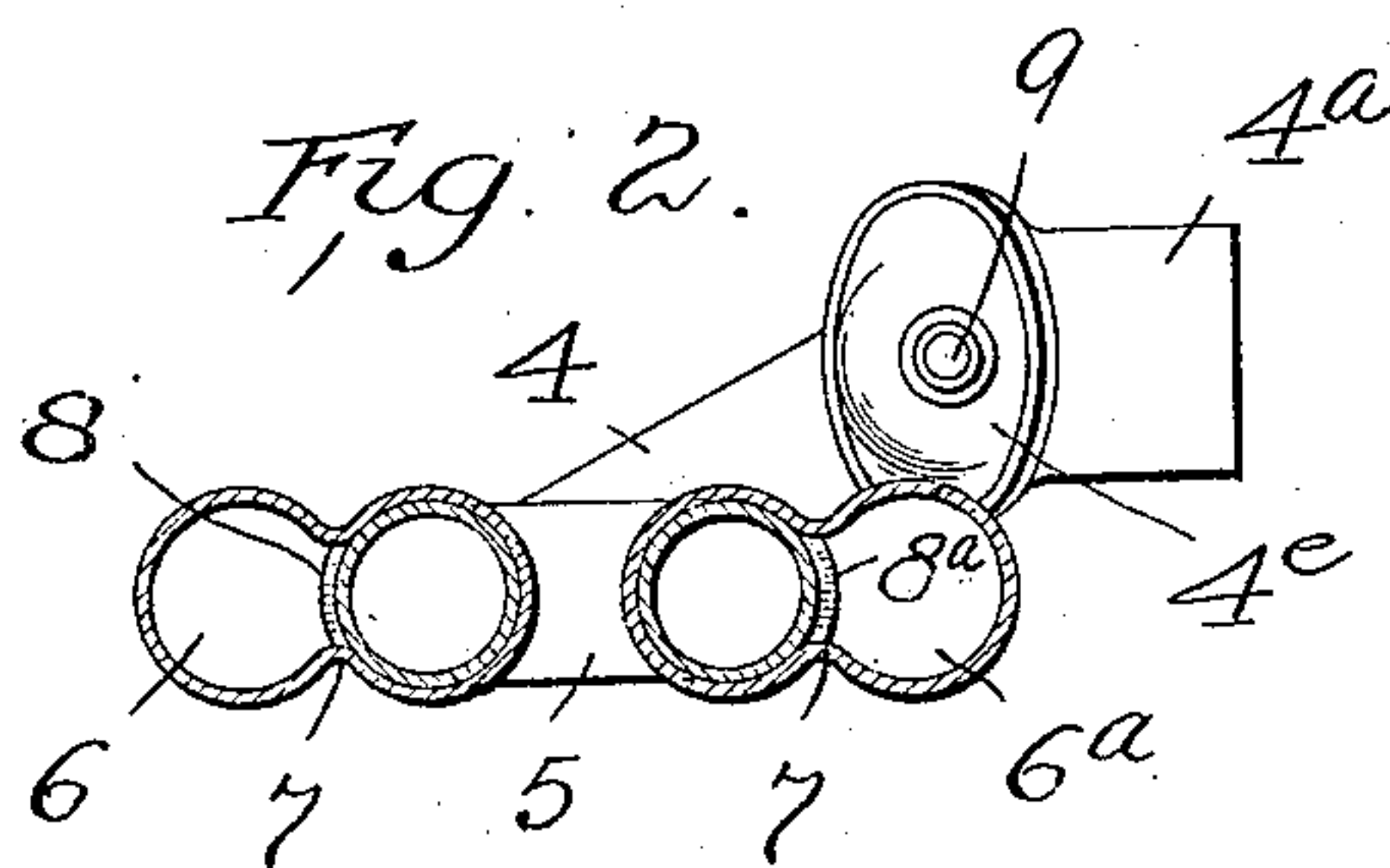
