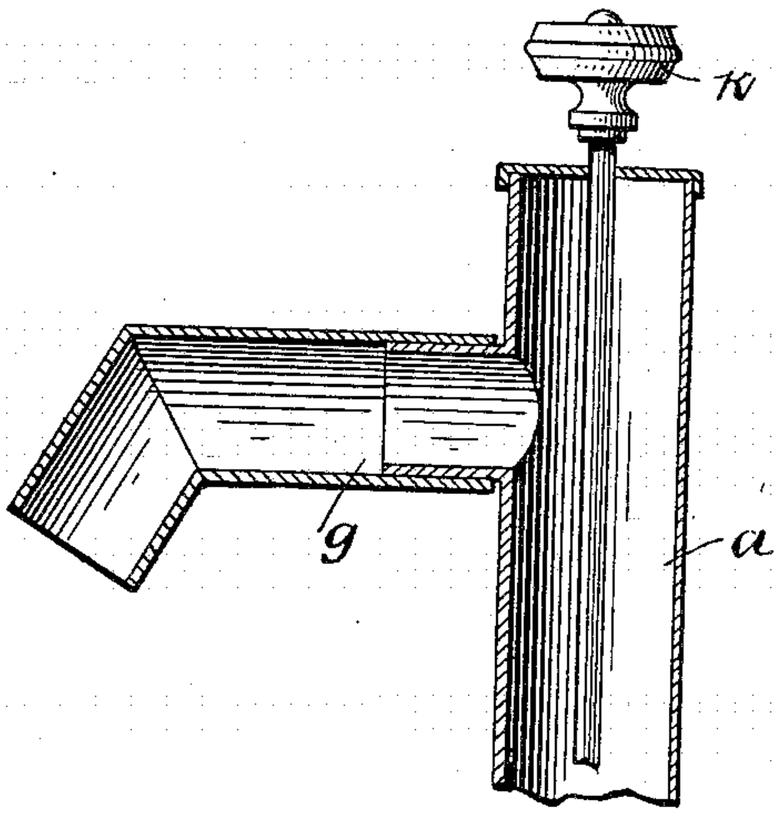
No. 610,279. Patented Sept. 6, 1898.

W. M. RICKETTS.

CISTERN CLEANING DEVICE.

(Application filed Nov. 15, 1897.)

(No Model.)



