G. S. VAMPA.

FLUSH VALVE.

APPLICATION FILED NOV. 20, 1913.

1,160,790.

Patented Nov. 16, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

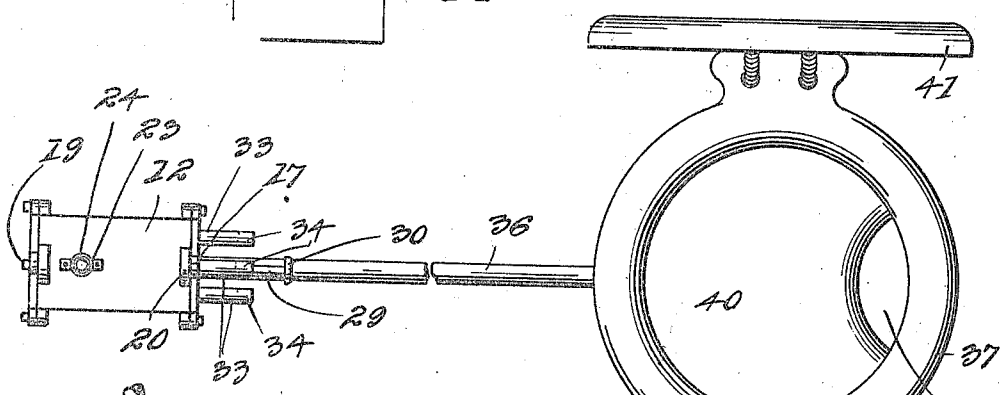
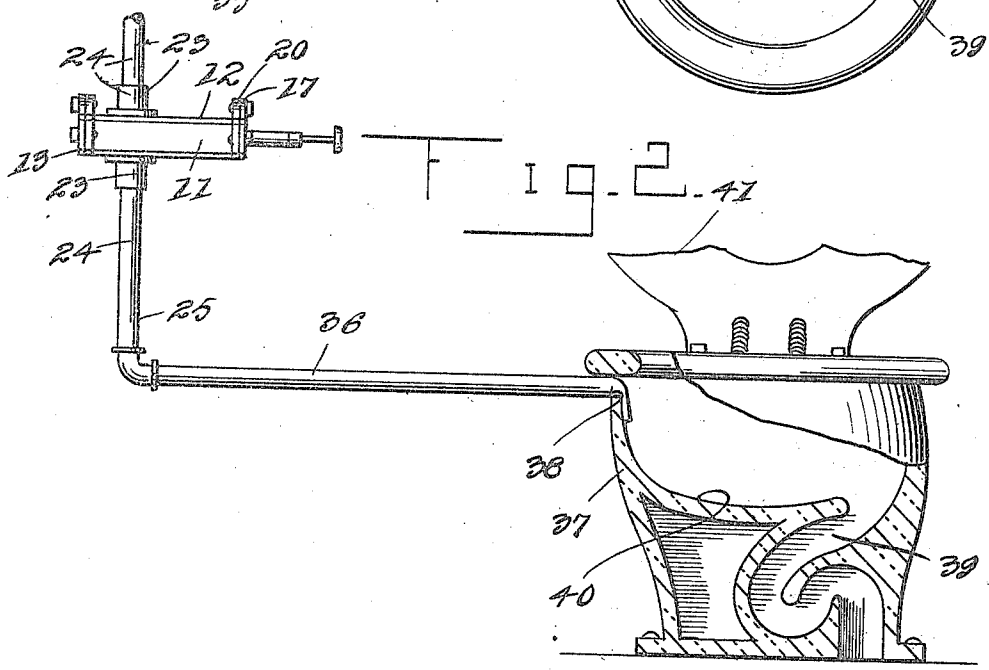


Fig. 2.



Witnesses

C. A. Beall.

A. E. Johnson.

Inventor

G. S. Vampa.

By A. F. Randolph & Co.

Attorney

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2 SHEETS—SHEET 2.

Fig. 3.

