No. 710,342. Patented Sept. 30, 1902.

D. S. SCHUREMAN.

WATER CLOSET.

(Application filed Dec. 17, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

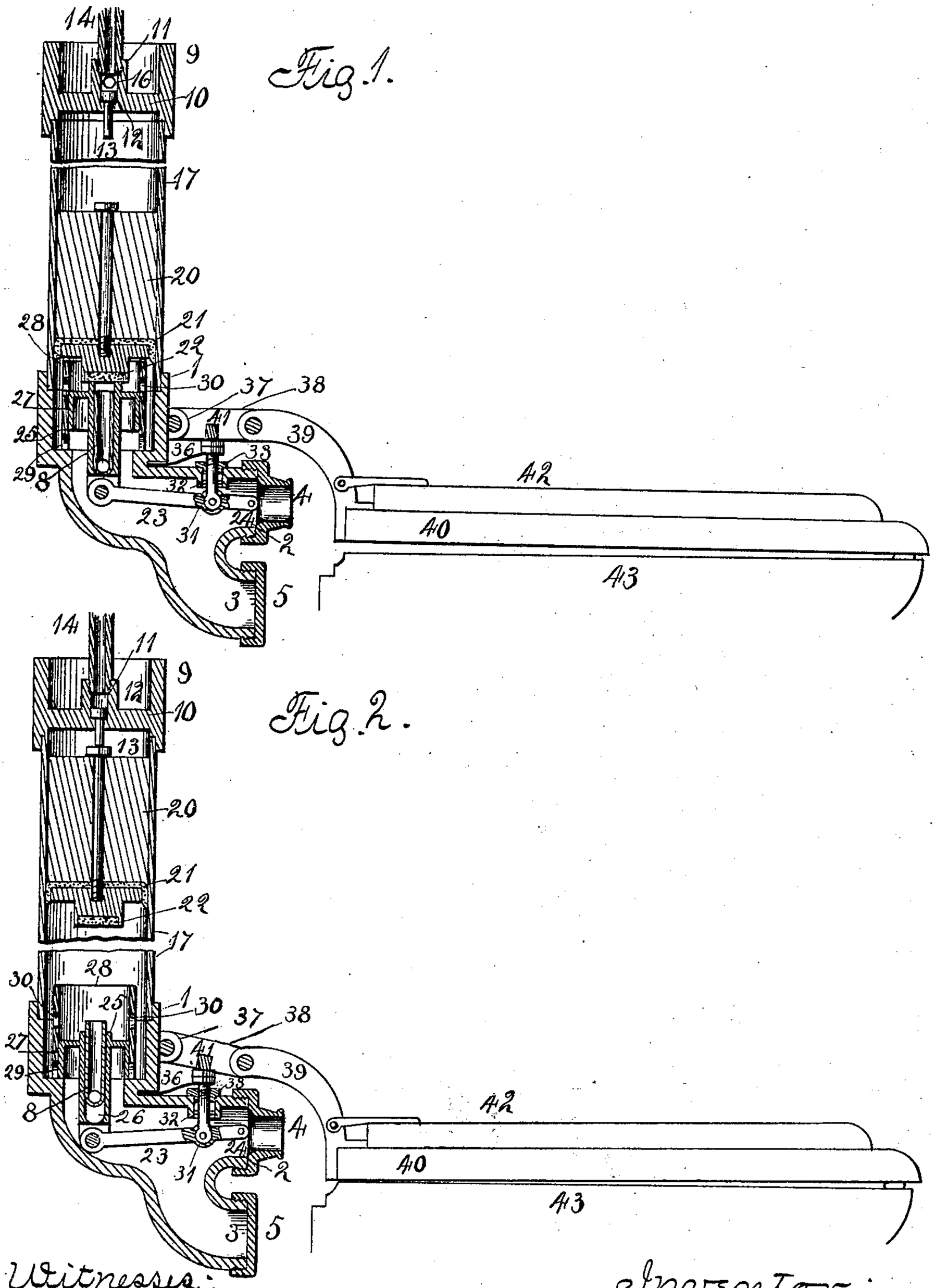


Fig. 2.