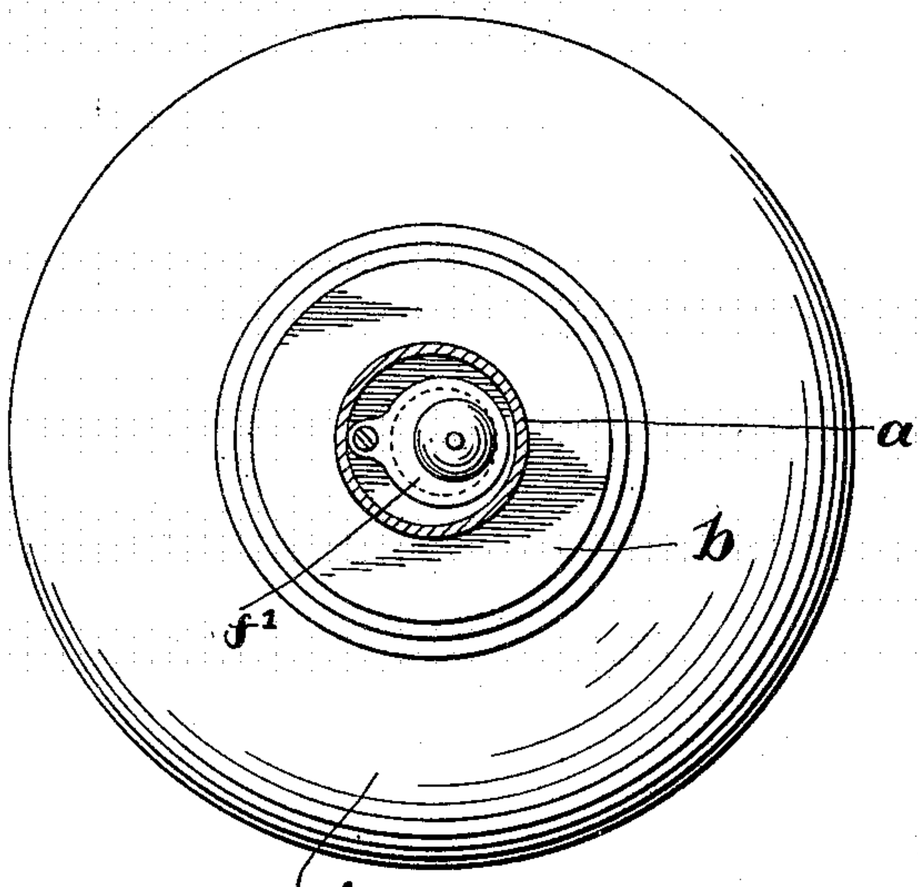


Fig. 2

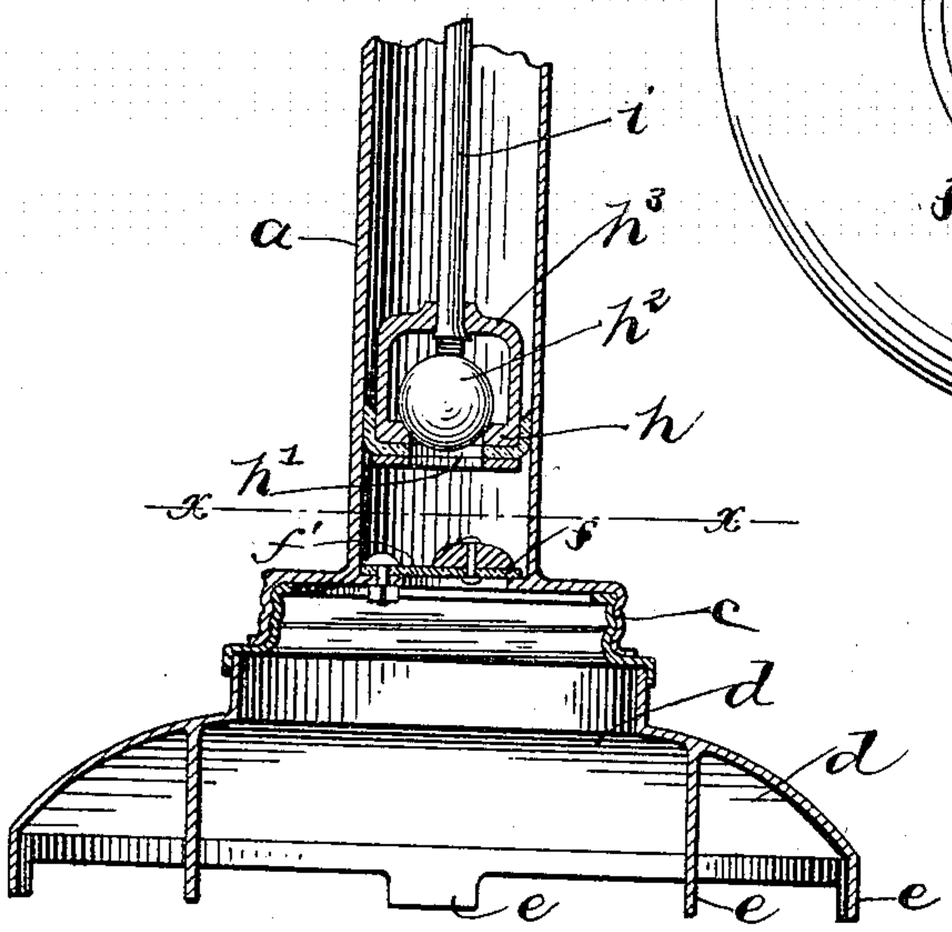


Fig. 1

WITNESSES:

L. A. Travel

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WILLIAM M. RICKETTS, OF COLUMBUS, OHIO, ASSIGNOR OF ONE-HALF TO WILLIAM H. SLADE, OF SAME PLACE.

CISTERN-CLEANING DEVICE.

SPECIFICATION forming part of Letters Patent No. 610,279, dated September 6, 1898.

Application filed November 15, 1897. Serial No. 658,564. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. RICKETTS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Cistern-Cleaning Devices, of which the following is a specification.

