

(No Model.)

J. M. ALLEN.
ROTARY PUMP.

No. 572,082.

Patented Nov. 24, 1896.

Fig. I.

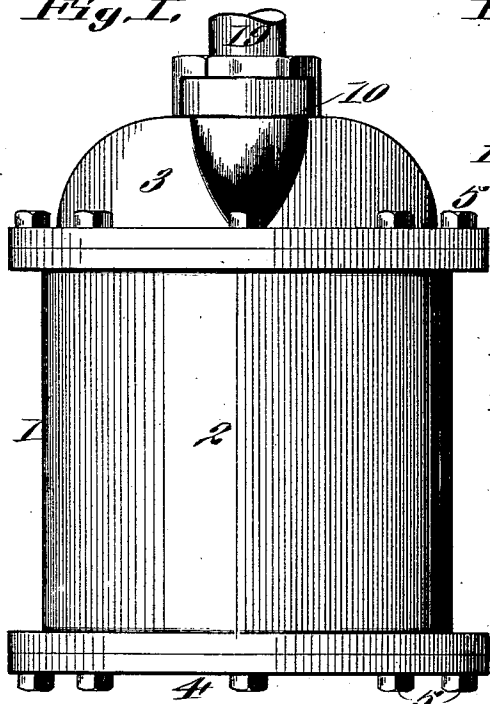


Fig. II.

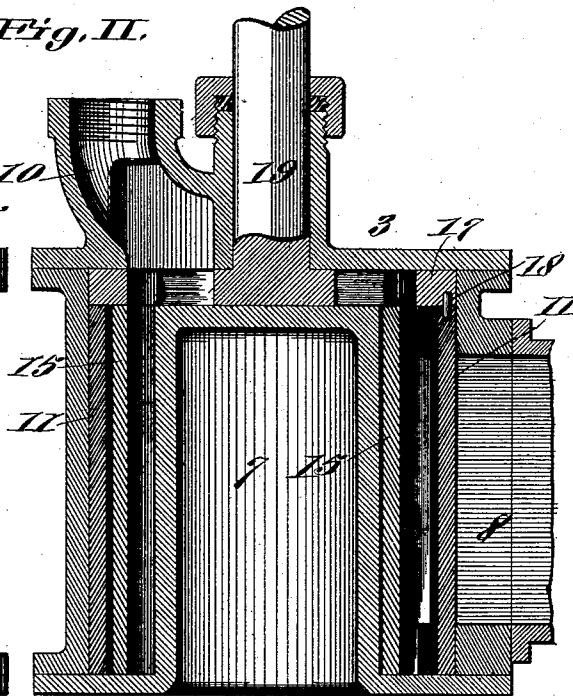


Fig. III.

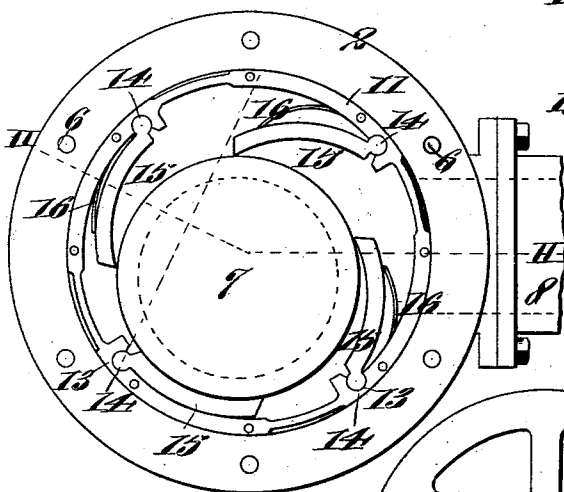


Fig. IV.

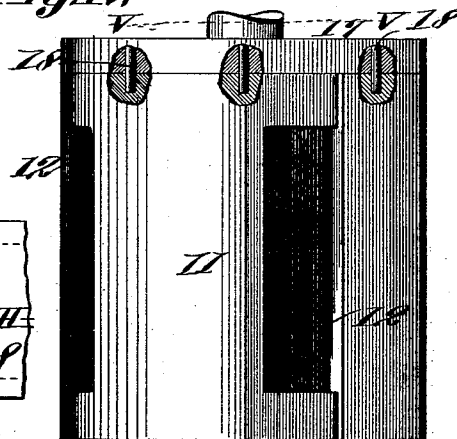


Fig. V.