Witnesses:
W. L. Goodloe
E. Rehel.

Inventor:
David S. Schureman
By A. O. Rehel
Atty.

No. 710,342. Patented Sept. 30, 1902.

D. S. SCHUREMAN.

WATER CLOSET.

(Application filed Dec. 17, 1901.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 3.

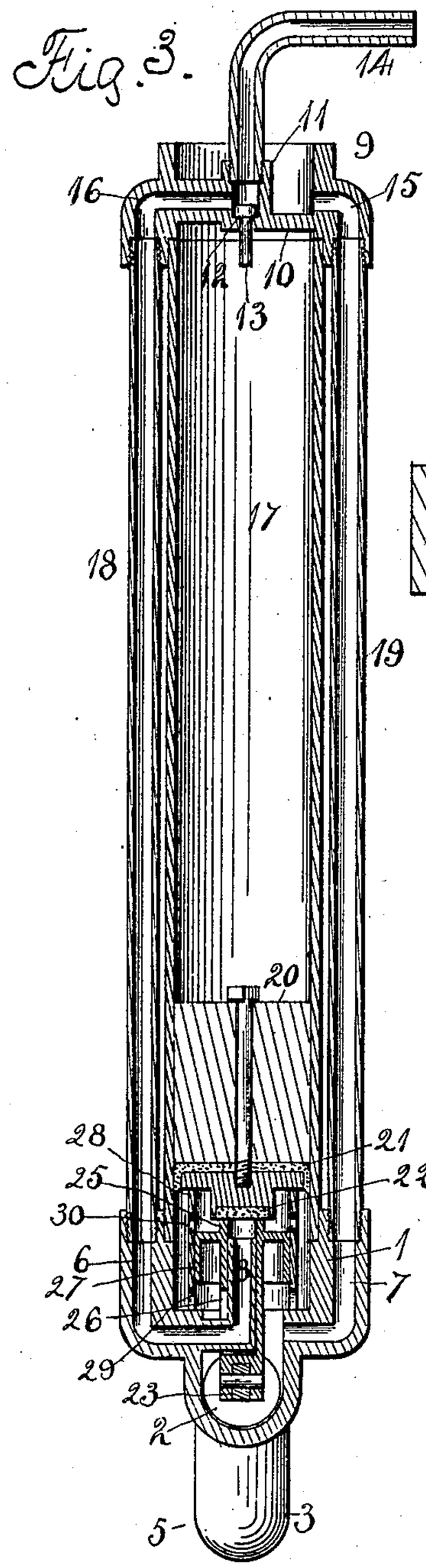


Fig. 5.