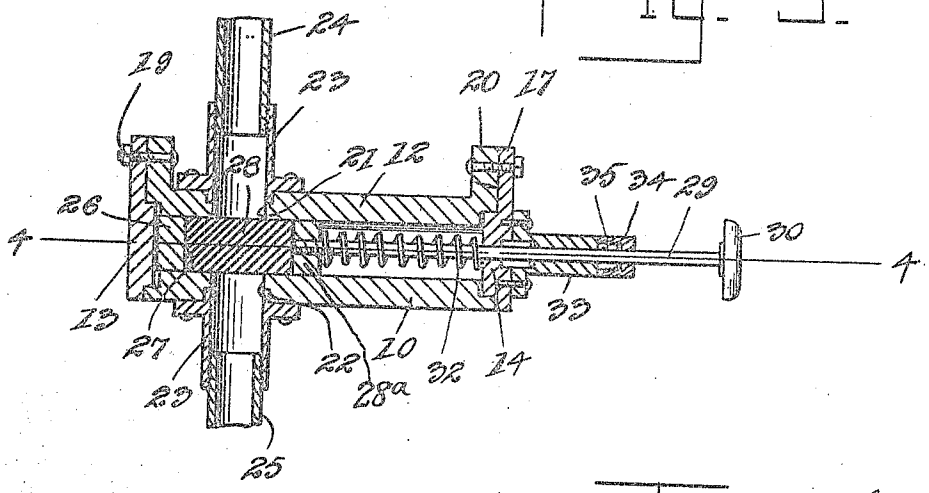


Fig. 4.

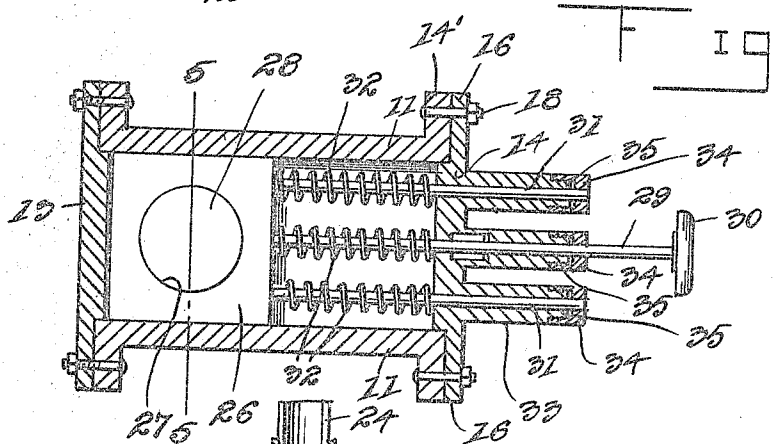
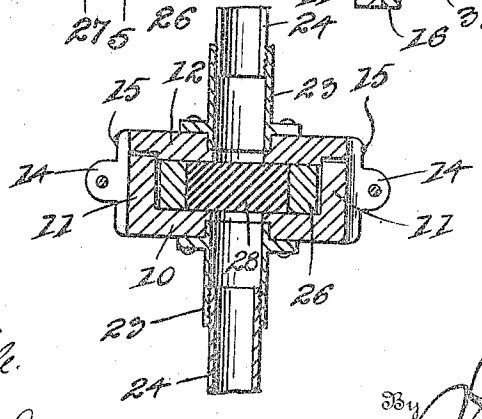


Fig. 5.



Witnesses

C. R. Bealle.

A. E. Johnson.

Inventor

G. S. Vampa.

By N. T. Lundregan Jr.

Attorney

UNITED STATES PATENT OFFICE.

GIOSEPE SARDO VAMPA, OF NEW YORK, N. Y.

FLUSH-VALVE.

1,160,790. Specification of Letters Patent. Patented Nov. 16, 1915.

Application filed November 20, 1913. Serial No. 802,127.

To all whom it may concern:

Be it known that I, GIOSEPE SARDO VAMPA, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Flush-Valves; 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 comprehends improvements in flush valves, and relates more particularly to such valves as are especially adapted for use in connection with a water closet bowl, so that the latter may be flushed without using a flush tank.