My invention relates to the improvement of cistern-cleaning devices; and the objects of my invention are to provide an improved cistern-cleaning device of superior construction and arrangement of parts by means of which the dirt and other deposits at the bottom of a cistern or well may be removed by taking from the cistern a comparatively small amount of water, to so construct and arrange the parts of my device as to admit of their being produced at a reasonable cost of manufacture, to provide an improved base or support for the cleaning-pump, and to produce other improvements in details of construction, which will be more fully pointed out hereinafter.

These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical section of my improved cistern-cleaning apparatus, and Fig. 2 is a transverse section on line *x x* of Fig. 1.

Similar letters refer to similar parts throughout both views.

In carrying out my invention I employ a vertical pump-cylinder *a*, the lower end or bottom of which is enlarged to form a mouth, as indicated at *c*, said enlarged mouth portion being internally threaded, as shown. Into this threaded mouth portion of the cylinder *a* is screwed the rigid upstanding neck portion of a base plate or support *d*. The body of this base-plate *d*, as indicated in the drawings, is substantially dome-shaped, and said dome-shaped portion is provided on its under side at suitable intervals with downwardly-projecting supporting-legs *e*, some of which are formed, as shown, on the lower edge of the dome-shaped base-plate, and the remainder of which are made to project downwardly from the body or arch portion of said base-plate, the latter being adapted to support the lower edge of the base-body slightly above the surface on which said legs *e* rest.

In the lower end of the cylinder *a* I provide an eccentrically-arranged valve-opening *f*, the latter being adapted to be normally closed by a check-valve *f'*, the latter being adapted to open only by pressure on the under side thereof.

In the upper portion of the cylinder *a* I provide a suitable outlet-neck *g*. Within said cylinder *a* I provide a desirable form of close-fitting yet movable sucker-head *h*, the latter being provided with a central valve-opening *h'*, which is normally closed by a ball-valve h^2, said ball-valve being loosely contained within a cage-frame by suitable separated arms h^3, which connect the body of the sucker with the lower end portion of a vertical sucker-rod *i*. This sucker-rod *i* passes upward and outward through a suitable opening in the upper end of the cylinder *a* and is provided on its outer end with a suitable head or handle piece *k*.

In utilizing my invention a pump or cleaning device such as herein described and produced of desired length is inserted into the cistern to be cleaned, the separated base-legs *e* being adapted to come into contact with and support said cleaning device from the bottom of the cistern. By an upward-and-downward or reciprocating movement of the sucker-rod the dirt which is covered by the dome-shaped base *d* and which is adjacent thereto is drawn upward through the valve-opening in the bottom of the cylinder and into the latter. On the downward movement of the rod *i* and its sucker-head *h* it is obvious that the valve *f'* will be closed and that the dirt or other matter contained in the cylinder will be forced upward through the valve-opening *h'* into the upper portion of the cylinder, where on the upward stroke of the sucker-rod the matter thus collected will be carried to the discharge-spout *g*.

It will be seen that owing to the spreading form of the dome-shaped base *d* and the close proximity of its lower edge to the bottom of the cistern the suction produced by the operation of the sucker-rod must result in drawing all the dirt immediately covered by the

base and that adjacent thereto into the pump-cylinder. It is evident that the dirt thus drawn into the cylinder must be accompanied by a certain amount of water.

By moving the pump-base to different points in the cistern it will readily be seen that all the dirt contained in the bottom thereof may in a comparatively short time be discharged through the spout *g* of the pump and that the water remaining in the cistern will have been rendered comparatively clean.

It is obvious that a cistern-cleaning device such as herein described will be exceedingly simple of construction and may be produced at a low cost of manufacture. It will also be observed that the parts of my device are such as to obviate any tendency toward their readily getting out of order.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

In a cistern-cleaning device, the combination with the pump-cylinder *a*, its discharge-spout, a sucker-rod and sucker working in said cylinder, a check-valve connected with said sucker and a check-valve in the lower end portion of said cylinder, of a substantially dome-shaped and flaring base-plate *d* having a rigid upstanding neck portion detachably connected with said pump-cylinder and having legs *e* formed with the lower edge of said base and with the arch portion thereof, said legs depending therefrom at intervals, substantially as and for the purpose specified.

WILLIAM M. RICKETTS.

In presence of—

A. L. PHELPS,

EDWARD M. TAYLOR.