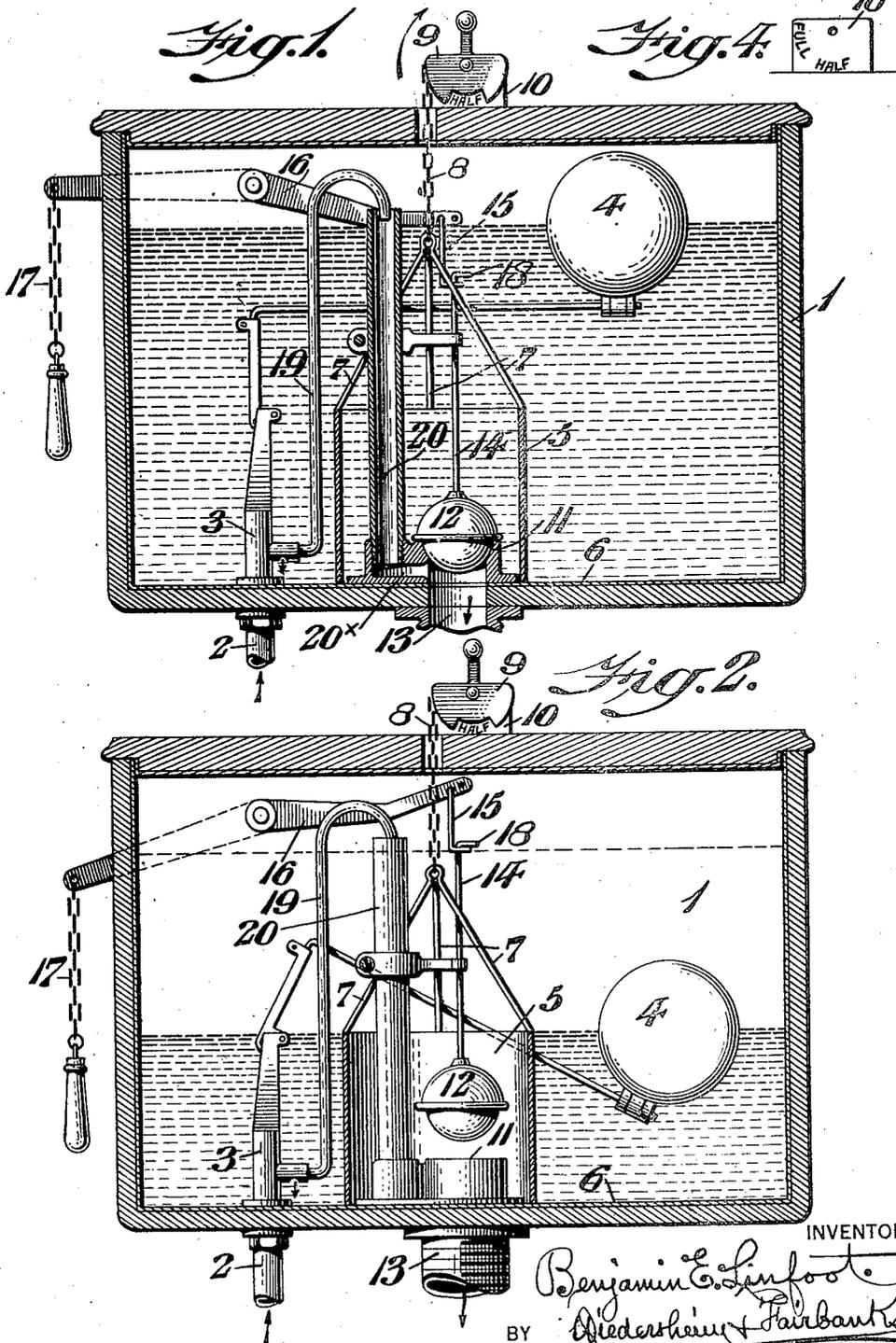


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 APPLICATION FILED NOV. 22, 1917.

1,323,703.

Patented Dec. 2, 1919.

