

(No Model.)

L. LIPP.
FLUSHING TANK.

No. 466,828.

Patented Jan. 12, 1892.

Fig. 1.

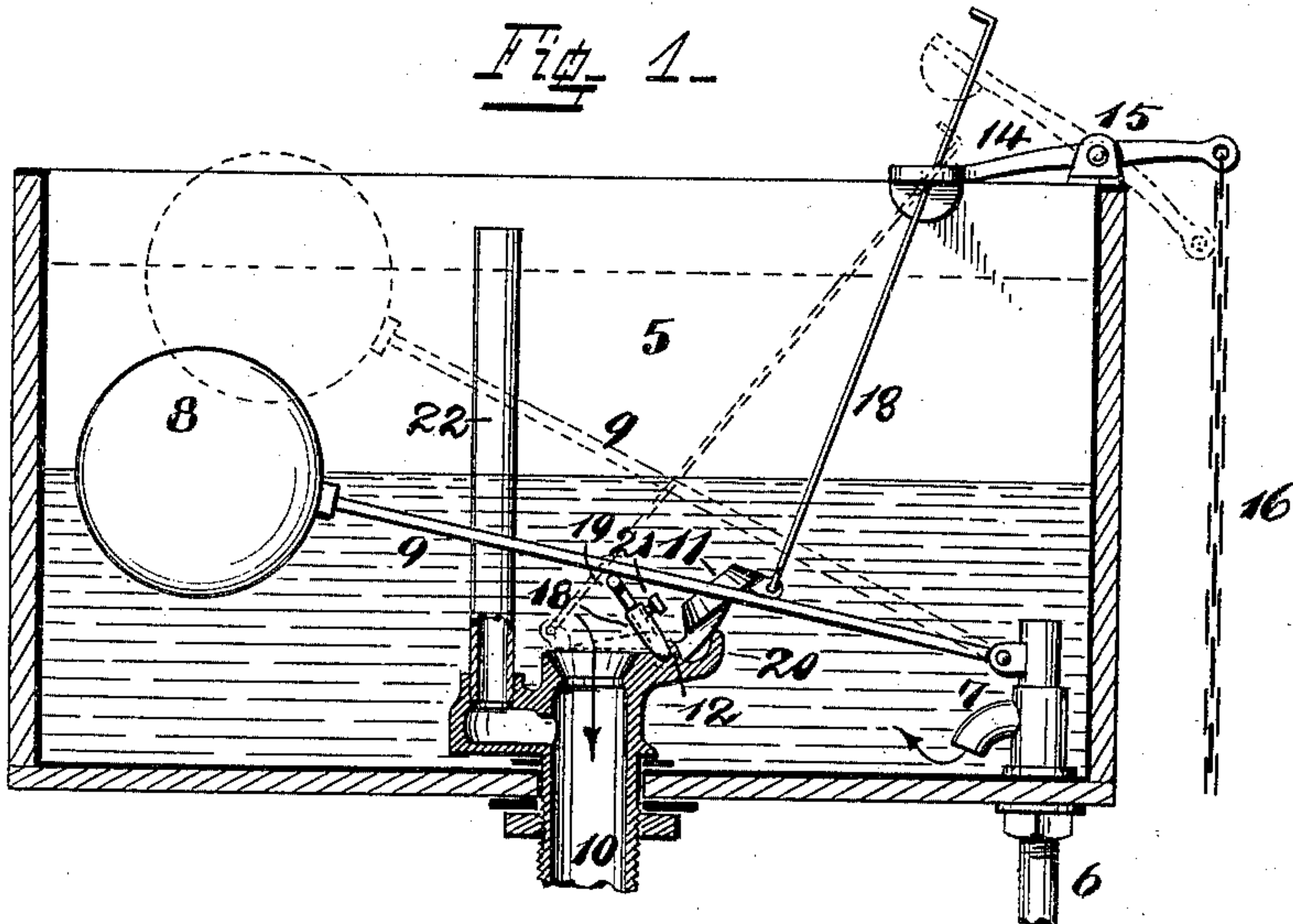


Fig. 2.

