No. 97,655. PATENTED DEC. 7, 1869.

N. H. LEBBY.

CENTRIFUGAL PUMP.

Fig. 2.

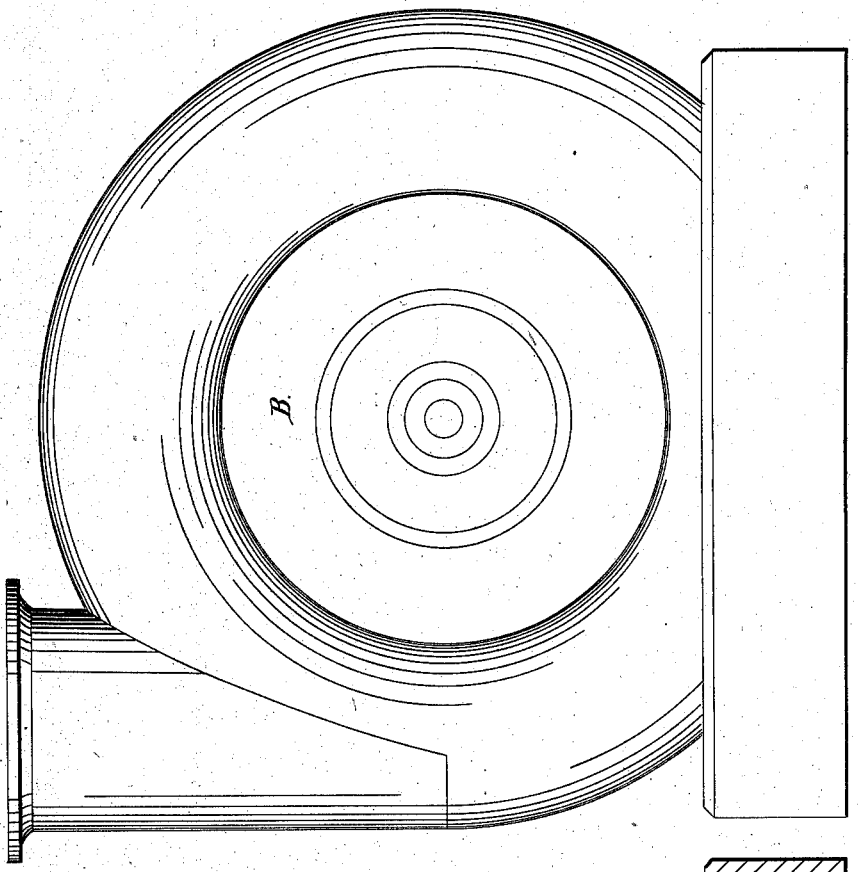
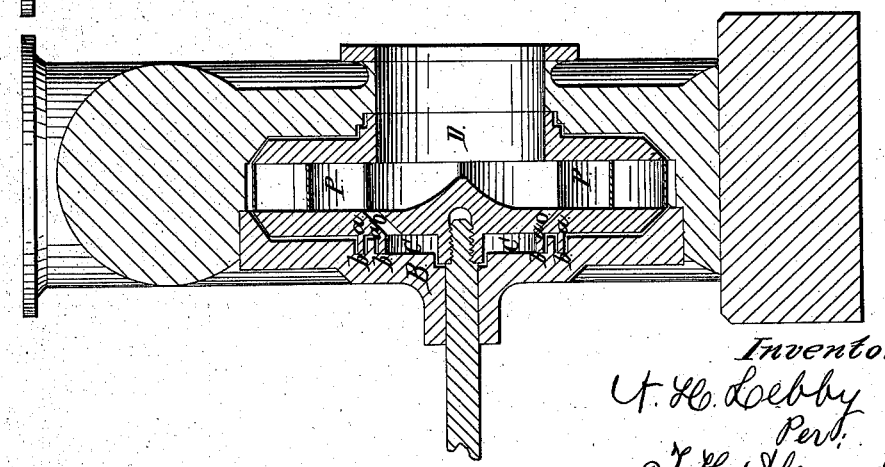


Fig. 1.



Witnesses.

J. V. White.

H. N. Miller.

Inventor.

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Per

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N. H. LEBBY, OF CHARLESTON, SOUTH CAROLINA.

Letters Patent No. 97,655, *dated December* 7, 1869.

IMPROVEMENT IN CENTRIFUGAL PUMPS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, N. H. LEBBY, of Charleston, in the district of Charleston, and State of South Carolina, have invented certain new and useful Improvements in Centrifugal Pumps; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 represents a side elevation, and

Figure 2, a longitudinal section of my centrifugal pump.

Similar letters indicate like parts in both figures.

My invention relates to that class of centrifugal pumps which has its induction on one side only. And to this end,

It consists in the construction of a chamber on the wheel, opposite the induction, substantially in the manner and for the purpose hereinafter specified.

To enable others skilled in the art to which my invention appertains, to make and use the same, I will now describe its construction and operation.

In the accompanying drawings—

P represents the pump-wheel, which is formed on its back side, that is, the side opposite the induction, with one or more tongues *a a*, which revolve freely in and around the corresponding grooves and tongues *b b*, formed on the plate B, that covers the wheel.

The circular chamber C, formed by these grooves and tongues, is opposite the induction D, and is of the same diameter.

The chamber C communicates with the hollow on the opposite side of the wheel P, through the openings O, in the wheel P, and the area of these openings O is large, compared with the area of leakage between the tongues and grooves *a b*, so that a small pressure in the chamber C, will discharge as much water through the openings O, as the pressure, due to the height to which the water is raised, can force to leak between the tongues and grooves *a b*, into the chamber C.

By this arrangement of a chamber on the side of the pump-wheel, opposite the induction, an equal pressure on both sides of the wheel is obtained.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The openings O, in the back of the wheel P, in combination with tongues and grooves *a b*, on the back of the wheel P, and on the plate B, substantially in the manner and for the purpose specified.

In testimony that I claim the foregoing as my own, I affix my signature, in presence of two witnesses.

N. H. LEBBY.

Witnesses:

JNO. E. RIVERS,

A. J. BURKE.