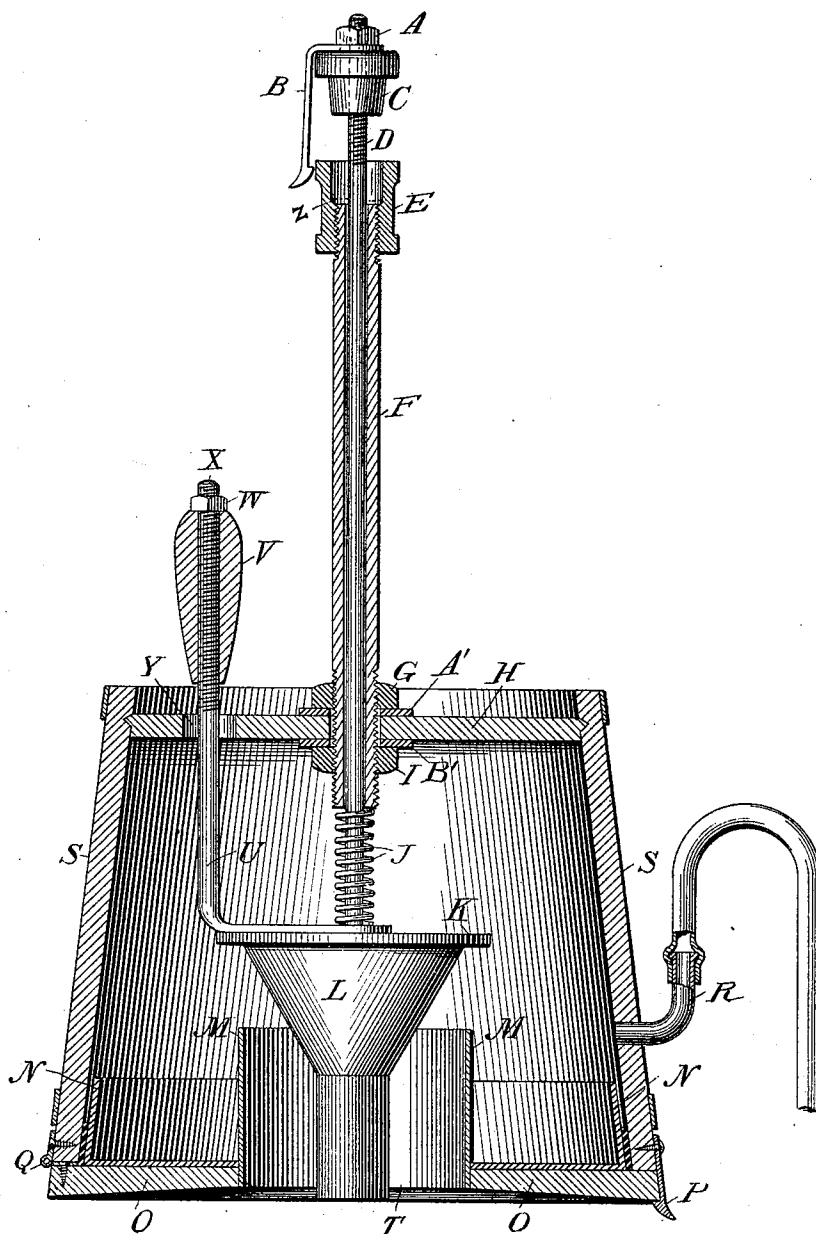


(No Model.)

L. LEGGETT.
CISTERN OR WELL CLEANER.

No. 582,653.

Patented May 18, 1897.



Witnesses.

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CISTERN OR WELL CLEANER.

SPECIFICATION forming part of Letters Patent No. 582,653, dated May 18, 1897.

Application filed April 20, 1896. Serial No. 588,322. (No model.)

To all whom it may concern:

Be it known that I, LEROY LEGGETT, a citizen of the United States, residing in Sidney, in the county of Fremont and State of Iowa, have invented certain new and useful Improvements in Cistern or Well Cleaners and Devices for Removing Quicksand from Inside of Caissons in Bridge-Building; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which forms a part of the specification.

My invention relates to improvements in machines for prospecting for gold, cistern and well cleaners, &c., in which a plunger operated by a long piston-rod is operated to open and close an opening in a receptacle, the receptacle being provided with other openings for the escape of air in filling the receptacle and for the discharge of debris collected in the receptacle during its operation.

The objects of the improvement are to provide a device whereby a cistern or well may be cleaned without the necessity or expense of windlass or buckets and the services of two or more men. This device may be operated by one man without other assistance, and by no other assistance than is shown, and is easy of operation, cheap in its construction, and by its employment both time and expense are saved. I attain these objects by the mechanism illustrated in the accompanying drawing, in which the figure presented shows a vertical transverse section of the machine.

