(No Model.) 2 Sheets—Sheet 1.

J. M. WILES.

ROTARY PUMP.

No. 295,704. Patented Mar. 25, 1884.

Fig. 2.

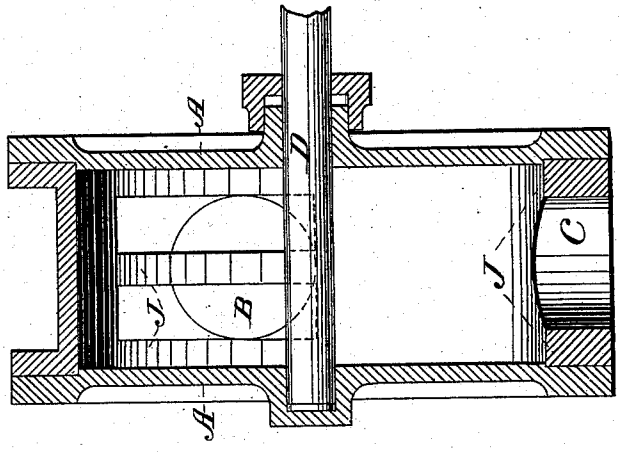
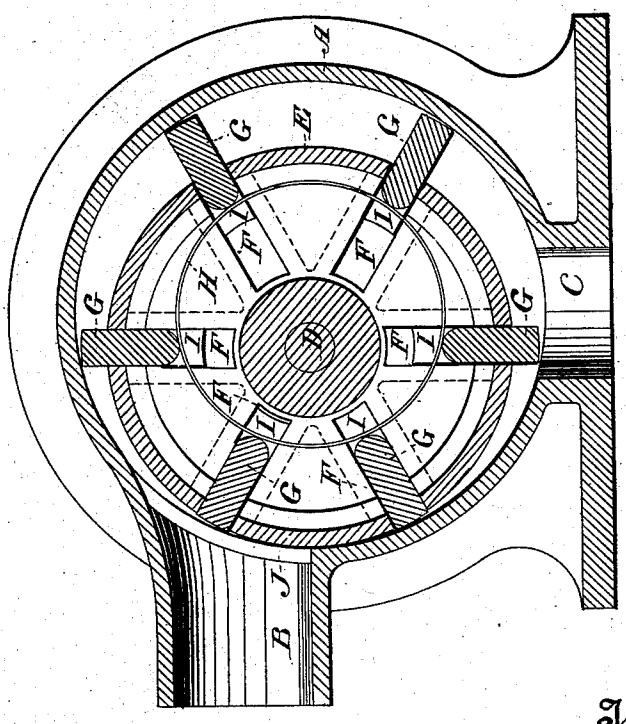


Fig. 1.



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Fig. 5.

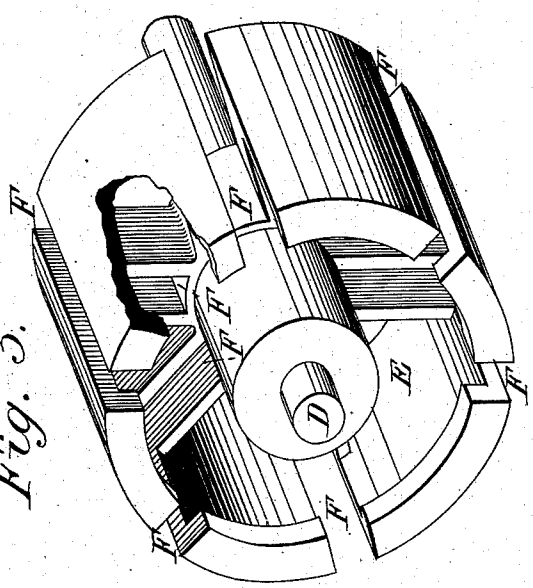


Fig. 7.

