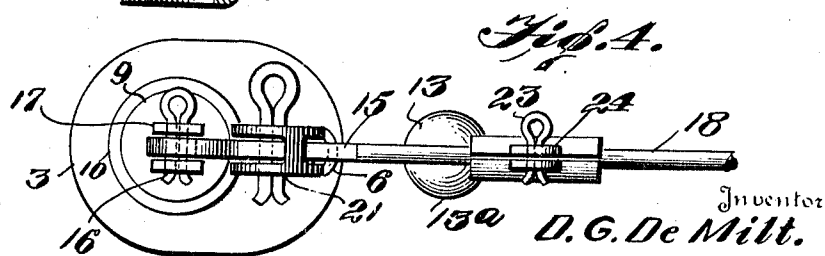
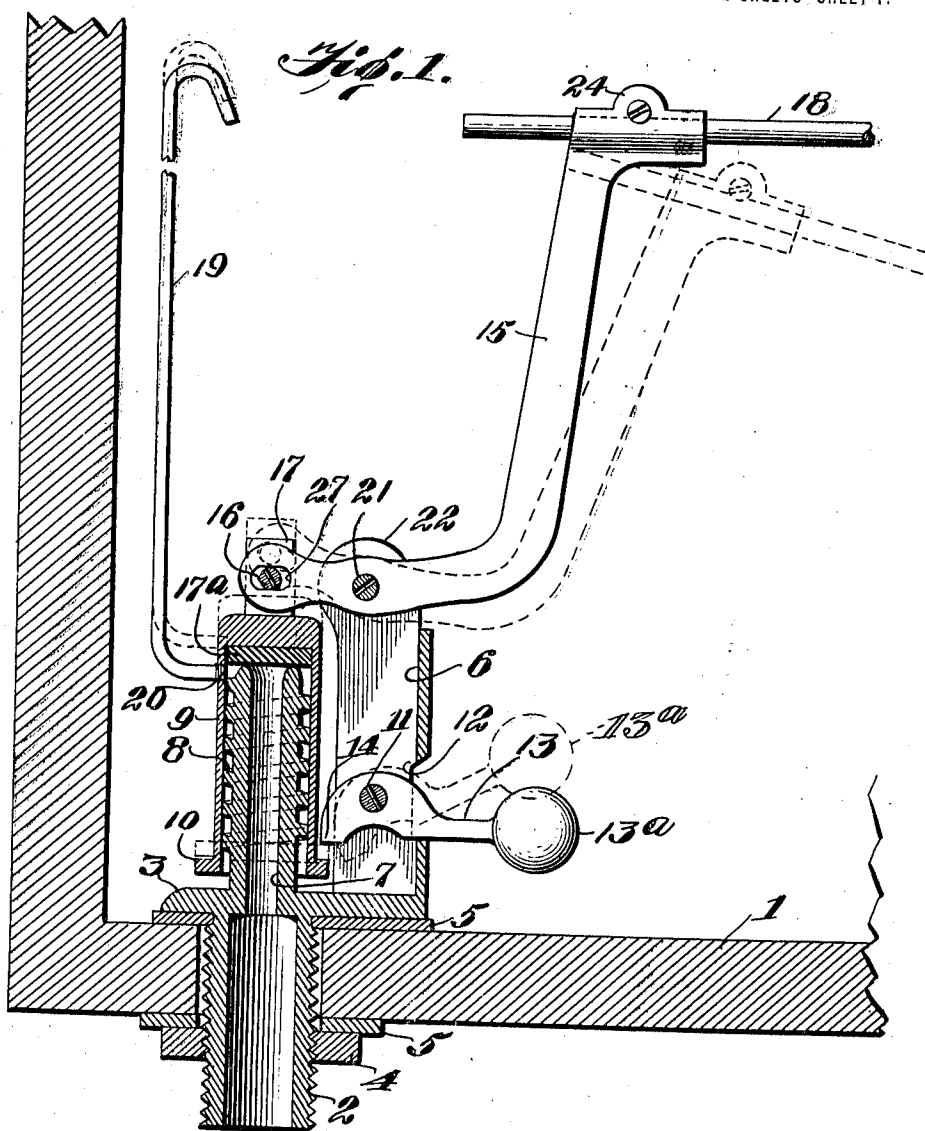


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BALL COCK.
APPLICATION FILED JULY 23, 1918.