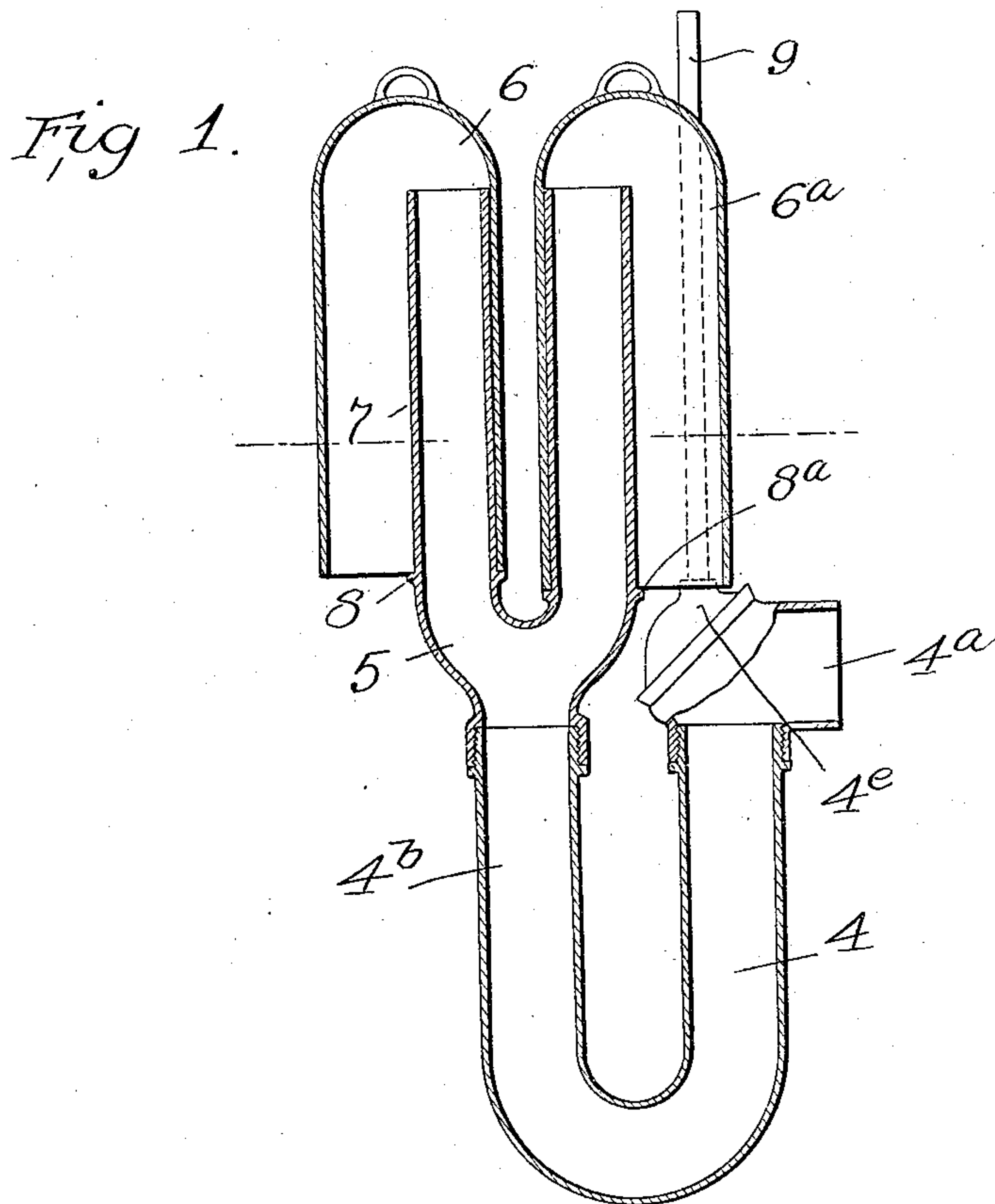