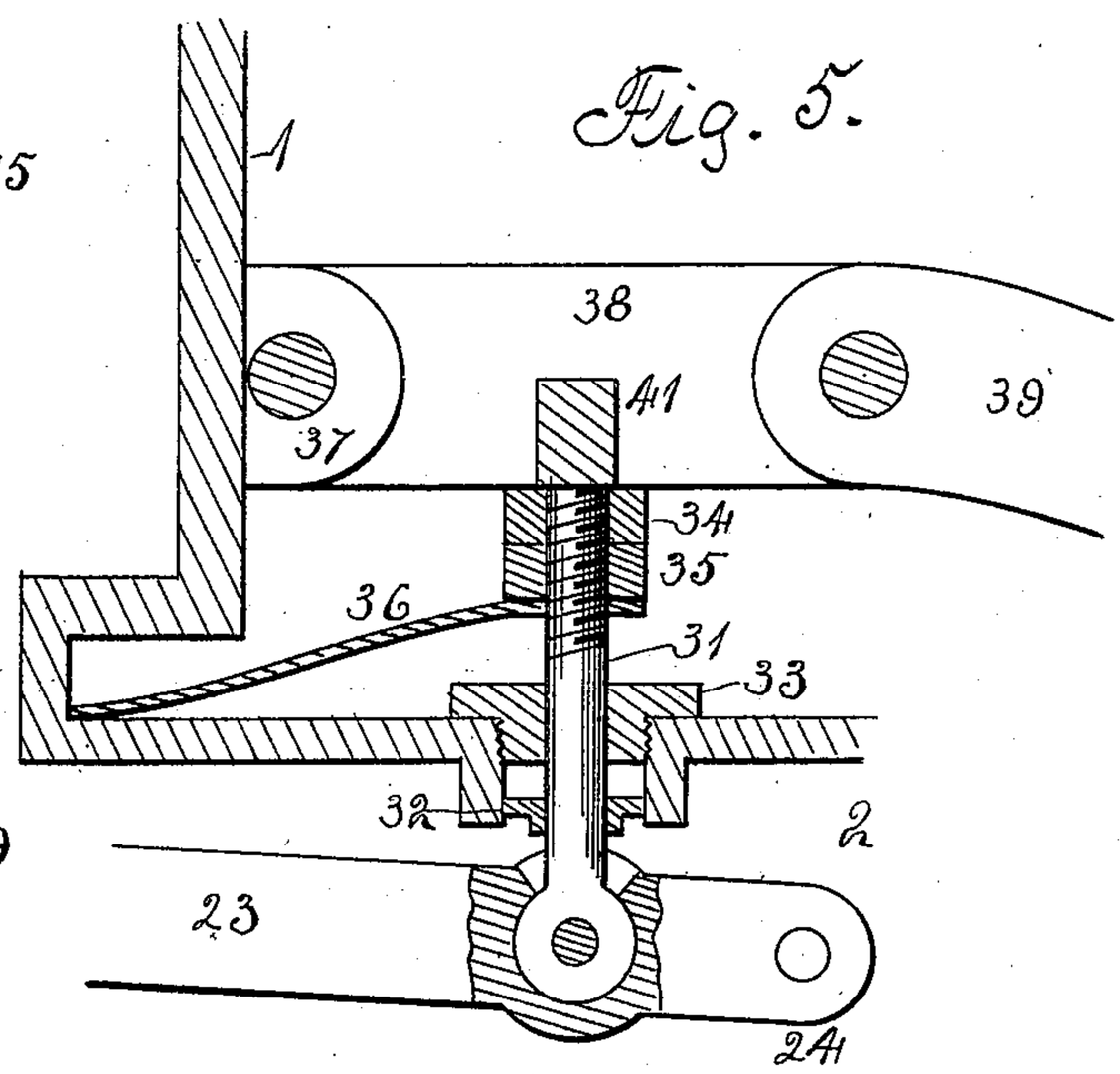
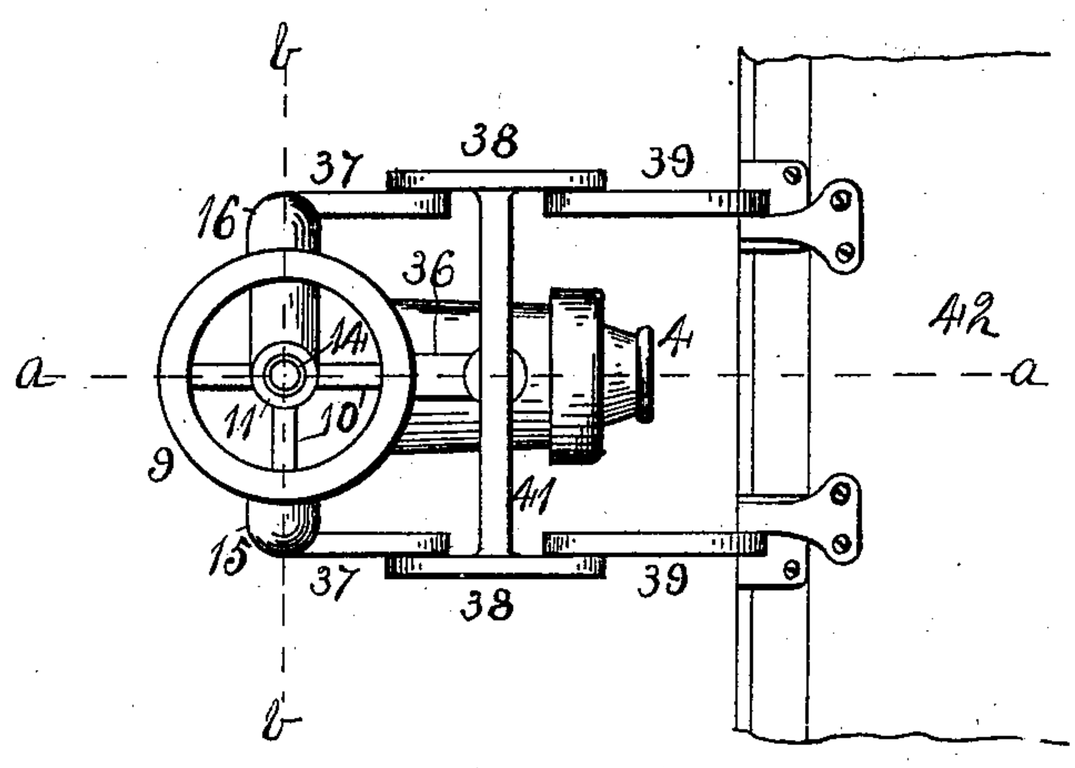