Patented Aug. 19, 1919.
2 SHEETS—SHEET 1.



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his Attorney.

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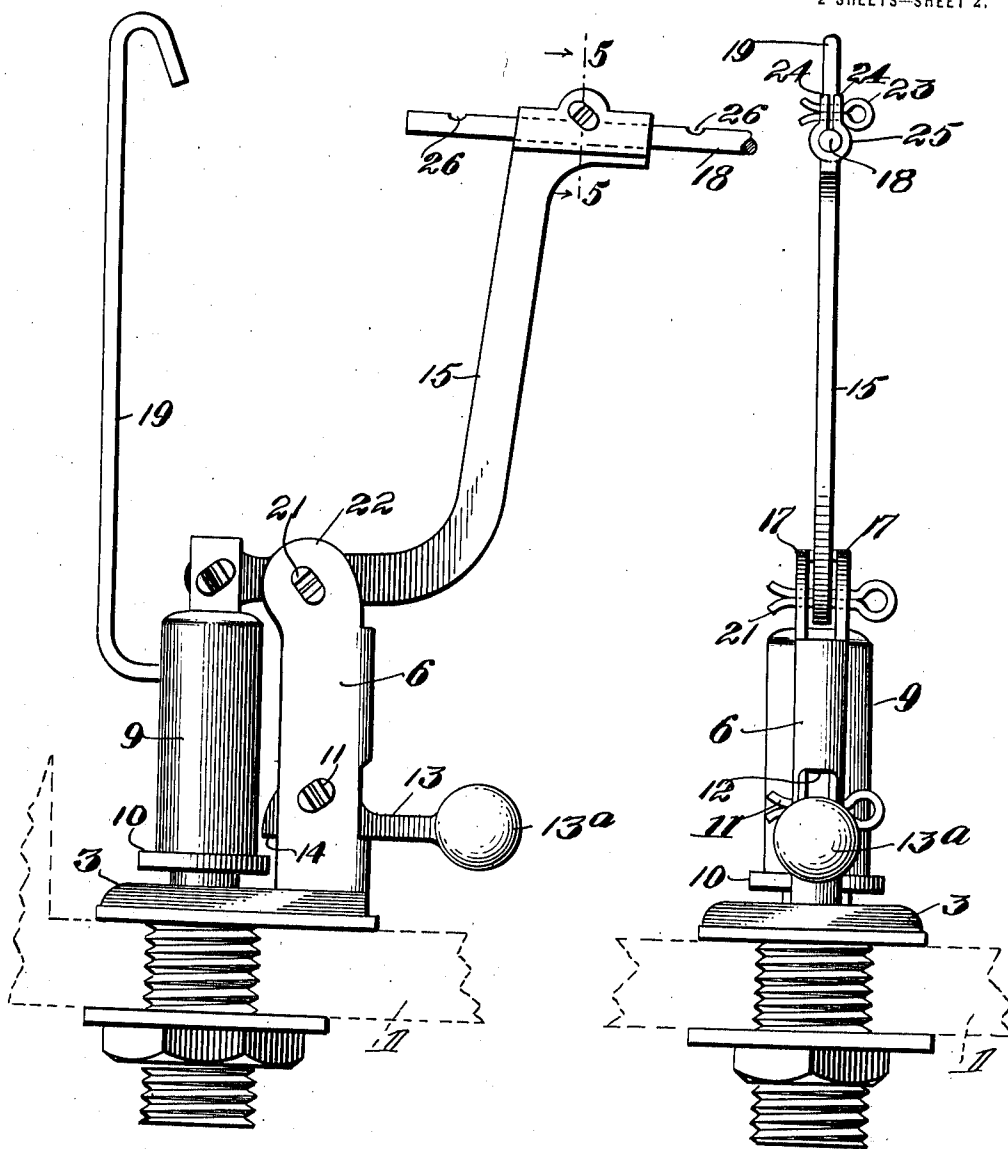


Fig. 2

Fig. 5.

