

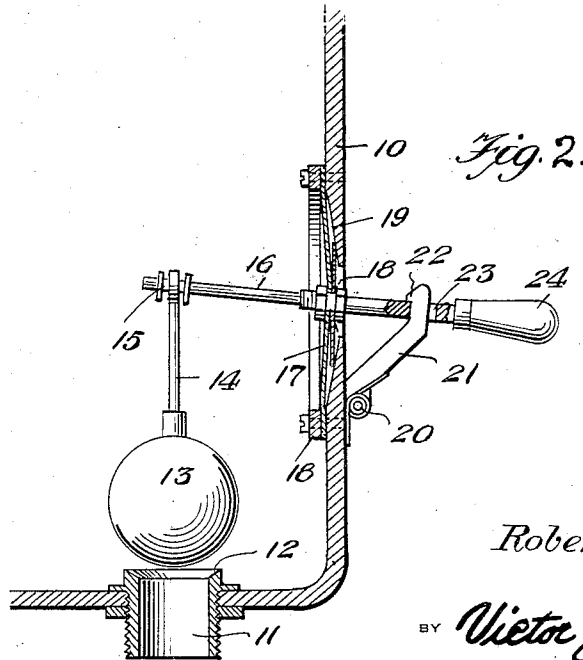
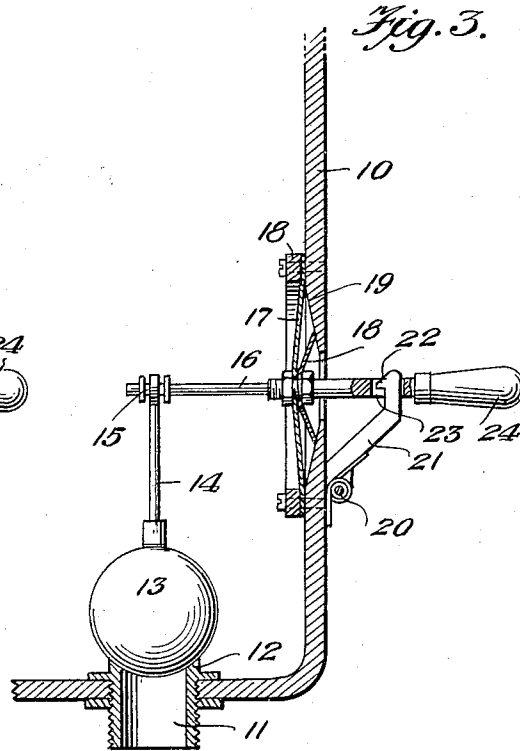
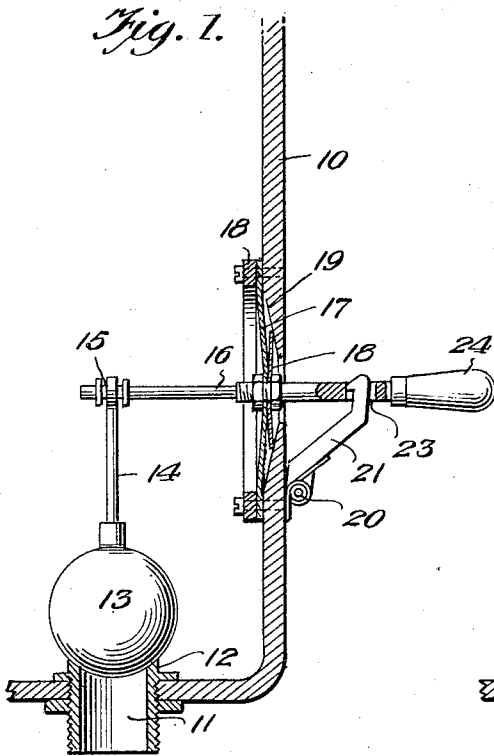
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VALVE ACTUATING MECHANISM

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VALVE-ACTUATING MECHANISM

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This invention relates to valve operating mechanisms especially designed for controlling the discharge of the contents of a container, an object being to provide means for use in connection with the discharge valve of a tank (such as a flushing tank) which may be manually operated to open a valve for the discharge of the contents of said tank and automatically closed.

Another object of the invention is the provision of means for holding the valve in open position until the contents of the tank reach a predetermined level, whereupon the holding means will be automatically released and the valve returned to its normal position.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawing and pointed out in the appended claims.

In the drawing:—

Figure 1 is a fragmentary sectional view showing a portion of a tank or container with the invention applied, the valve being shown in closed position and the parts arranged in the position occupied when the tank is full.

Figure 2 is a similar view showing the valve open for the discharge of the contents of the tank.

Figure 3 is a view showing the valve in closed position with the parts arranged in the position assumed prior to the filling of the tank.

Referring to the drawing in detail wherein like characters of reference denote corresponding parts, the reference character 10 indicates a portion of a container or tank having a discharge port 11 at the inner end of which is a seat 12. This seat is engaged by a valve member 13 which is carried at one end of a stem 14 and the latter has a loose pivotal connection 15 with the inner end of an operating lever 16.

The lever 16 extends through an opening provided in one wall of the tank and is mounted for pivotal movement within this opening by means of a diaphragm 17. The edges of this diaphragm are suitably secured as at 17^a upon the inside of the container and in ad-

dition to providing a pivotal mounting for the lever 16, the diaphragm acts to close the opening. If desired, the resiliency of the diaphragm may be increased by a spring 18 which bears against a beveled portion 19 surrounding the opening.

Pivotaly mounted as shown at 20 upon the outside of the container 10 is a spring influenced dog 21 whose bill 22 is adapted to extend through an opening 23 provided in the outer end of the operating lever 16. A handle 24 is carried at the outer end of this lever.

Normally, the parts are arranged as shown in Figure 1 of the drawing, the valve 13 being seated and the diaphragm 17 flexed outward by pressure of the water within the tank or container. When it is desired to open the valve to permit of the discharge of the contents of the tank, the handle 24 of the lever 16 is pulled downward so that the bill 22 of the dog will engage over the edge of the opening 23 as shown in Figure 2 of the drawing. The parts will remain in this position until the water within the tank falls below the center of the diaphragm, whereupon, pressure will be relieved and the diaphragm will flex inwardly under the action of the spring 18 assisted by the resiliency of the diaphragm. The valve will then be resealed and the parts will assume the position shown in Figure 3 of the drawing, the diaphragm being flexed inward and the operating lever released from the dog.

As soon as water within the tank rises to a height governed by the resistance of the diaphragm and spring 18, the diaphragm will be flexed outward and the parts will again be positioned as shown in Figure 1. In the drawing, the movement and proportion of the parts have been exaggerated for the sake of clearness.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is:—

1. In combination, a container having an

opening therein, a valve to control the opening, an operating lever connected with the valve, a resilient pivotal mounting for the lever, means to hold the lever in position to close the valve, and means included in the lever mounting means and controlled by the contents of the container to actuate the pivotal mounting and release the lever holding means.

2. In combination, a container having openings therein, a valve to control one opening, an operating lever connected with the valve and extending through the other opening, a diaphragm connected to the lever to close the lever opening and provide a pivotal mounting for said lever, a latch arranged to engage the lever when the latter is manually moved to open the valve and to release said lever through pressure of the contents of the container upon the diaphragm.

3. In combination, a container having an opening therein, a valve to control the opening, an operating lever connected with the valve to manually open the latter, means engaged by the lever to hold the latter in open position, and means controlled by pressure of the contents of the container to release the lever, reseal the valve and provide a movable mounting for said lever.

In testimony whereof I affix my signature.
ROBERT GRANT.

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