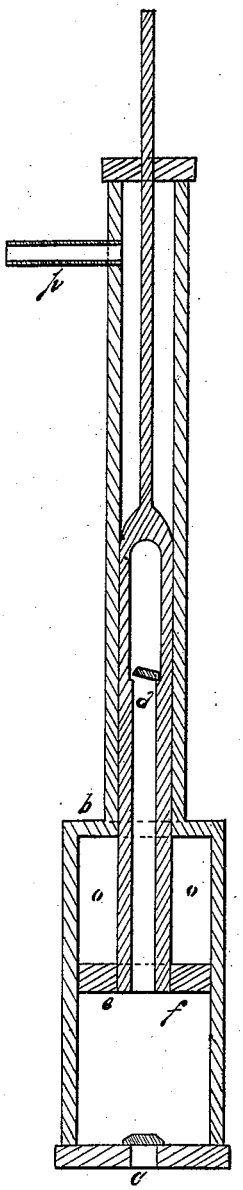
W. M. Wheeler,

Pump Lift,

No. 2,097. Patented May 15, 1841.



UNITED STATES PATENT OFFICE.

WILLIAM M. WHEELER, OF LIBERTY, MISSOURI.

PUMP.

Specification of Letters Patent No. 2,097, dated May 15, 1841.

To all whom it may concern:

Be it known that I, WILLIAM M. WHEELER, of Liberty, Clay county, State of Missouri, have invented a new and useful Improvement in the Construction of Pumps; and I do hereby declare that the following is a full, clear, and accurate description thereof.

a b c, as shown in the accompanying drawings, is the body, or barrel of the pump, which, inside, may be round or square, and of any size and proportions to suit the purpose. If we suppose that part of the barrel between *a* and *b* to be two inches square on the inside, it will contain four cubic meters of water, and if the larger part of the barrel between *b* and the lower valve *c*, be three inches square inside, it will contain nine cubic inches of water, or more than double the quantity of the upper and smaller part of the barrel, in every inch of its length.

d e f is a hollow piston, the upper part being two inches square to fit that part of the barrel and the lower part *e f* being three inches square corresponding with the enlarged size of the barrel between *b* and *c;* the piston requires packing at both ends. If, when thus constructed, the piston is drawn upward until the enlarged part *e f* is nearly at *b*, the water resting upon it is raised and discharged as in the common lifting pump. When the piston is forced downward a vacuum is formed in the space *o o*, the water which filled the space *o o* in the lower barrel being forced by the descending piston, or plunger, to escape through the valve *d* into the upper part of the barrel, and as the smaller part of the barrel is at all times full of water, the water thus forced up from below the plunger must flow out at the discharging pipe *p*.

The enlarged part of *d e f*, fitting the enlargement of the barrel between *b* and *c*, is that which I shall call the plunger, and the smaller part, extending into the smaller part of the barrel, having a valve opening upward at *d*, may be denominated a piston because in its upward motion its action is like the lifting pump, and in its descent it has the effect of a forcing pump, combining the principles of both in one machine.

What I claim as my invention and desire to secure by Letters Patent is—

Constructing the barrel with an enlargement below and having a plunger with an aperture in its center, adapted to said enlargement, in combination with a hollow piston, or stem, attached to said plunger, and passing up through a portion of the smaller diameter of the pump barrel, having a valve at its upper end to close the aperture in it, through which the water mounts on the descent of the plunger, by which arrangement the apparatus is constituted a lifting as well as a forcing pump; in other words, what I claim is, constructing the apparatus in such a manner, that, on every descent of the piston rod, a vacuum, or space containing no water, is formed in the pump above the plunger, the object of which is, to admit a sufficient quantity of water, on every ascent of the piston rod, to keep a constant stream flowing at the discharging pipe, all as herein set forth.

WM. M. WHEELER.

Witnesses:

JOHN BOMBARGER,

CHRISTFER BOMBARGER.