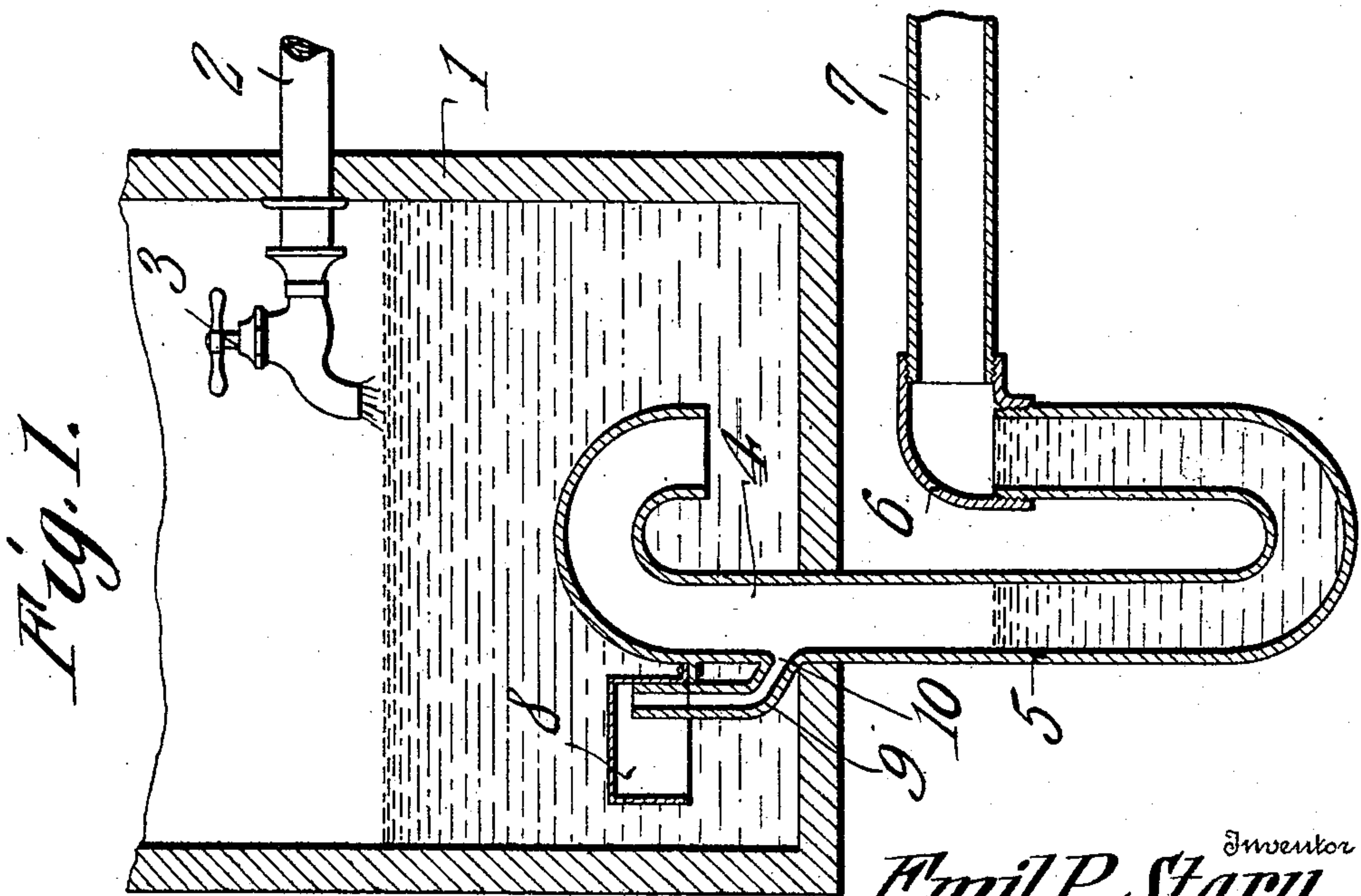
