

Patented Mar. 26, 1867

Witnesses:
Thos A Connolly
Thomas J. Parker.

Inventor:
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- A. B. Smith
By their atty.
J. S. Brown.

United States Patent Office.

ELI FLANEGIN AND A. B. SMITH, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 63,235, dated March 26, 1867.

IMPROVEMENT IN PUMPS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, ELI FLANEGIN and A. B. SMITH, of Pittsburg, in the county of Allegheny, and State of Pennsylvania, have invented an improved Pendulum Pump; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a top view of our improved pump.

Figure 2, a side elevation thereof, the position of a well, also, being shown in connection with the same.

Like letters designate corresponding parts in both figures.

Letter A indicates the pump-frame; B, the spring, or other moving power; C, the clock-work or gearing; D, a well; G, the pump-tube; H, the regulating pendulum; and I the lever which operates the pump-piston, through the connecting-rod *i*. The principal difficulty in working the pump lies in the balancing of the lever I, as the height of the water *x* varies in the well. The object of our invention is to obviate this difficulty. For this purpose we employ a counter-weight, L, on the lever, and so arrange it as to move it out or in, as the water lowers or rises in the well, at just the proper rate to constantly counterbalance the varying weight of water in the pump. To effect this the weight L is supported on a bar, M, which slides on the top of the lever I. There is a rack, *m*, on the under side of this bar, which gears into a pinion, *n*, on the shaft of a pulley, N. On this pulley or drum a cord, *p*, is wound, said cord extending down into the well and terminating in a floating weight, P. Another cord, *r*, is wound round the pulley N in the opposite direction, and has a counter-weight, Q, only sufficient to move the bar M and weight L inward on the lever I, when the floating weight P is raised by the water; but when the water lowers the weight P is sufficient to draw up the weight Q, and also move the bar M and weight L outward. Thus, by proportioning all the parts right, the floating weight P will regulate the position of the balance-weight L so as to adapt the lever I to all variations in the height of water in the well.

What we claim as our invention, and desire to secure by Letters Patent, is—

The floating weight P, counter-weight Q, pinion-pulley N, rack-bar M, and balance-weight L, arranged and operating together, substantially as and for the purpose herein specified.

The above specification of our improved pendulum pump signed by us this

day of July, 1866.

ELI FLANEGIN,
A. B. SMITH.

Witnesses:

LEONARD S. JOHNS,
JOHN D. McFADEN.