

G. O. LA CROIX.
 AUTOMATIC CISTERN CLEANER.
 APPLICATION FILED SEPT. 26, 1912.

1,054,004.

Patented Feb. 25, 1913.

Fig. 1.

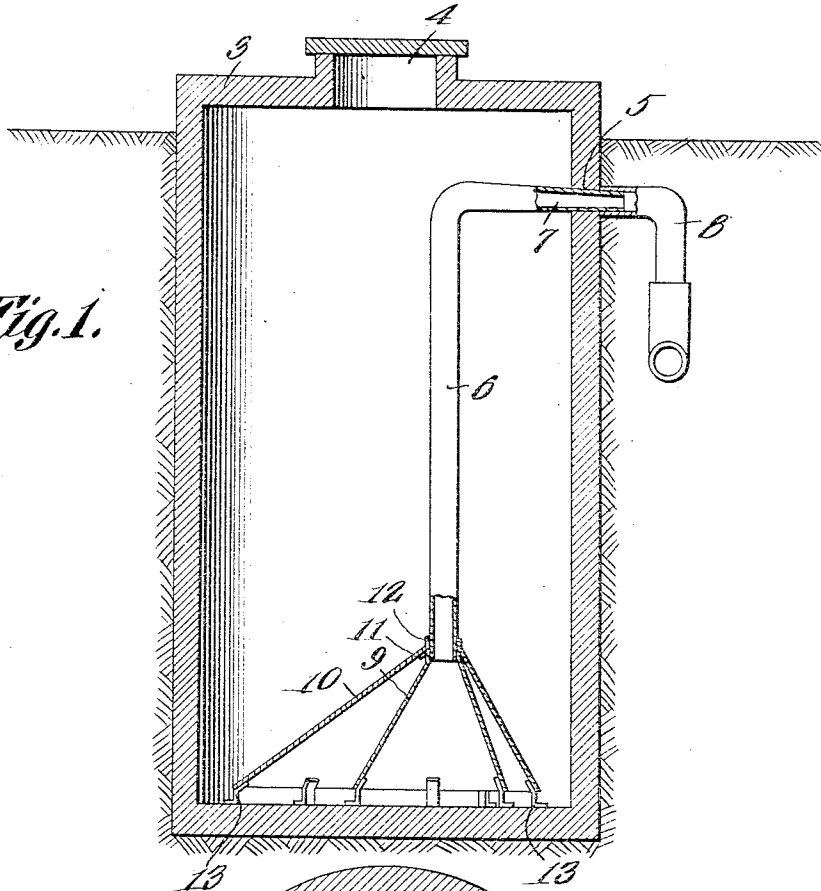
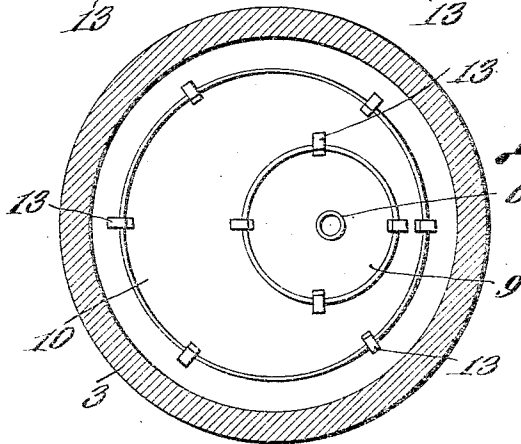


Fig. 2.



Witnesses

J. H. Klein
L. H. Wilson

George O. La Croix. Inventor
 by *C. A. Snow & Co.*
 Attorneys

UNITED STATES PATENT OFFICE.

GEORGE O. LA CROIX, OF TOLEDO, OHIO.

AUTOMATIC CISTERN-CLEANER.

1,054,004.

Specification of Letters Patent.

Patented Feb. 25, 1913.

Application filed September 26, 1912. Serial No. 722,552.

To all whom it may concern:

Be it known that I, GEORGE O. LA CROIX, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Automatic Cistern-Cleaner, of which the following is a specification.

This invention relates to a cistern cleaner, and aims to provide a novel and improved device of this character.

It is the object of the present invention to provide a cistern cleaner, which shall be automatic in action, which shall be simple, durable and compact in construction, and which shall be effective and efficient in its operation.