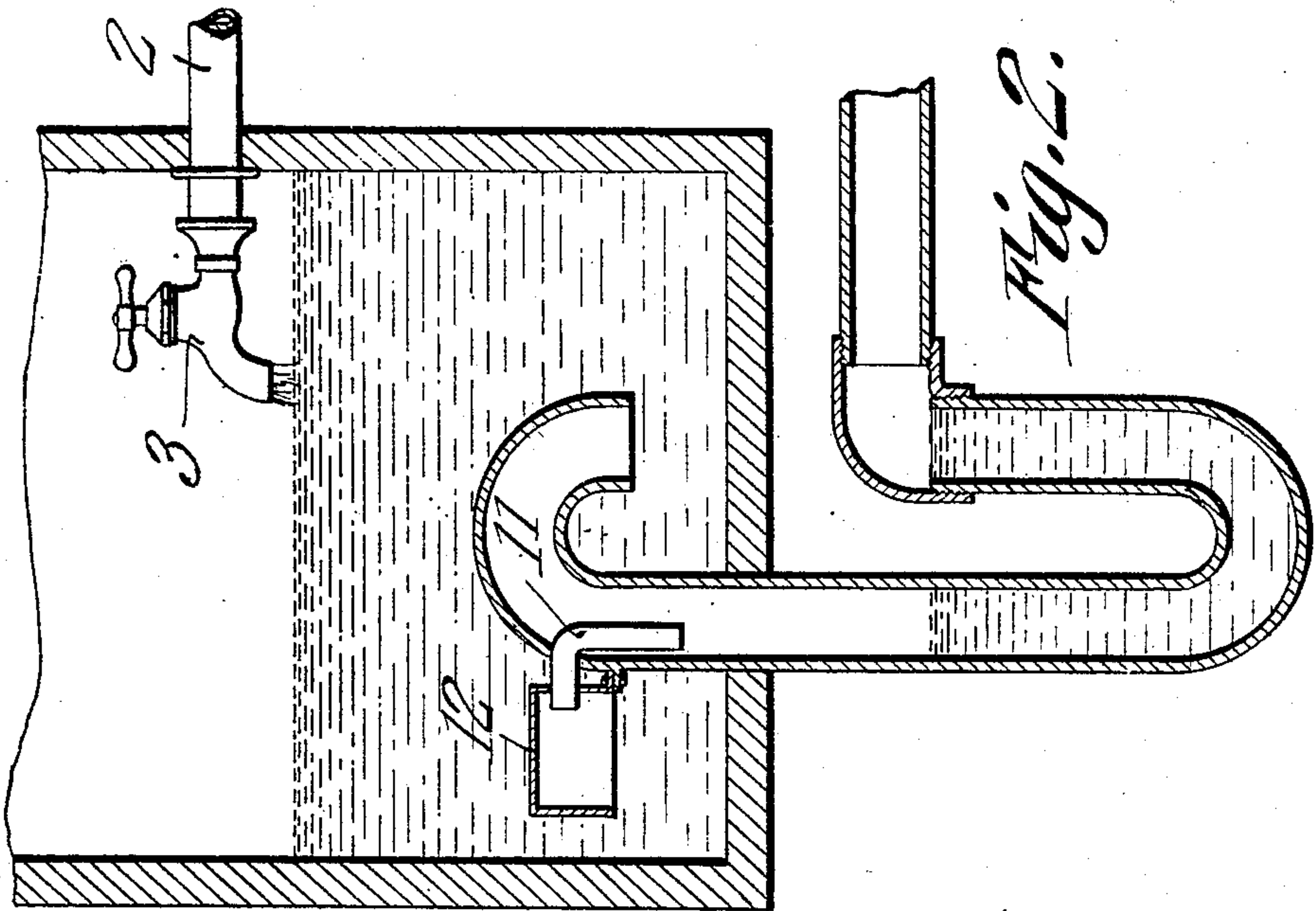