The receptacle S may be of wood, sheet-iron, or any other suitable material. The receptacle is provided with opening T in the bottom O O, into which is fitted a circular rim M M, upon which the plunger L rests when in the closed position. The plunger L is provided with rim K, which fits upon the upper edge of M M to close opening T. Upon the plunger L is fastened an iron rod V, flattened at its lower end and bent nearly to a right angle to its fastening upon plunger L in the top H of receptacle S. Upon the upper end of rod U is fitted an air-stop V, held in place by nut X, the upper portion of rod U being

screw-threaded to more securely hold the air-stop V in position.

The receptacle S S is provided in its side with an elbow R, adapted to receive a rubber hose, which may be used to siphon off the materials collected in receptacle S S, to the upper end of which may be attached a suitable pump. This elbow R may be replaced by a tube in the top of the receptacle S S, in which case the operation would be the same.

The bottom O O of receptacle S S is hinged at Q and secured in its opposite diameter by a spring-catch P. O O, M M, and N N can be cast in one solid piece. Receptacle S S is further provided in its inner lower border with linings N N, which may be of tin or other suitable materials.

The plunger L is operated by rod D, which fits loosely in pipe F, through which it is adapted to slide. Rod D at its lower extremity passes through spiral spring J and is secured in plunger L. Spiral spring J bears against the pipe F at its upper end and against plunger L at its lower end or passes upward inside of pipe F over D, secured at lower end of pipe F and inside of pipe F, and operates to hold plunger L in a closed position against the upper rim of cylinder M M.

Pipe F passes through an opening in the center of top H and is held in position by nuts G on the outer and I on the inner surface of top H. These nuts bear against washers A' and B'.

The upper end of pipe F is provided with collar E, which is screw-threaded in its lower inner border to fit upon the screw-threaded upper extremity of pipe F. This collar E at its upper inner border is smooth and adapted to receive the air-stop C, which fits into said upper inner border against a washer Z, of cork, rubber, or other suitable materials. The air stop or valve C is screwed upon the upper end of rod D, and above it is placed a spring-catch B, both C and B being held in place by nut A. Spring-catch B is adapted to fasten over the lower edge of collar E when the device is closed.

The figure in the drawing shows my device in position for receiving debris from the bottom of a well or cistern. The steps in its operation are as follows: Rod D is forced down-

ward until spring-catch B is fastened in the lower border of collar E. This movement closes simultaneously valve C, plunger L, and valve V. In this position the device is lowered into the water until the bottom is reached, when spring-catch B is released. This opens the opening Y and cylinder M M, when the pressure from below will cause the air to escape through Y and the space between rod and pipe F. The debris then enters receptacles S S through the hollow cylinder M M. When the receptacle is filled to the upper rim of cylinder M M, the plunger is again closed in the manner heretofore described and the whole machine drawn from the water, and by releasing the spring-catch P the debris is removed and the operation repeated. Instead of removing the machine in operating in caissons for removing quicksand a pump may be attached to the hose on elbow R and the debris removed by pumping, and the machine does not need to be removed. I have found in practice that large quantities of dirt, rags, and the various kinds of accumulation in cisterns may be removed without roiling the water or necessitating its removal.

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

1. In a cistern and well cleaning device having a hinged bottom secured by a spring-catch, a cylinder closed by a plunger fitting upon the upper rim of said cylinder, said plunger being closed by a spring bearing upon its upper border, said plunger also carrying

a right-angled rod U upon the upper edge of which is valve V adapted to close opening Y substantially as set forth.

2. In a cistern and well cleaning device a receptacle having a hinged bottom secured at its opposite diameter by spring-catch P, said receptacle having linings N N, a cylinder M M upon which fits spring-operated plunger L adapted to close opening T, said plunger carrying a rod bent at right angles upon which rod is a valve V adapted to close opening Y, said plunger operated by a rod passing through pipe F, said rod secured in a closed position by spring-catch B fitting over the lower border of collar E, substantially as set forth and described.

3. In a well or cistern cleaner, the receptacle S S, having a hinged bottom O O provided with opening T, into which fits the rim M M, adapted to be closed by conical-shaped plunger L, the arm U, upon which is fitted valve V, closing the air-vent opening Y, spring J adapted to bear upon and hold in close position plunger L, linings N N, elbow R, rod D, collar E, over which spring-catch B engages to hold valve C against the upper opening of pipe E, washer Z, rim K, all operating substantially as in the manner set forth.

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

LEROY LEGGETT.

Witnesses:

MERO WEBSTER,
F. E. ASHLEY.