Fig. 3.



Inventor
D. G. DeMilt.

By E. C. Vrooman & Co.,
his Attorneys.

UNITED STATES PATENT OFFICE.

DAVID G. DE MILT, OF TAMPA, FLORIDA.

BALL-COCK.

1,313,797.

Specification of Letters Patent.

Patented Aug. 19, 1919.

Application filed July 23, 1918. Serial No. 246,348.

To all whom it may concern:

Be it known that I, DAVID G. DE MILT, a citizen of the United States, residing at Tampa, in the county of Hillsborough and State of Florida, have invented certain new and useful Improvements in Ball-Cocks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to ball cocks, and more particularly to an efficient valve mechanism for flushing tanks.

The object of my invention is to simplify the construction of a valve device or ball cock, yet produce a highly efficient and positive mechanism which will give a great amount of satisfaction and will last a long time.

With these and other objects in view, the invention consists of certain novel constructions, combinations, and arrangements of parts, as will be herein fully described and claimed.

In the drawings:

Figure 1 is a fragmentary view of a flushing tank, showing my improved ball cock partly in vertical section.

Fig. 2 is a view in side elevation of the mechanism shown in Fig. 1, the flushing tank merely being indicated by dotted lines, while

Fig. 3 is a view, in side elevation, at right-angles to Fig. 2.

Fig. 4 is a top plan view of the mechanism.

Fig. 5 is a sectional view taken on line 5-5, Fig. 2, and looking in the direction of the arrows.

Referring to the drawings by numerals, 1 designates the flushing tank body and 2 is the depending hollow threaded pipe extension that is integral with the base plate 3 of my mechanism.

A retaining nut 4 is threaded upon the depending extension 2, and suitable washers 5 are positioned against the body 1 of the tank and between the base plate 3 and retaining nut 4 for producing a very tight joint.

A vertical frame 6 is integral with the base plate 3. Integral with the base plate 3, over the inlet depending pipe 2, is an auxiliary smaller pipe 7 that is provided on its outer face with a spiral thread 8 for the purpose hereinafter specified.

Mounted upon the auxiliary hollow extension 7 is a plunger casing 9, which plunger

casing 9 is closed at its top and open at its bottom. At the lower end of the plunger casing 9, is formed an annular flange 10, and pivotally mounted at 11, in the aperture 12 of the frame 6, is a weighted catch 13, that has its inner end 14 normally overhanging the annular flange 10, so that if the lever arm 15 should become detached, at 16, from the parallel lugs 17, integral with the closed top of the plunger casing 9, the catch 13 will be engaged, at 14, by the annular flange 10 and prevent any damage being done by too great a flow of water through the auxiliary extension 7 and thence around the passage formed by the spiral or threaded portion 8 on the outer face of auxiliary extension 7. Between the closed top of plunger casing 9 and the upper end of the auxiliary hollow extension 7, is placed the washer 17^a, which produces a tight closure, so that when the ordinary ball float carried by rod 18 has risen in tank 1 to cause the rod 18 to assume a horizontal position, a very tight closure is formed to prevent any leakage or seepage out of pipe 7 after the water has risen to its predetermined level in the tank.

To permit a tight closure of plunger casing 9 upon the hollow extension 7, I arrange a vent pipe 19 in the tank 1 having the lower end of pipe 19, at 20, threaded into an aperture formed in the plunger casing 9 near the top, so as to vent the interior of the plunger casing, as it moves downward upon the extension 7, to its normal seated position, Fig. 1.

The lever arm 15 is pivotally mounted, by means of a cotter pin, upon the parallel extensions 22 formed at the upper end of frame 6. Further, I use cotter pins for all of the connections, at 11, 16, 21 and 23; cotter pin 23 being positioned in registering apertures in the parallel ears 24 that are integral with the clamping body 25, which body 25 surrounds the ball float carrying rod 18, by forming on the float carrying rod 18, a plurality of cotter pin receiving notches 26, which notches register with the apertures in the parallel ears 24; when the cotter pin 23 is placed in these apertures and registering notches, the rod 18 will be retained in a fixed position, after the desired adjustment upon the lever arm 15.

