

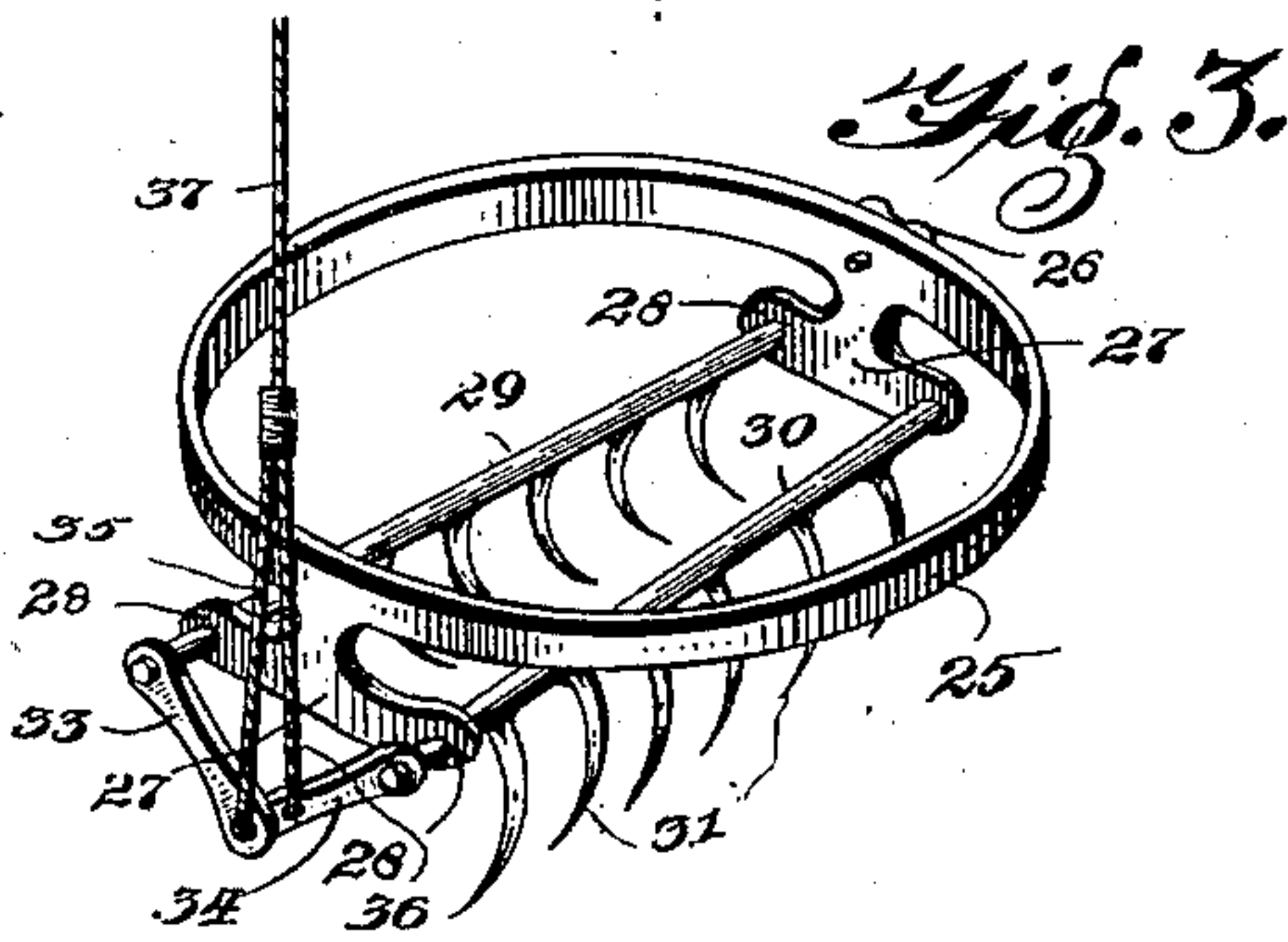
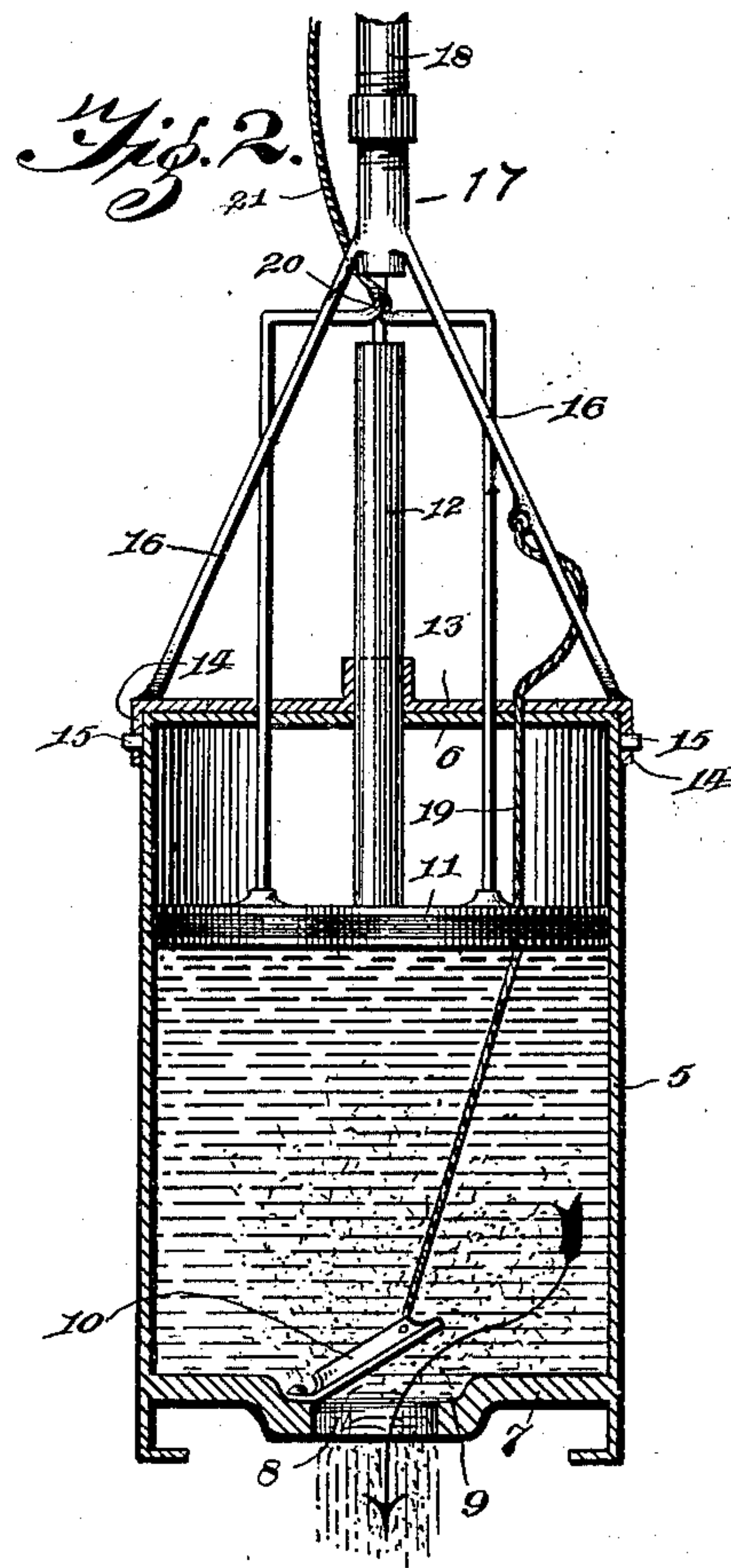
