

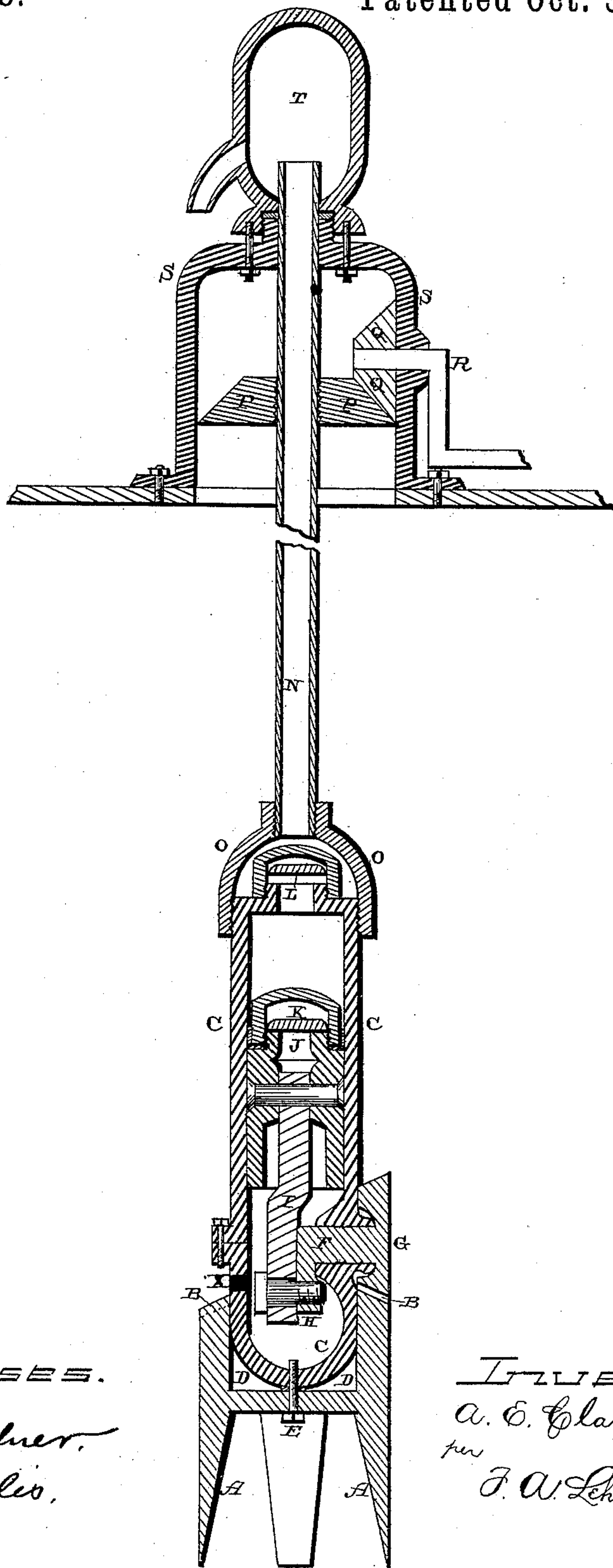
(No Model.)

A. E. CLARK.

PUMP.

No. 392,008.

Patented Oct. 30, 1888.



Witnesses.

L. J. Gardner,  
Edm. B. Ellis,

Inventor.

A. E. Clark,

per

J. A. Lehmann,

att'y.



# UNITED STATES PATENT OFFICE.

ALEXANDER EVANS CLARK, OF BUCKHOLTS, TEXAS.

## PUMP.

SPECIFICATION forming part of Letters Patent No. 392,008, dated October 30, 1888.

Application filed March 22, 1888. Serial No. 268,089. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER EVANS CLARK, of Buckholts, in the county of Milam and State of Texas, have invented certain new and useful Improvements in Pumps; and I do hereby 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 it, reference being had to the accompanying drawing, which forms a part of this specification.

