(No Model.) 2 Sheets—Sheet 1.

E. NEFF, W. ENDERS & J. B. FIESER.

ROTARY DOUBLE PISTON PUMP.

No. 275,844. Patented Apr. 17, 1883.

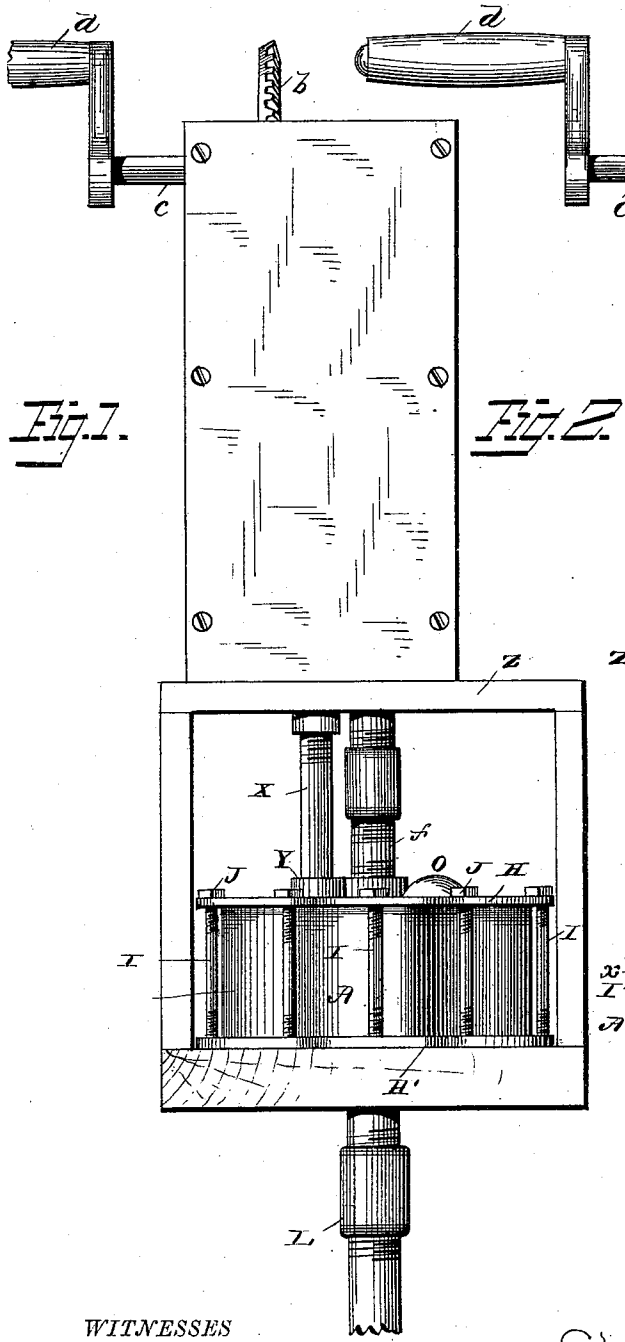


Fig. 1.

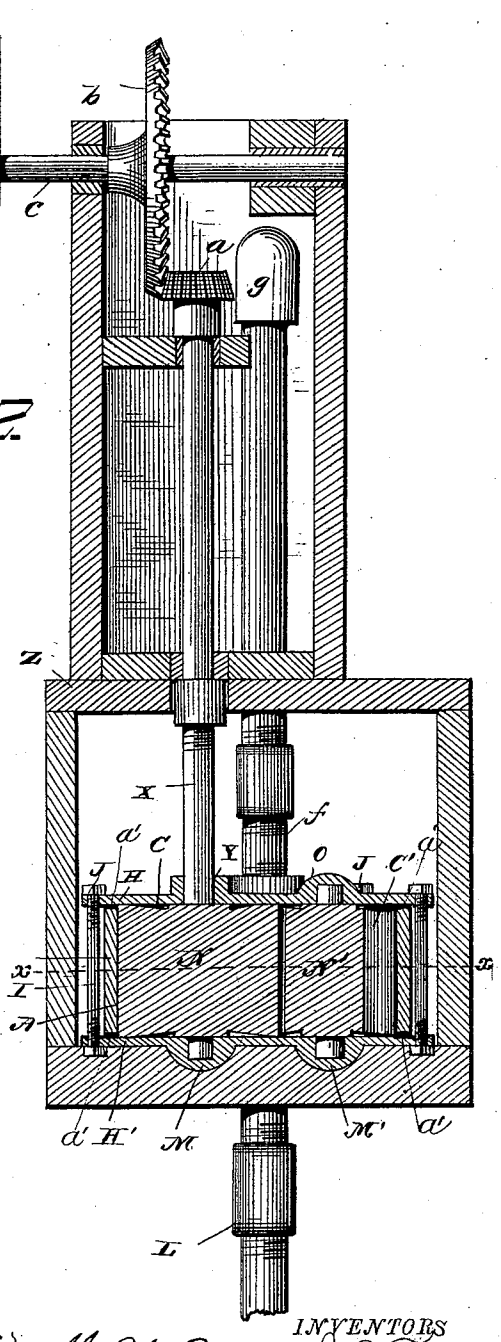


Fig. 2.