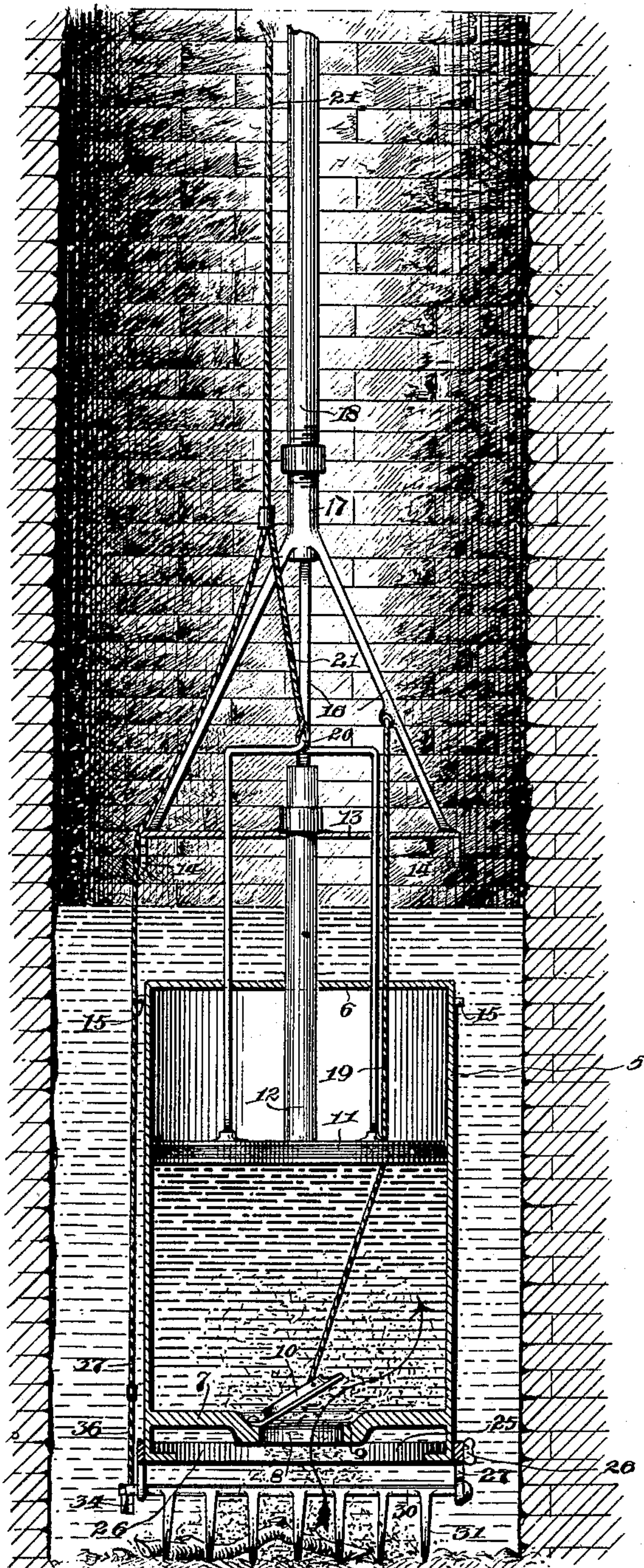
No. 671,650.