This invention also contemplates a cistern cleaner, which is applicable to cisterns having either a flat or concaved bottom, with equal propriety.

This invention also provides further details and advantages, which will be apparent as the invention is better understood.

The invention resides in the novel construction, arrangement and combination of parts hereinafter set forth and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a vertical central section of a cistern embodying the improved cistern cleaner. Fig. 2 is a bottom view of the cleaner.

Referring specifically to the drawings, the cistern has been designated by the numeral 3, the same being of any preferred construction and being provided at its upper end with a manhole 4. This cistern is provided in one wall and adjacent the upper end thereof with an opening 5, said opening being at a height which shall determine the highest level of the water within the cistern.

In carrying out the present invention, an eduction pipe 6 is arranged eccentrically within the cistern 3, the upper end of the said pipe being bent angularly as indicated by the numeral 7 so as to pass through the opening 5, the said upper end tapering so as to provide a reduced outlet. This

eduction pipe is in the form of an elbow, one arm of which is of equal diameter throughout and extends eccentrically of the cistern or to one side of the axis thereof, and the other arm being tapered toward its outer end and passing through the wall of the cistern. A suitable pipe or elbow 8 is slipped over the outer end of the arm 7 and communicates with a suitable drain for carrying off the overflow water.

A pair of eccentric cones 9 and 10 are arranged in the lower end of the cistern, the inner cone 9 having an annular flange 11 at its apex which is rigidly secured to the lower end of the pipe 6, and the outer cone 10 having an annular flange 12 at its apex loosely engaging the lower end of the said pipe in order to be slidable thereon. Each of the cones 9 and 10 has a plurality of short legs 13 attached to the periphery thereof, the said legs or supports being adapted to rest on the bottom of the cistern in order to support the cones slightly above the bottom. The axis of the inner cone 9 is inclined away from the axis of the cistern, while the axis of the outer cone is inclined at a greater angle from the axis of the cistern, the peripheries of the inner and outer cones being eccentric and concentric, respectively, relative to the cistern, and the periphery of the outer cone extending adjacent the wall of the cistern. The legs 13 support the peripheries of the cones slightly above the bottom of the cistern, and it will be apparent, that when the bottom of the cistern is concaved or dished, the outer cone 10 will be slid upwardly on the pipe 6, but will still be retained in proper spaced position relative to the bottom by means of the legs 13 secured around the periphery thereof. Thus, it will be apparent that the cleaner may be employed with cisterns having either flat or concaved bottoms, without decreasing the efficiency of the device in either case.

The cistern is provided with the usual inlet pipe and outlet pipe, and it will be apparent, that when the level of the water within the cistern rises above the opening 5, the excessive water may flow upwardly through the eduction pipe 6 and will be discharged into the drain, thereby providing an automatic action. Inasmuch as the foul water leaves and other extraneous matter will precipitate to the bottom of the cistern, it will follow, that the same will be dis-

charged from the cistern through the pipe 6, the cistern thus being automatically scavenged or cleansed. Thus with the provision of the cleaner, the water in the cistern may be kept pure, the precipitates being gradually led off through the eduction pipe. The outer cone 10 having its periphery extending to the wall of the cistern will cause the precipitates to pass around the periphery thereof thereby removing all the precipitates from the bottom and corners of the cistern. The eduction pipe 6 being arranged to one side of the center of the cistern will eliminate any obstruction within the cistern below the manhole, such as might encumber the cistern.

Having thus described the invention, what is claimed is:

1. A cistern cleaner embodying an eduction pipe and a pair of cones, one arranged within the other, the inner cone being attached rigidly at its apex to the lower end of the eduction pipe, and the apex of the outer cone slidably engaging the lower end of the said pipe.

2. A cistern cleaner embodying an eduction pipe, a pair of cones, one arranged within the other, the inner cone being attached rigidly at its apex to the lower end of the eduction pipe, and the apex of the outer cone slidably engaging the lower end of the said pipe, and short supports secured to the periphery of each cone.

3. A cistern cleaner embodying an eduction pipe and a pair of cones having annular flanges at their apices and having a peripheral support, one cone being arranged within the other cone, the flange of the inner cone being attached rigidly to the lower end of the eduction pipe, and the flange of the outer cone slidably engaging the lower end of the said pipe.

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

GEORGE O. LA CROIX.

Witnesses:

FRANK M. ROGERS,
E. L. HATTENDORF.