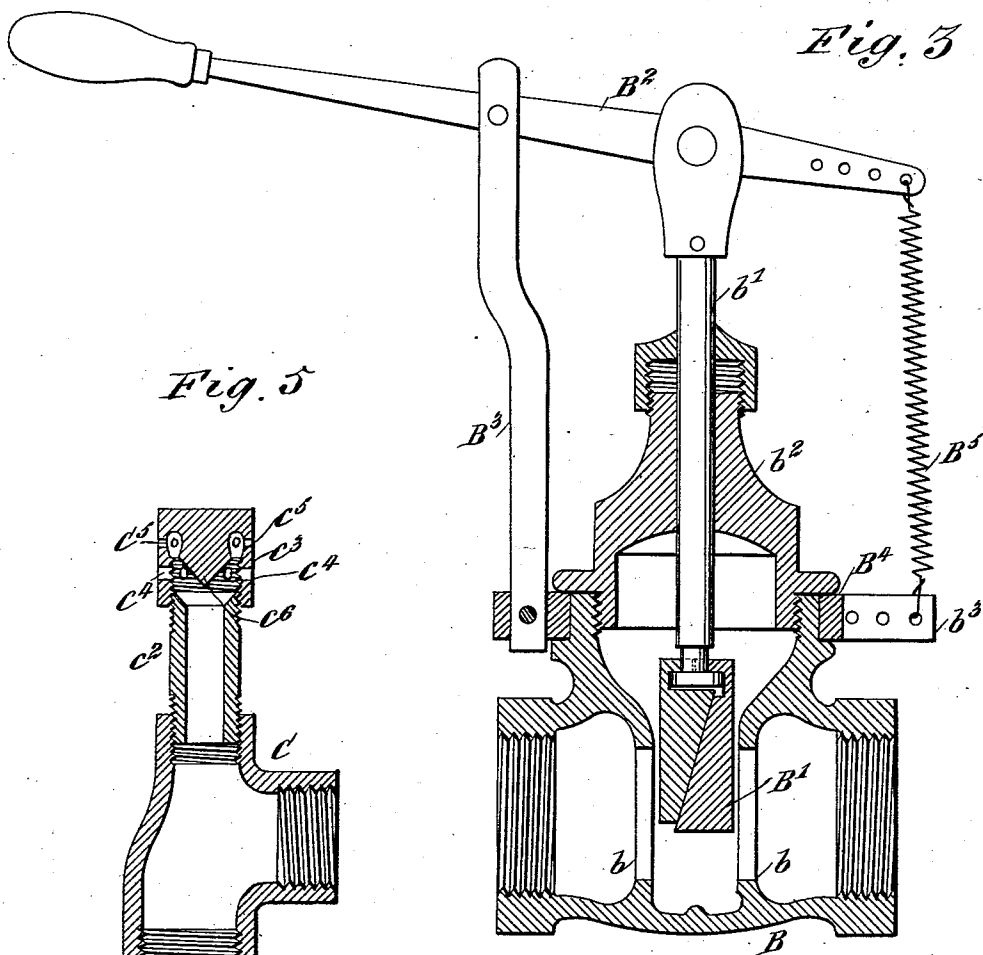


Fig. 3

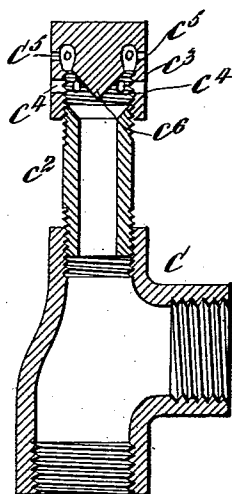
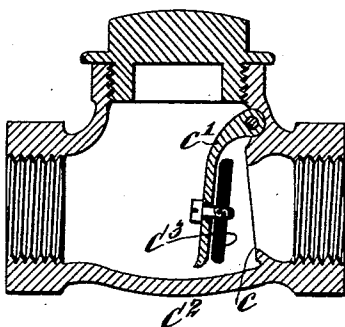


Fig. 4



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UNITED STATES PATENT OFFICE.

FRA P. GILIBERTI, OF WOOD HAVEN, NEW YORK.

FLUSHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 563,161, dated June 30, 1896.

Application filed October 11, 1895. Serial No. 565,381. (No model.)

To all whom it may concern:

Be it known that I, FRA P. GILIBERTI, of Wood Haven, in the county of Queens and State of New York, have invented certain new and useful Improvements in Flushing Apparatus, of which the following is a full, clear, and exact description.

