

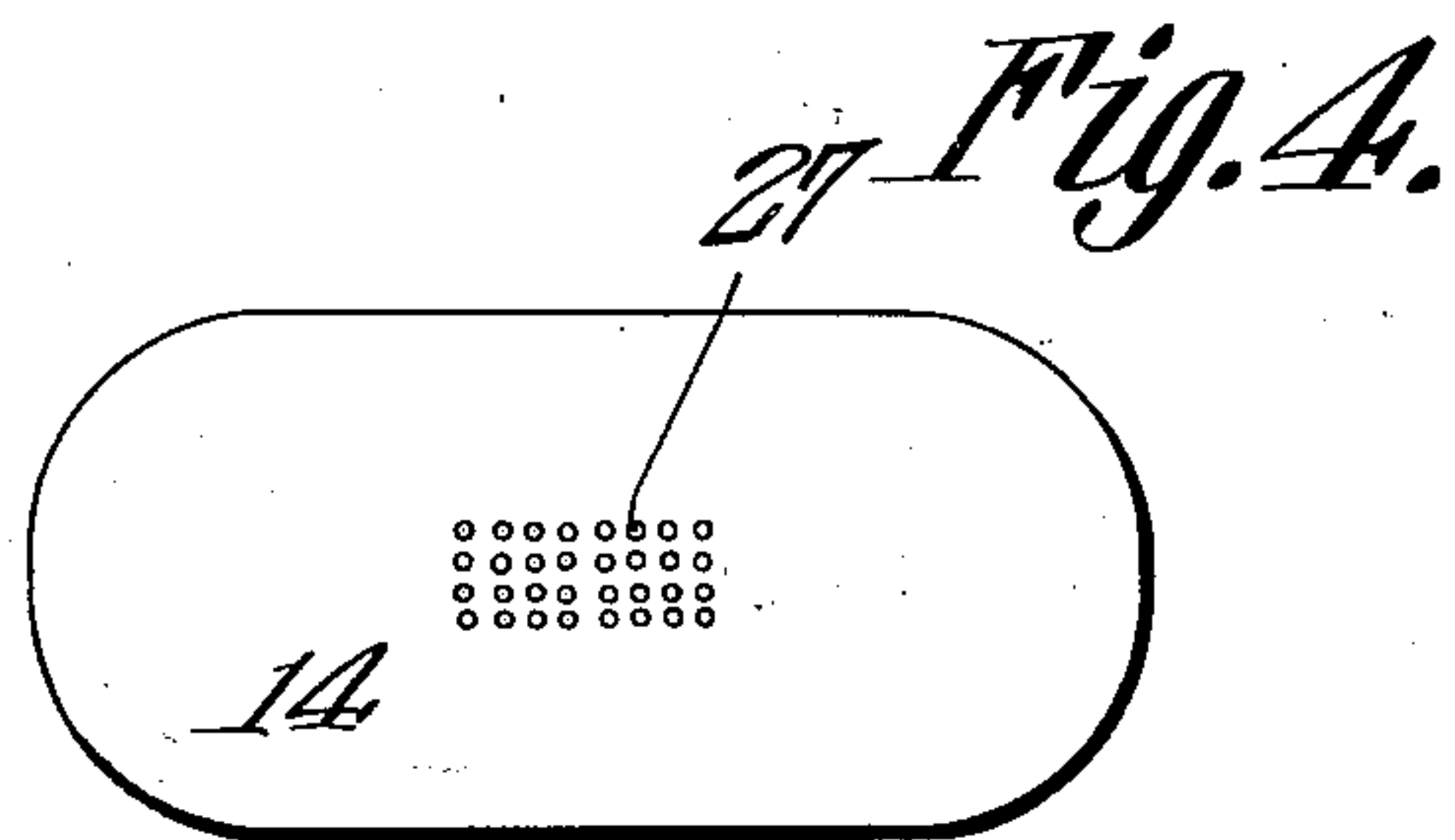