2 SHEETS—SHEET 1.

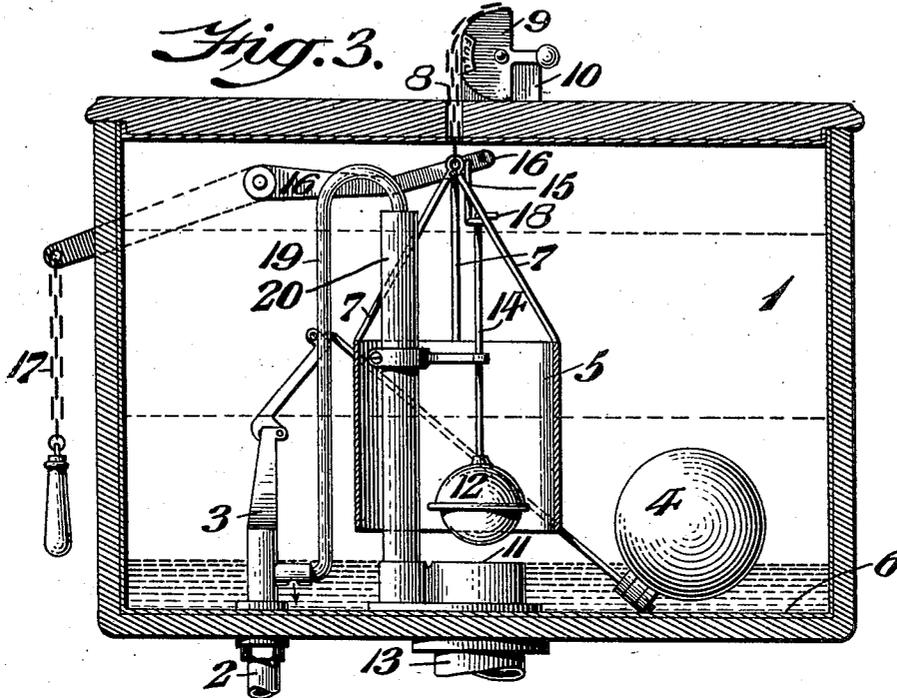


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UNITED STATES PATENT OFFICE.

BENJAMIN E. LINFOOT, OF PHILADELPHIA, PENNSYLVANIA.

DUPLEX FLUSH-TANK.

1,323,703.

Specification of Letters Patent.

Patented Dec. 2, 1919.

Application filed November 22, 1917. Serial No. 203,304.

To all whom it may concern:

Be it known that I, BENJAMIN E. LINFOOT, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Duplex Flush-Tank, of which the following is a specification.

My invention consists of a flush tank in which provision is made for flushing a closet bowl with different quantities of water according as the latter may be used for urination alone or for fecal matters. To this end, I employ within the tank a supplemental chamber which operates in conjunction with the discharge valve of the tank to allow water to escape from the tank to a limited extent or to a greater extent according to requirements, thus effecting a saving of water, the construction and operation of the device being hereinafter set forth and the novel features thereof pointed out in the claims that follow the specification.

The invention is satisfactorily illustrated in the accompanying drawing, but the important instrumentalities thereof may be varied, and so it is to be understood that the invention is not limited to the specific details shown and described, as long as they are within the spirit or scope of the claims.

Figure 1 represents a vertical section of a flush tank embodying my invention, the members thereof being in normal position.

Fig. 2 represents a similar view thereof, certain members being in different positions from that shown in Fig. 1.

Fig. 3 represents a similar view thereof, certain members thereof being in a different position from those shown in Figs. 1 and 2.

Fig. 4 represents a side elevation of an indicating plate employed.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings:—

1 designates the tank proper of a flush tank, and 2 the supply pipe thereof, said pipe being provided with the valve 3 and float 4 connected therewith, as well known.

Within said tank is the vertically movable chamber 5 of cylindrical or other form, the same having a closed side and an open top and bottom, its lower end being adapted to be rested on the bottom 6 of the tank as a seat to close the bottom of the chamber when the latter is at its lowest point.

Connected with the upper end of said chamber are the arms 7 to which are at-

tached the chain 8, the latter extending downwardly to said arms from the rotatable head 9, the latter being mounted pivotally on the ears 10 on the top of the tank.