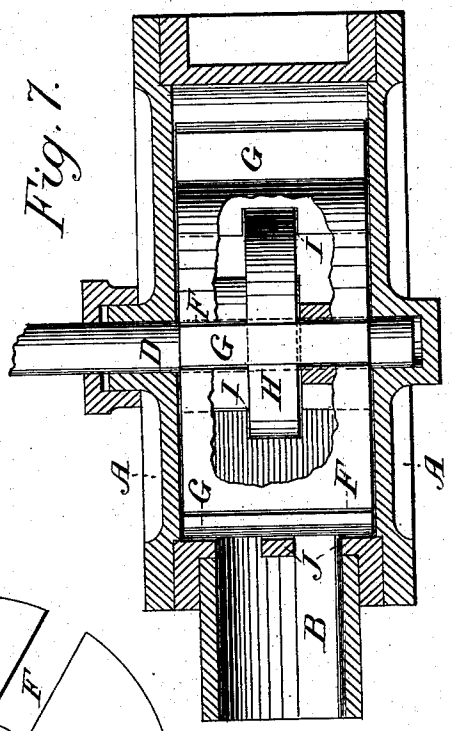


Fig. 4

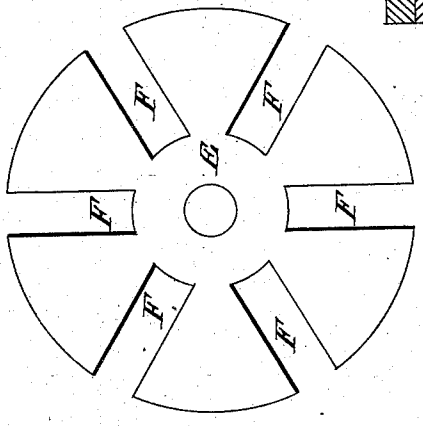


Fig. 6.

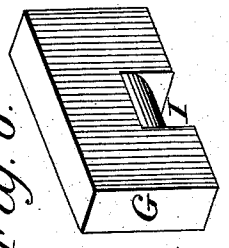
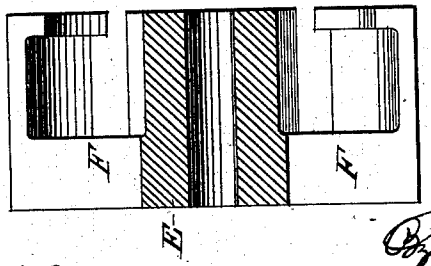


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN M. WILES, OF BUTTE CITY, CALIFORNIA.

ROTARY PUMP.

SPECIFICATION forming part of Letters Patent No. 295,704, dated March 25, 1884.

Application filed September 1, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. WILES, of Butte City, county of Colusa, and State of California, have invented an Improvement in Rotary Pumps; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to certain improvements in rotary pumps; and it consists of an exterior case with inlet and discharge passages, an interior cylindrical drum revolving upon an axis, which is placed eccentric to the outer case and slotted to receive buckets, and a loose elastic ring which is placed within the drum and the inner edges of the buckets, against which it presses and holds them out to the inner face of the case.

It also consists of certain details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a vertical section of the pump, taken transverse to the shaft. Fig. 2 is a vertical section in a plane through the axis of the shaft. Fig. 3 is a section of the drum. Fig. 4 is an elevation of the drum. Fig. 5 is a perspective view of the drum. Fig. 6 is a view of one of the buckets. Fig. 7 is a horizontal section of the pump, the upper portion of the drum being broken away.

A is the outer case, which is in the form of a cylinder, and has an inlet-passage, B, and an outlet, C. A shaft, D, passes through the ends of the case, but at one side of the center, and it has a cylindrical drum, E, keyed to it, so as to be revolved by power applied to the shaft exterior to the case. This drum has radial slots F, extending from its periphery toward the center, into which the buckets G are fitted to slide. A loose elastic ring, H, is dropped into the drum E from one end, and the inner edges of the buckets have notches I, which fit over the ring and keep it in a central position. When all the parts are in place, one side of the drum comes in close contact with the interior of the case just below the outlet-passage, while from the position of the drum within the case there will be a crescent-shaped space upon the opposite side. The outer edges of the buckets are kept in contact with the inner circumference of the case by the pressure of the elastic ring H against their inner edges, as shown. The inlet-passage is at the bottom of the case, and when the drum is revolved the buckets are carried around, and by reason of the shape of the space between the drum and interior of the case, water or other liquid or fluid is drawn into the case through the inlet-passage, and is carried around and forced out through the outlet. The buckets are forced out to the full distance between the drum and the case by the pressure of the interior elastic ring, and they are prevented from catching, when they pass the inlet or discharge openings, by bridges J, which cross these openings, as shown. If any thing obstructs the movement of the buckets, the elastic ring allows them to be forced back in the radial slots without interfering with their forward movement, and as soon as the obstruction is passed the ring forces them out again to the inside of the drum.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a rotary pump, a cylindrical outer case and a cylindrical inner drum rotating upon axis at one side of that of the case, and having the radially-sliding buckets, in combination with an interior elastic ring fitting loosely within the drum, and pressing against the inner ends of the buckets, substantially as herein described.

In witness whereof I have hereunto set my hand.

JOHN M. WILES.

Witnesses:
S. H. NOURSE,
HENRY C. LEE.