J. J. FINNEY.
Force-Pump.

No. 217,357. Patented July 8, 1879.

Fig. 1.

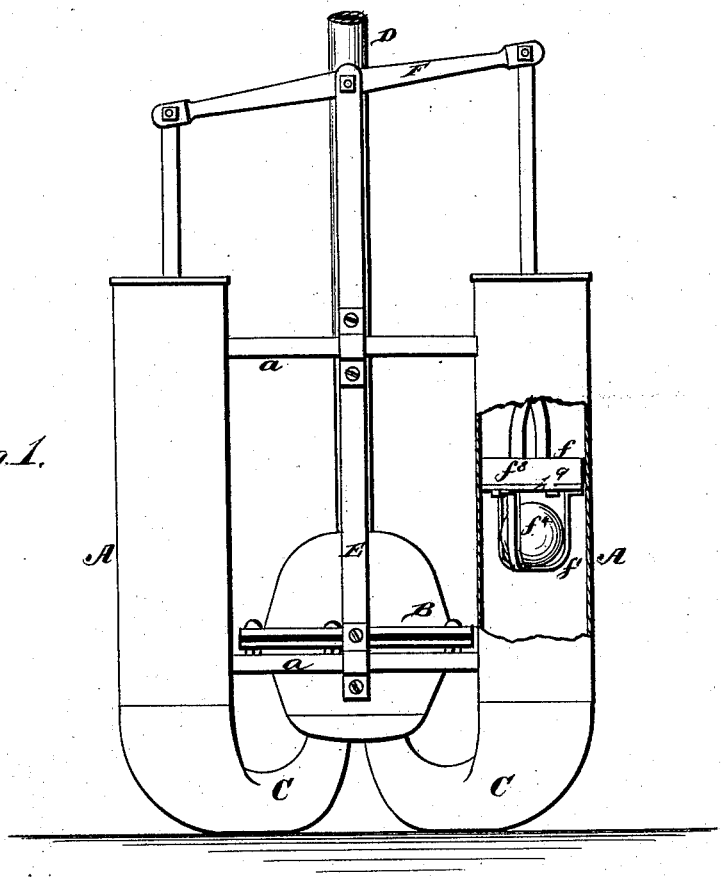
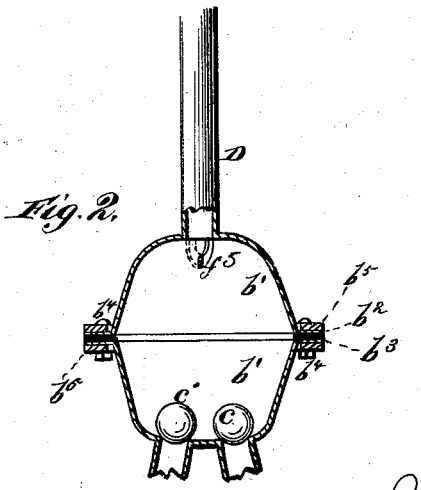


Fig. 2.



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JAMES J. FINNEY, OF LAMPASAS CITY, TEXAS.

IMPROVEMENT IN FORCE-PUMPS.

Specification forming part of Letters Patent No. **217,357**, dated July 8, 1879; application filed May 10, 1879.

To all whom it may concern:

Be it known that I, JAMES J. FINNEY, of Lampasas city, in the county of Lampasas and State of Texas, have invented certain new and useful Improvements in the Art of Raising Water by Means of a Double-Acting Submerged Force-Pump; 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 side elevation, partly in section; and Fig. 2 is a sectional detail view.

My invention relates to that class of force-pumps which are to be submerged and are double-acting; and it consists in the construction and arrangements of the parts, as the same will more fully herein appear.

A are the cylinders of the pump, connected by the ties *a*. B is the water-chamber, constructed spherical and formed of two hemispheres, b^1 b^1, provided with flanges b^2, and packing b^3, and they are attached by means of the bolts b^4 and rings b^5 b^6. C are curved cone-shaped pipes, connecting the cylinders of the pump with the water-chamber. The large ends of these pipes are equal in diameter with the cylinders, and the other ends enter the bottom of the water-chamber B. The check-valve of each of these pipes C is located at the end of each of them, which is flush with the inside of the chamber; and it consists in a metallic ball or sphere, *c*, and so constructed and arranged, in connection with the concave bottom of the chamber, that unless operated upon by some force they will close the pipes.

D is a discharge-pipe, extending from the spherical or dome-shaped upper part of the water-chamber.

The standard E for the walking-beam of the pump is attached to and supported by the ties *a*.

The walking-beam F is operated by power, and actuates the two plungers *f f*. These plungers are provided with rubber spheres f^4, serving as valves, retained in position by the baskets f^1 f^1, which are secured to the bulb b^9 of the plunger, and the packing f^3 being interposed between the baskets and bulbs, and retained in position by the bolts that retain the baskets. There is also a basket, f^5, located in the water-chamber, extending downward over the opening of the discharge-pipe D, to prevent the ball-valves from being forced into the discharge-pipe by the outflowing water.

I am aware that submerged pumps are not broadly new, and I do not broadly claim them.

What I claim is—

In a submerged double-acting force-pump, the two cylinders A, united by the ties *a*, in combination with the two curved pipes C and the water-chamber B, formed of two hemispheres and provided with two ball-valves, the plungers ff^1, provided with the ball-valves f^4, basket f^1 f^1, and packing f^3, formed, constructed, and operating as and for the purposes substantially as set forth.

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

JAMES J. FINNEY.

Witnesses:

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T. H. HAYNIE.