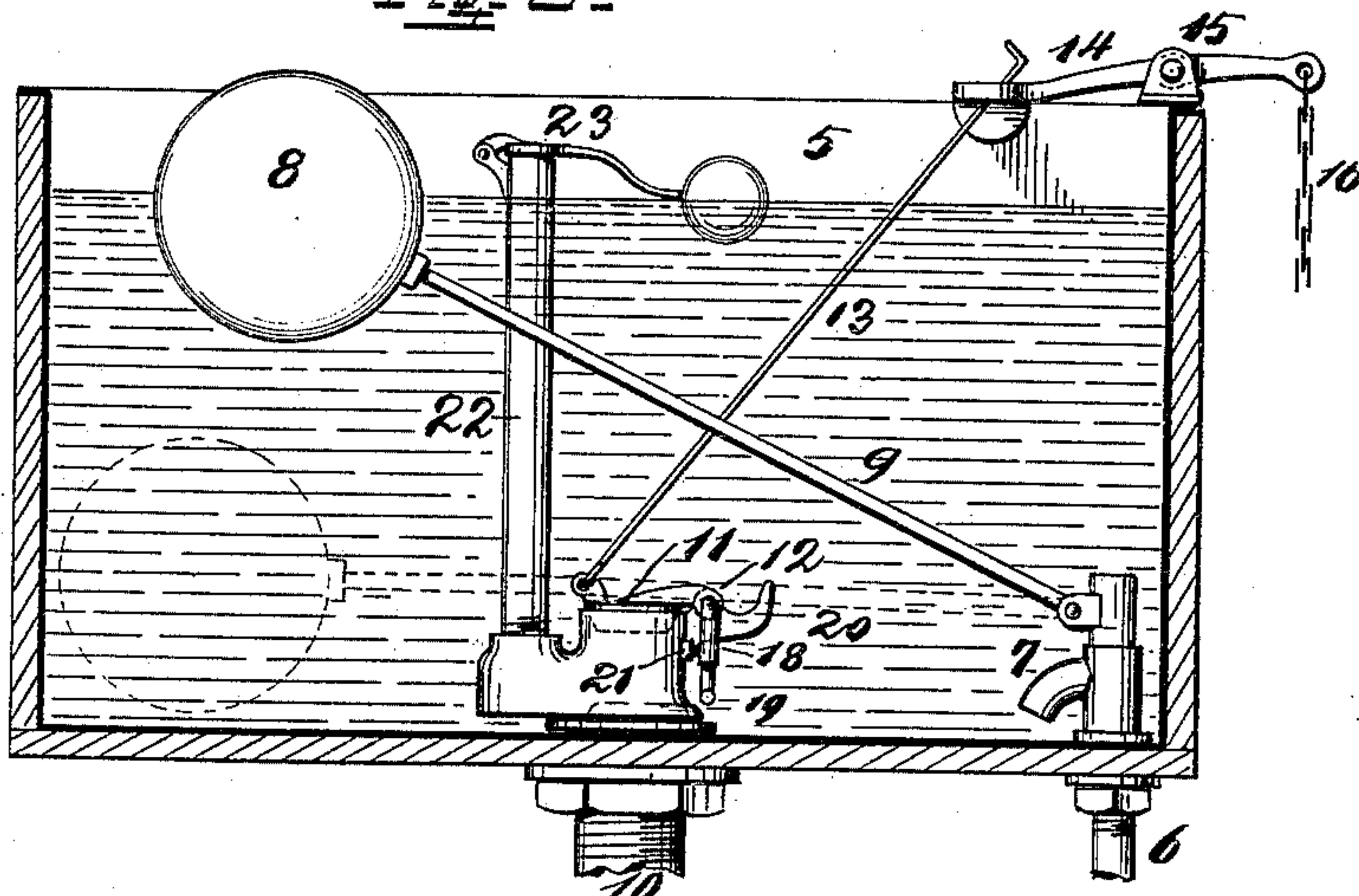