Fig. 4.



Witnesses:
W. L. Taylor
E. C. Bebel.

Inventor:
David S. Schureman
By A. O. Behel
Atty.

UNITED STATES PATENT OFFICE.

DAVID S. SCHUREMAN, OF ROCKFORD, ILLINOIS.

WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 710,342, dated September 30, 1902.

Application filed December 17, 1901. Serial No. 86,263. (No model.)

To all whom it may concern:

Be it known that I, DAVID S. SCHUREMAN, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Water-Closets, of which the following is a specification.

The object of this invention is to construct a water-closet in which the valve mechanism is operated by the heel of the seat and the flow of water to the stand-pipe cut off by the upward movement of a weight located within the stand-pipe.

In the accompanying drawings, Figure 1 is a vertical central section of my improved water-closet in which the seat is in its normal position on dotted line *a*, Fig. 4. Fig. 2 is a similar section in which the seat is depressed. Fig. 3 is a vertical central section on dotted line *b*, Fig. 4. Fig. 4 is a plan view. Fig. 5 is a vertical section of the plunger 31 and its relation of the surrounding parts.

A casing comprises the vertical section 1 and two outlets 2 and 3. A nozzle 4 has a screw-threaded connection with the opening 2, and a cap 5 has a screw-threaded connection with the opening 3. At opposite sides of the vertical section of the casing are formed openings 6 and 7. The opening 6 has an extension 8 located centrally within the vertical section, and the opening 7 communicates with the chamber formed by the vertical section 1.

A cap 9 has cross-ribs 10, supporting a central cylinder-section 11. A valve 12 is located within the cylinder and its stem 13, extending downward. A water-supply pipe 14 connects with the upper end of the cylinder. Within the cap and a part thereof is formed a passage-way 16, communicating with the cylinder 11. Another passage-way 15 is formed in the cap and communicates with the space outside of the cylinder 11 and within the cap. A stand-pipe is formed by a tube 17, having its upper end located within an annular recess formed in the lower end of the cap 9, and its lower end located within an annular recess formed in the upper end of the vertical section 1. Pipes 18 and 19 have a right and left hand screw-threaded connection with the cap 9 and vertical section 1, and as they are turned in place the cap and vertical section are brought in contact with the tube, thereby making a tight connection. A weight 20 is located within the tube 17 and supports a cup-packing 21 at its lower end and a disk packing 22.

