

(No Model.)

2 Sheets—Sheet 1.

V. BRIES.
ROTARY PUMP.

No. 514,060.

Patented Feb. 6, 1894.

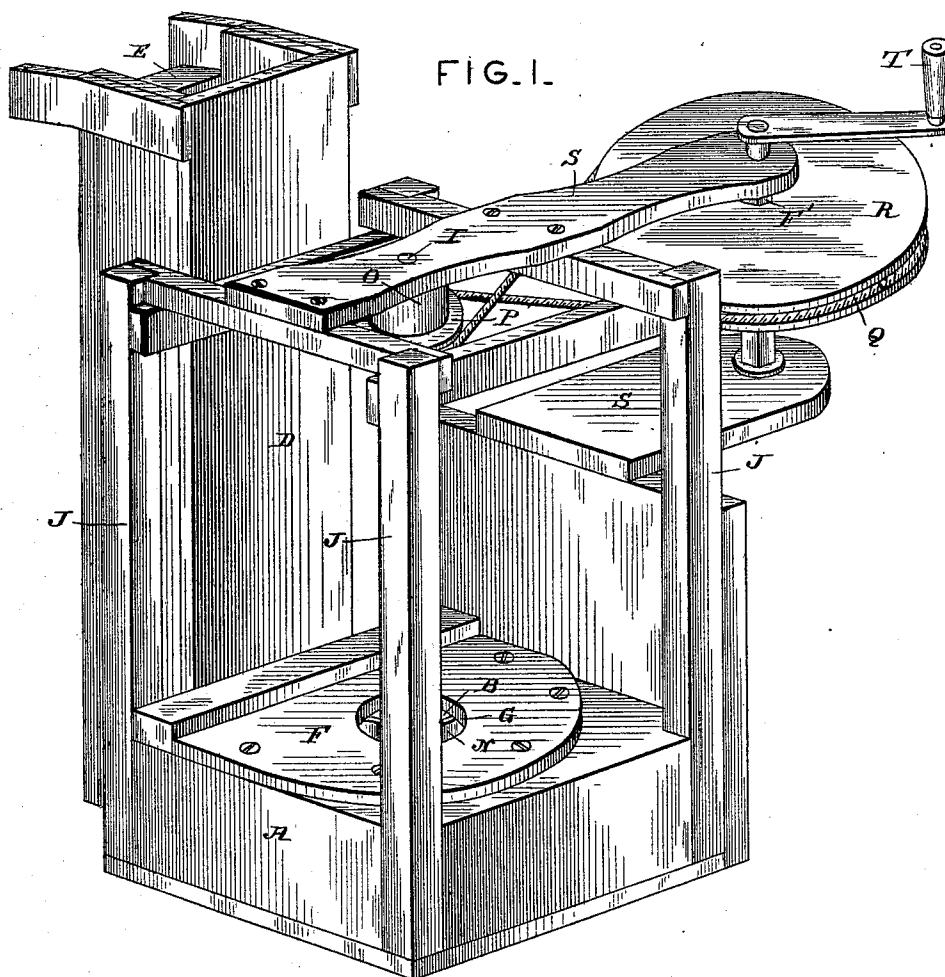
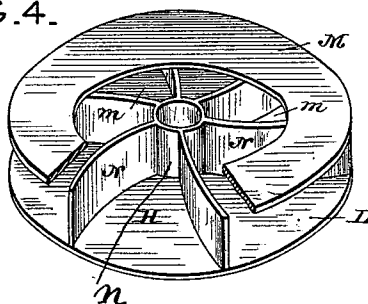


FIG. 4.



