

(No Model.)

P. FALKINBURG.
FLUSH TANK FOR CLOSETS.

No. 495,611.

Patented Apr. 18, 1893.

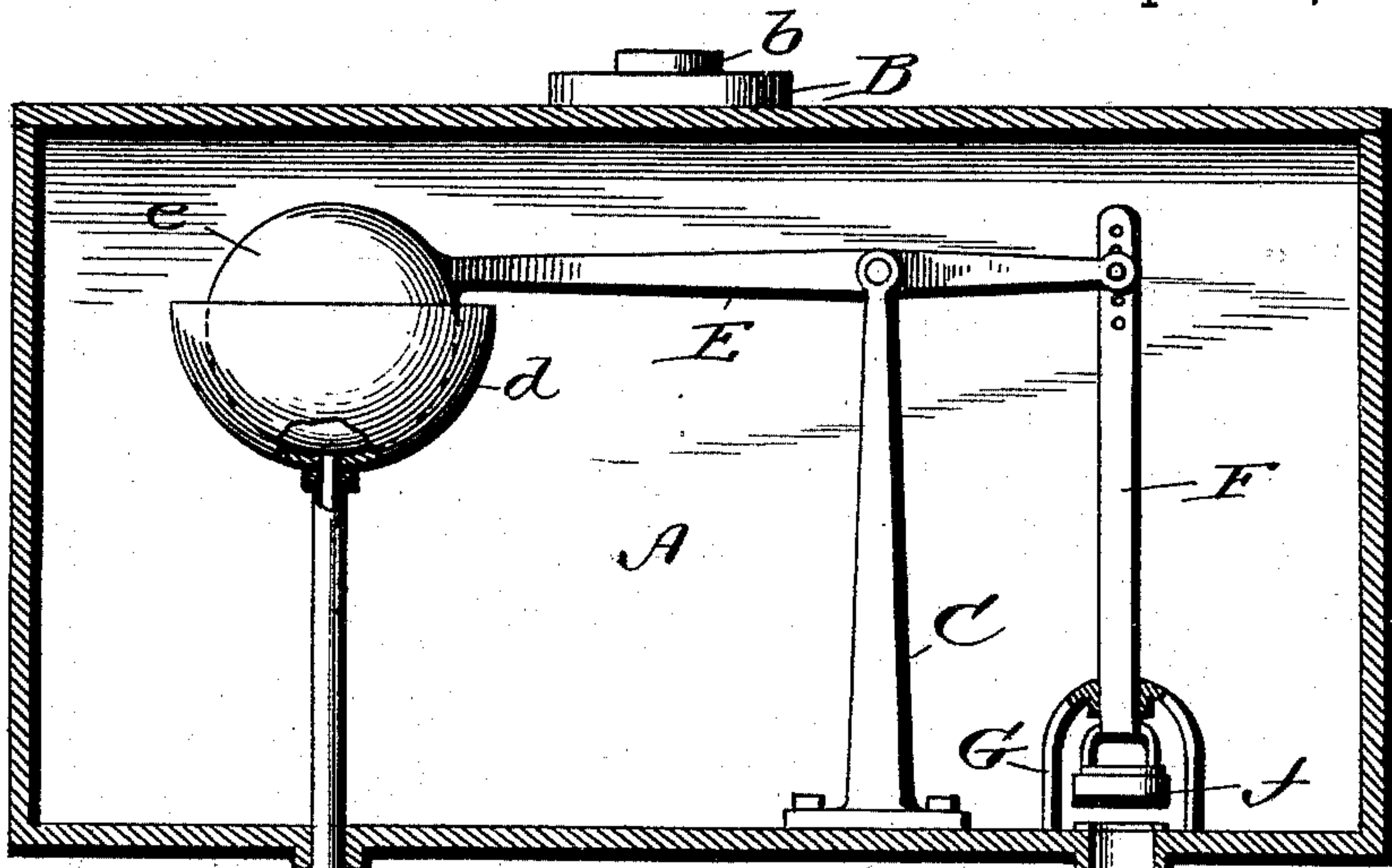


Fig. 1.