WITNESSES

Franck L. Durand

J. R. Littell

INVENTORS

E. Neff, W. Enders & J. B. Fieser,

by A. Snow & Co.

Attorneys.

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

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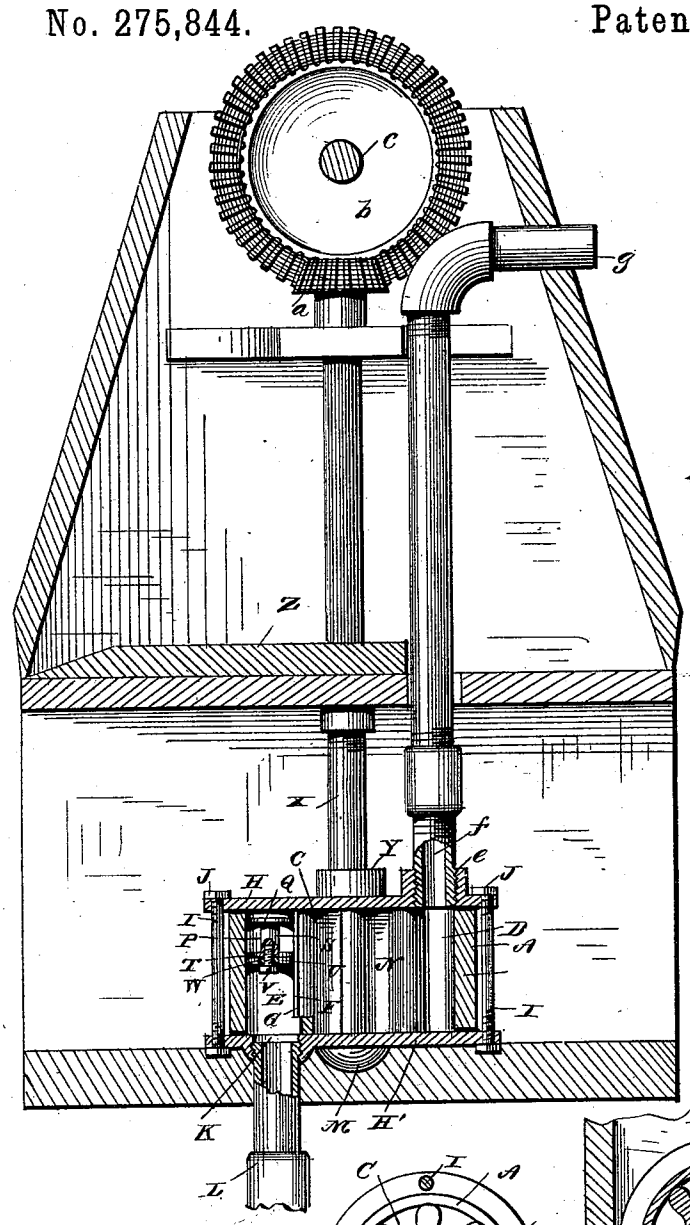


Fig. 3.

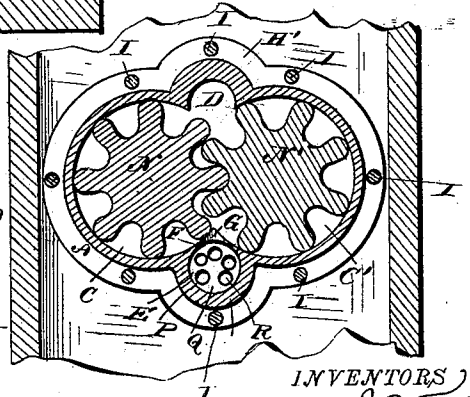


Fig. 5.

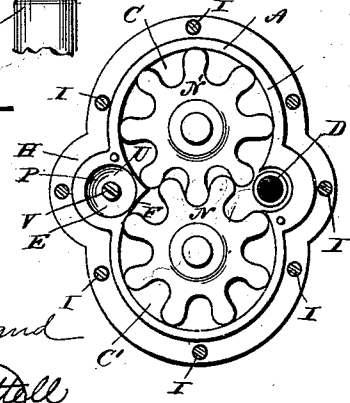


Fig. 4.

WITNESSES

Franck L. Durand

J. R. Littell,

INVENTORS

E. Neff, W. Enders, J. B. Fieser,

by A. D. Smith & Co.

