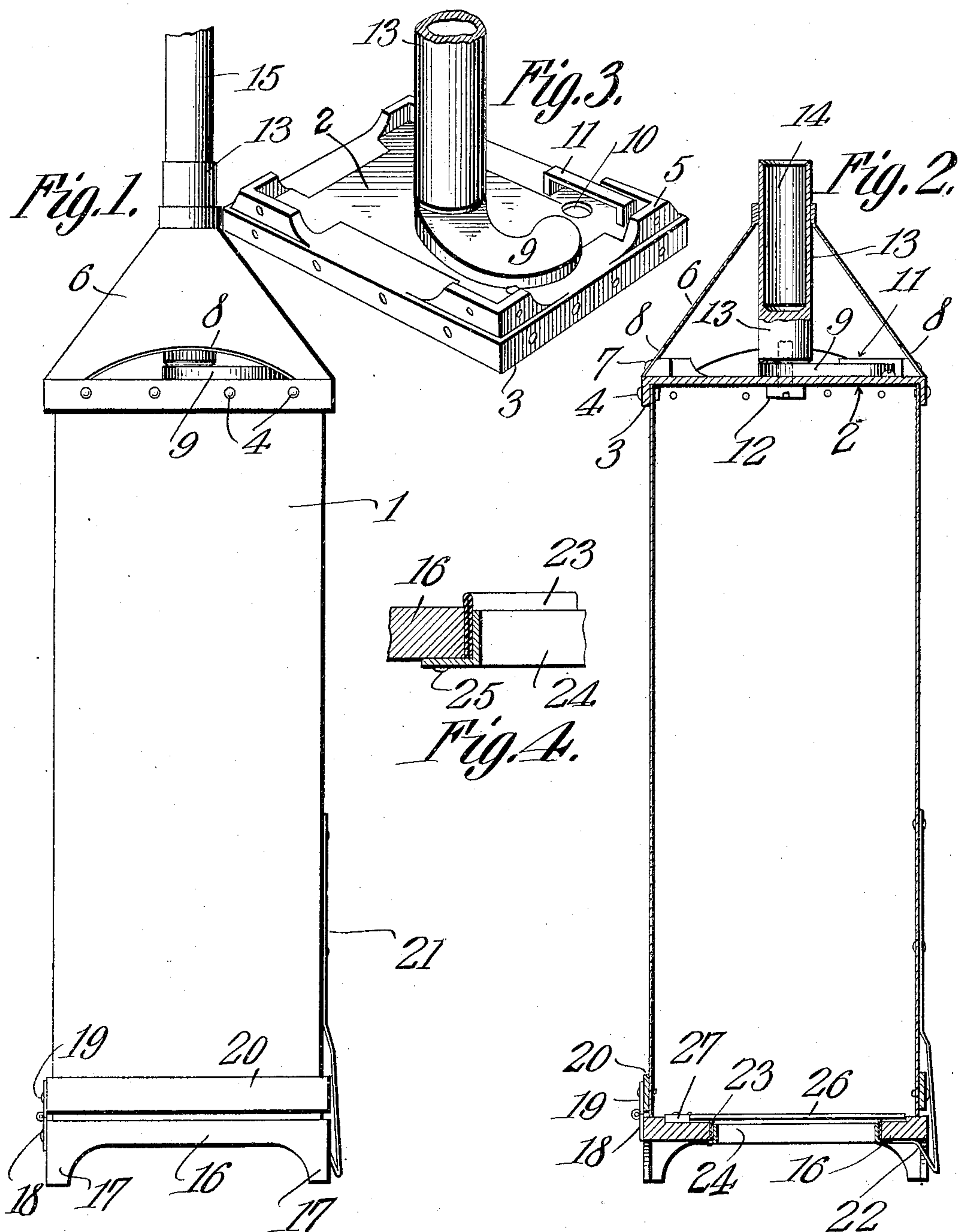


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CISTERN CLEANER.  
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917,374.

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Witnesses:

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# UNITED STATES PATENT OFFICE.

GEORGE A. STINGER, OF CINCINNATI, OHIO.

## CISTERN-CLEANER.

No. 917,374.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed July 3, 1903. Serial No. 441,887.

*To all whom it may concern:*

Be it known that I, GEORGE A. STINGER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Cistern-Cleaner, of which the following is a specification.

This invention relates to cistern cleaners.

The object of the invention is to simplify and improve the construction of such apparatus, and with the minimum of labor, to insure the removal of dirt and sediment from the bottom of a cistern without roiling the water therein and at the same time to aerate the water thereby to remove any foul gases contained therein.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a cistern cleaner as will be hereinafter fully described and claimed.

In the accompanying drawings forming a part of this specification, and in which like characters of reference indicate corresponding parts, Figure 1 is a view in side elevation of a cistern cleaner constructed in accordance with the present invention. Fig. 2 is a view in vertical longitudinal section through the cleaner. Fig. 3 is a perspective detail view of the cap plate of the cleaner. Fig. 4 is a fragmentary detail view in section of a portion of the apparatus.