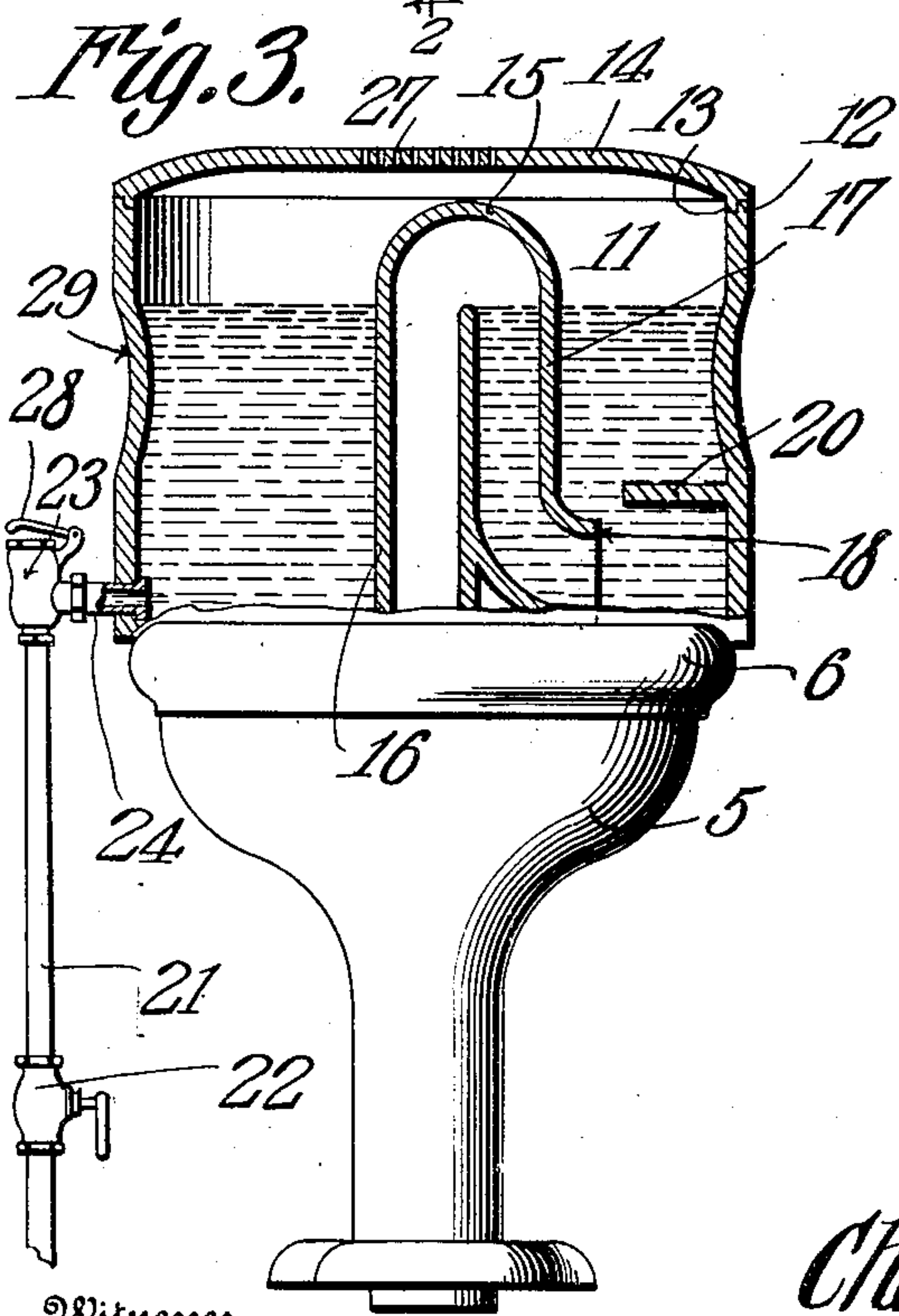
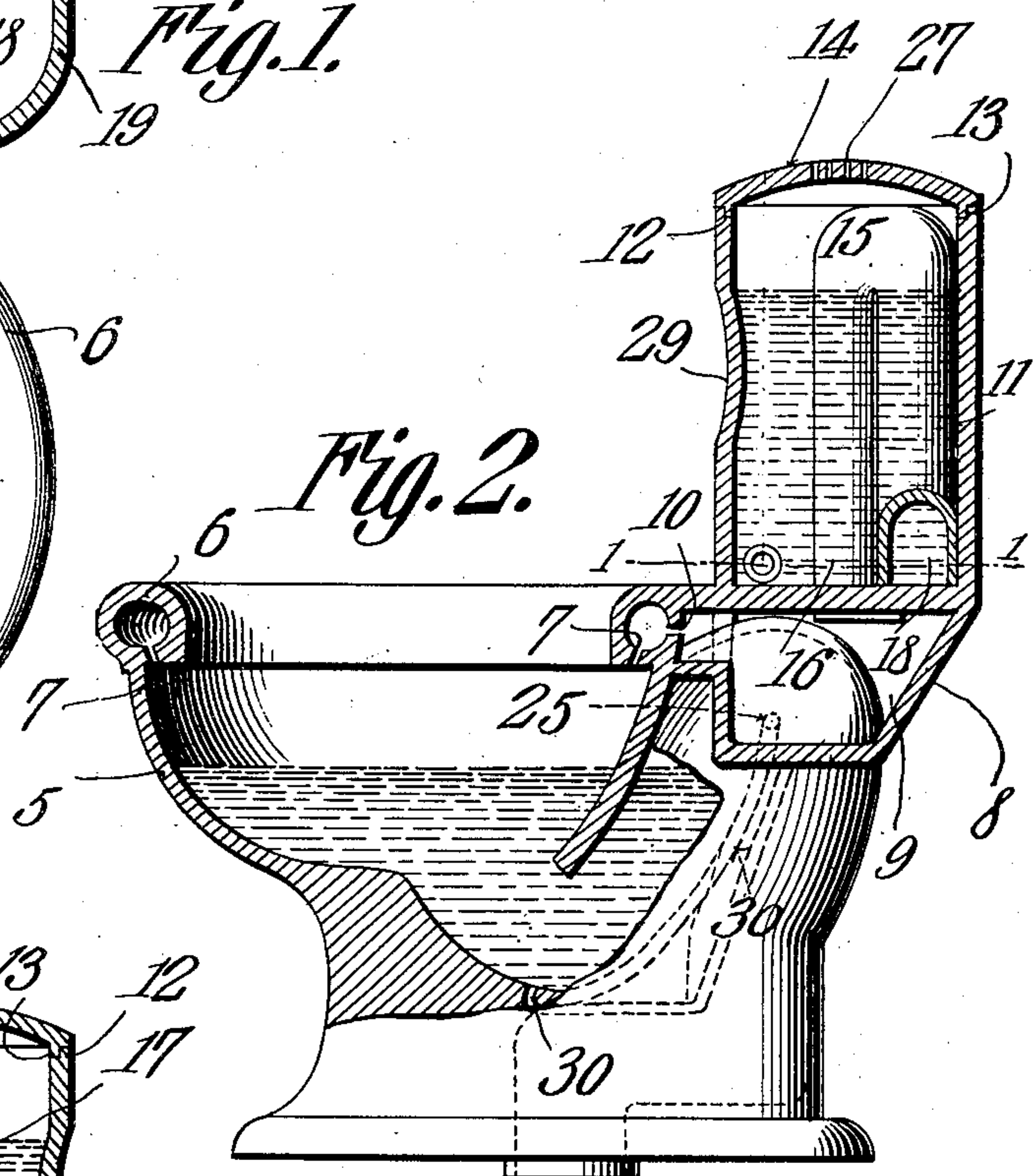
