No. 625,023. Patented May 16, 1899.

J. A. DOLLAR.

PUMP.

(Application filed Aug. 13, 1898.)

(No Model.)

Fig. 1.

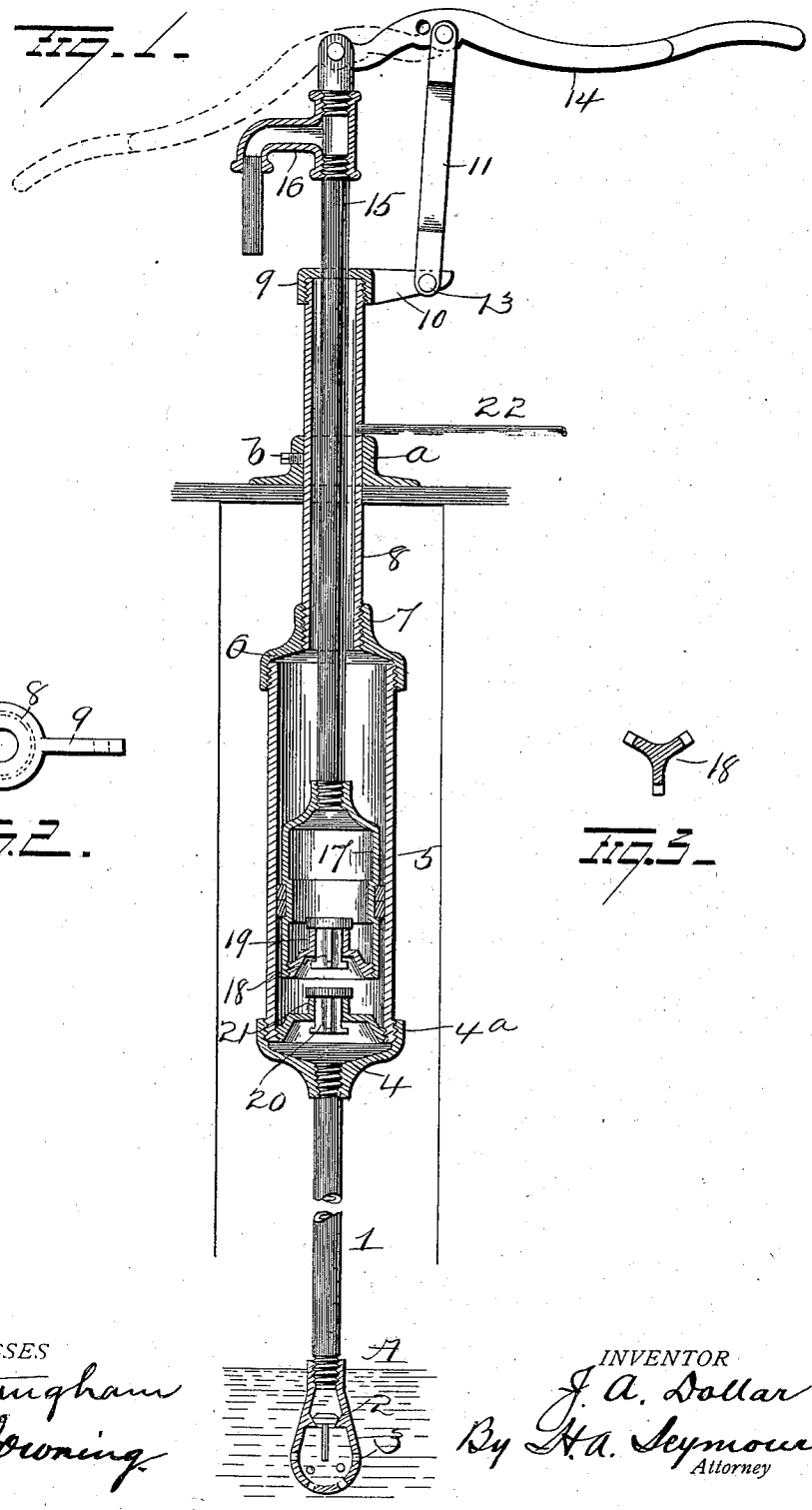


Fig. 2.

Fig. 3.

WITNESSES

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JOSEOPH A. DOLLAR, OF CAMILLA, GEORGIA.

PUMP.

SPECIFICATION forming part of Letters Patent No. 625,023, dated May 16, 1899.

Application filed August 13, 1898. Serial No. 688,474. (No model.)

To all whom it may concern:

Be it known that I, JOSEOPH A. DOLLAR, a resident of Camilla, in the county of Mitchell and State of Georgia, 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 appertains to make and use the same.

My invention relates to an improvement in pumps, the object of the invention being to produce a simple, durable, and free-acting pump for lifting and forcing water from wells, cisterns, and other sources of water-supply in which the pump is not submerged, but is placed a desired distance from the water-supply and connected therewith by a pipe.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in section of my improved pump, and Figs. 2 and 3 are views of details.