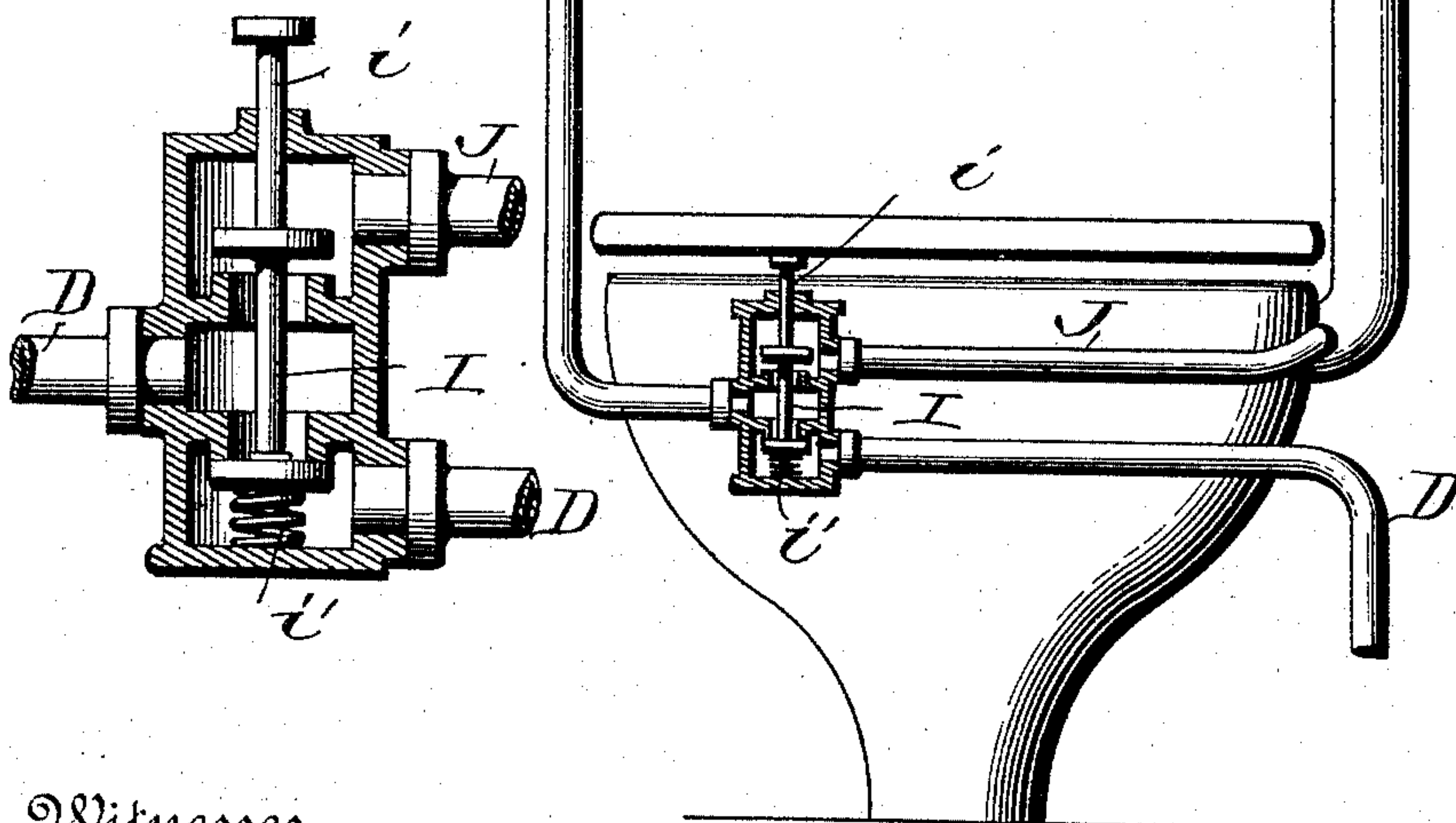


Fig. 2.

Witnesses

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Inventor

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UNITED STATES PATENT OFFICE.

PERCY FALKINBURG, OF ATLANTIC HIGHLANDS, NEW JERSEY.

FLUSH-TANK FOR CLOSETS.

SPECIFICATION forming part of Letters Patent No. 495,611, dated April 18, 1893.

Application filed January 14, 1893, Serial No. 458,400. (No model.)

To all whom it may concern:

Be it known that I, PERCY FALKINBURG, a citizen of the United States, residing at Atlantic Highlands, in the county of Monmouth, State of New Jersey, have invented certain new and useful Improvements in Flush-Tanks for Closets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to flush tanks for water closets.

The object of the invention is to prevent waste of water, secure a good flush and enable the use of an air tight tank.

The invention consists of the novel features and the peculiar construction and combination of the parts which will be hereinafter more fully described and claimed and which are shown in the annexed drawings, in which;

Figure 1 is a diagrammatical view of the invention. Fig. 2 is a detail view of the valve which is opened by the pressure on the closet seat and closed by a spring.