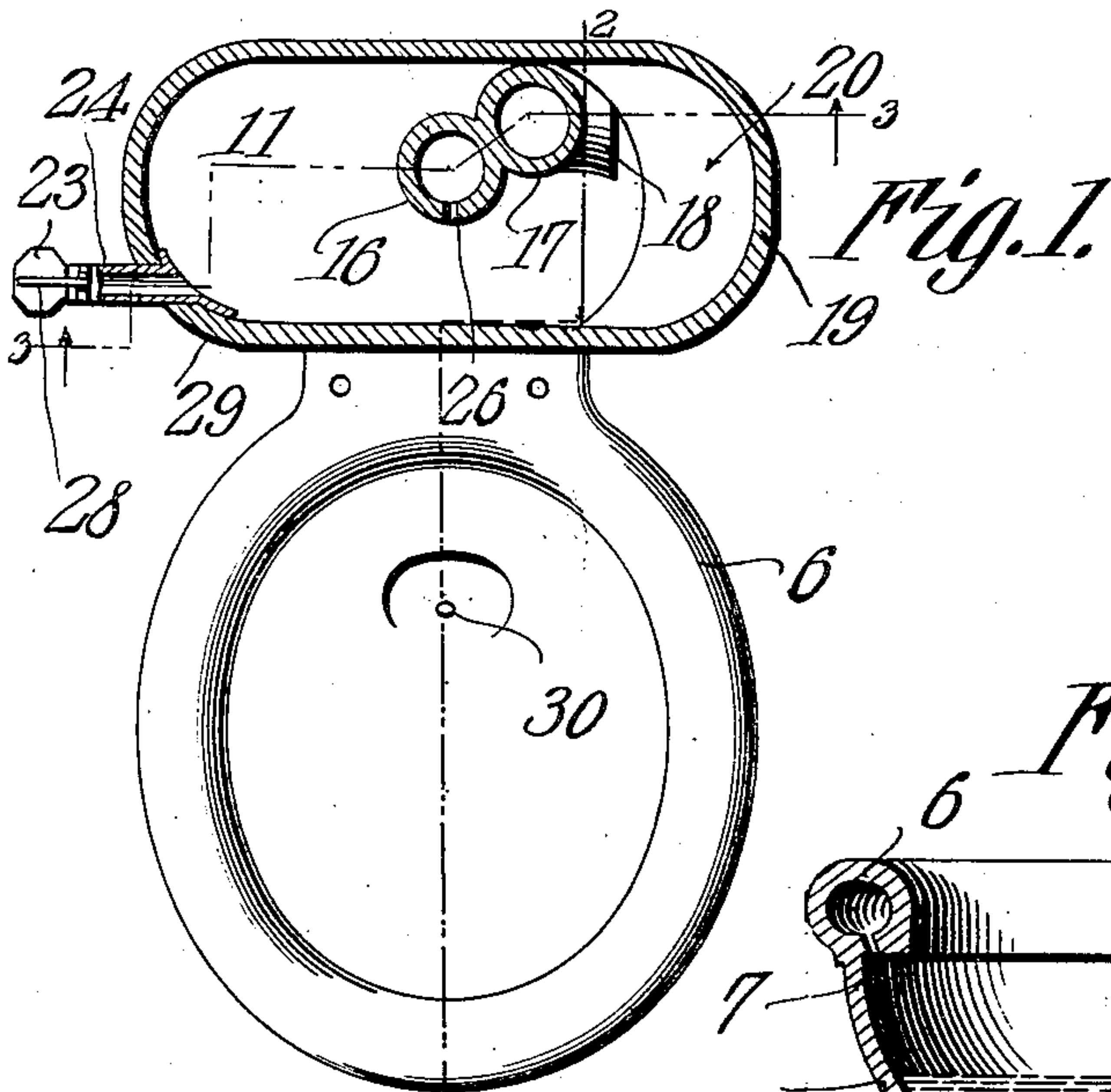
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FLUSHING TANK.

