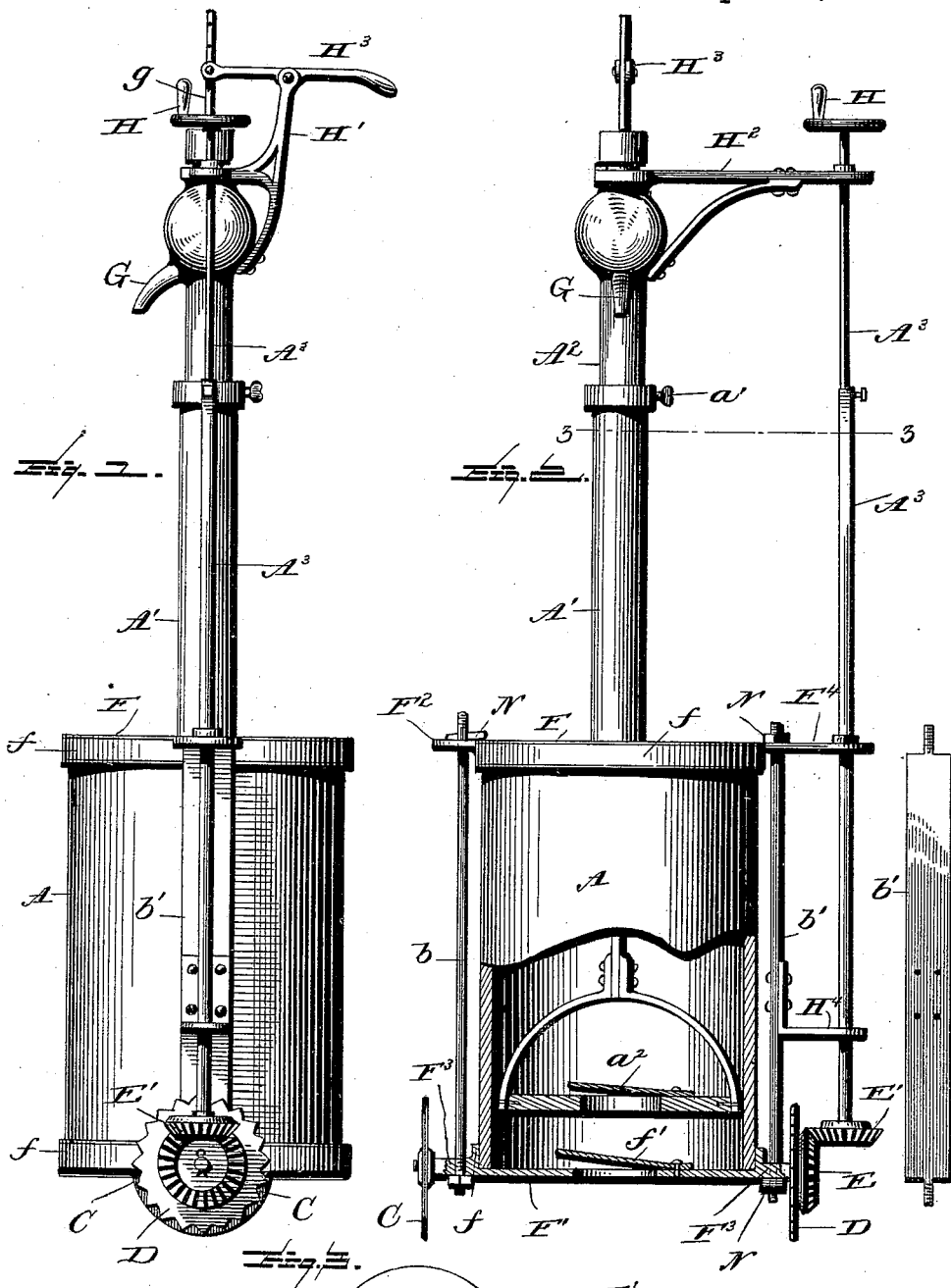


(No Model.)

J. W. HAWK.
CISTERN CLEANER.

No. 526,077.

Patented Sept. 18, 1894.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES WILLARD HAWK, OF WEBSTER CITY, IOWA.

CISTERN-CLEANER.

SPECIFICATION forming part of Letters Patent No. 526,077, dated September 18, 1894.

Application filed November 21, 1893. Serial No. 491,570. (No model.)

To all whom it may concern:

Be it known that I, JAMES WILLARD HAWK, a citizen of the United States, and a resident of Webster City, Hamilton county, State of Iowa, have invented certain new and useful Improvements in Cistern-Cleaners; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to cistern cleaners; and the object of the same is to provide an improved device for cleaning cisterns which will agitate the water only directly beneath the cleaner and can also be used as a pump, and which can be moved from point to point within the cistern with perfect ease.

To this end the invention consists in the device hereinafter more fully described and claimed, and as illustrated in the accompanying drawings, wherein—

Figure 1 is a side view of my improved device, showing the toothed or spur wheel and its gearing. Fig 2 is a front view of the same with the lower part of the cylinder in section to illustrate the interior mechanism; and this view also shows a detail of the flat tie-rod. Fig. 3 is a section on a reduced scale on the line 3—3 of Fig. 2.