Attorneys.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

ELIJAH NEFF, WILLIAM ENDERS, AND JOHN B. FIESER, OF ROCHESTER, INDIANA; SAID NEFF ASSIGNOR OF ONE-HALF HIS RIGHT TO MILO R. SMITH, OF SAME PLACE.

ROTARY DOUBLE PISTON PUMP.

SPECIFICATION forming part of Letters Patent No. 275,844, dated April 17, 1883.

Application filed November 3, 1882. (No model.)

To all whom it may concern:

Be it known that we, ELIJAH NEFF, WILLIAM ENDERS, and JOHN B. FIESER, citizens of the United States, residing at Rochester, in the county of Fulton and State of Indiana, have invented a new and useful Rotary Double Piston Pump, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to pumps of that class known as "rotary double piston pumps;" and it has for its object to provide a simple, efficient, and convenient pump that can be easily operated.

In the drawings, Figure 1 is a side view of my improved pump complete. Fig. 2 is a vertical longitudinal sectional view thereof. Fig. 3 is another vertical longitudinal sectional view. Fig. 4 is a view of the under side of the cylinder with the bottom plate removed. Fig. 5 is a horizontal sectional view on the line *x x*, Fig. 2.

Referring to the drawings, A designates the cylinder of the pump, having a suitable exteriorly-shaped casing divided into two interior nearly circular rotary piston-compartments, C C′, having at their point of juncture on one side a semi-cylindrical eduction-compartment, D, and at the same place, on the opposite side, a cylindrical induction-valve compartment or chamber, E. All of these compartments or chambers are vertically disposed, and the chambers C, C′, and D open into each other, while there is a partition, F, between chamber E and chambers C C′. This partition F is formed with a longitudinal slot, G.

H H′ are the top and bottom plates, respectively, of the cylinder A. These plates are secured firmly against the edges of the casing by connecting-bolts I and nuts J, suitable packing, *a′*, being of course interposed. The bottom plate, H′, is provided with an opening, K, at the induction-chamber E, from which opening extends down an induction-pipe, L. The said plate H′ is also provided with bearings M M′, respectively, for two suction intermeshing gear-wheels, N N′, working respectively in chambers C C′. These gear-wheels fit neatly inside their respective chambers, and the gear-wheel N′ in chamber C′ has a bearing, O, in the top plate, H.

In the induction-chamber E the induction-valve P works or slides vertically. This valve consists of a top disk or plate, Q, having perforations R, and united by a central stem or shank, S, with an imperforate bottom disk or plate, T. To the bottom plate, T, is secured an elastic or leather washer, U, by means of a screw, V, which enters a corresponding recess, W, in stem S.

From the top of gear-wheel N in chamber C extends an operating-rod, X, having a bearing, Y, in top plate, H, and extending up through the bottom of a suitable surface-casing, Z. This shaft or rod X is journaled in suitable bearings in casing Z, and is provided at its top with a pinion, *a*, by which it may be turned. Pinion *a* engages a gear-wheel, *b*, on a transverse crank-shaft, *c*, having an operating crank or handle, *d*.

e is an opening in the top plate, H, at the semi-cylindrical eduction-chamber D, and from this opening extends an exhaust-pipe, *f*. This pipe *f* passes up through the bottom of casing Z, and terminates in a spout, *g*.

In operation the water passes first into the induction-chamber, and is forced around to the eduction-chamber by the revolution of the suction gear-wheels when the pump is operated. It passes from the eduction-chamber into the pipe leading therefrom, and then out at the spout.

We claim as our invention—

1. The herein-described pump-cylinder, having the two rotary piston-chambers, and at their point of juncture at one side an eduction-chamber, and an induction-chamber at the opposite side, in combination with an induction-valve and intermeshing suction-gear, substantially as set forth.

2. The combination, with the cylinder having the two piston-chambers provided with intermeshing suction gear-wheels, and the eduction-chamber at one side, and the opposite cylindrical induction-chamber opening into the piston-chambers, of the sliding induction-valve comprising a perforated top disk, connecting-stem, and imperforate bottom disk, substantially as set forth.

3. The combination of the pump-cylinder having the two piston-chambers—the eduction-chamber at one side and the cylindrical in-

duction-chamber at the other—the bottom plate, the induction-pipe at the induction-chamber, the vertically-sliding induction-valve, the top plate, the exhaust-pipe leading from the eduction-chamber, and the intermeshing rotary gear-wheels operating in the piston-chambers, one of which wheels has an operating-rod, substantially as set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

ELIJAH NEFF.
WILLIAM ENDERS.
JOHN B. FIESER.

Witnesses:
JULIUS ROWLEY,
DAVID EDWARDS.