APPLICATION FILED NOV. 23, 1908.

938,468.

Patented Nov. 2, 1909.



Witnesses

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FLUSHING-TANK.

938,468.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed November 23, 1908. Serial No. 464,115.

To all whom it may concern:

Be it known that I, CHARLES MERTS FRANZHEIM, a citizen of the United States, residing at Wheeling, in the county of Ohio and State of West Virginia, have invented a new and useful Flushing-Tank, of which the following is a specification.

This invention relates to flushing tanks and more particularly to means for flushing closet bowls and other articles requiring flushing in their operation.

The object of the invention is to provide a flushing tank in combination with a closet bowl or other article of the siphonic or other type, in which the flushing is effected by discharging a stream of water under pressure into the flushing tank and through the body of water in said tank.

A further object is to provide a flushing tank in which the water in the tank acts as a cushion to prevent splashing, detonation, and unnecessary mechanical noise incident to the flushing operation.

A further object is to utilize the body of water in the flushing tank to retard violent or hurried delivery of the water to the tank, closet bowl, or other device to be flushed.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and sanitary efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification:—Figure 1 is a transverse sectional view taken on the line 1—1 of Fig. 2. Fig. 2 is a longitudinal sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a similar view taken on the line 3—3 of Fig. 1. Fig. 4 is a top plan view of the tank with the bowl removed.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved flushing tank forming the subject matter of the present invention may be used in connection with water closets or other articles requiring flushing in their op-

eration, and by way of illustration is shown in connection with a closet of the siphonic type in which 5 designates the bowl, and 6 the flushing rim provided with a series of flushing jets, indicated at 7. The bowl 5 and tank 11 may be formed of porcelain, iron, wood or other material; or combination of materials and is provided at the rear end thereof with a casing 8 formed integral with the body of the bowl and defining a water-receiving chamber or reservoir, indicated at 9, the contents of the chamber 9 being discharged into the bowl 5 through the orifices 7 and 10.

Disposed above the casing 8 and preferably formed integral with the body of the bowl 5 is a flushing tank 11 and arranged within said tank 11 is a siphon 15, the down leg 16 of which communicates with the interior of the chamber 9, while the up leg 17 is provided at its lower end with a flared extension 18 communicating with the interior of the tank.

Secured to one wall of the tank 11 at a point above the extension 18 of the siphon is a shelf or deflector 20 which serves, in this case, to direct the water entering the tank into the mouth of the extension 18 of the siphon during the flushing operation.

Disposed on one side of the bowl 5 is a water supply pipe 21 having its lower end provided with a cut off valve 22 and its upper end provided with an automatic flushing valve 23, of any approved construction, there being a short pipe section 24 extending from the flushing valve 23 to the lower or other portion of the tank 11 for forcing a stream of water under pressure through the body of water in the tank 11 into the mouth 18 of the siphon 15.

The water in the tank 11 acts as a cushion to prevent splashing, detonation, mechanical hammering and other unnecessary noise incident to the flushing operation, and also serving to retard violent or hurried delivery of water to the tank or other article to be flushed.

A drain opening or passage 25 is formed in one of the walls of the down leg of the bowl siphon and establishes a source of communication between the interior of the bowl and the chamber 9 so that a portion of water

accumulated in the chamber or reservoir 9 may seep through the drain opening or passage 25 into the bowl for refilling the latter after the flushing operation. A drain opening 26 may also be formed in the down leg 16 of the tank siphon for a similar purpose, it being here stated that either drain opening may be employed but if desired, both may be used to effect the refilling of the bowl.

The cover 14 of the flushing tank is preferably formed with a series of perforations 22, thereby to admit air to the interior of the tank.