No. 897,378.

PATENTED SEPT. 1, 1908.

G. LAND.
AUTOMATIC FLUSH TANK SIPHON.

APPLICATION FILED MAR. 27, 1907.



Attest:

B. G. Phillips
Edward N. Stanton

Inventor
Gordon Land.

By *Spears, Auditor Donaldson* *Spears*
Att'y.

UNITED STATES PATENT OFFICE.

GORDON LAND, OF GRANTS PASS, OREGON.

AUTOMATIC FLUSH-TANK SIPHON.

No. 897,378.

Specification of Letters Patent.

Patented Sept. 1, 1908.

Application filed March 27, 1907. Serial No. 364,949.

To all whom it may concern:

Be it known that I, GORDON LAND, a citizen of the United States, residing at Grants Pass, Oregon, have invented certain new and useful Improvements in Automatic Flush-Tank Siphons, of which the following is a specification.

My invention relates to improvements in flush tank siphons for use in sewers.

The object of my invention is to provide in a sewer flushing siphon means to render its continued action positive and automatic and also to embrace in the same device suitable features to make it possible to use this form of siphon as a pull tank flusher wherein all the parts remain essentially the same as when used automatically.

The combination in a single siphon having no valves or moving parts of all these essential and desirable features constitutes together with its funnel like intake to its discharge member whereby rapidity of discharge is enhanced every known want in a sewer siphon.

A study of the drawings accompanying these specifications will show that every known feature of merit required by sanitary engineers is provided in the working parts of this device, even to accessibility for the purpose of rodding and venting the sewer. The parts are all designed to be easily and safely removable from any standard manhole or sewer flush tank. The parts are made detachable and may be placed at an angle to either side of the outlet to the sewer so as to give the greatest possible space in the invert of manhole when rodding the sewer is going on.

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

Figure 1 is a section elevation. Fig. 2 is a horizontal section on line 2—2 of Fig. 1.

Referring by reference characters to these figures the numeral 4 designates a trapped discharge pipe designed to have its outlet branch or uptake 4^a connected in any suitable manner to the sewer. This pipe has its downtake limb 4^b provided with a double or forked downtake member 5, the downtake branches of which extend to the same height, as shown and which form a continuation of the downtake member 5, the union therewith forming a funnel shaped portion as shown. Over these branches fit the removable or detachable bells or hoods 6 and 6^a which may be of identical construction and

which are preferably formed with inwardly extending opposed longitudinal flanges or ribs 7 so as to form two portions, each of which approximates the greater part of a circle and one of which is adapted to embrace one of the branches of the downtake limb while the other presents an unobstructed uptake channel or passage for the water connecting at the upper end with the open upper end of branch or downtake limb. The bells or hoods may be held at the proper height by stops or flanges 8 and 8^a on the branches of the forked intake members 5, and it will be noticed that one of these flanges 8 is located higher than the other so that the hood 6 is more elevated than the other hood 6^a . This hood holds the one bell enough higher than the other to permit of its breaking the siphonage in advance of the other, which latter by reason of its lower intake will continue in operation a sufficient length of time before breaking to provide a perfect air recovery. Experience has shown that siphons become air-locked and inoperative by not having proper venting following each succeeding discharge and that sniff-holes and vent pipes are liable to clog and so prevent proper air recovery.

It will be noticed that the trapped discharge pipe has its bends of equal length and these are connected respectively to the parts 4^a and 5 by similar connections so as to be interchangeable and thereby prevent error in assembling. The outlet limb 4^a has a cap member 4^c detachably connected thereto, the line of junction being at an angle of approximately 45° as shown. By removing this cap the sewer may be inspected or rodded or cleaned without disturbing the main siphon. An air vent pipe 9 may be fitted to this detachable cap.

What I claim as my invention is:—

1. In a flush tank siphon for flushing sewers and the like, the combination with a trap having a vertical downtake limb, of a pair of vertical downtake pipes having their lower ends connected together to form a single conduit which is joined to the downtake limb of said trap, and a bell over each downtake pipe and having a side space forming an uptake channel, one of said bells having its lower edge located on a higher plane than the lower edge of the other.

2. In a flush tank siphon for flushing sewers and the like, the combination with a trap having a vertical downtake limb, of a

pair of vertical downtake pipes having their lower ends connected together to form a single passage communicating with said downtake limb, a bell over each downtake pipe having a part circular portion embracing the pipe and a part circular portion forming an uptake passage, and stops on the pipes for holding said bells at different elevations.

3. In a flush tank siphon for flushing sewers and the like, a trap having vertical intake and uptake portions and a horizontal outlet, a diagonally connected removable cap at the junction of said uptake and horizontal outlet, a pair of vertical downtake pipes connected together at their lower ends to form a single conduit joined to the downtake limb of said trap, and a bell over each pipe having a side space forming an uptake channel.

4. In a flush tank siphon for flushing sewers and the like, a trap having vertical intake and uptake portions and a horizontal outlet, a diagonally connected removable cap at the junction of said uptake and horizontal outlet, a vent pipe extending vertically upward from said cap, a pair of vertical downtake pipes connected together at their lower ends to form a single conduit joined to the downtake limb of said trap, and a bell over each downtake pipe having a side space forming an uptake channel.

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

GORDON LAND.

Witnesses:

GARRETT MILLAR,
T. D. M. SLAVEN.