Witnesses

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Inventor

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By his Attorneys,

C. A. Snow & Co.

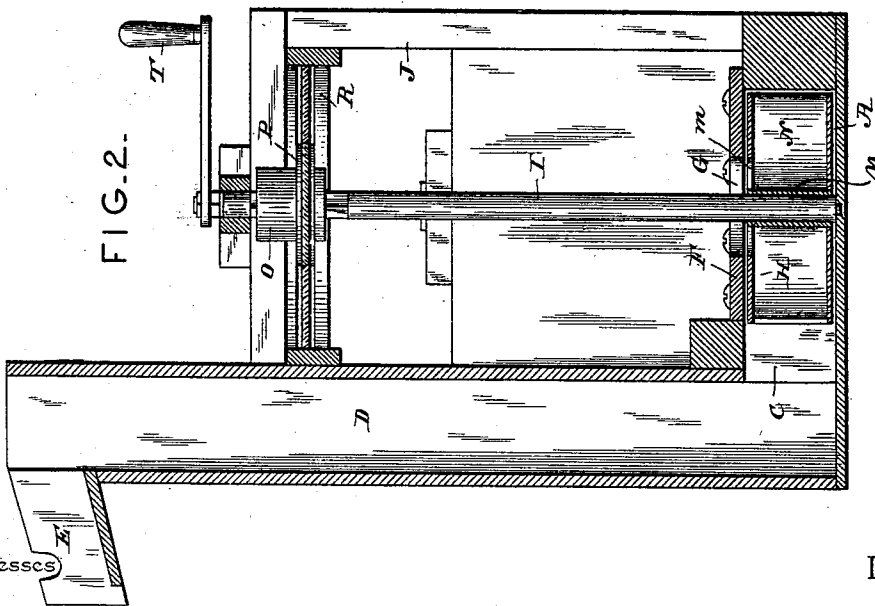
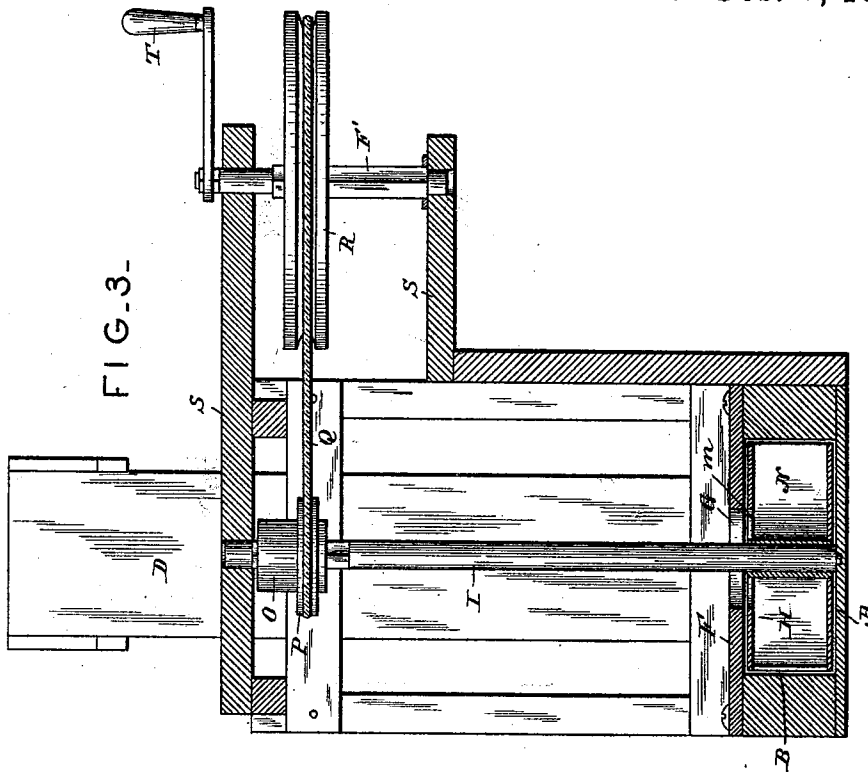
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2 Sheets—Sheet 2.

V. BRIES.
ROTARY PUMP.

No. 514,060.

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Witnesses

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UNITED STATES PATENT OFFICE.

VICTOR BRIES, OF FABACHER, LOUISIANA.

ROTARY PUMP.

SPECIFICATION forming part of Letters Patent No. 514,060, dated February 6, 1894.

Application filed April 15, 1892. Serial No. 429,318. (No model.)

To all whom it may concern:

Be it known that I, VICTOR BRIES, a citizen of the United States, residing at Fabacher, in the parish of Acadia and State of Louisiana, have invented a new and useful Rotary Pump, of which the following is a specification.

