

No. 863,250.

PATENTED AUG. 13, 1907.

M. F. ABBÉ.
ROTARY PUMP.

APPLICATION FILED FEB. 16, 1907.

Fig. 1.

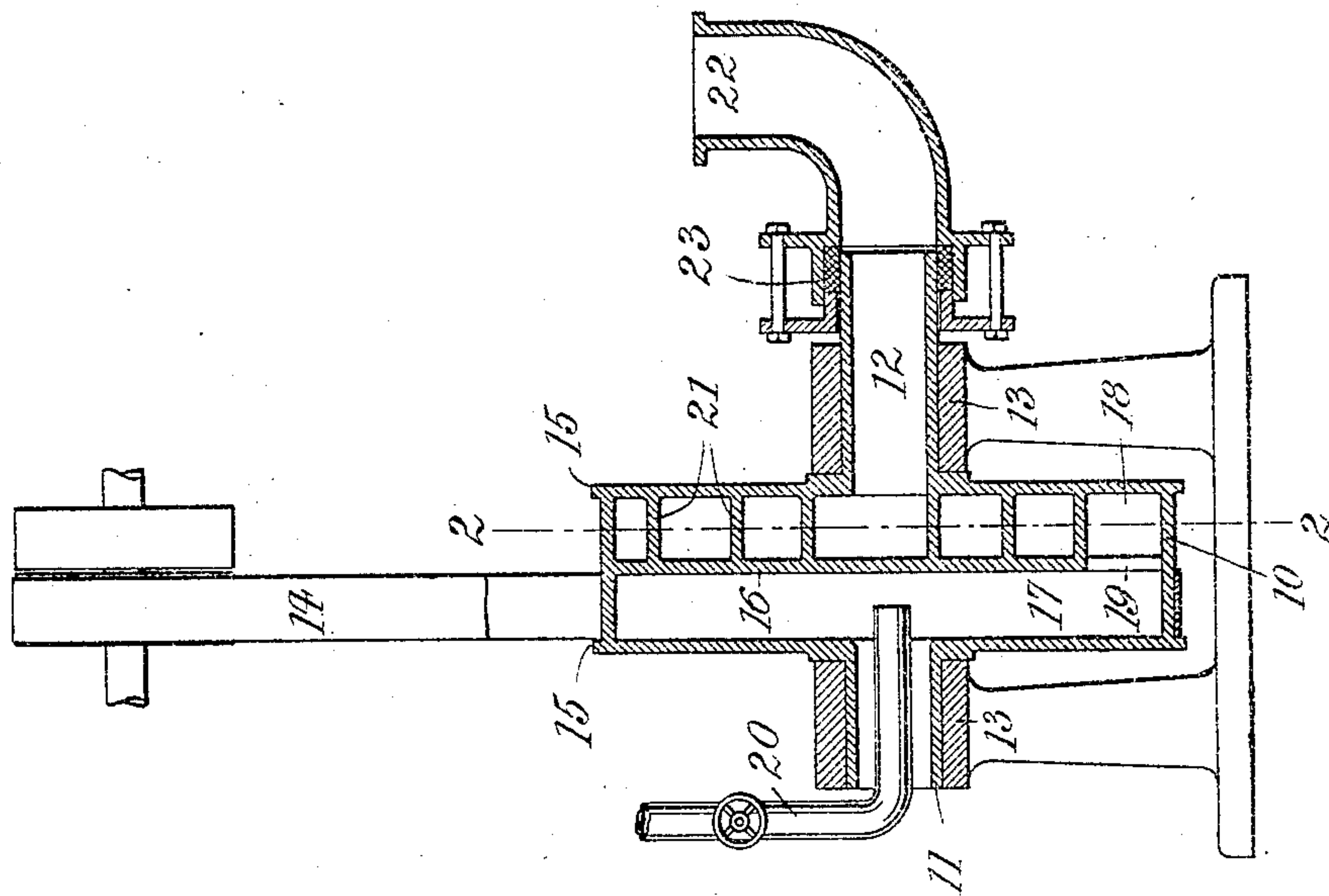