Within the tank on the bottom thereof is the seat 11 for a ball valve 12 of the discharge pipe 13 which members of themselves are also well known.

Rising from said valve 12 is the stem 14 whose upper end passes freely through the lower limb of the elbow 15, whose upper limb is connected with the lever 16, the latter being adapted to raise the valve from its seat and having connected with it outside of the tank the chain 17, both as also well known.

In order to prevent disconnection of the stem 14 and elbow 15, the upper end of the former is provided with the bend 18, for evident purposes.

The casing of the valve 3 has connected with it the pipe 19, the latter leading to the upper end of the tube 20 and opening thereinto, said tube having its lower end communicating with the inlet 20* which opens into the base of the tank.

A portion of the periphery of the head 9 is cutaway so as to expose the words "Full," "Half," marked on one of the ears 10, the same forming a gage having reference to the quantity of water that may be used for flushing purposes, the normal position of the parts being shown in Fig. 1, where the word "Half" is exposed.

The operation is as follows:—

When it is desired to discharge but a limited quantity of water, say about one-half of that in the tank, for flushing the closet bowl in the case of urination, the head 9 the chamber 5 and the ball valve 12 remain undisturbed, as in said figure, it being noticed that the lower portion of said chamber surrounds the ball valve and its seat, while the chamber rests closed on the bottom of the tank. The lever 16 is now operated, whereby the valve 12 is raised and consequently opened, as in Fig. 2, when the water flows out of the tank through said chamber 5 and flushes the bowl with the quantity of water that has lowered in the tank to the level of the top of the chamber 5, see Fig. 2, the quantity of water being half or about half that originally in the tank. As the chain of the lever 16 is let go, the valve 12 returns to its seat or is allowed to return to its seat, the float 4 then dropping to partial extent

and also opening the supply valve as usual in flush tanks.

When it is desired to flush the closet bowl to full extent, the parts being in position as in Fig. 1, the head 9 is rotated, in the direction indicated by the arrow, whereby it uncovers the word "Full" and covers the word "Half." The chamber 5 is thus raised from its seat on the bottom of the tank and has its bottom uncovered, see Fig. 3. The lever 16 is also operated whereby the valve 12 is opened, and the water will flow through the seat thereof to the discharge pipe 13, thus draining the tank almost of its contents, excepting the small quantity that may remain therein on the level of the seat of the valve 12, as also shown in said Fig. 3.

The float 4 falls to its lowest extent opening the valve 3 and causing the tank to be refilled, when said float then rises to its normal position closing said valve 3. The head 9 may now be returned to its normal position, which is as shown in Fig. 1, and the chamber 5 descends, when its lower end is again seated on the bottom of the tank, thus closing said chamber from below.

As the lever 16 is meanwhile let go the valve 12 returns or is permitted to return to its closed position, when the parts are again in position, as in said Fig. 1.

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

1. In a flush tank, a discharge valve, a supplemental chamber normally resting on the bottom of the tank, said chamber having

a closed side wall and an open top and bottom and being adapted to be moved whereby in one position its bottom is closed, and in another position said bottom is opened, said chamber operating in combination with said discharge valve to cause flushing of a closet bowl with a less or a greater amount of water as desired.

2. In a flush tank a discharge valve, a movable supplemental chamber in said tank, said chamber having its side wall adapted to inclose said discharge valve, and being open at the top and bottom, said chamber being adapted to be seated on the bottom of the tank, and closed at the bottom in normal position, in combination with means for moving said chamber to uncover its bottom whereby a closet bowl may be flushed with a less or greater amount of water as desired.

3. In a flush tank, a discharge valve, a supplemental chamber, the latter being open at the top and adapted to rest normally on the bottom of the tank and having its side wall adapted to inclose said valve, said chamber having its bottom portion open adapting it as an outlet for water to said valve, in combination with means for moving said chamber to uncover said outlet to a variable extent whereby a closet bowl may be flushed with a less or greater amount of water as desired.

BENJAMIN E. LINFOOT.

Witnesses:

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