

(No Model.)

2 Sheets—Sheet 1.

C. H. GILLETT.
AUTOMATIC FLUSH TANK SIPHON.

No. 552,119.

Patented Dec. 31, 1895.

Fig. 1.

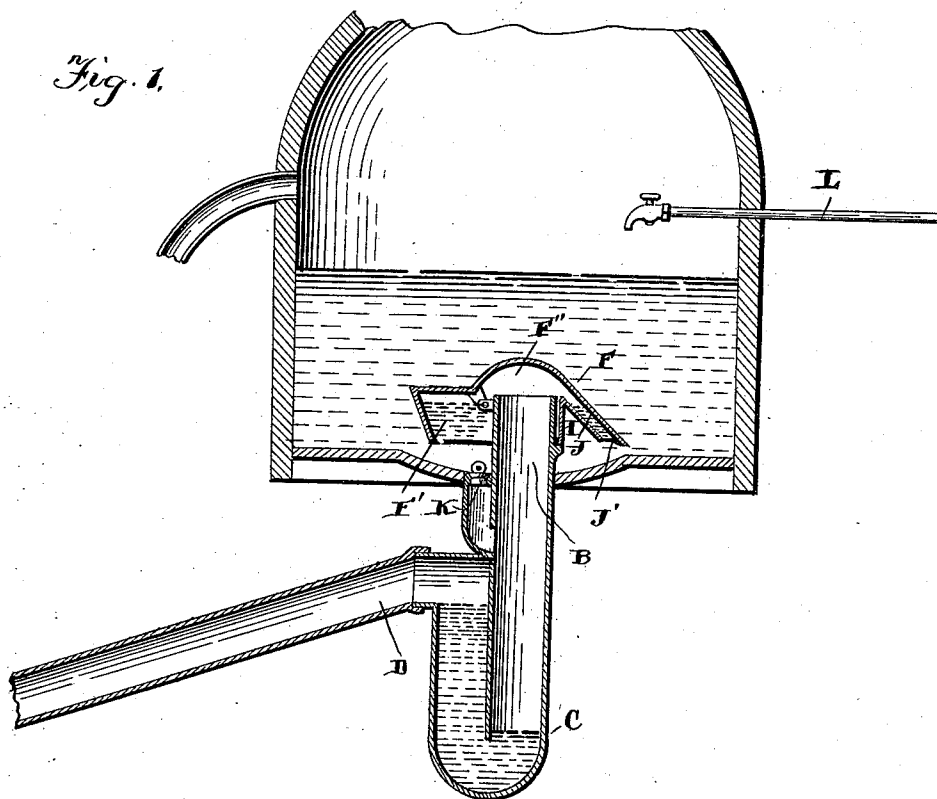
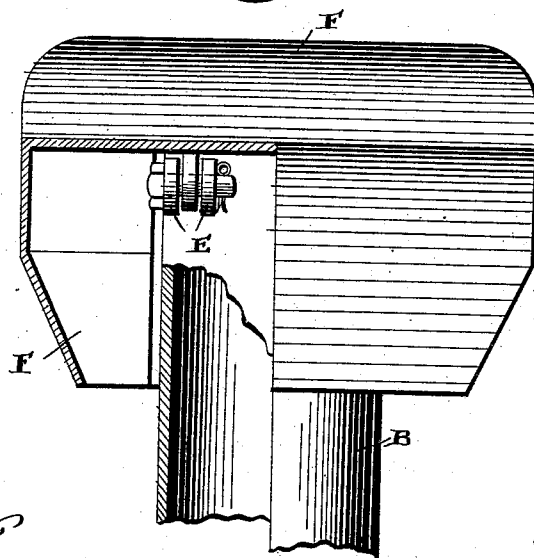


Fig. 3.



