L. & J. H. RODERICK.

Gearing for Operating Force-Pumps.

No. 220,175. Patented Sept. 30, 1879.

Fig. 1.

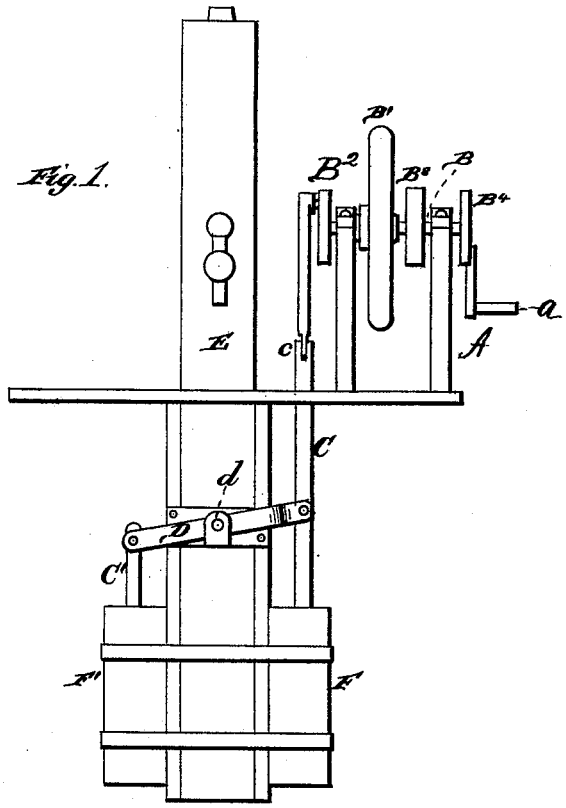
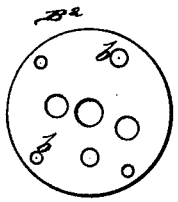


Fig. 2.



WITNESSES

Robt. Everett.

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UNITED STATES PATENT OFFICE.

LEVI RODERICK AND JAMES A. RODERICK, OF CHAUNCEY, ILLINOIS.

IMPROVEMENT IN GEARING FOR OPERATING FORCE-PUMPS.

Specification forming part of Letters Patent No. **220,175**, dated September 30, 1879; application filed November 30, 1878.

To all whom it may concern:

Be it known that we, LEVI RODERICK and JAMES A. RODERICK, of Chauncey, in the county of Lawrence and State of Illinois, have invented a new and valuable Improvement in Gearing for Operating Force-Pumps; and we do hereby declare that the following is a full, clear, and exact desccription 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 of our force-pump, and Fig. 2 is a plan view of the perforated disk.

Our invention relates to a double-acting force-pump; and the novelty consists in the construction and arrangement of parts, as will be more fully hereinafter set forth, and pointed out in the claim.

In carrying out our invention we employ a shaft carrying a fly-wheel, and a disk so perforated as to allow ready adjustment of a plunger, which works in a cylinder, as shown. This plunger is connected to another plunger, which operates in another cylinder, by a lever pivoted upon the pump-stock. The plungers, by this construction, are reciprocating, and the cylinders connect with the main stock.

The length of stroke may be adjusted at will, and the shaft operated by any suitable power.

The fly-wheel affords a steady motion, and the reciprocating plungers have proper valves, of any ordinary construction.

The fly-wheel may be of any ordinary size or construction that will serve the purpose.

Referring to the drawings, A represents a suitable framing, in which is journaled a shaft, B, carrying fly-wheel B^1, perforated disk B^2 *b*, perforated disk B^4, having crank *a*, adjustable to and from its center, and pulley B^3.

The pulley may be belted to proper machinery, or it may be perforated in such a manner as to allow a crank to be adjustably secured thereto, as shown.

C represents the main plunger, adjustably secured to the disk B^2 in any desired perforation *b*, and it is pivoted at *c*. This plunger C is secured to or connected with a plunger, C′, by a lever, D, which is pivoted to the stock E at *d*. The plungers C C′ operate in any ordinary manner in cylinders F F′, respectively, and these cylinders connect with the stock E.

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

The gearing for operating double-acting force-pumps, composed of the frame A, with the shaft B, carrying the fly-wheel B^1, perforated disk B^2 *b*, adjustably connected to the plunger-rod C, and the perforated disk B^4, having the adjustable crank *a*, substantially as and for the purpose set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

LEVI RODERICK.
JAMES ALLEN RODERICK.

Witnesses:
GREENE ROSBOROUGH,
JOSEPH R. ROSBOROUGH.