

No. 649,170.

Patented May 8, 1900.

G. LAND.
AUTOMATIC SIPHON.

(Application filed July 1, 1899.)

(No Model.)

Fig. 2.



Fig. 1.

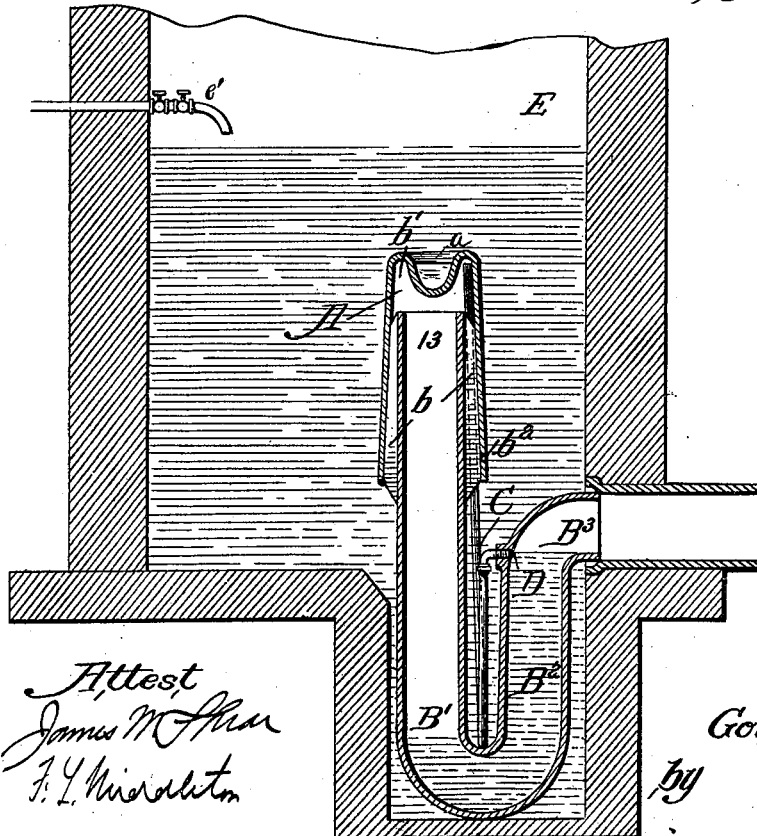
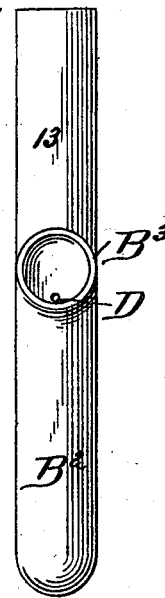


Fig. 3.



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AUTOMATIC SIPHON.

SPECIFICATION forming part of Letters Patent No. 649,170, dated May 8, 1900.

Application filed July 1, 1899. Serial No. 722,568. (No model.)

To all whom it may concern:

Be it known that I, GORDON LAND, a citizen of the United States, residing at Denver, Colorado, have invented certain new and useful Improvements in Automatic Siphons, of which the following is a specification.

My invention relates to improvements in flush-tank siphons designed for the automatic flushing of sewers. Heretofore in devices used for this purpose the inability to rod the line or inspect the same has been occasioned by the fact of the various siphons being embedded in concrete and so placed as to render this necessary work impossible. I have sought in my device to produce a ready means to accomplish this work by designing a siphon wherein all the parts are always accessible and may be readily removed, yet at the same time my siphon embraces no moving parts except in such cases as the device may be used as a pull-tank siphon, the construction being such as to permit of this action without in any way interfering with its use as an automatic device.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical section through the flush-tank and siphon. Figs. 2 and 3 are detail views.

To more particularly describe my invention, the bell or intake limb A is made with beveled sides and annular in form a gradual taper being employed so as to permit its sliding on or off the sloping fins *b* cast upon the upper end of the discharge or inverted part 13 of the siphon. This arrangement of the parts holds the bell in its proper place and prevents its slipping down farther than is desired, while at the same time it prevents any tremor or movement of the bell during the action of the siphon. This siphon-bell or intake-limb is provided with an annular air-space *b'* at the top and a vent or sniff hole *b²* near the bottom or lower part of the bell. The discharge-pipe comprises the vertical part 13, extending downward to the bend *B'* and then upward at *B²* to the lateral discharge-outlet *B³*.

The annular air-space described in the bell is for the purpose of receiving the upper end of the blow-off pipe C. This blow-off pipe is preferably of lead and is made to pass down between the bell and outside of the main discharge-limb of the siphon, forming a trap or water seal, and having its discharge end con-

nected by an adjustable pipe-union at a point D outside and just above the water-level in the discharge of main siphon. The purpose of this arrangement of a blow-off pipe is to permit of its recovery of a water seal during the discharge of the main siphon and at the same time prevent its action as a subsidiary siphon.

I am aware that various devices are in use to accomplish the purpose of a blow-off pipe; but by reason of their arrangement they all act as subsidiary siphons and are liable to become clogged and inoperative. In my device this cannot occur, as no water is permitted to pass through the blow-off pipe during its action, which is only brief and always prior to the action of the main siphon, which it starts.

The office of the annular air-chamber in the upper part of the bell is to afford a perfect means of preventing the action of the blow-off pipe as an auxiliary siphon. It will thus be seen that in this combination of parts a perfectly-automatic intermittent siphon is secured, and at the same time provision is made for its being used as a pull-tank, which is a novel feature in this connection, all other devices heretofore offered for such purposes being deficient in this respect.

A bar *a*, connecting the opposite sides of the depression in the top of the bell, serves for the connection of a chain or the like when the siphon is to be used as a pull-siphon.

The flush-tank is lettered E in the drawings, *e'* being the inlet for the flushing-water. The tank is provided with a pocket in its lower end, in which the discharge-pipe is seated without being embedded in concrete, as is generally done.

What I claim is—

In combination, the discharge-pipe, the bell at the intake end thereof with an annular space between and the blow-off pipe having one end extending freely up into said annular space and the other end adjustably and detachably connected with the outlet end of said discharge-pipe, substantially as described.

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

GORDON LAND.

Witnesses:

CHAS. A. BRANHAM,
ALONZO RICE.