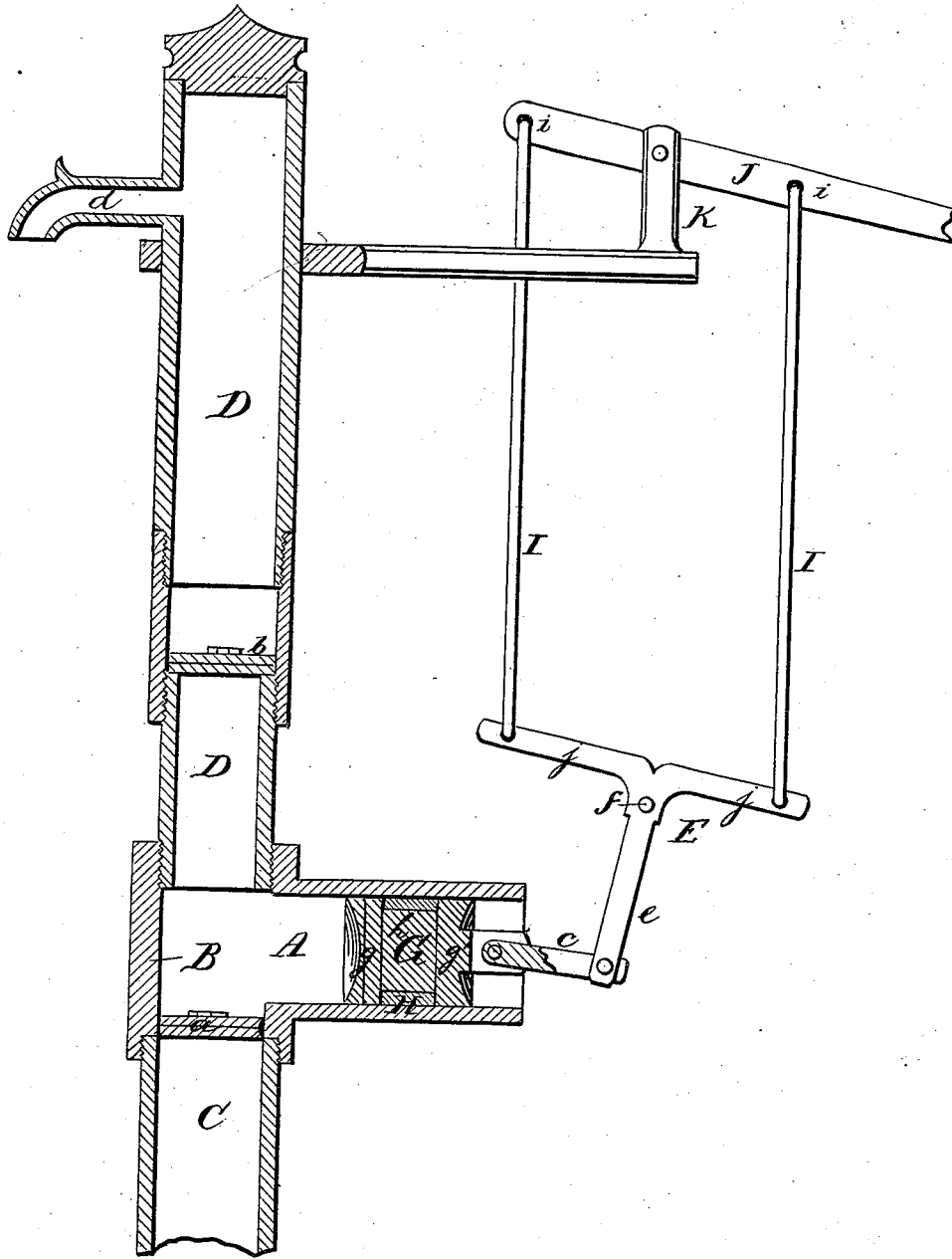


J. TALLENT.
Force-Pump.

No. 196,953.

Patented Nov. 6, 1877.



Attest
F. S. Blanchard, *Ret.*
August Petersohn

Inventor:
Jonathan Tallent
by Louis Baggerly
Attys.

UNITED STATES PATENT OFFICE.

JOHNATHAN TALLENT, OF RICEVILLE, TENNESSEE.

IMPROVEMENT IN FORCE-PUMPS.

Specification forming part of Letters Patent No. **196,953**, dated November 6, 1877; application filed August 13, 1877.

To all whom it may concern:

Be it known that I, JOHNATHAN TALLENT, of Riceville, in the county of McMinn and State of Tennessee, 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 drawing, which forms a part of this specification, and which represents a vertical cross-section of my invention.

This invention relates to certain improvements in pumps, and more especially to the improved construction of the piston, as I shall now proceed more fully to describe.

In the drawing, A is a cylinder, which is disposed horizontally at the top, bottom, or any intermediate point in the well, the latter being preferable, as, when arranged at the middle of the well, the columns of water above and below it are about equally balanced, thus requiring equal force in the up and down stroke of the operating lever or handle. Cylinder A has, at the end, a coupling, B, by which it is connected with two other cylinders or tubes, one of which, C, extends downward to the bottom of the well, and the other, D, upward above the curb, where it is provided with a spout, *d*. Tube C has, at or near the top, a valve, *a*, opening upward, and a similar valve, *b*, is arranged in tube D, at or near the lower end thereof.

G is the piston, which slides in cylinder A. It is connected, by a pivoted connecting-rod, *e*, with the lower arm *e* of a T-shaped lever, E, having its fulcrum at *f*, where it is pivoted to a supporting-bracket. Piston G consists of two heads, *g g'*, connected by a central rod, *h*, around which the packing H, consisting of leather or other suitable material, is wrapped.

The inner head *g* of the piston is made concave, in order to expel sand, (when used at the bottom of the well,) which might otherwise interfere with the operation of the valves *a b*.

To the ends of the arms *j j* of the T-shaped lever E are hinged or pivoted rods I I, the upper ends of which are similarly hinged or pivoted to the operating lever or handle J, which is pivoted to an upright, K, above the curb, the points *i i*, at which rods I I are hinged to lever J, being, of course, on different sides of the fulcrum thereof.

The operation of my improved pump will be readily understood from the foregoing description and by reference to the drawing hereto annexed. By operating the lever J, the piston G is reciprocated in cylinder A, thus alternately drawing water from the well through tube C, and forcing it out through tube D. If sand is raised with the water, it will accumulate in the concavity of piston-head *g*, and thus not interfere with the working of the valves.

The operating device, consisting of lever J, connecting-rods I, and T-shaped lever E, is simple, and not apt to get out of order, and, as great leverage may be had, the pump is easily operated.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The piston G, consisting of heads *g g'*, the former having concave face, connected by rod *h*, around which the packing H is wrapped, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHNATHAN TALLENT.

Witnesses:

WILLIAM M. DIXON,
GEORGE D. PETTITT.