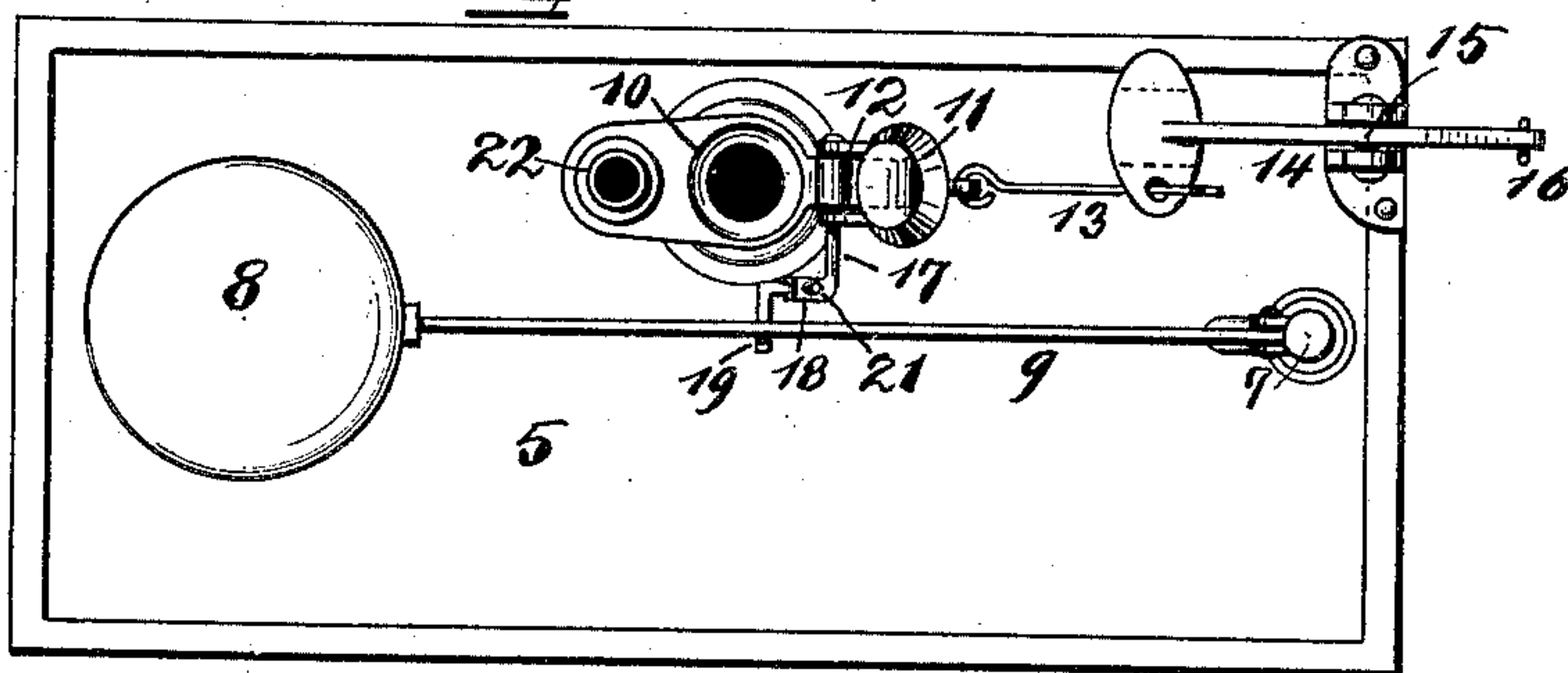