My invention relates to horizontal centrifugal pumps, and it has for its object to provide a simple, inexpensive and efficient device adapted for elevating water from reservoirs, wells, &c.; to provide a construction of piston or wheel casing whereby ready access is given to said piston or wheel for purposes of repair, &c.; and furthermore, to provide an arrangement of inlet opening, and an attachment of the shaft to the piston or wheel, whereby the casing may be rested upon the bottom of the reservoir or well to relieve the superstructure of the weight thereof, said casing forming the base of the supporting framework upon which the operating mechanism is mounted.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings: Figure 1 is a perspective view of a pump embodying my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a vertical transverse section of the same. Fig. 4 is a detail view in perspective of the piston or water wheel.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

A designates a horizontal piston or wheel casing, having a cylindrical interior and a rectangular exterior, said cylindrical interior being designated at B, and being of a size to receive the horizontal rotary piston or wheel H. This casing is provided with a lateral outlet C, with which communicates the lower end of a vertical discharge-pipe D, having a spout E at its upper end. The casing is further provided with a removable collar or cap-plate F, which is secured, by means of screws or similar fastening devices, to the sides of the casing, and is provided with a central inlet opening G. The wheel H comprises a circular bottom plate L, having a central perforation, an annular top-plate M, the exterior

dimension of which corresponds with that of the bottom plate and interposed curved wings N, which are flush at their outer extremities with the peripheries of the top and bottom plates and are fixed at their inner extremities to a sleeve n, which registers with the perforation in the bottom plate. The opening m of the top plate is co-extensive with the inlet-opening G of the cap plate, and being larger than the sleeve n the inner ends of the wings N are exposed and lie beneath said inlet-opening.

The shaft I extends through the inlet-opening G and is fitted snugly in the sleeve n, its lower end being stepped in a socket in the floor of the casing. The supporting framework is provided with uprights J, which are let into the angles of the casing, the latter forming the base for the support of the framework. These uprights are connected at their upper extremities by suitable cross-bars, two of which support a horizontal bracket S, in a perforation of which is fitted the upper extremity of the shaft I. A corresponding sub-jacent bracket S, which is arranged parallel with that secured to the cross-bars of the frame, together with said upper bracket, supports a vertical shaft F', bearing a wheel R and provided with an operating handle T. The wheel R is connected, by means of a cord belt Q, with a pulley P, which is secured to the shaft I. A band-wheel O is carried by the shaft I, for use when an ordinary belt is employed.

From the above description it will be understood that the essential feature of my invention resides in the special construction of the casing which forms the base for the supporting framework, the removable cap plate whereby access may be had at any time to the interior of the casing, and the peculiar construction of the piston or wheel which entirely fills the cavity of the casing, and which is provided with both top and bottom plates, whereby unnecessary friction in the operation of the mechanism is avoided. After the water has entered the piston or wheel it is supported entirely by the latter, thus avoiding the friction due to the pressure of the water upon the floor of the casing. Furthermore, after entering the piston or wheel, the water is received between the top and bottom

plates and is concentrated at the outer extremities of the wings, whereby it is thrown with considerable force through the outlet-opening and into the discharge pipe.

5 Having thus described my invention, what I claim is—

10 In a horizontal centrifugal pump, the combination of a horizontal casing A, having a cylindrical interior, a single lateral outlet C, and a removable cover or cap plate F provided with a central inlet-opening G, a discharge pipe communicating with said outlet,
15 a rotary wheel or piston H arranged in said casing and comprising a centrally-perforated bottom plate L, an annular top plate M, and interposed wings N terminating at their outer ends flush with the peripheries of the top and bottom plates, and at their inner ends fixed
20 to a central sleeve which registers with the central perforation in the bottom plate, said annu-

lar plate having an opening *m* which is co-extensive with the inlet-opening G, a supporting framework mounted upon the casing A as a base, a vertical shaft fitted in the sleeve of the wheel or piston and passing centrally through 25 the inlet-opening G, and means supported by the framework for operating said shaft, the inner portions of the wings of the wheel or piston being arranged vertically beneath the openings G and *m*, whereby the pressure of 30 the water in entering the casing is directly upon the bottom plate of the wheel or piston, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 35 the presence of two witnesses.

VICTOR BRIES.

Witnesses:

J. H. CARLIN,

A. S. CHAPPINS.