A represents any approved water-supply, and 1 is a pipe communicating therewith. The pipe 1 is provided on its lower end with a foot-valve 2 and also with a strainer 3, whereby to prevent the entrance of any solid matter into the pump. The upper end of the pipe 1 is externally screw-threaded to mesh with internal threads in a head 4. The head 4 is provided around its edge with an upwardly-extending flange 4^a, having screw-threads on its inner edge to mesh with external screw-threads on one end of a cylinder 5. The upper end of said cylinder 5 is provided with a cap 6, having an upwardly-extending internally-screw-threaded flange 7, adapted to mesh with threads on a pipe 8 and secure same in place. A suitable collar *a*, adjustably secured to the pipe 8 by means of a screw *b*, is provided whereby to support the pump in its proper position. A nut or collar 9 is secured to the upper end of the pipe 8 and is provided with a projection 10, on which is fulcrumed a link 11. The link 11 is preferably bifurcated at each end for the accommodation of the pivot-pin 13 at one end, whereby the link is connected with the projection 10. The other end of the link is pivotally connected to the pump-handle 14, and the latter is pivotally supported between its ends on a hollow plunger-rod 15, having a gooseneck outlet 16, as shown. The plunger-rod 15 extends downward through the pipe 8 into the cylinder 5 and is secured at its lower end to a hollow plunger 17. A valve 18 is seated in the lower portion of said plunger and is provided with the cage 19, as shown. A valve 20 is provided at the upper end of pipe 1 where it enters the cylinder 5, and said valve is provided with the cage 21, as shown. At the top of the pump a small discharge-pipe 22 is placed to carry off the water which collects around the piston at top of pump.

The operation of the pump is as follows: When the pump-handle 14 is raised, it will raise the plunger 17, thus closing the valve 18 and opening the valve 20 and drawing water into the cylinder 5. When the handle is forced downward, the valve 20 will be closed and the valve 18 opened and the water will be forced up through the hollow plunger 15 and out through the gooseneck 16. Water is not allowed to back into the well, but escapes at the top of the pump through the small pipe 22, thus avoiding the disagreeable iron taste in the water, such as occurs when the water is allowed to leak back into the well.

Various slight changes might be resorted to in the general arrangement and construction of parts set forth without departing from the spirit and scope of my invention, and hence I would have it understood that I do not wish to limit myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In a pump, the combination with a cylinder and a collar, of a pipe secured at its lower end to the upper end of cylinder and passing upwardly through said collar, a fastening device for fixing the pipe in said collar to adjustably suspend the cylinder in a well-hole above the water therein, a pipe communicating with the lower end of the cylinder and adapted to receive water from the well, a valve in the bottom of the cylinder, a hollow plunger in the cylinder, a valve in said

plunger, a hollow plunger-rod secured to and communicating with said plunger and passing freely through said fixed pipe, a spout communicating with the hollow plunger, and a lever for moving the plunger within the cylinder.

2. In a pump, the combination of a cylinder, a depending pipe communicating with the bottom thereof, a pipe secured to the top of the cylinder, a supporting device to which said last-mentioned pipe is adjustably secured at a point between its ends, a lever having a pivotal connection with the upper end of said last-mentioned pipe, a valve in the bottom of the cylinder, a hollow plunger in the cylinder, a hollow plunger-rod secured to and communicating with said plunger and passing loosely through and above said last-mentioned pipe and pivotally connected to said lever and a spout communicating with said hollow plunger-rod.

3. In a pump, the combination with a cylinder having a valve in its bottom, of a depending pipe communicating with the cylinder, an upwardly-projecting fixed pipe also communicating with the cylinder and adapted to project above the top of the well-hole, means for supporting said upwardly-projecting pipe, so as to suspend the cylinder in the well above the water therein, a cylinder attached thereto, a cap on said pipe, a hollow plunger-rod passing through said pipe and the cap thereon, a hollow valved plunger within the cylinder and secured to said hollow plunger-rod, and an exhaust-pipe communicating with said upwardly-projecting pipe at a point above the support thereof to prevent water from leaking back into the well, substantially as set forth.

4. In a pump, the combination with a cylinder adapted to enter a well-hole, a pipe communicating with said cylinder and adapted to project above the top of the well-hole, a support for said pipe and cylinder, of a pipe communicating with said cylinder and depending therefrom, a strainer at the lower end of said depending pipe, a valve in said strainer, a valve at the upper end of said depending pipe, a hollow valved plunger in the cylinder, a hollow plunger-rod secured to the plunger and projecting through the upwardly-projecting pipe, and means for operating said plunger-rod and plunger whereby to force water through the same, and a spout on said plunger-rod, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOSEOPH A. DOLLAR.

Witnesses:
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A. G. STEWART.