

A. J. ASHFORD.
TANK SIPHON.
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1,013,719.

Patented Jan. 2, 1912.

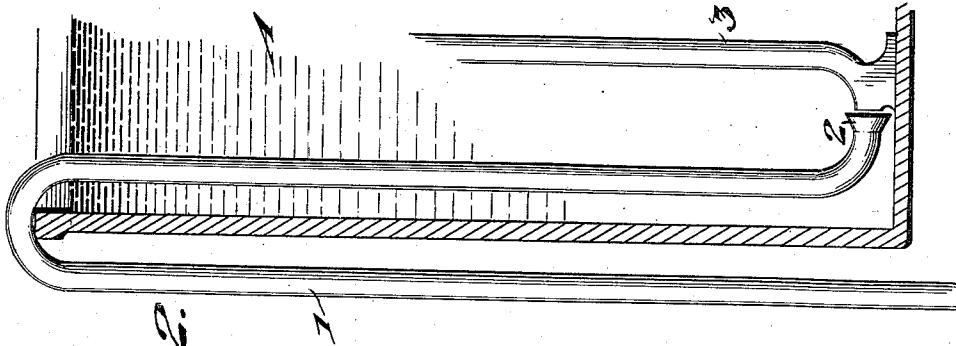


Fig. 2.

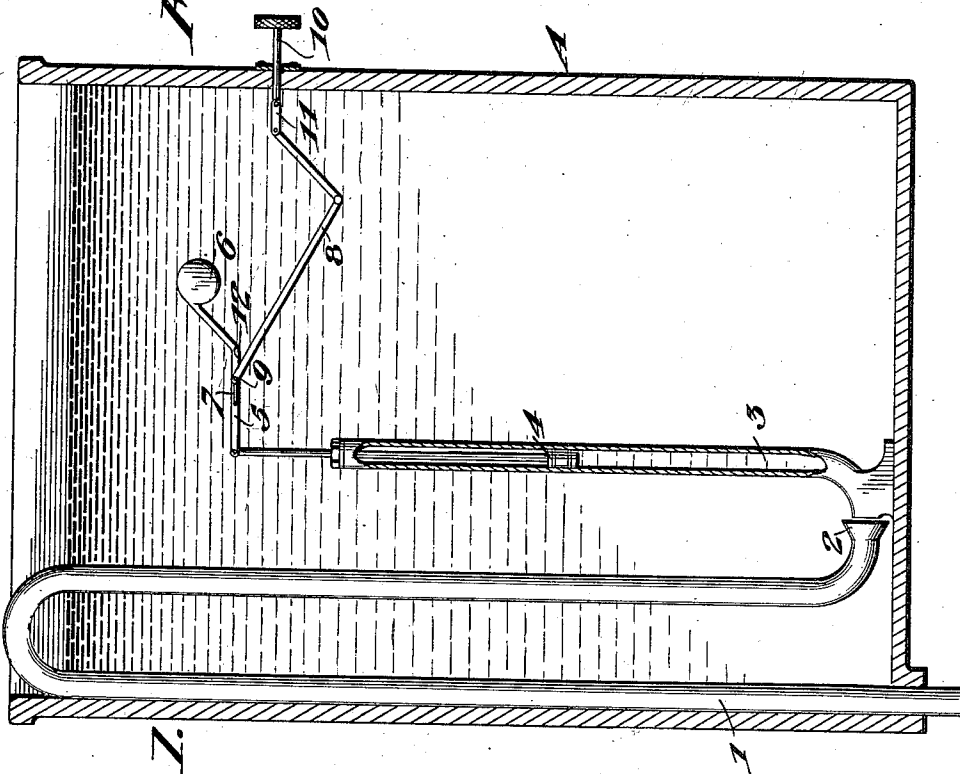


Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

ALFRED JOHNSON ASHFORD, OF KINSTON, NORTH CAROLINA.

TANK-SIPHON.

1,013,719.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALFRED J. ASHFORD, citizen of the United States, residing at Kinston, in the county of Lenoir and State of North Carolina, have invented certain new and useful Improvements in Tank-Siphons, of which the following is a specification.

My invention relates to an improvement in tank siphons.

The object is to provide means for forcing the water in a stand pipe into the flush pipe for causing the water in the tank to be sucked or drawn into the flush pipe, thereby producing a siphonic action.

The invention consists of certain novel features of construction and combination of parts which will be hereinafter described and pointed out in the claim.

In the accompanying drawing:—Figure 1 is a vertical sectional view through the tank showing my invention. Fig. 2 is a sectional view showing a modified arrangement of connecting the flush pipe with the tank.

A represents the flush tank and 1 is the flush pipe which extends above the water line and then is bent downwardly so that the end of the pipe is near the bottom of the tank, the end of the pipe being flared as at 2. The vertical stand pipe 3 is mounted in the tank and the lower end of the stand pipe is adjacent to the end of the flush pipe 1. A plunger 4 is mounted in the stand pipe 3 and is adapted to be moved therein for forcing the water, which will rise in the pipe as the tank is filled, into the flared end of the flush pipe 1. The forcing of the water from the stand pipe into the flush pipe will cause the water in the tank to be drawn into the flush pipe 1 and the pressure of the water injected into the flush pipe from the stand pipe will be sufficient to carry the water over the bend in the flush pipe and down the main portion of the flush pipe. The forcing of the water from the stand pipe into the flush pipe will draw the water from the tank into the flush pipe whereby a siphonic action is produced for drawing the water from the tank. A lever 5 is connected to the plunger 4 and is provided with a weight 6 for drawing the plun-

ger upward in the pipe 3, after each operation. The lever 5 is provided with an elongated slot 7. A bell crank lever 8 is pivotally connected to the tank A and one end of the bell crank has a loose connection with the lever 5 by pin 9 which is received in the elongated slot 7, the other terminal of the bell crank 8 is connected to the push rod 10 by means of a link 11.

Assuming that the tank is full with water and that it is desired to produce the flushing action the push rod 10 is forced inward causing the bell crank to be operated; as the terminal of the bell crank which is connected to lever 5 is moving downward it will engage an abutment or projection 12 causing the lever to move and force the plunger 4 downward into the stand pipe 3 thereby causing the water in the stand pipe to be discharged into the flush pipe 1. The water from the stand pipe discharging into the flush pipe will produce a suction causing the water in the tank to be drawn into the flush pipe thereby causing the tank to be emptied. When the tank is filled by any suitable means (not shown) water will enter the stand pipe 3 so that the plunger in the stand pipe when operated will act upon the water and force it into the flush pipe. After the operation of the plunger in discharging the water from the stand pipe the push rod 10 is drawn outward so that the bell crank 8 will be in position for the next operation. The weight 6 on the lever 5 will cause the lever to be moved on the pin 9 after each operation for raising the plunger 4 in the stand pipe 3.

In the modified form shown in Fig. 2 I have shown the flush pipe extending over the top of the tank instead of extending through the bottom of the tank as in Fig. 1. It will therefore be seen that by this arrangement there is practically no possibility of the tank leaking from formation of joints in connecting the flush pipe with the tank.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

The combination with the stem of a plunger, of a slotted lever provided with an abutment or projection, means connected

with said lever for normally raising the
plunger, a bell-crank lever having sliding
connection with the first-mentioned lever
through the medium of its slot, and means
5 for rocking the bell-crank lever whereby it
is caused to engage the projection on the
other lever to cause the plunger to move in
the opposite direction.

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

ALFRED JOHNSON ASHFORD.

Witnesses:

W. B. HANEY,
T. W. HEATH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