My invention relates to an improvement in pumps; and it consists in the combination, with a suitable base or support which rests upon the bottom of the well and is provided with cogs upon its upper surface, of a rotating cylinder and delivery-pipe, a crank-shaft journaled in the cylinder and provided with a pinion upon its outer end, a connecting-rod at its inner one, and a vertically-moving piston, all of which will be more fully described hereinafter.

The object of my invention is to have the cylinder revolve, and thus operate, through suitable gears and a connecting-rod, a vertically-moving piston, by means of which the water is elevated.

The accompanying drawing represents a vertical section of a pump which embodies my invention.

A represents a suitable base or tripod, which rests upon the bottom of the well or cistern, and which is prevented from turning around by having its sharp-pointed feet catch in or upon the bottom of the well or cistern, so as to hold it stationary. This base has a suitable recess formed in its top, and formed around its top edge are a series of teeth or cogs, B. The lower end of the cylinder C is placed in the recess D in the top of the base A, and is loosely connected thereto by the bolt E. This bolt allows the cylinder to freely revolve, but prevents it from becoming detached from the base.

The cylinder C has its lower portion made in two parts, which are suitably bolted together, and upon its line of division is made a suitable opening, journal, or bearing, through which the horizontal shaft F is passed. Upon the outer end of this shaft F is formed or secured the beveled gear G, which meshes with the cogs B upon the upper edge of the base A.

Secured to the inner end of the shaft F is a crank, H, and connected to this crank is a connecting-rod, I, which is pivoted at its upper end to the valved piston J. The upper end of this rod I extends into an opening made in the piston J, and the water as the piston descends passes up around upon opposite sides of the upper end of the rod I and operates the valve K. The water is admitted into the cylinder through an opening, X, which may be made through its side, its bottom, or any other convenient point that may be preferred. Only one opening X is here shown; but there may be any desired number of them. From this cylinder the water is forced by the upward movement of the piston past the valve L in the upper end of the cylinder, on up through the discharge-pipe N, which is screwed into the casting O, which forms the upper end of the cylinder. Rigidly secured near the upper end of this pipe N is a beveled wheel, P, with which the pinion Q on the inner end of the crank-shaft R engages. The shaft R is journaled in suitable supports, S, upon the top of which the head or air-chamber T is bolted, and the upper end of the pipe N passes through the top of this support S and into the air-chamber T, as shown.

When the crank-shaft R is operated, the pinion Q communicates a rotary motion to the wheel P, delivery-pipe N, and the cylinder C, so as to cause them to revolve. As the cylinder revolves, the pinion G is given a rotary motion by engaging with the cogs B upon the upper end of the base A, and as this pinion G revolves, the crank upon the inner end of the shaft F causes the piston to reciprocate and raise the water. The support S is securely attached to the platform at the top of the well or cistern and raises the air-chamber T upward any suitable distance. As the pipe N revolves, it delivers the water into the chamber T; but its rotary motion is not communicated to any other part than the cylinder and its attachments. A suitable packing placed between the chamber T and the upper end of the support S forms a tight joint to prevent any leakage of water from the chamber T back into the well. Where only one piston is to be operated, the cylinder will be made of a corresponding size, and there will be but one pinion, G; but several pistons may be placed in

the cylinder, in which case each piston will be operated by a pinion of its own.

Having thus described my invention, I claim—

5 1. The combination of a stationary base provided with teeth, a rotary cylinder, a crank journaled therein and provided with a pinion at its outer end to engage with the teeth upon the base, a connecting-rod, a reciprocating  
10 valved piston, a suitable valve placed in the cylinder, and the rotating delivery-pipe, to which the operating mechanism is applied, so as to cause it to revolve, substantially as shown.

15 2. The combination of the stationary base provided with feet or projections to catch in

the bottom of the well or cistern, and having a recess at its upper end, and teeth or cogs upon its upper edge, with a rotating cylinder and stand-pipe, a crank-shaft passing through the side of the cylinder and provided at its outer end with a gear which meshes with the teeth upon the top of the base, a connecting-rod, and piston, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALEXANDER EVANS CLARK.

Witnesses:

R. H. JOHNSON,

J. C. WATSON.