Fig. 3.



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LOUIS LIPP, OF CINCINNATI, OHIO.

FLUSHING-TANK.

SPECIFICATION forming part of Letters Patent No. 466,828, dated January 12, 1892.

Application filed July 27, 1891. Serial No. 400,843. (No model.)

To all whom it may concern:

Be it known that I, LOUIS LIPP, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Flushing-Tanks; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to flushing-tanks for water-closets of the kind whereby by the pulling and operation of a lever a certain quantity of water stored in the tank is liberated and, passing down and through the bowl of the closet, flushes the same. After such flushing the tank fills again automatically.

The object of my invention is to provide a tank of this kind which, while accomplishing the same purpose, does such, however, in a different manner, which permits of a simpler construction, whereby the cost of its manufacture is materially reduced.

The leading features of my construction consist of the use for closing the discharge-pipe of the float operating the supply-cock and of the provision of a device whereby the quantity of water to be discharged and used at a flushing may be regulated. I attain these objects in a construction illustrated in the accompanying drawings and explained in the following description.

In the drawings, Figure 1 is a sectional view of the tank, discharge-pipe, also in section, and the discharge-valve open. Fig. 2 is a sectional view of the tank, valve closed, and Fig. 3 is a top view of Fig. 1.

5 is a flushing-tank of customary construction, shape, and material.

6 is the supply-pipe, and 7 the supply-cock, located inside of the tank.

8 is a ball-float connected to the cock by means of a lever 9, which, when the float falls with the receding water, opens the cock and again closes the same when the water-supply has been replenished and lifted the float.

10 is the discharge-pipe leading down to the bowl of the water-closet, its upper end normally closed by a valve 11, hinged at 12.

Either this valve or the valve-seat is preferably rubber-coated or lined to prevent leakage. 13 is a rod connecting this valve to the operating-lever 14, pivoted at 15 near the top of the tank and provided with a pull 16.

Rigidly secured to that part of the hinge, connected to the valve is a lever 17 18 19, part 17 of it extending out laterally, so as to bring its extremity 19, when raised, within the path of lever 9 when the latter descends with the float.

20 is a stop back of the valve and against which the latter drops when open.

The operation of the different parts is as follows: When a flushing of the closet is desired, pull 16 is operated, whereby valve 11 is thrown open and drops back against stop 20, where it remains, the connection between rod 13 and lever 14 being operative only when the valve is raised, after which the said lever drops back to its normal position without affecting either the valve or rod 13. The contents of the tank discharge now through pipe 10, causing the float 8 to drop until lever 9, descending with it, comes in contact with the upper extremity 19 of the lever, connected to the valve, which contact causes the valve to tip and close the discharge-pipe. The descending float has meanwhile opened the supply-cock and begins to ascend again under the influence of the inflowing water until the replenished supply has raised the float sufficiently to close the cock and shut off the water. The amount of water discharging at a flushing being dependent on the interval of time elapsing between the opening of the valve and the moment the impact between levers 9 and 17 18 19 takes place, it is evident that if the proximity of part 19 of the last lever to lever 9 is varied the length of such interval of time mentioned above is also varied, or, in other words, if the upper extremity of lever 17 18 19 is closer to lever 9, the latter will strike the former sooner, tipping the valve and cutting off the discharge from the tank at an earlier stage. The same takes place, only in reverse order, if extremity 19 is moved farther away from lever 9, in which case the valve is tipped later and after a larger quantity of water has passed out. I provide for such regulation by making the length of part 18 of lever 17 18 19 adjust-

able. Such may be done in several ways; but the one I prefer is by having part 18 hollow and in two sections, one fitting and sliding within the other one, as shown in the drawings. A set-screw 21 serves to hold the parts in their adjusted positions.

22 is an overflow-pipe which guards against possible accidents caused by a refusal of the ball-cock to operate properly. It joins the discharge-pipe 10 below valve 11, and is consequently independent from the actions of the latter. Its upper end may be left open, or it may be closed by a cover 23, having a small ball-float attached to it, which lifts when the water-level rises abnormally high and permits the surplus to pass directly downward.

The shape of lever 17 18 19 or its particular location of attachment to the valve is not essential. The main points to be observed are a rigid connection of the former lever to the valve and the location of its free end within the path of the lever of the ball-float when it is descending.

Having described my invention, I claim as new—

1. In combination with the supply-cock, ball-float, operating-lever connecting the two, discharge-valve and discharge-pipe of a flush-

ing-tank, a lever 17 18 19, connected to the said discharge-valve, part 17 of the said lever extending out laterally, so as to bring its extremity 19 within the path of lever 9 when it descends, to enable the latter to tip and close the valve, and a stop against which the latter rests while open, all as substantially shown and described.

2. In combination with the supply-cock, ball-float, operating-lever 9, connecting the two, discharge-valve and discharge-pipe of a flushing-tank, a lever 17 18 19, having one of its ends directly connected to the discharge-valve, being adjustable in length and so located as to bring its other end, which is free, within the path of lever 9 when it descends, thereby enabling the same to come in direct contact with lever 17 18 19 and depressing the same, causing the valve, which is rigidly connected to it, to tip and close, and a stop which supports the latter while open, all as substantially shown and described.

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

LOUIS LIPP.

Witnesses:

SAMUEL M. QUINN,
CARL SPENGEL.