A lever 23 is located within the casing, and its end 24 has a pivotal connection with the casing. To the free end of this lever is pivoted a double-ended valve comprising a central tubular section 25, having a portion 26 of one side cut away. Some distance below the top end of the tubular section extends an end having a depending flange 27. Outside of the flange 27 and forming a part of the casing extends a rim 28, having a series of holes 29 near its lower end and a series of openings 30 some distance from its top. A plunger 31 has a pivotal connection with the bar 23 intermediate its ends and extends upward through the casing and guided by a disk 32, attached thereto, and the bushing 33. The free end of this plunger is screw-threaded and supports two nuts 34 and 35. A flat spring 36 rests against the under face of the nut 35, and its other end is seated in a recess formed in the casing. From the casing extend two lugs 37, to which are pivoted links 38, and to the free ends of the links are pivoted curved arms 39, having their free ends secured to the rear end of a water-closet seat 40. A bar 41 connects the links 38. A cover 42 to the water-closet seat has a pivotal connection with the arms 39. The forward end of the water-closet seat rests on the front end of the bowl 43 of the water-closet.

A connection is formed between the nozzle 4 and the water-closet, and if the closet has a lower opening the positions of the cap 5 and nozzle are changed. When the closet is not in use, the parts will appear as shown in Figs. 1 and 3. The front end of the seat will rest on the forward end of the bowl of the closet. The spring will hold the rear end of the seat elevated, and the spring exerting its force on the plunger will hold the bar 23 in its elevated position, which will press the upper end of the tube 25 against the packing 22 in the lower end of the weight, thereby preventing the water from escaping from the pipe 17. The weight will be supported by the rim 28. When the seat is depressed, the bar 23 will be depressed, which will move the double-

ended valve with it, and the lower end of the valve will close the openings 29 in the rim 28. The pressure of the water passing through the pipe will raise the weight until it comes in contact with the valve-stem 13 and moves the valve up against the end of the inlet-pipe 14, when the flow of water will be cut off and the stand-pipe will remain filled. Upon the seat being released the spring will raise the double-ended valve until the position shown at Fig. 1 and the falling weight will force the water from the stand-pipe out through the openings 29 into the casing and out through the nozzle 4 into the closet. When the weight has dropped sufficiently to release the valve 12, the city water-pressure will enter the stand-pipe and the water will pass into the bowl. The weight will seat itself upon the rim 28, and the packing 22 will rest against the upper end of the double-ended valve, when the flow of water will be cut off. The side opening 26 in the tubular support of the double-ended valve permits the valve to be moved vertically while the pipe 8 remains stationary. Should water pass the weight or the valve 12 leak, the water can overflow by way of the pipe 19 into the bowl.

I claim as my invention—

1. In a water-closet, the combination of a vertically-arranged stand-pipe, a movable weight located within the stand-pipe, a stationary water-supply pipe located within the stand-pipe, a double-ended valve guided by the water-pipe, a seat, and a connection between the seat and valve, the valve adapted to press against the weight when the weight is down.

2. In a water-closet, the combination of a vertically-arranged stand-pipe, a movable weight located within the stand-pipe, a stationary water-supply pipe located within the stand-pipe, a double-ended valve guided by the water-pipe, a seat, a connection between the seat and valve, the valve adapted to press against the weight when the weight is down, and a valve located at the upper end of the stand-pipe and operated by the weight.

3. In a water-closet, the combination of a stand-pipe, a weight located within the stand-pipe, a double-ended valve located within the stand-pipe, a lever, a plunger connected with the lever, a spring operating on the plunger, and a seat operating upon the plunger.

4. In a water-closet, the combination of a vertically-arranged stand-pipe, a water-supply pipe extending from near the upper end of the stand-pipe and communicating with the lower portion of the stand-pipe, a valve within the water-supply pipe and located at the upper end of the stand-pipe, and a movable weight within the stand-pipe adapted to move the valve in one direction.

DAVID S. SCHUREMAN.

Witnesses:
A. O. BEHEL,
E. BEHEL.