Referring to the drawings, 1 designates the body of the apparatus, which is preferably quadrangular in cross section and is constructed of galvanized iron, the overlapped edges at the joint (not shown) being secured together either by solder, by rivets or by both, as may be preferred. The upper end of the body is closed by a cap plate 2 which is constructed preferably of aluminum, and it is provided with a downturned flange 3 in which the upper end of the body fits, and is held therein by rivets 4.

The upper face of the cap plate is provided at each of its four corners with an angular flange 5, each of which is inset from the adjacent edge of the plate, and has its outer face beveled or inclined in order to permit proper attachment with a cap 6, preferably of copper, and which is assembled with the flanges by rivets 7. The lower edges of the cap are cut away, as shown at 8, in order to provide air escapes, as will presently appear.

Mounted upon the upper face of the plate

is the controlling valve which consists of a curved arm 9 that is adapted to lie close to the plate, and the outer extremity of which is designed to cover or uncover an escape opening 10 formed in the plate, a guard or stop 11 covering the opening 10 serving to limit the rotation of the valve in one direction. The valve is held assembled with the plate by a screw 12 that is inserted from the underside of the plate and projects upwardly into the shank 13 of the valve, as clearly shown in Fig. 2. This shank has its upper portion provided with a socket 14 designed to engage a pole 15 by which the valve may be turned.

The lower end of the body is closed by a base plate 16 provided with legs 17 that are of sufficient length to insure proper passage of sediment or dirt within the body. This base plate is connected with the body by a hinge, one leaf 18 of which is secured to the base and the other leaf 19 to a band 20 firmly riveted around the lower outside portion of the body. In order to hold the plate in closed position when the body is lifted, after the valve 9 has been operated, a spring catch is provided, the upper end 21 of which is riveted to the body and the lower end of which is provided with a spring toe 22 to spring under the lower side of the base plate.

The base plate is provided at its center with a quadrangular orifice against the wall of which is secured a resilient upstanding packing 23 which is held in place by a quadrangular keeper 24, that is L-shaped in cross section and is secured to the base plate by rivets or bolts 25. The base plate will be constructed of aluminum the same as the top plate, on account of its lightness and non-oxidizable qualities. Of course, it is to be understood that the invention is not to be limited to the employment of this particular metal for these parts, as any other metal or substance adapted for the purpose may be substituted therefor. The opening in the base plate is normally sealed by a gravity valve 26 which is secured to the upper side of the base plate by a hinge 27.

All of the parts of the apparatus are constructed with a view to simplicity and durability and are designed to withstand rough usage without deterioration.

In the operation of the apparatus, the valves are closed and the body is forced to the bottom of the cistern by the pole, and as soon as the latter is turned to cause valve 9



to free the opening 10 the air contained within the body will from the pressure of the water be forced upward through the said opening, and the same pressure will operate to  
5 cause the dirt and sediment adjacent to the base plate to flow into the body. As the air escapes from the body it passes upward through the water in the cistern and thereby aerates the same and removes therefrom any  
10 foul gases or odors that may be present.

What is claimed is:—

1. A cistern cleaner embodying a hollow body, and an upper and a lower valve, the upper valve being rotatable about an axis  
15 longitudinal with that of the body, and constituting a means for positioning the body within and removing it from a cistern.

2. A cistern cleaner embodying a hollow body, cap and base plates secured thereto, a  
20 gravity valve carried by the base plate, and a rotary valve carried by the cap plate, and provided with means for attachment to a pole.

3. A cistern cleaner comprising a hollow  
25 body, cap and base plates secured thereto, a gravity valve carried by the base plate, a rotary valve carried by the cap plate, and means connected with the latter valve to effect its rotation and to sink and raise the  
30 body.

4. A cistern cleaner comprising a hollow body, cap and base plates secured thereto, an inward opening valve carried by the base

plate, a rotary valve carried by the cap plate, and means connected with the valve to rotate the same and to lift and lower the body. 35

5. A cistern cleaner comprising a hollow body, a base plate hinged thereto, an inward opening gravity valve carried by the base plate, a cap plate rigid with the body and  
40 provided with an escape orifice, a guard disposed over the orifice, a valve pivotally connected with the cap plate and rotatable about a vertical axis to open or close the orifice, and a socket carried by the valve. 45

6. A cistern cleaner comprising a hollow body, a base plate secured thereto and provided with a packing, an inward opening gravity valve carried by the base plate and arranged to engage the packing, a cap plate  
50 carried by the upper end of the body and provided with flanges and with an orifice, a cap secured to the flanges and provided at their sides with cutaway portions, a valve pivotally connected with the cap plate and  
55 rotatable about a vertical axis to open and close the orifice, a socket carried by the valve, and a pole having one end seated in the socket.

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

GEORGE A. STINGER.

Witnesses:

JACOB STAPFOR,  
A. M. HAGGERTY.