W. TETER.

Double-Acting Pump.

No. 197,804 Patented Dec. 4, 1877.

Fig. 1.

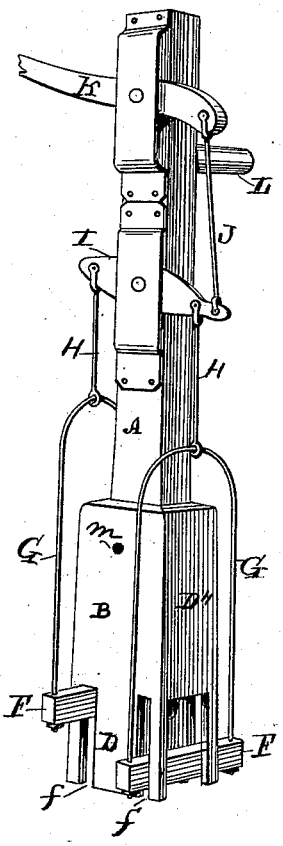


Fig. 2.

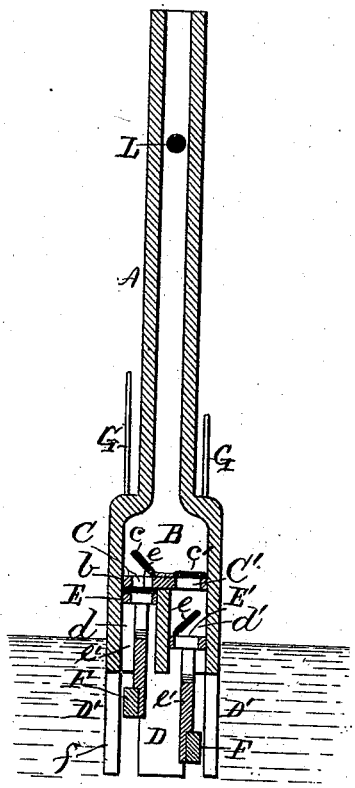
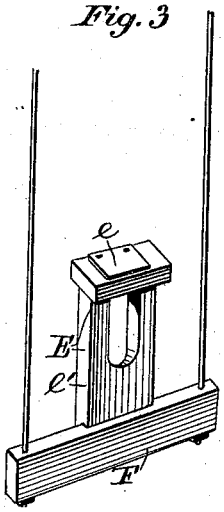


Fig. 3



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WASHINGTON TETER, OF FLINT RIDGE, KANSAS.

IMPROVEMENT IN DOUBLE-ACTING PUMPS.

Specification forming part of Letters Patent No. **197,804**, dated December 4, 1877; application filed October 15, 1877.

To all whom it may concern:

Be it known that I, WASHINGTON TETER, of Flint Ridge, in the county of Greenwood and State of Kansas, have invented certain new and useful Improvements in Pumps; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in double-acting pumps; and the invention consists in the peculiar construction and combination of parts hereinafter fully described and set forth in the claims hereto annexed.

Figure 1 is a perspective view of a pump embodying my invention. Fig. 2 is a vertical sectional view. Fig. 3 is a detailed perspective view.

Referring to the parts by letters, A represents the pump-stock and tubing of any ordinary construction. B is an enlarged chamber at the lower end of the tubing A, and has a bottom, *b*, with two openings, C C′, each provided with an upwardly-opening valve *c c′*. Beneath the chamber B is another chamber, D, divided into two compartments, *d d′*, the one *d* communicating with the chamber B through the opening *c*, and the other through the opening *c′*. Two sides, D′, of the chamber D are extended downward below the other sides D″, for purposes hereinafter described.

E E′ are pistons (see Fig. 3) in the chambers *d d′* respectively. Each piston E E′ is hollow, and provided with a valve, *e*, on its upper end, and is supported on a stem, *e′*. To the lower end of each stem *e′* is secured a cross-head, F, the ends of which extend outward through guide-slots *f f* in the extended sides D′. Each cross-head F has a yoke, G, attached to its ends, exterior to the pump-tubing, and the upper ends of the yokes G are connected by rods H to the two ends of the rocking bar I, which is pivoted centrally to the tube A. One end of the bar I is connected by a rod, J, to the handle or brake K. L is a discharge-spout, and *m* is a small opening into or just above the chamber C.

In operation, the chamber D is submerged, as shown at Fig. 2, and the water, entering below the shorter sides of said chamber, will be forced, alternately, by the pistons E E′ into the chamber C, and thence upward to the discharge-spout.

The opening *m* being below frost will allow the water to escape, and prevent freezing when the pump is not in use.

The tubing and stock and valves and pistons may be constructed of any material desired; and, as the pump works well when the pistons E E′ do not fit their chambers closely, it is evident that they will not become inoperative when worn, and may be made to fit loosely to render them easily operated.

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

1. The pistons E E′, having stems *e′* and heads F, arranged to operate with submerged chambers *d d′*, chamber C, valves *c c′*, and pump-stock A, substantially as described, and for the purpose specified.

2. The pistons E E′, having stems *e′* and cross-heads F, which extend through guide-slots *f* in the sides D′, combined with the valved chamber C and chambers *d d′*, substantially as and for the purposes specified.

3. The pistons E E′, stems *e′*, cross-heads F, yokes G, rods H J, rock-bar I, and handle K, combined with the chambers E E′ C and tube A, substantially as described, and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of three witnesses this 1st day of October, A. D. 1877.

WASHINGTON TETER.

Witnesses:

A. L. L. HAMILTON,
THOMAS H. LIGGETT,
J. M. LIGGETT.