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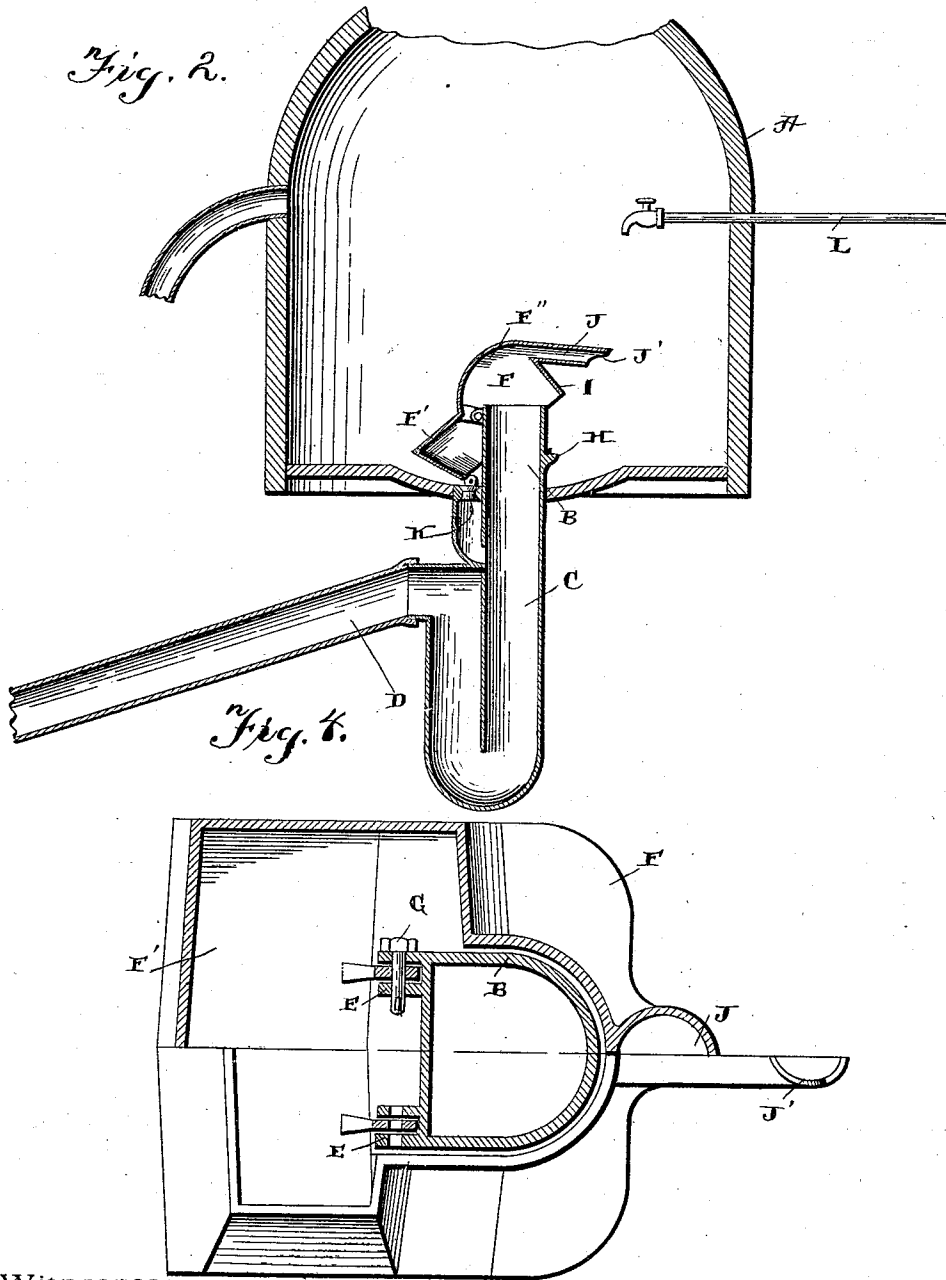
(No Model.)

2 Sheets—Sheet 2.

C. H. GILLETT.
AUTOMATIC FLUSH TANK SIPHON.

No. 552,119.

Patented Dec. 31, 1895.



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UNITED STATES PATENT OFFICE.

CHARLES H. GILLET, OF APPLETON, WISCONSIN.

AUTOMATIC FLUSH-TANK SIPHON.

SPECIFICATION forming part of Letters Patent No. 552,119, dated December 31, 1895.

Application filed March 13, 1895. Serial No. 541,620. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. GILLET, of Appleton, in the county of Outagamie and State of Wisconsin, have invented certain new and useful Improvements in Automatic Flush-Tank Siphons; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improved automatic flush-tank siphon; and it consists primarily in a siphon to be used in connection with a reservoir having an inflow of water, sewage or other liquids to be discharged intermittently.

My invention relates to that class of flush-tank siphons which are brought into action by an upward release or removal of the air confined in the siphon which separates the fluid in the reservoir from that in the trap of the discharge-pipe.

The objects of my invention are to simplify an operative siphon by dispensing entirely with such parts as small pipes, small siphons, small traps, floats, &c., heretofore employed and to make a cheap and simple flushing-siphon with the most prompt and powerful action and increased efficiency.

Referring to the accompanying drawings, Figure 1 is a vertical cross-sectional view of the tank and siphon, the latter being inactive. Fig. 2 is a similar view showing the position of the parts when the siphon is active. Fig. 3 is an end elevation of the portion of the apparatus within the reservoir. Fig. 4 is a vertical sectional view on line 4 4 of Fig. 1.

A designates the reservoir having the trapped discharge-pipe B extended through its bottom, said discharge-pipe being provided with a deep seal C communicating with outlet D, said seal having a capacity greater than an equal depth of the discharge-pipe B. Upon one side of the upper end of pipe B are the ears E, to which a tilting air-releasing intake-chamber F is hinged by pivot-bolts G. This chamber is mounted in an inverted position, and normally is nearly balanced on its pivots, and the portion extending across the discharge B being slightly heavier than the op-

posite end is properly counterbalanced. Thus the chamber normally closes the pipe B, as indicated in Fig. 1. Pipe B is formed with flange H, which constitutes a rest for the wall I of the chamber.