E. P. STARY.  
 AUTOMATIC FLUSHING TANK.  
 APPLICATION FILED JULY 30, 1909.

969,305.

Patented Sept. 6, 1910.



Witnesses  
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# UNITED STATES PATENT OFFICE.

EMIL P. STARY, OF CEDAR RAPIDS, IOWA.

AUTOMATIC FLUSHING-TANK.

969,305.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed July 30, 1909. Serial No. 510,364.

*To all whom it may concern:*

Be it known that I, EMIL P. STARY, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented a new and useful Automatic Flushing-Tank, of which the following is a specification.

This invention relates to flushing tanks and its object is to provide simple and efficient means whereby the liquid contents of a tank or reservoir can be automatically and intermittently discharged, the frequency of the discharge being determined by the size of the tank or reservoir and by the size of the feed pipe opening into the tank or reservoir.

Another object is to provide a device of this character which can be readily regulated and which is devoid of any parts which are movable and which might therefore get out of order.

The present device permits the use of feed pipes of different sizes ranging up to one almost equal in capacity to that of the discharge pipe, thus enabling the apparatus to be so regulated as to cause the automatic discharge of the contents of the tank or reservoir at any predetermined interval.

The invention consists in certain novel details of construction and the combinations of parts hereinafter more fully described and pointed out in the claim.

In the accompanying drawings the preferred forms of the invention have been shown.

In said drawings Figure 1 is a section through a tank embodying the present improvement. Fig. 2 is a similar view showing a modified construction.

Referring to the figures by characters of reference, 1 designates a tank or reservoir of any desired proportions, the same being provided with an inlet 2 which may, if desired, be provided with a controlling valve 3. A discharge siphon 4 is arranged within the bottom of the tank, the inlet of the tank being disposed any preferred distance above the bottom of said tank. The lower portion of the siphon merges into a trap 5 which is connected by means of an elbow 6 with a drain pipe or sewer 7. A cap or hood 8 having an air chamber therein is suitably secured upon the siphon and within the tank, the lower or open end of this hood being disposed in a plane slightly above and parallel with the inlet end of the siphon 4. A

vent pipe 9 extends from the siphon 4 and up into the hood or cap 8, the outer end of this vent pipe being preferably disposed in a plane extending through the lower wall of the bend of the siphon.

In using the apparatus the liquid is discharged into the tank or reservoir in any desired volume and when it reaches a predetermined depth, the pressure of the liquid becomes such as to force air out of the hood 8, thus permitting the water to flow upwardly into the inlet end of the siphon and then downwardly into the trap and to the pipe or sewer 7. After the level of the water passes below the inlet end of the hood 8, air enters the hood and passes through the pipe 9 and into the siphon 4, at a point slightly below the level of the inlet end of the siphon, this point being indicated at 10. The action of the siphon 4 continues however until the level of the water has passed below the inlet of said siphon, thus insuring the complete recharge of the hood 8 with air and the refilling of the trap 5 after the siphonage with the sewer or drain pipe 7 has been broken. After all of the contents of the tank or reservoir has been discharged in this manner, the level of the water or other fluid therein again rises and causes the air to be trapped within the siphon and hood, after which the automatic operation hereinbefore described is repeated.

If preferred, and as shown in Fig. 2, a vent pipe 11 may be mounted within the siphon and extended into one side of the hood 12. The action of this device will be the same as that of the vent shown in Fig. 1.

Although the trap has been shown as formed integral with the siphon, it is to be understood that they may be made of separate parts secured together in any preferred manner.

It is of course to be understood that various changes may be made in the construction and arrangement of the parts without departing from the spirit or sacrificing the advantages of the invention.

What is claimed is:

Apparatus of the class described including a reservoir, an outlet pipe extending through the bottom of the reservoir and having a goose neck at its upper end and constituting a siphon, the lower end of said siphon forming a trap, a hood supported by the pipe at one side thereof and within the reservoir, said hood being open at the bot-

tom and the bottom of the hood being disposed slightly above the plane of the open upper end of the pipe, and a vent pipe extending from the upper portion of the hood  
5 and longitudinally within the said pipe to a point below the level of the inlet end of the siphon.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

EMIL P. STARY.

Witnesses:

FRANK G. STARY,  
A. T. COOPER.