

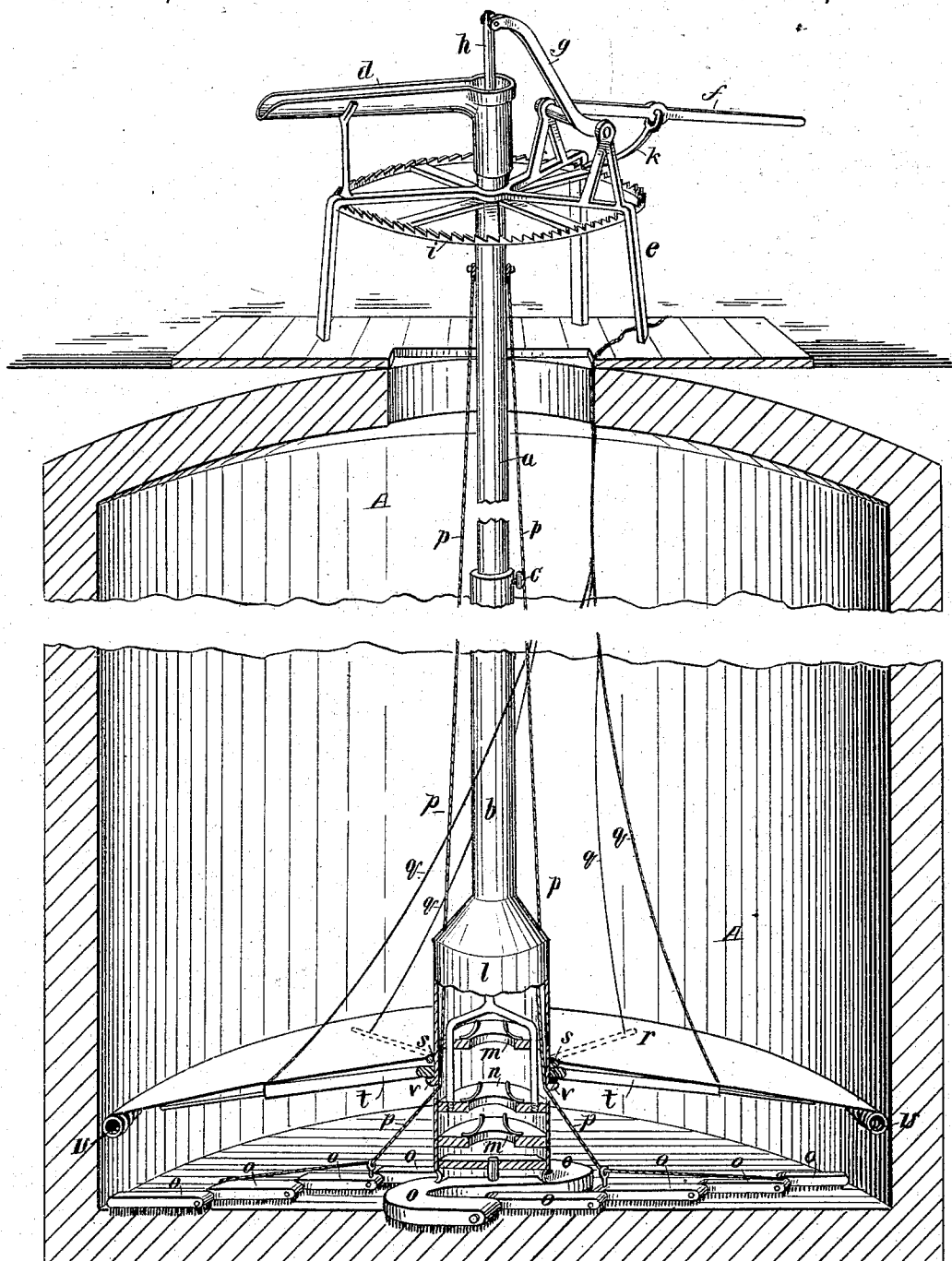
(No Model.)

W. M. PRATHER.

APPARATUS FOR CLEANING CISTERNS.

No. 270,118.

Patented Jan. 2, 1883.



WITNESSES:

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WILLIS M. PRATHER, OF KANSAS CITY, MISSOURI.

APPARATUS FOR CLEANING CISTERNS.

SPECIFICATION forming part of Letters Patent No. 270,118, dated January 2, 1883.

Application filed May 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIS M. PRATHER, of Kansas City, in the county of Jackson and State of Missouri, have invented a new and Improved Apparatus for Cleaning Cisterns, Reservoirs, and Wells, of which the following is a full, clear, and exact description.

