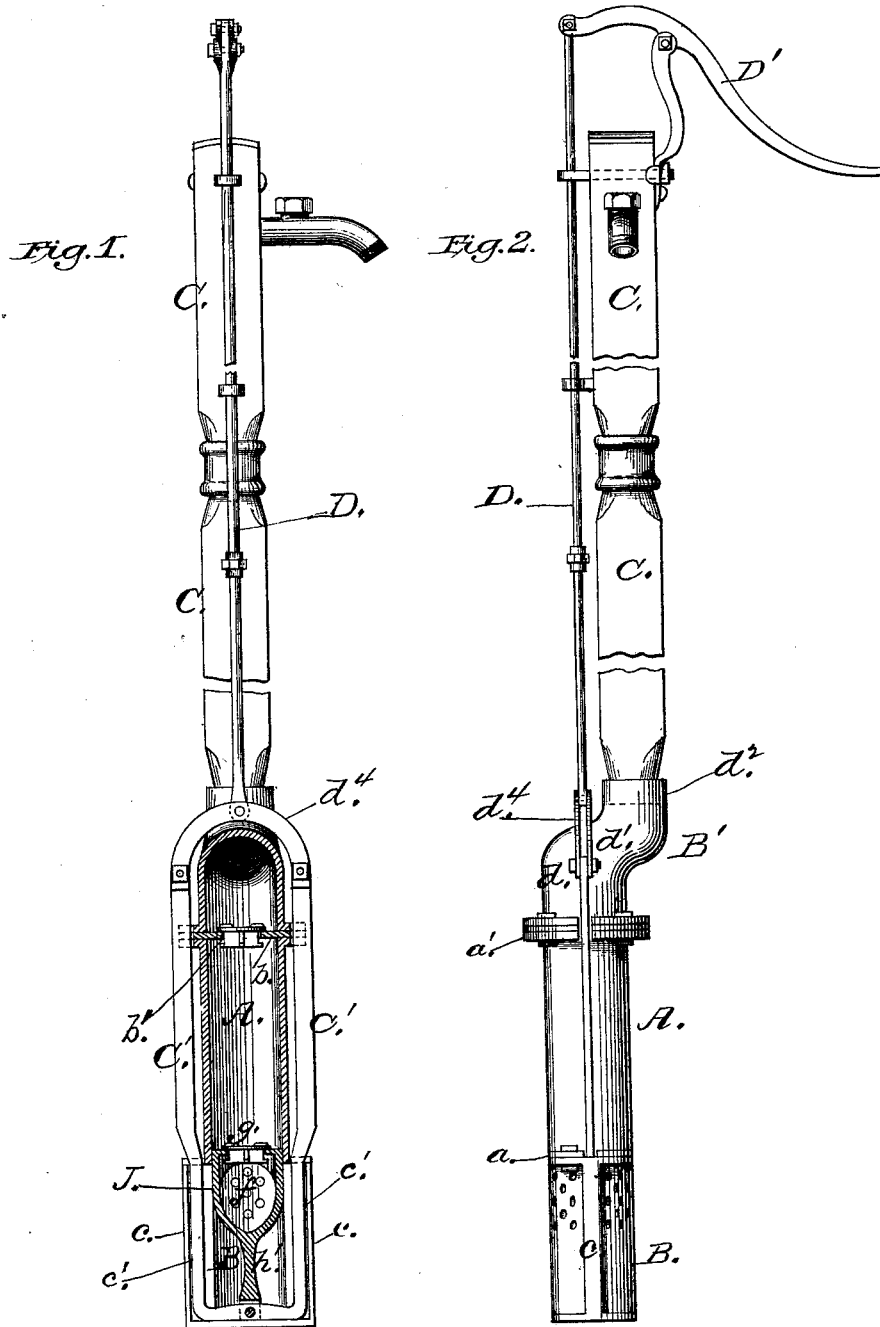


D. C. MONTGOMERY..
Pump.

No. 220,858.

Patented Oct. 21, 1879.



WITNESSES
John A. Lewis.
Frank J. Mass.

INVENTOR
D. C. Montgomery,
by E. W. Anderson
his ATTORNEY

UNITED STATES PATENT OFFICE.

DAVID C. MONTGOMERY, OF ST. JOSEPH, MISSOURI.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 220,858, dated October 21, 1879; application filed September 6, 1879.

To all whom it may concern:

Beit known that I, DAVID C. MONTGOMERY, of St. Joseph, in the county of Buchanan and State of Missouri, have invented a new and valuable Improvement in Pumps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my improved pump, and Fig. 2 is a side view of the same.

This invention has relation to improvements in submerged pumps.

The object of the invention is to improve this class of pumps generally, but more especially to devise means for dispensing with piston-packings, which, from their liability to leak when under water, are objectionable.

The nature of the invention will be fully explained hereinafter.

In the annexed drawings, the letter A designates the barrel of the pump, having at its lower and upper ends, respectively, the flanges *a* and *a'*, to which are secured the corresponding flanged ends of the strainer B and a double elbow-pipe, B', into the open end of which are inserted the coupled wooden sections C, leading to the surface. Between the barrel and lower end of the elbow is clamped a seat, *b*, having an upwardly-opening valve, *b'*.

The strainer B is a closed cylindrical vessel closed at bottom and provided at its middle upper half with perforations. It is provided on opposite sides with ribs *c*, in which are formed grooves *c'*, extending up through the flange-joints of the strainer cylinder and barrel, the object of which will be explained hereinafter.

The elbow has a vertical part, *d*, a horizontal part, *d'*, and a second vertical part, *d''*, the object being to throw the part *d''* out of line with the longitudinal axis of the barrel.

C' indicates a U-shaped bail, the lower portion of which is received in the grooves or guides *c'*, and corresponds in length therewith. The legs of the bail extend above the

barrel through the joint-flanges aforesaid, being slightly spread for the purpose above the strainer, and their upper ends are connected together above the horizontal part of the elbow by a strong arched brace, *d''*, to the apex of which is secured a guided endwise-movable rod, D, actuated to reciprocate endwise by means of a lever-handle, D', pivoted to the top section, C, above the ground.

Rod D may be composed of a number of coupled sections, and is guided in its up-and-down movements by suitable eyebolts secured to the wooden sections aforesaid.

J indicates an open seat having in its upper end, above the openings *f* in its sides, an upwardly-opening valve, *g*. This seat fits snugly in the lower end of the barrel, extends down into the strainer, and is connected to the lower end of the bail by a stem, *h'*. When the bail is at its lowest point of depression—that is, nearly in contact with the bottom of the strainer—the upper end of the plunger J *g'* still remains within the lower end of the barrel, and as it forms a tight joint therewith water can only reach the said barrel through the openings in the sides of the seat or valve-carrier and through the valve *g*.

By operating the handle water will be raised in the ordinary manner, and discharged through the spout.

It will be observed that the pump above described needs no stuffing-boxes or other like devices, but yet works perfectly.

What I claim as new, and desire to secure by Letters Patent, is—

In a pump, the combination, with the barrel A, having the upwardly-opening valve *b'*, of the double-elbow pipe B', the strainer B, having inside vertical grooves, *c'*, the bail C', working endwise in said grooves and carrying the plunger J *g'*, the arched brace *d''*, and lever D', combined, arranged, and operating as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

DAVID C. MONTGOMERY.

Witnesses:

THOMAS J. HOWARD,
DAVID E. BALLARD.