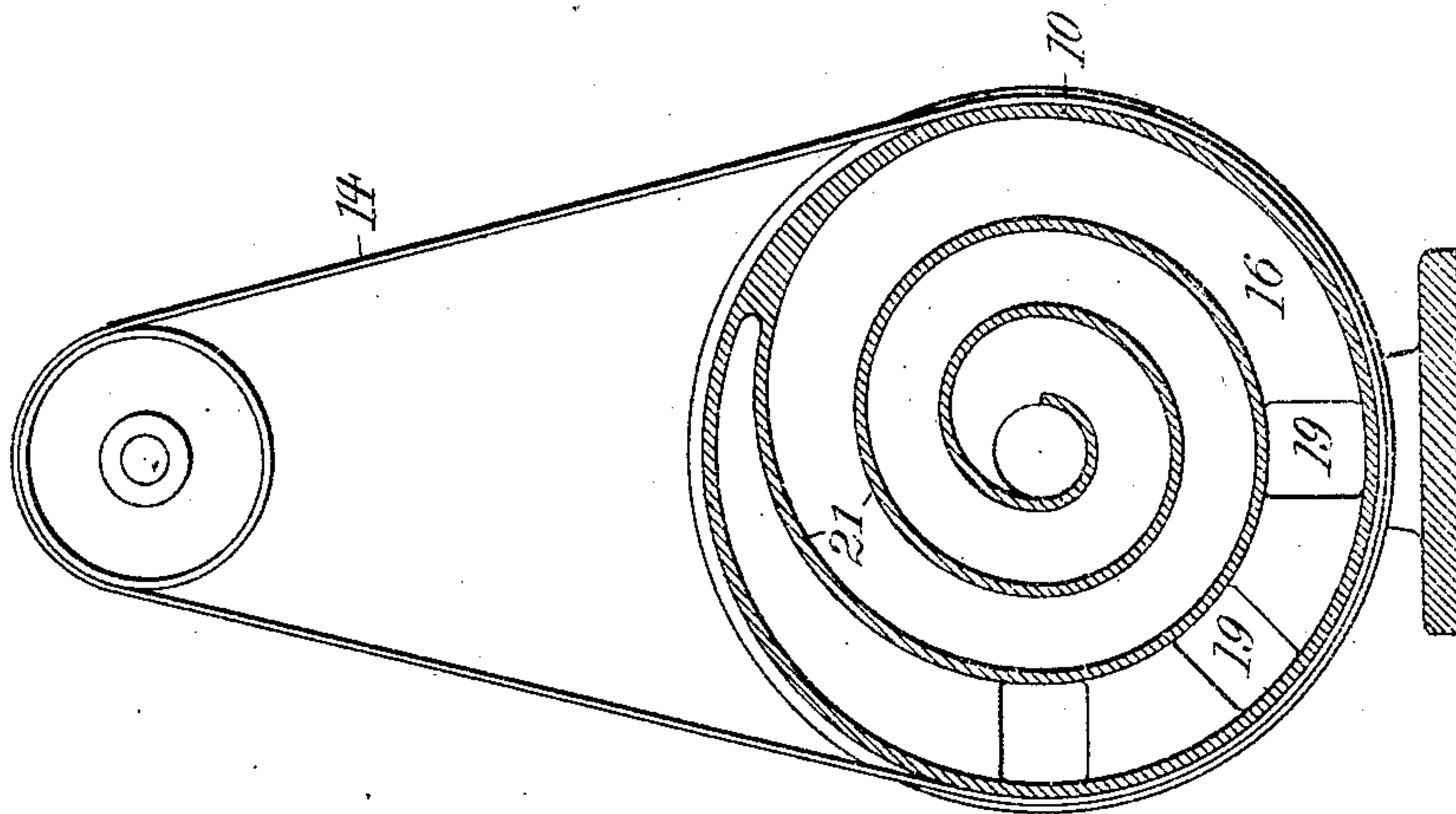


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

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ROTARY PUMP.