Patented Apr. 9, 1901.

G. LATCHEM.  
CISTERN CLEANER.

(Application filed Sept. 6, 1900.)

(No Model.)



Witnesses  
*Leopoldo Dondro*  
*Geo. H. Chandler*

*Fig. 1.*

*G. Latchem* Inventor  
*Chas. Snow & Co.* Attorneys



# UNITED STATES PATENT OFFICE.

GEORGE LATCHEM, OF OTTAWA, KANSAS.

## CISTERN-CLEANER.

SPECIFICATION forming part of Letters Patent No. 671,650, dated April 9, 1901.

Application filed September 6, 1900. Serial No. 29,209. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE LATCHEM, a citizen of the United States, residing at Ottawa, in the county of Franklin and State of Kansas, have invented a new and useful Cistern-Cleaner, of which the following is a specification.

This invention relates to cistern-cleaners; and it has for one object to provide a simple and efficient device with which the impurities at the bottom of the cistern may be raised and with which, moreover, sticks, stones, and other solid bodies may be grappled and raised to the surface.

Further objects and advantages of the invention will be evident from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a sectional view of a well or cistern, the cleaner being shown as in the operation of filling. Fig. 2 is a sectional view of the cleaner with the valve raised to discharge, the grapple being disengaged therefrom. Fig. 3 is a perspective view showing the grapple disconnected from the body of the cleaner. Fig. 4 is a detail perspective showing a portion of the body of the cleaner and the hook for engagement therewith.

Referring now to the drawings, the present cleaner comprises a cylindrical hollow body portion 5, having its upper end closed by a head 6, while a diaphragm 7 is formed or secured in the lower end thereof just above the edge of the body portion and has a central opening 8, at the upper side of which is a valve-seat 9. A valve 10, hinged to the diaphragm 7, is movable downwardly into the seat and opens upwardly.

