Oct. 19, 1926. 1,603,749

J. A. DELORME

WATER CLOSET FLUSHING VALVE OPERATING MECHANISM

Filed April 3, 1926 2 Sheets-Sheet 1

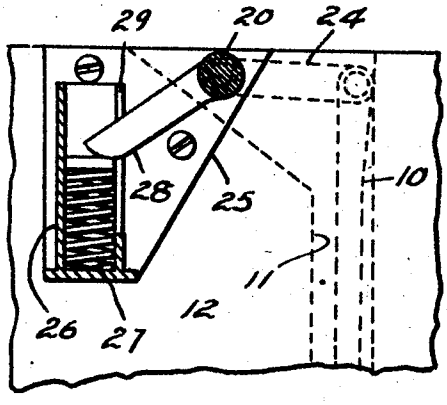


FIG. 4

FIG. 1

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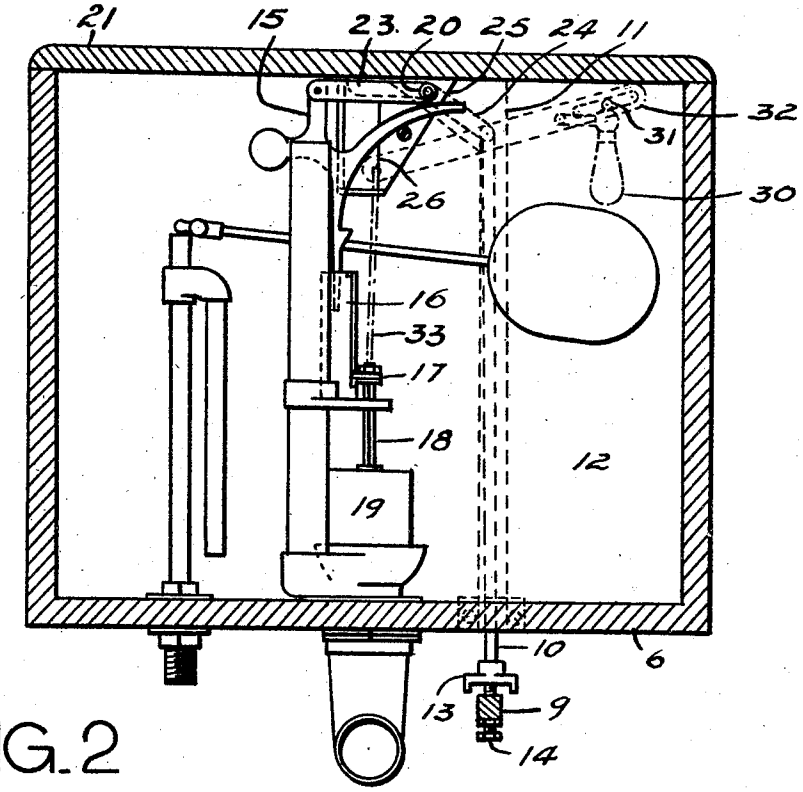


FIG. 2

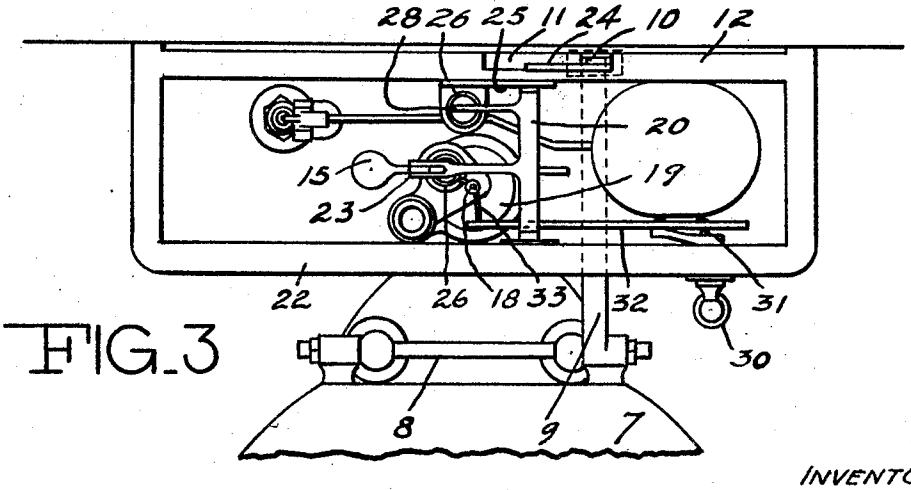


FIG. 3

INVENTOR,

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Patented Oct. 19, 1926. 1,603,749

UNITED STATES PATENT OFFICE.

