L. ADAMS.

Rotary-Engine.

No. 167,489. Patented Sept. 7, 1875.

Fig. 1.

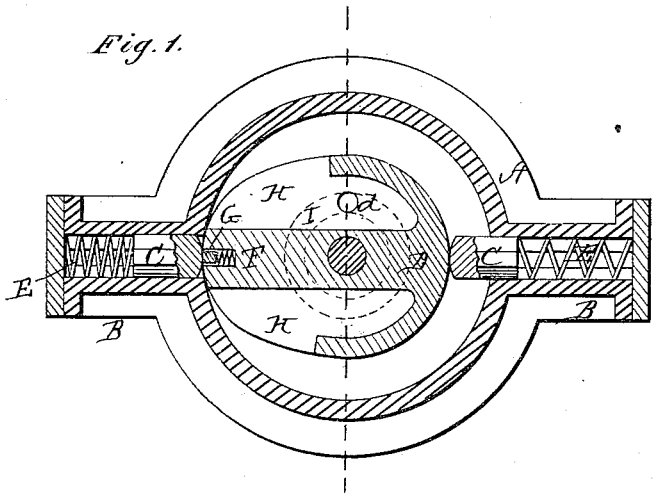
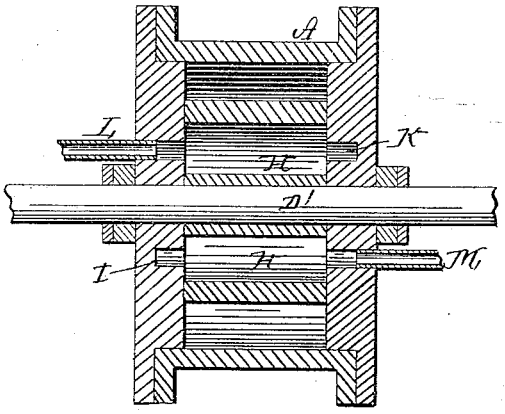


Fig. 2



WITNESSES

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UNITED STATES PATENT OFFICE.

LUTHER ADAMS, OF MATTOON, ILLINOIS.

IMPROVEMENT IN ROTARY ENGINES.

Specification forming part of Letters Patent No. **167,489**, dated September 7, 1875; application filed August 14, 1875.

To all whom it may concern:

Be it known that I, LUTHER ADAMS, of Mattoon, in the county of Coles and in the State of Illinois, have invented certain new and useful Improvements in Rotary Engines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

This invention relates to certain improvements in rotary pumps or engines; and it consists in a cylindrical casing provided with sliding valves on opposite sides, and containing a rotary piston consisting of an oval disk, mounted eccentrically upon a shaft or journal passing through the heads of the cylinder, said valve being cut from the periphery on its longest side, forming two chambers, separated by a partition extending to its periphery, the edge of which contains an elastic packing, one chamber communicating, by means of an opening through the side of the piston, with an annular groove in one head of the cylinder, and the other chamber in a similar manner with a like groove in the other head, the two grooves leading respectively from the induction and eduction ports, as hereinafter more fully set forth.

In the drawing, Figure 1 represents a longitudinal vertical section, and Fig. 2 a transverse vertical section, of my improved pump or engine.

The letter A represents a cylindrical casing, provided on opposite sides with chambers B B, containing sliding valves C, which are pressed forward toward the piston D by means of the coiled spring E. Said piston D is constructed in the form of an oval disk of suitable thickness, mounted eccentrically upon a shaft or journal, D′, extending through packed boxes in the heads of the cylinder. The longer end or side of the piston revolves in contact with the interior of the cylinder, and is chambered on opposite sides of its periphery, leaving a partition, F, which is provided with a spring-packing, G, at its edge. The chambers H H′ thus formed, are entirely separate from each other when the piston is inserted in the casing, the valves C C preventing any communication as the piston revolves. One chamber communicates by means of an opening, *d*, through the side of the valve with an annular groove, I, in one head of the cylinder, and the other with a similar groove, K, in the opposite head, which lead respectively to the induction and eductions ports L and M.

The apparatus thus constructed can be used either as a pump or engine, but is principally designed as a pump. The power is applied to either end of the shaft or journal, and, as the piston is rotated, takes the water in at one side into one chamber, and from thence to the other, finally discharging at the opposite side of the apparatus, as will be clearly perceived by reference to the drawing.

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

A rotary engine or pump, consisting of a cylindrical casing, provided with sliding valves, and having an oval rotary plunger adapted to move therein, mounted eccentrically upon a journal passing through the heads, and chambered, as described, said chambers opening respectively into annular grooves in the opposite heads, communicating with the induction and eduction ports, substantially as described and shown.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of July, 1875.

LUTHER ADAMS.

Witnesses:
R. B. RUTHERFORD,
D. H. MCFADDEN.