In the cylinder is fitted a slidable piston 11, to the central portion of which is fixed a rod 12, which is passed upwardly and through the head 6 of the cylinder, and upon this rod is slidably mounted a disk 13, having depending hooks 14 at opposite points of its edge, these hooks being adapted for engagement with pins 15 upon the outer surface of the body. A tripod 16 is connected with the disk 13, and with the stem 17 thereof is engaged a rod 18, through the medium of which the disk may be oscillated to engage and disengage the

hooks with respect to the pins. When the hooks are engaged, the cylinder may be raised and lowered by means of the rod 18.

A cord 19, attached to the valve 10, is passed upwardly through openings in the piston and the upper head of the cylinder and serves to open the valve against the pressure of matter that may be in the cylinder to permit it to escape.

In practice the piston is moved to the lower end of the cylinder, and the cylinder is lowered by means of the rod, after which the piston is raised to create suction, which raises the valve and draws the mud and other impurities into the cylinder. To provide for thus raising the piston, a U-shaped frame is provided and has its legs passed downwardly through the upper head of the cylinder and attached to the piston, the web of the frame being provided with an eye 20, by means of which a cord 21 is attached to the frame for raising it and therewith the piston. To insure opening of the valve when the piston is raised, the cord 19 has its upper end connected to one of the legs of the tripod, and thus previous to drawing upon the cord 21 the hooks 14 may be disengaged from the pins 15, when by drawing upwardly upon the rod 18 the valve will be raised. After the piston has been raised to its limit to fill the cylinder the hooks may be reengaged with the pins and the cleaner may be raised from the cistern. The cord 19 may be then manipulated to raise the valve and permit a discharge of the contents of the cylinder.

In connection with the cylinder 10 there is employed a grapple comprising a metallic ring 25, which is disposed upon the lower end of the body 10 and held in place by set-screws 26. At diametrically opposite points of the ring are formed depending lugs 27, having broadened heads 28, and through the corresponding ends of these heads are passed rock-shafts 29 and 30, each of which is provided with a series of fingers 31, which are adapted to move toward each other as the shafts are rocked. To rock the shafts to move the teeth or fingers of one toward the fingers of the other, crank-arms 33 and 34 are attached to the rods or shafts, and with the free ends of these cranks are connected cords 35 and 36, which are in turn connected to a cord 37,



which when drawn upwardly moves the shafts, as stated. The cord 37 is connected to the cord 21, whereby when said cord 21 is drawn to raise the piston in the cylinder the grapple will be operated to grip any solid body that may lie between its fingers.

What is claimed is—

1. A device of the class described comprising a cylindrical body portion having a piston therein, an opening in the bottom of the cylinder and having an inwardly-opening valve, a rod connected with the piston and extending outwardly of the cylinder, a tripod slidably engaged with the rod and having hooks for engagement with the cylinder, a lifting-rod connected with the tripod and means for raising the piston in the cylinder.

2. A device of the class described comprising a cylinder having a valved opening in its bottom, a piston in the cylinder and having a rod extending exteriorly thereof, a tripod slidably engaged with the rod and having hooks, pins on the cylinder for engagement by the hooks, a lifting-rod connected with the tripod, a frame connected with the piston and a cord attached to the frame for moving it to raise the piston.

3. A device of the class described comprising a cylinder having a valved inlet-opening, a piston in the cylinder, means connected

with the piston for operating it, a grapple connected with the cylinder and an operating-cord connected to the grapple and to the piston-operating means for actuating the piston and grapple simultaneously.

4. A device of the class described comprising a cylinder having an inwardly-opening valve and an opening controlled thereby, means for raising the valve from its seat, a piston in the cylinder and provided with a rod, a tripod slidably engaged with the rod and provided with hooks, pins upon the cylinder for engagement by the hooks, a lifting-rod connected to the tripod, a frame connected with the piston, a cord connected to the frame for raising it to raise the piston, a ring disposed upon the bottom of the cylinder and having depending lugs, rock-shafts mounted in the lugs and having gripping-fingers, cranks for the rock-shafts and a cord attached to the cranks and to the cord connected with the frame, whereby the grapple and piston may be operated simultaneously.

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

GEORGE LACHEM.

Witnesses:

J. K. BAILEY,

STEPHEN H. FULLER.