This invention relates to flushing devices for closets; and the object is to provide an apparatus simple in construction, in which float-valves are dispensed with, and in which the flushing-water will discharge under considerable pressure.

I will describe a flushing apparatus embodying my invention, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of an apparatus embodying my invention. Fig. 2 is a side elevation showing a modified construction. Fig. 3 is a sectional view of a controlling-valve employed. Fig. 4 is a sectional view of a check-valve employed, and Fig. 5 is a sectional view of an air-valve employed.

Referring to the drawings, A designates a stand-pipe comprising a cylinder or tank A' and connection *a* with the bowl A². In Fig. 1 the connection *a* is arranged horizontally; but in Fig. 2 it is arranged vertically, so as to adapt the device for a less space than is required by the construction shown in Fig. 1.

In the connection *a* is a controlling-valve comprising a casing B and a gate B' movable between the perforated walls *b* within the casing which form seats for the gate B'. The gate B' consists of two sections having their meeting faces oppositely inclined and both adapted to slide laterally and longitudinally with relation to the stem *b'* with which they are connected. It will be seen that one section of the gate is slightly longer than the other section, so that when moved to a closing position the end of the longer section will engage against the wall of the casing, and then, as the other section has a short continued movement, the sections will be moved laterally to bear against the walls *b* and tightly close the ports through the walls.

The stem *b'* extends through a bonnet *b*²,

having a screw-thread engagement with the casing B, and to the outer end of the stem an operating-lever B² is pivoted. The lever B² is fulcrumed, between its hand-piece and its connection with the stem *b'*, to an arm B³, extended from a ring B⁴, rotatively mounted on the casing B, and the inner end of the lever has a spring connection B⁵ with an arm *b*³ extended from the ring B⁴. By rotating the ring B⁴ on the casing the lever B² may be adjusted laterally to bring its handle to any desired and convenient position. The spring B⁵ is designed to automatically close the valve.

Between the valve B and the cylinder or tank A' the stand-pipe A has a supply-inlet *a'*, and communicating with the upper end of the cylinder A' is a horizontally-disposed pipe C, which connects with an overflow-pipe C', communicating with the pipe-section *a* between the valve B and the bowl A².

In the pipe C is a check-valve comprising a casing C², having within it a valve-seat *c*, against which a swinging valve C³ is adapted to engage. The valve C³ is mounted on an arm or plate *c'*, having pivotal connection with the upper wall of the casing C², and the valve-seat *c* is inclined downward and outward, so that when the valve is relieved of water-pressure it will swing away from the seat, leaving a sufficient opening for the admission of air to the cylinder or tank.

An air-inlet valve C⁴ is mounted on the pipe C. This air-valve consists of a tube *c*², communicating with the pipe C, and a cap *c*³ adjustably mounted on the end of the tube. As here shown, the cap *c*³ has an interior thread engaging with an exterior thread on the tube. The cap is provided with two annular rows of holes *c*⁴ *c*⁵, and within the cap is a tapered plug *c*⁶, adapted to engage in the end of the tube *c*² when it is desired to wholly close the same. When the cap *c*³ is in the position shown in Fig. 5, air will be admitted through both rows of holes *c*⁴ *c*⁵, but the amount of air inlet may be reduced by adjusting the cap on the tube to close the holes *c*⁴.

In operation, when the controlling-valve B is closed the water from the supply-pipe will rise in the stand-pipe and cylinder and the air above the water will be forced out of the air-valve. When the water reaches the pipe C, the slight overflow will run, through the

pipe C', into the bowl A² and serve to cleanse the same. As the water fills the pipe C, the pressure will close the check-valve and thus stop the overflow. When it is desired to flush the bowl A², the lever B² will be operated to open the controlling-valve, allowing the water to discharge under its weight-pressure from the cylinder A', and as the check-valve is relieved of pressure it will automatically open and allow the entrance of air to the cylinder.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a flushing apparatus, the combination with a bowl, of a stand-pipe comprising a cylinder or tank, a controlling-valve in the stand-pipe between the cylinder and bowl, an over-

flow-pipe communicating with the stand-pipe between the controlling-valve and bowl, and having a connection with the upper end of the cylinder, an automatically-opening check-valve in said connection and an adjustable air-valve communicating with said connection, substantially as specified.

2. The combination with the cylinder and overflow-pipe, of a check-valve comprising a casing having an interior valve-seat inclined downward and outward, a swinging valve-plate adapted to engage with the seat, and an adjustable air-valve connected to the pipe in which the check-valve is located.

FRA P. GILIBERTI.

Witnesses:

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