The tank A is air tight and is provided on its top side with a hand hole B which is closed by a screw cap b. Within this tank is located the mechanism for controlling the supply of water to the closet. The supply pipe D projects vertically into the tank and is provided at its upper end with a cup d which is designed to receive a float e at one end of the lever E. The valve f for closing the upper end of the flush pipe H is carried by the rod F which is attached at its upper end to the opposite end of the lever E. This lever E is pivoted between its ends to a standard or other suitable support C rising from the bottom of the tank A. The guide G is provided to insure the closing of the valve f on the seat provided at the upper end of the flush pipe H and guides the rod F in its movements. The flush pipe H extends from the bottom side of the tank A and connects with the closet in the usual manner.

The spring actuated valve I is suitably located in the supply pipe D and is adapted to be pressed upon to cause a supply of water to the tank A. This valve I is normally held closed by means of a spring i' and is opened

by pressure of the seat on the valve stem i which overcomes the force of the spring i'.

A small waste pipe J connects the valve I with the flush pipe H, the parts being so disposed that when the valve I is open to admit a supply of water to the tank A the waste pipe J will be closed and when the said valve I is closed the waste pipe J will be opened to permit the water in the cup d and in the upper portion of the supply pipe to escape for the purpose presently to be described.

The operation of the invention is as follows: The valve I being opened by pressure on the closet seat permits the water to flow into the cup d and fill the same and overflow into the tank A. As the cup d fills with water the float e rises and causes the valve f to close the upper end of the flush pipe H. The water will continue to overflow the cup d and enter the tank until the atmospheric pressure in the said tank A will equal the pressure of the flow of water when the supply will cease notwithstanding the valve I remains open. When the pressure is removed from the seat the valve I will close and shut off the supply of water and the waste pipe J will be opened. The water in the cup d and in the upper portion of the supply pipe D will escape and permit the float e to fall thereby unseating the valve f and permitting the water confined in the tank A to escape through the flush pipe H. The air confined under pressure in the tank A facilitates the discharge of the water from the cup d through the pipe J and at the same time gives an impetus to the water escaping through the flush pipe H.

Any form of valve that is provided with an escape or waste as J and which is adapted to be operated by pressure on the valve stem and which valve when open will close the waste J and when closed will open the waste J, may be substituted for the valve I have herein shown and described.

To prevent the suction in the pipe H from seating the valve f a small air pipe h will be provided and located at the head of the said flush pipe H to admit air.

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

1. The combination with an air tight tank

for flushing closets, of a supply pipe having a cup at its delivery end, the flush pipe communicating with said tank, and a lever carrying a valve at one end to close the flush pipe, 5 and provided with a float at its other end, which float is adapted to rest in the said cup at the delivery end of the supply pipe when the water is shut off from the said supply pipe, substantially as and for the purpose 10 herein specified.

2. In a flushing closet the combination with a tank having the flush pipe connected therewith, and a lever carrying a valve for closing the said flush pipe, of a float carried by the 15 said lever, and the supply pipe having its delivery end directly under the said float whereby the pressure and force of the inflowing water against the said float will assist in closing the valve on the flush pipe, substantially 20 as set forth.

3. In a flushing closet the combination of a tank, flush pipe communicating with said tank, a valve for closing the flush pipe, a lever carrying the said valve and provided with 25 a float, a supply pipe having a cup at its delivery end to receive the said float, a valve connected with the said supply pipe and adapted to be operated by pressure on the closet seat, and a waste pipe connected with 30 the said valve and adapted to be closed when the said valve is open and vice versa, substantially as set forth.

4. The herein described means for flushing closets consisting of an air tight tank, a flush pipe communicating with the lower portion 35 of the said tank, a valve adapted to close said flush pipe, a guide to insure the seating of the said valve, the lever having the said valve connected therewith, a float attached to the said lever, a supply pipe having a cup at its 40 delivery end to receive the said float, a valve for controlling the supply of water through the supply pipe, and a waste pipe connected with the said valve for the purpose of draining the said cup and upper portion of the 45 supply pipe, substantially as described for the purpose set forth.

5. In a flushing closet the combination of an air tight tank, a lever pivotally supported between its ends and provided with a float at 50 one end and a valve at the opposite end, a supply pipe having its delivery end directly beneath the float, and a flush pipe adapted to be closed by the said valve and provided at its upper end with an air tube to prevent the 55 suction seating the said valve when flushing the closet, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

PERCY FALKINBURG.

Witnesses:

M. E. FOSTER,

WM. M. FOSTER.