The lower end of the lever arm 15 is provided with an elongated slot 27, in which is positioned the connection or cotter pin 16 for allowing a free and positive movement

of the lever arm 15 with respect to the plunger casing 9.

When it is desired to remove the plunger casing 9 off the extension 7, all that the operator has to do is to swing the weighted catch 13 upwardly to the position shown by dotted lines 13^a, so that the plunger 10 can pass the inner end 14 of the catch 13, as shown in Fig. 1.

From the foregoing description, it will be understood that I have produced a very efficient and positive valve cock that will permit the ready filling of tank 1 as soon as the lever arm 15 and rod 18 (by reason of the ball float moving downward) have moved to the position clearly shown in dotted lines (Fig. 1), and as the tank 1 fills, the rod 18 and the lever arm 15 will be swung to the position shown in Fig. 1, closing the plunger casing 9 down upon the auxiliary extension 7, and as the tank is completely filled, the inflowing water will be checked, and should there be any air between the auxiliary extension 7 and the plunger casing 9, it will escape through the vent pipe 19, allowing a very tight closure of the valve casing upon the inlet supply pipe 7.

What I claim is:

1. In a mechanism of the class described, the combination with a base plate, of a frame integral with said base plate, an inlet pipe provided with a spiral passage-way formed upon its outer face integral with said base plate, a plunger casing slidably mounted upon the spiral face of said inlet pipe and being adapted to close said inlet pipe, a plunger arm connected to said plunger casing and pivotally mounted upon said frame, and means attached to said lever arm and controlling the sliding movement of said plunger casing upon said inlet pipe.

2. In a mechanism of the class described, the combination with a base plate, of an inlet extension integral with said base plate, said inlet extension being provided with a spiral thread-like passage-way formed upon its outer face, a plunger casing closed at its top and open at its bottom mounted upon the spiral face of said inlet extension, means for preventing accidental displacement of said plunger casing off of said inlet extension, and means for operating the plunger to control the flow of liquid through the plunger casing and spiral face of said inlet extension.

3. In a mechanism of the class described, the combination with a base plate having an opening therethrough and provided with an inlet extension in communication with said

opening having a spiral thread formed upon its outer face, a frame integral with said plate contiguous to said inlet extension, a plunger casing closed at its top and open at its bottom slidably mounted upon the spiral thread of said inlet extension, the closed top of the plunger serving as a closure for the inlet extension, said plunger casing provided at its lower end with an annular flange, a weighted catch pivotally mounted upon said frame and having its inner end overhanging the flange of said plunger casing for limiting the upward movement of said casing upon said inlet extension, said plunger casing provided with a pair of lugs at its upper end, a lever arm pivotally mounted on said frame and pivotally connected to the plunger casing between said lugs, and a float ball carrying rod attached to the outer end of said lever arm.

4. In a mechanism of the class described, the combination with a base having an opening therethrough and a frame, of valve means carried by said base for closing said opening, a weighted catch pivotally mounted upon said frame and cooperating with said valve means for preventing accidental displacement thereof, and lever means pivotally mounted upon said frame and cooperating with said valve means for normally controlling the movement thereof.

5. In a mechanism of the class described, the combination with a base plate having an opening therethrough, of an inlet hollow extension projecting vertically from said base plate and in communication with said opening, a vertical frame integral with said base plate to one side of said hollow extension, a slidable plunger casing mounted upon and adapted to close said hollow extension, said plunger casing provided with an extension at its lower end and with an extension at its upper end, a catch movably mounted on said frame and extending therethrough and being adapted to engage the extension on the lower end of said plunger casing for preventing accidental displacement of said casing, and lever means movably mounted upon the upper end of said frame and connected to the extension at the upper end of said plunger casing for normally controlling the movement of said casing upon the hollow extension on the base plate.

In testimony whereof I hereunto affix my signature.

DAVID G. DE MILT.

Signed in the presence of—

E. B. DRUMRIGHT,
KATHRYNE CATE.