In order to effect the flushing of the bowl, the lever 28 of the flushing valve 23 is depressed, which causes a stream of water at city pressure to enter the tank 11. The mouth of the supply pipe 24 being disposed at one end of the tank, the water entering the tank through the pipe 24 will be directed into the mouth 18 of the siphon, and thence into the chamber or reservoir 9 and through the apertures 10 into the flushing rim 6, a portion of the water from the tank 11 being delivered to the jet 30 through the opening or groove 25, as indicated by dotted lines in Fig. 2 of the drawings, for siphoning the water in the bowl. The valve 23 is of the usual slow acting type so as to permit the tank 11 to be refilled before the valve 23 acts to automatically cut off the flow of water into said tank.

While I have shown and described the flushing tank supported by and integral with the bowl, it is obvious that said tank may be spaced from the bowl or supported over-head and connected with the bowl or other article to be flushed through the medium of a suitable pipe, without departing from the spirit of the invention.

Having thus described the invention what is claimed is:—

1. The combination with a bowl or other article to be flushed, of a flushing tank having a curved wall, a siphon disposed within the tank and having its mouth opposite the curved wall of the tank, and means for discharging water under pressure within the tank against said curved wall, thereby to operate the siphon to effect the flushing operation.

2. The combination with a bowl or other article to be flushed, of a flushing tank having a curved wall, a siphon disposed within the tank and having its down leg opening at the curved wall of the tank, and means for discharging water under pressure against the curved wall of said tank, thereby to operate the siphon, the water in the tank serving as a cushion to prevent splashing, detonation or violent action of the water during the flushing operation.

3. The combination with a bowl or other article to be flushed, of a flushing tank hav-

ing a curved wall, a siphon disposed within the tank and having one leg thereof extended in the direction of and spaced from the curved wall of the tank, and means for forcing a stream of water under pressure against said curved wall and into the up leg of the siphon, thereby operating the siphon.

4. The combination with a bowl or other article to be flushed, of a flushing tank, a siphon disposed within the tank and having one leg thereof extended in the direction of the water supply, a shelf extending from one wall of the tank, and means for discharging a stream of water under pressure into the up leg of the siphon to effect the operation of the siphon.

5. The combination with a bowl or other article to be flushed, of a flushing tank, a siphon disposed within the tank and having one leg thereof provided with a drain opening, and means for forcing a stream of water under pressure through the water in said tank to effect the flushing operation.

6. The combination with a bowl or other article to be flushed, of a flushing tank having vertically disposed side walls, a shelf disposed within the tank, a siphon disposed within the tank and having a long leg thereof in communication with the bowl and its opposite leg provided with a lateral extension, the mouth of which is arranged below the shelf, and means for discharging a stream of water under pressure through the water in the tank and into the short leg of the siphon to effect the flushing operation.

7. The combination with a bowl or other article to be flushed, of a flushing tank, a siphon disposed within the tank and having one leg thereof communicating with the bowl and its opposite leg provided with a lateral extension, a shelf secured to the tank in advance of the siphon, and means for discharging a stream of water through the liquid in the tank, thereby to operate the siphon to effect the flushing operation, there being a drain opening formed in one leg of the siphon to permit refilling of the bowl after the flushing operation.

8. The combination with a bowl or other article to be flushed having a siphon and provided with a reservoir, there being a passage formed in one wall of the bowl siphon and forming a source of communication between the reservoir and interior of the bowl, of a flushing tank formed integral with the bowl and reservoir, and a siphon arranged within the tank and having one leg thereof extending within the reservoir and its opposite leg provided with a lateral extension projecting in the direction of the water supply, a shelf secured to one wall of the tank in advance of the extension, a supply pipe communicating with the lower portion of

the tank for directing a stream of water under pressure through the liquid in said tank and into the short leg of the tank siphon to effect the operation of said siphon, there being a drain opening formed in the long leg of the tank siphon to permit refilling of the bowl after the flushing operation.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHARLES MERTS FRANZHEIM.

Witnesses:

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