One of the objects of the invention is to provide a flush valve which may be connected in the feed water line or pipe and easily operated to permit a flow of water to the bowl or other objects to be flushed.

Another and more specific object of the invention is to provide a valve of this nature including a casing having openings or ports to which sections of the water pipe are connected, a valve proper slidable within the casing to close the passage therethrough, spring means for holding the valve normally in its operative position and a stem or handle to permit of the valve being drawn in such a position as to open the passage therethrough.

The invention also aims to provide a novel form of bowl, having a water entrance on one side and a discharge port on the other side below the level of the entrance opening.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a top plan view of my improved valve, the bowl being also shown, Fig. 2 is a side elevation of the valve with the bowl shown in section, Fig. 3 is a vertical longitudinal sectional view through the valve, Fig. 4 is a section taken on the plane of line 4—4 of Fig. 3, and Fig. 5 is a transverse sectional view taken on the plane of line 5—5 of Fig. 4.

Referring in detail to the drawings by numerals, 10 designates the body of the valve casing, said body being of a rectangular shape and formed with side walls 11. A top wall 12 rests upon the side walls and end walls 13 and 14 are employed for the purpose of closing the extremities of the body. The side walls 11 are provided with transverse flanges or ears 14′ adjacent their terminals and the top wall 12 is secured to these ears or flanges by means of the fasteners 15. The end walls 13 and 14 are formed with longitudinally extending flanges 16 and laterally extending flanges or ears 17, the latter being formed upon the upper edges of the walls. Bolts 18 connect the flanges 14′ and 16 and bolts 19 connect the flanges 17 and 20, the latter being formed upon the top or cover 12 adjacent the ends thereof. It will be noted that the end walls project slightly into the body thereby assisting in forming a very substantial casing. The top wall 12 is formed with an intake opening 21 which is alined with a discharge opening 22 formed in the bottom of the body 10. Nipples 23 are secured to the casing around the intake and discharge opening and are internally threaded for engagement with the sections 24 and 25 of a feed water pipe.

To control the flow of water through the valve casing, I employ a sliding plate valve 26 which is rectangular in plan and which is formed with a central circular opening 27 in which is seated a preferably rubber disk or plug 28, as clearly shown in Figs. 3 and 5. The faces of the plug 28 are larger in area than the diameter of the ports 21 and 22, whereby when a valve is closed, said faces seat against the walls of the casing about both of the ports and effectively close the ports. Guide rods 31 are also secured to the valve 26 and slide through openings formed in the wall 14. To hold the valve normally in its operative position, I employ a plurality of expansive helical springs 32 which encircle the rods 29 and 31 bearing at their outer ends against the wall 14 and at their inner ends against the valve. Guide tubes 33 are secured to the wall 14 to receive the rods 29 and 31 and said tubes are

provided with caps 34 which may be used to retain packing 35 in position so as to prevent any water leaking around said rod.

When the valve is moved so as to open the ports 21 and 22, water will flow through the pipes 25 and 36 to the bowl 37. This bowl is formed with an entrance opening 38 on one side thereof and a tortuous discharge channel 39 on the other side thereof, the mouth of the channel being below the opening 38. An essentially horizontal wall or partition 40 is formed in the bowl and the incoming water is directed downwardly thereagainst and flows into the passage 39. A spring pressed seat 41 is secured to the bowl and remains normally raised.

From the foregoing description taken in connection with the accompanying drawings, it will be apparent that I have provided a very simple, practical and substantial flush valve for water closet bowls which will do away with the necessity of using flush tanks and which may be very easily and conveniently operated.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention as claimed.

Having thus described my invention, I claim:—

A flush valve comprising a casing having inlet and outlet ports, a valve slidably mounted within the casing, guide tubes secured to the casing, guide rods secured to the valve and entering certain of said guide tubes, a stem secured to the valve and passing through another of said guide tubes, springs mounted within the casing and encircling said guide rods and located between the valve and one wall of the casing.

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

GIOSEPE SARDO VAMPA.

Witnesses:
LOUIS L. LEVINE,
WILLIAM J. CAMPBELL.