Referring to the accompanying drawings, the letter A designates a cylinder having a top or cover F provided with lateral ears F² and F⁴, and a bottom F' provided with lateral ears F³. The top and bottom have flanges f adapted to fit over the outside of the cylinder, and in the bottom is a hole over which fits an ordinary flap valve f'. Said top and bottom are held secure by means of the ties b and b' the former of which is a rod and the latter a plate, as shown, with reduced and threaded ends. The extremities of these tie rods pass through apertures in the ears exterior of the cylinder and receive pins or nuts N. Rising from and secured to the top or cover F is the tube or pipe A', and telescoping therewith is another smaller pipe or tube A². These may be adjusted to any desired length by means of the set screw a'. The pipe A² has at its upper end a head provided with an ordinary discharge spout G, and secured to this head are two brackets H' H², one of which pivotally supports the handle or lever H³ while the

other extends radially from the head for a purpose to be described below. The lever H³ is adjustably secured in any suitable manner to the pump rod g which passes through the telescoping pipes or tubes A' A² into the cylinder A, where it is secured to a fork which supports a piston having an ordinary sucker valve a². The ears F³ of the bottom form stub-axles upon which are independently journaled the loose wheels C and D projecting below the lower end of the cylinder; and one of these wheels, D, is toothed and has a gear E on its hub.

A³ is a rod formed in two members telescopically connected by being square or splined together as shown, and adjustable in length in any suitable manner as by the set screw shown. This rod passes through and is journaled in the bracket H² above mentioned and extends downward through the large ear F⁴ of the top or cover of the cylinder A, and thence through an angle-iron H⁴ which is secured in any suitable manner to the flat tie rod b' preferably near its lower end. Said telescoping rod has secured to its lower end a gear E' meshing with the gear E on the hub of the toothed or spur wheel D; and the same is operated by means of a crank or handle H which is secured to the upper end of the rod A³.

The operation of my device is as follows: Having adjusted the pipe and rod to the desired length, the cleaner is lowered into a cistern, and the dirt or sediment directly beneath the cleaner is pumped out by means of the hand lever H³. To move the cleaner to another position in the cistern, the operator turns the crank or handle H which causes the gear E' to revolve and in turn rotates the toothed or spur wheel D, thus causing the cleaner to move bodily around the pivot formed by the smooth wheel C. Or, the operator can incline the telescoping pipe and shove or draw the device to the proper position within the cistern, after which it can be turned as on a pivot in the manner just described. The dirt can be removed in the same manner from the last spot, and so on until the whole cistern is cleaned; after which the cleaner may be used as an ordinary pump, or it can be removed for use in another cistern. It will be seen that the water is agitated only

directly beneath the cleaner so that the dirt is not stirred up at other points. After all the dirt has been removed, the use of the device as a pump will not, of course, stir up any sediment.

I do not limit myself to the precise construction, sizes, shapes, or materials; as a great variety of changes may be made without departing from the spirit of my invention.

10 What is claimed as new is—

1. In a cistern cleaner, the combination with an upright cylinder having a top and bottom; of stub axles formed by ears of said bottom, wheels journaled thereon and extending be-
15 low the base, one of said wheels being smooth and the other toothed, and means for turning said toothed wheel from a point remote from the cylinder, as and for the purpose set forth.

2. In a cistern cleaner, the combination with
20 a cylinder having a flanged top and bottom, ears projecting radially therefrom, tie rods passing through said ears exterior of the cylinder and connecting the top and bottom, stub axles formed by the ears of the bottom,
25 wheels journaled thereon and extending below the base, one of said wheels being smooth and the other toothed, and a gear on the hub of the latter; of an angle iron secured to one of the tie rods, a rod passing through and
30 journaled in one of the top ears and in said angle iron, a gear secured to said rod and meshing with the gear on the toothed wheel, and a handle on the rod near its upper end, as and for the purpose set forth.

35 3. In a cistern cleaner, the combination with a cylinder having a top and bottom, stub

axles formed by ears on said bottom and projecting radially therefrom, and wheels journaled independently thereon and extending below the bottom; of a pump within said cylinder, a pipe rising from the cylinder, two brackets secured to the head of said pipe one of which pivotally supports the pump-lever, a rod journaled in the other bracket and in one of the ears of the cylinder, and means for
45 connecting said rod with one of said wheels for turning the latter, substantially as described.

4. In a cistern cleaner, the combination with a cylinder having a top and bottom, ears projecting radially therefrom, stub axles formed by the ears of the bottom, wheels journaled thereon and extending below the base, one of said wheels being smooth and the other
50 toothed, a gear on the hub of the latter, a pump within the cylinder, telescoping pipes rising from the cylinder, and two brackets carried by the upper end of said pipes, one of which supports the pump-lever; of a telescoping rod passing through and journaled in
60 one bracket and one ear, a gear on said rod meshing with that on said toothed wheel, and a crank-handle carried by the upper end of the rod, all as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my signature on this the 15th day of
65 November, A. D. 1893.

JAMES WILLARD HAWK.

Witnesses:

GEORGE J. HAUSCHEN,
FRANCIS A. CONKLING.