

(No Model.)

3 Sheets—Sheet 2.

F. WANKEL.
ROTARY FORCE PUMP.

No. 500,361.

Patented June 27, 1893.

Fig. 3.

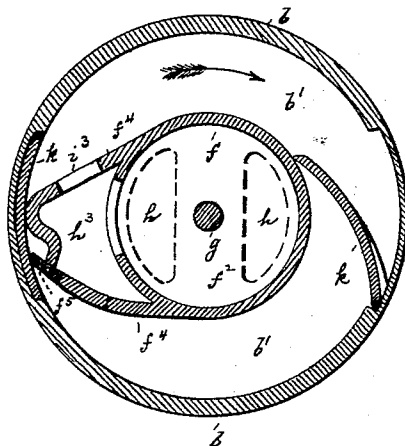


Fig. 5.

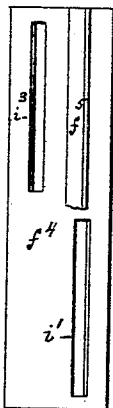
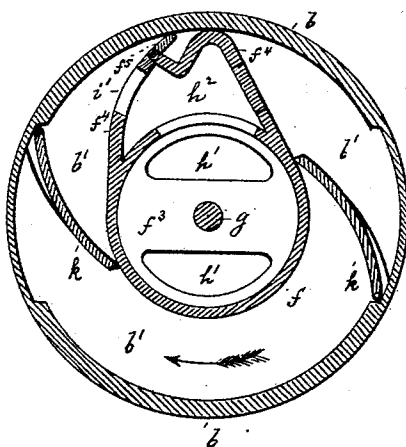


Fig. 4.



Witnesses:

A. Schehl.

Wm. Schulz.

Inventor:

F. Wankel, per
Roeder & Briesen
Attorneys.

(No Model.)

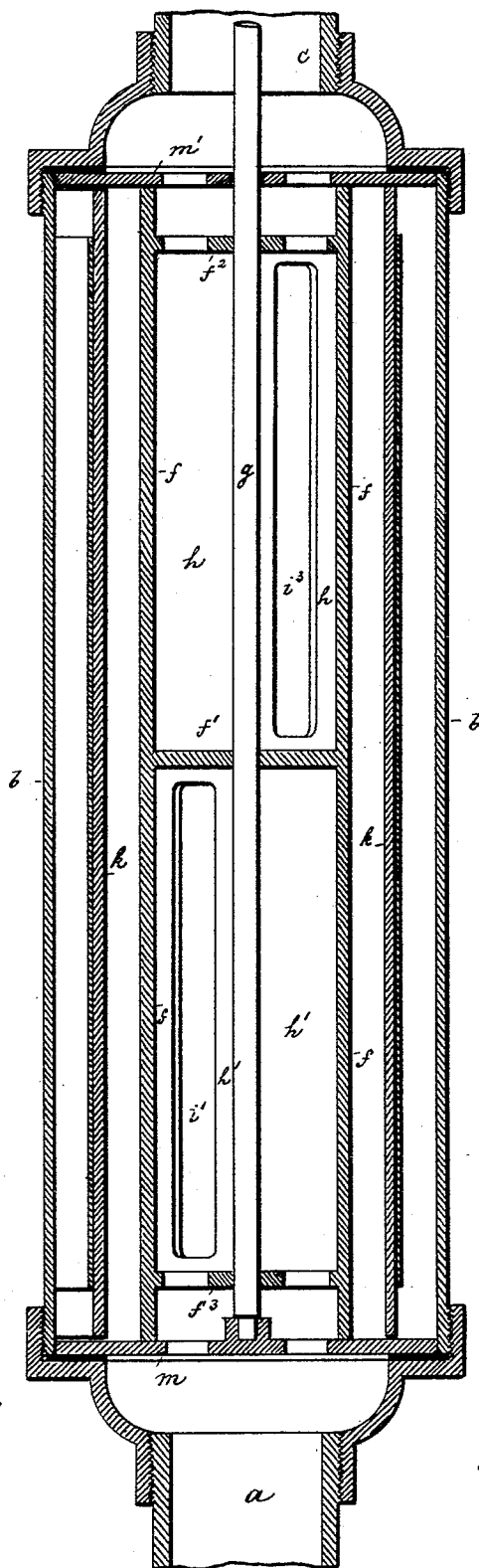
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Fig. 6.