No. 863,250.

Specification of Letters Patent.

Patented Aug. 13, 1907.

Application filed February 16, 1907. Serial No. 357,658.

To all whom it may concern:

Be it known that I, MAX F. ABBÉ, a citizen of the United States, residing at New York city, Manhattan, county and State of New York, have invented new and useful Improvements in Rotary Pumps, of which the following is a specification.

This invention relates to a rotary pump which is of simple construction, cleanly in its operation, and is not apt to become rapidly worn by abrasion. The pump may be used for lifting sand, slime, pulp and for similar purposes.

In the accompanying drawing: Figure 1 is a vertical longitudinal section of my improved rotary pump, and Fig. 2 is a cross section on line 2—2, Fig. 1.

The rotatable pump cylinder 10 has hollow gudgeons 11, 12 supported on bearings 13. Rotary motion is imparted to cylinder 10 directly by the driving belt 14 that engages the circumference of the cylinder, thus dispensing with all intermediate power-transmitting means. To prevent displacement of the belt, the cylinder may be provided with outwardly extending flanges 15. Within cylinder 10 there is formed a partition 16 parallel to the heads thereof, and which divides the cylinder into an ingress chamber 17 and an egress chamber 18. These chambers connect with each other by a suitable number of peripheral openings 19 in partition 16. Chamber 17 communicates directly with the bore of the ingress gudgeon 11 and receives the material, to be pumped, through a fixed valve-controlled inlet pipe 20 projecting through said gudgeon into the chamber. Within chamber 18 is fitted a spiral conveyor 21 having convolutes of gradually decreasing diameter. Of these, the innermost convolute communicates directly with the bore of the egress gudgeon 12. The fixed discharge pipe 22 of the pump connects with the outer end of gudgeon 12, to which it is coupled by a stuffing box 23.

Rotary motion being imparted to the pump cylinder

by belt 14, the material to be lifted is delivered by pipe 20 into chamber 17, from whence it passes through openings 19 into the outermost convolute of conveyor 21. As the pump rotates, the material will thus be raised until it is discharged from the innermost convolute of the conveyor into gudgeon 12, and thence out of discharge pipe 22.

It will be seen that my improved pump is of simple construction, operates with great cleanliness and is not apt to become rapidly worn.

I claim:

1. In a rotary pump, a rotatable cylinder, a partition within the cylinder provided with peripheral perforations and dividing the cylinder into an ingress and egress chamber, a hollow inlet gudgeon communicating with the ingress chamber, a hollow outlet gudgeon, and a spiral conveyor in the egress chamber that communicates at its outer coil with the ingress chamber and at its inner coil with the outlet gudgeon, substantially as specified.

2. In a rotary pump, a rotatable cylinder, a partition within the cylinder provided with peripheral perforations and dividing the cylinder into an ingress and egress chamber, a hollow inlet gudgeon communicating with the ingress chamber, a hollow outlet gudgeon, a spiral conveyor in the egress chamber that communicates at its outer coil with the ingress chamber and at its inner coil with the outlet gudgeon, and a fixed feed pipe entering the inlet gudgeon, substantially as specified.

3. In a rotary pump, a rotatable cylinder, a partition within the cylinder provided with peripheral perforations and dividing the cylinder into an ingress and egress chamber, a hollow inlet gudgeon communicating with the ingress chamber, a hollow outlet gudgeon, a spiral conveyor in the egress chamber that communicates at its outer coil with the ingress chamber and at its inner coil with the outlet gudgeon, a fixed delivery pipe, and means for coupling said pipe to the outlet gudgeon, substantially as specified.

Signed by me at New York city, (Manhattan,) N. Y., this 15th day of February, 1907.

MAX F. ABBÉ.

Witnesses:

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