It is well known that cisterns, wells, and other reservoirs of water collect sediment and other foreign matters rapidly, which pass in with the water-supply from the roofs of buildings, and form mud and slime at the bottoms of such wells and cisterns, so that the water is rendered unfit for use. The removal of such material is usually a work of considerable time, and generally requires the emptying of the well or cistern, which is objectionable, especially in situations where the water is wholly supplied by collecting rain-water.

The object of my invention is to furnish an apparatus by which wells and cisterns can be cleansed as often as required, and without necessitating the withdrawal of the water from the well.

To that end the invention consists in the apparatus hereinafter described and claimed.

Reference is to be had to the accompanying drawing, in which the apparatus is shown by a sectional elevation and as applied to use.

A represents an underground cistern of usual construction. *a b* are tubes of suitable size, and fitted one within the other, so as to form a continuous tube that may be lengthened or shortened, according to the depth of the well.

c is a set-screw by which the tubes are clamped after being adjusted.

On the upper end of the tube *a* is a spout, *d*, attached upon the tripod stand or frame *e*, by which the mechanism is supported upon the platform at the top of the well.

f is a lever or handle attached upon a rock-shaft that is fitted on the frame *e*, on which shaft an arm, *g*, connects to the pump-rod *h*.

i is a ratchet-wheel fixed upon the tube *a*, and engaged by the pawl *k* upon the lever *f*, so that as the lever is reciprocated for operation of the pump-rod the ratchet-wheel will be given an intermittent movement to rotate the tube and pump-barrel. This particular mechanism

for the operation of the pump may be varied, and instead of using the stand *e* the pump-lever may be pivoted directly upon the platform.

At the lower end of the tube *b* is the pump-barrel *l*, of greater diameter than the tube *b*, and fitted internally with upper and lower fixed valve-seats, *m m*, that are provided with suitable valves. The pump-rod *h* is forked within the barrel *l* to pass through the upper valve-seat *m*, and carries at its lower end the piston or plunger *n*, that is provided with a suitable valve. The valves will preferably be attached upon raised seats, so as to form a chamber or cavity for the collection of sand and gravel.

Upon the lower end of the barrel *l* is attached a brush or scraper, *o*, of S form, made in sections jointed together, so that they may be turned upward while the apparatus is being raised and lowered into the well. For raising the brush a rope (shown at *p*) is provided, and extends to the top of the well.

The barrel *l* is to be lowered to the bottom of the reservoir or cistern, and the hinged brush being also lowered to place, the pump is put in operation by the lever *f*, and the sediment and slime at the bottom of the cistern will be drawn into the barrel and raised to the discharge-spout *d*. At the same time, the pump-barrel being rotated by means of the pawl *k* and ratchet-wheel *i*, the S-shaped brush or scraper will act to carry the sand, gravel, and other matters from the outside to the middle, so as to crowd them upon and into the lower end of the barrel, thus insuring the thorough cleansing of the whole bottom. The water at the bottom of the valve will be drawn out without disturbance of the water, and to prevent any fouling of the water above the bottom of the pump-barrel a cover, *r*, of canvas, rubber cloth, or other flexible material, is attached to a ring, *s*, around the pump-barrel, and spread out to the sides of the well or cistern, where this cover is provided with a spiral spring, *u*, that fits the interior surface of the well.

For raising and lowering the cover *r* arms *t* are jointed to a ring, *v*, on the pump-barrel and extend beneath the cover. The ring *v* is supported on a flange, and ropes *q* pass from

the arms to the top of the well. When these ropes are drawn upon, the arms are raised and they carry the cover upward.

5 This apparatus is simple and efficient for its intended purpose. By its use wells and cisterns can be readily and thoroughly cleansed without any considerable waste of water.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

10 1. The apparatus for cleaning wells, cisterns, and reservoirs, consisting of the telescopic tubes *a b*, pump-barrel *l*, provided with valves, pump-rod *h*, plunger *n*, and operating-lever *f*, substantially as described, combined
15 for operation as set forth.

2. The lever *f*, pawl *k*, and ratchet-wheel *i*,

in combination with the tube *a* of the pump, substantially as described, for operation as set forth.

3. The brush or scraper *o*, in combination 20 with the pump-barrel *l*, substantially as and for the purposes set forth.

4. The adjustable covering *r*, of flexible material, in combination with the pump-barrel *l*, substantially as and for the purpose set forth. 25

5. The combination of pump-barrel *l*, flexible covering *r*, provided with spring *u*, and the pivoted arms *t*, substantially as described.

WILLIS M. PRATHER.

Witnesses:

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H. GANZ.