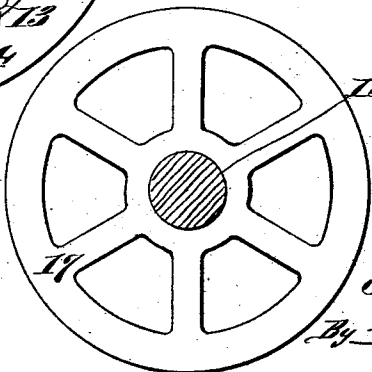
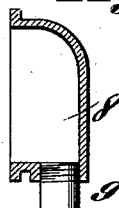


Fig. VI.



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UNITED STATES PATENT OFFICE.

JAMES M. ALLEN, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO
ARMAND J. WELCKER, OF SAME PLACE.

ROTARY PUMP.

SPECIFICATION forming part of Letters Patent No. 572,082, dated November 24, 1896.

Application filed February 8, 1896. Serial No. 578,529. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. ALLEN, of the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Rotary Pumps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improved rotary pump adapted to be employed either submerged or for elevating water by means of suction.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

In the drawings, Figure I is a side elevation of my improved pump. Fig. II illustrates a section taken on line II II, Fig. III. Fig. III illustrates a top view with the cap of the housing, the operating-shaft, and driving-spider removed. Fig. IV is a side elevation of the traveling cylinder, its operating-shaft, and driving-spider. Fig. V is a top view of the driving-spider, a section being taken through the operating-shaft on line V V, Fig. IV. Fig. VI is a detail view illustrating the connection of a pipe with the device when it is to be used as a suction-pump.

In the drawings, 1 represents the pump-housing, which is composed of a central cylinder 2, a cap 3, and a base 4. These portions of the housing are connected by means of screws 5, inserted in openings 6 in the different parts of the housing.

The base 4 carries a cylindrical body 7, that extends up into the pump-housing, and is eccentrically located in said housing, as is clearly illustrated in Fig. III. This cylindrical body is preferably hollow for the purpose of lessening its weight, but, if desired, it might be of solid form.

8 designates the inlet in the side of the housing 1, which inlet, when the pump is submerged, is not provided with a pipe but is open for the direct inlet of water; but where the pump is employed as a suction-pump a pipe 9 is connected to it, as is illustrated in Fig. VI.

10 designates the outlet in the cap 3 of the

housing. The construction of the outlet at its base is in the form of an elongated dome, as is illustrated in Fig. I and dotted lines in Fig. III, thereby permitting of increased space for the egress of the water in reaching the upper end of the outlet.

11 designates a traveling cylinder that is provided with ports 12 in its periphery. In the interior of the cylinder 11 are sockets 13, that receive journal-bearings 14 of piston-wings 15. These piston-wings are therefore carried by the traveling cylinder. Their free ends ride in contact with the periphery of the cylindrical body 7, alternately receding from the surface of the traveling cylinder as they approach the outlet, and returning to contact with the traveling cylinder as they leave the location of the outlet and pass the portion of the cylindrical body 7 that is nearest the interior side of the housing 1.

16 designates springs secured to the traveling cylinder and having their free ends resting in contact with the pistons 15 for the purpose of projecting the pistons.

The traveling cylinder is driven by means of a spider 17, connected to the cylinder by means of pins 18, and the spider is carried by an operating-shaft 19, which may be propelled by any suitable power.

I claim as my invention—

1. In a rotary pump, the combination of a housing provided with an inlet and an outlet, a cylindrical body eccentrically located in said housing, a traveling cylinder, and piston-wings carried by said traveling cylinder, substantially as described.

2. In a rotary pump, the combination of a housing provided with an inlet and an outlet, a cylindrical body eccentrically located in said housing, a traveling cylinder provided with ports, piston-wings hinged to said traveling cylinder, and springs arranged to press against said wings, substantially as and for the purpose set forth.

JAMES M. ALLEN.

In presence of—

E. S. KNIGHT,
STANLEY STORER.