The sides of the wall inclosing the cavity F' at the rear or lighter end of chamber I converge or are contracted to make the bottom entrance to said cavity small with reference to the capacity of said portion of the chamber, for the purpose presently to be stated. The top of the chamber forms the cavity F'', and from the same leads the downwardly and outwardly inclined passage or nose J. A portion of the extremity of said nose is cut away, as at J', to afford the same an intake-orifice above the plane of the intake of the cavity F', for the purpose which will presently appear. Plug K closes a drain-passage from the reservoir-bottom to the outlet. This passage may open into pipe B or seal C, if so desired, but not into both.

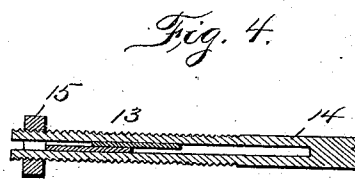
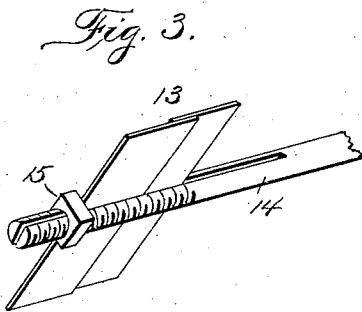
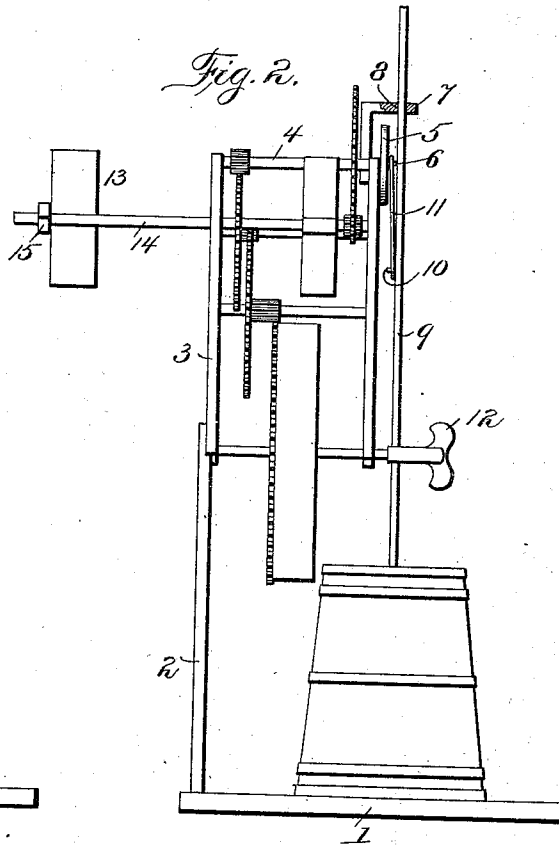
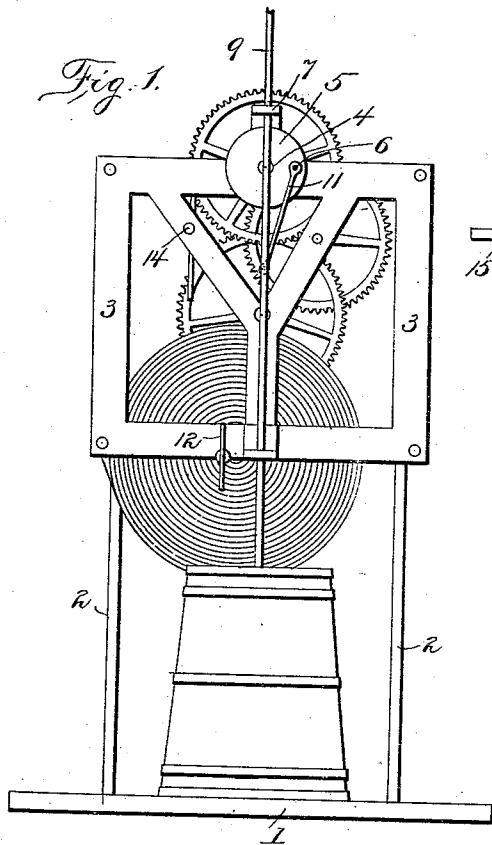
The operation of the siphon is as follows: The trap in the discharge-pipe having been filled, water or other liquid is allowed to flow into the reservoir through pipe L in a regulated stream, which rises in the same until it passes the bottom edge of the tilting air-releasing intake-chamber, when the air occupying the interior of said chamber is confined and sealed therein. As the water continues to rise above said chamber, the air confined between the water in the trap and the water in the chamber will be compressed and slowly force the water in the seal to discharge into the outlet. The difference in height between the water-surface in seal C and pipe B corresponds to the difference in height between the surface of the water in the reservoir and the surface of the water in the intake-chamber. The average sectional area in the space in part F' of the intake-chamber and that space inclosed by the nose J being about five times that of the discharge-pipe B, water will rise one inch in the intake-chamber to a depression of five inches in pipe B—that is, a certain volume of air is forced from the chamber into the discharge. Water continues to rise in cavity F' and in the nose until the volume of air remaining in the former has been so reduced that it no longer counterbalances by its buoyancy the buoyancy of the

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