WITNESSES:
A. Schehl.
Wm. Schütz.

INVENTOR
F. Wankel
BY *Roeder & Briesen*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

FRANK WANKEL, OF NEWBURG, NEW YORK, ASSIGNOR OF ONE HALF TO
HENRY B. REBSCHER, OF SAME PLACE.

ROTARY FORCE-PUMP.

SPECIFICATION forming part of Letters Patent No. 500,361, dated June 27, 1893.

Application filed January 28, 1893. Serial No. 460,144. (No model.)

To all whom it may concern:

Be it known that I, FRANK WANKEL, of Newburg, Orange county, New York, have invented an Improved Rotary Force-Pump, of which the following is a specification.

This invention relates to a rotary force pump more particularly designed to deliver the water in a continuous stream from an Artesian or other well or from a water main.

In the accompanying drawings: Figure 1 is an elevation of the pump; Fig. 2 a longitudinal central section through the cylinder; Figs. 3 and 4 horizontal sections on the lines x, x , and y, y Fig. 2, showing the piston in different positions; Fig. 5 an end view of the piston. Fig. 6 is a longitudinal central section at right angles to Fig. 2.

The letter a , represents the inlet of the pump.

b , is the cylinder, c the pipe, d the standard, and e , the outlet all as usual. Within the cylinder b , there revolves the piston f , to which rotary motion is imparted by the piston rod g , driven by handle g' , or otherwise through bevel gear g^2, g^3 . The piston f , is of peculiar construction being divided into four chambers. Two of these chambers h, h' , are formed by a central partition f' , and an upper and lower perforated partition f^2, f^3 . The two other chambers h^2, h^3 , are formed by a horizontal partition within an eccentric or nose f^4 , which constitutes the piston proper. The lower chamber h' , of the piston communicates by opening i , with the chamber h^2 , and this chamber communicates by lateral opening i' , with the water space b' , of the cylinder b , (Fig. 4.) The upper chamber h , communicates by opening i^2 , with the chamber h^3 , and this chamber communicates by lateral opening i^3 , also with the water space. The openings i', i^2, i^3 , below and above the partition are placed at opposite sides of the nose, so that the nose receives water below the par-

tion by suction, and discharges it at the opposite side and above the partition by force. Within the cylinder there are suitable spring valves k , adapted to be opened and closed by the revolution of the piston. In order to form a packing for the piston, the latter is provided with the hinged lid f^5 , which is normally pressed outward by the water and bears against the cylinder and valves directly back of the piston itself.

The operation of the pump is as follows: The water is admitted through inlet a , and a perforated disk m , into chamber h' , of the piston. From chamber h' , the water flows through opening i into chamber h^2 , and thence through opening i' , into the cylinder b . The piston being revolved in the direction of the arrow Fig. 3, the water is by the nose f^4 , crowded against one of the valves k , and thus caused to rise and enter with great force into the opening i^3 , from which it flows into chamber h^3 , and thence through opening i^2 , chamber h , and perforated disk m' , into the discharge pipe c , of the pump to be ejected at the outlet e .

What I claim is—

1. The combination of a hollow revolving piston having two chambers with a hollow nose communicating with the chambers and having a horizontal partition an inlet and outlet opening at opposite sides of the nose and with a surrounding cylinder having a yielding valve adapted to be engaged by the nose, substantially as specified.

2. The combination of a cylinder with valves k , a revolving piston having a pair of chambers, nose f^4 , and a hinged packing f^5 , secured to the nose, substantially as specified.

FRANK WANKEL.

Witnesses:

F. v. BRIESEN,
A. JONGHMANS.