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WATER-CLOSET FLUSHING-VALVE-OPERATING MECHANISM.

Application filed April 3, 1926. Serial No. 99,469.

This invention relates to improvements in water closet flushing valve operating mechanisms, in which are combined manually and automatically operated controls for said mechanisms.

The principal object of this invention is to simplify the automatic control thereof, by eliminating all counterweight generally necessary and requiring adjustment for its proper operation.

Another object is to provide the combination of a manual control, for the purpose of actuating the flushing valve, when the closet seat has not been used to operate the automatic control.

A further object is to present a neat appearance, in eliminating from view the necessary mechanism to operate automatic controls of this character.

These objects and other advantages will be disclosed in the following description and on the accompanying drawings, in which:

Figure 1 is a side view of a general water closet equipment, the water box thereof being sectioned to clearly illustrate the invention.

Figure 2 is a front view of the water box thereof, the front wall of which being cut away.

Figure 3 is a top view of the same, the water box cover being taken off, and

Figure 4 is a segmentary detail of the automatic control that operates the flushing valve mechanism.

The flushing valve operating mechanism, herein shown, has been disclosed in my application for "water closet flushing device", filed November 12th, 1925, and bearing Serial No. 69,034. Therefore, this invention will be described in conjunction therewith.

A closet bowl 5 and a water box 6, properly connected together, constitute a general water closet equipment. A seat 7 is hinged to a fitting 8 fixed on top of the bowl 5 and an arm 9, integral with the seat 7, projects rearwardly under the the box 6. Directly above the projecting end of the arm 9 is a vertical rod 10, preferably mounted within a groove 11 made on the outer face of the rear wall 12, and a stop 13 is fixed to the lower end of this rod 10, for the purpose of abutment with a set screw 14 mounted on the end of the arm 9.

The flushing valve operating mechanism consists of an oscillating lever 15 engaging a vertical sliding member 16 carrying a projecting hook 17 encircling the upwardly directed stem 18 of the valve 19. This mechanism is automatically operated by means of a cross-piece 20 mounted near the top cover 21, within the box 6, between the front wall 22 and the rear wall 12, this cross-piece 20 having an extending lever 23, horizontally disposed at right angle therewith, to the end of which is suspended the oscillating lever 15. Integral with the cross-piece 20, on its end extending into the groove 11, is a lever 24 connected to the upper end of the rod 10.

Fixed to the inner face of wall 12, through which is passed the end of cross-piece 20, is a bracket 25 supporting a vertical tubular casing 26 enclosing a compressible spring 27, on top of which bears the end of a finger 28 integral to the cross-piece 20 and parallel with the lever 23, and which registers with a slot 29 made into the casing 26 for its movement of compressing the spring 27.

The manually operated control, for the action of the valve 19, consists of a handle 30 rotatively connected through the front wall 22 to a small crank 31 disposed within the box 6. A lever 32 is pivoted to the interior of the wall 22 so that one end connectively registers with the crank 31 and the other end suspends a wire link 33 suitably bent and encircling the valve stem 18 adjacently under the hook 17.

The amount of movement required to actuate the automatic control of the flushing mechanism is represented in the space 34, between the bowl 5 and the seat 7, maintained by the expansion of the spring 27 raising the finger 28, which rotates the cross-piece 20 and elevates the flushing mechanism actuating the valve 19. The space 34 is predeterminedly regulated by the screw 14 set in contact with the stop 13. When the seat 7 is lowered, the rod 10 is raised and causes the lever 24 to rotate the cross-piece 20 that lowers the oscillating lever 15 preparedly to raise the member 16 carrying the hook 17 that will lift the valve 19, independently of the manual control actuating the link 33.

Supposing that the seat 7 is not used, as when it is raised out of the way, then the flushing operation may be performed by means of the handle 30 being turned, causing the crank 31 to move the lever 32 that

raises the link 33, lifting the valve 19, independently of the mechanism actuating the oscillating lever 15.

Many changes may be made in the construction here shown, without departing from the spirit and scope thereof. I am aware that there are other manual and automatic controls for operating flushing valves, in water closets, and I do not claim this invention broadly; but—

What I do claim as my invention is:

In a water closet flushing device, in combination with the mechanism for automatically operating the valve thereof, means for causing the said mechanism to lift the said valve and to raise the relative water closet seat preparedly to the action of said mechanism, consisting of a finger controlled by a spring, said finger being integral with a cross-piece member of the said mechanism which is predeterminedly adjusted to cause the said seat to move in relation thereof.

Signed at Montreal, Province of Quebec, Canada, this 31st day of March, 1926.

JOSEPH ARSENE DELORME.