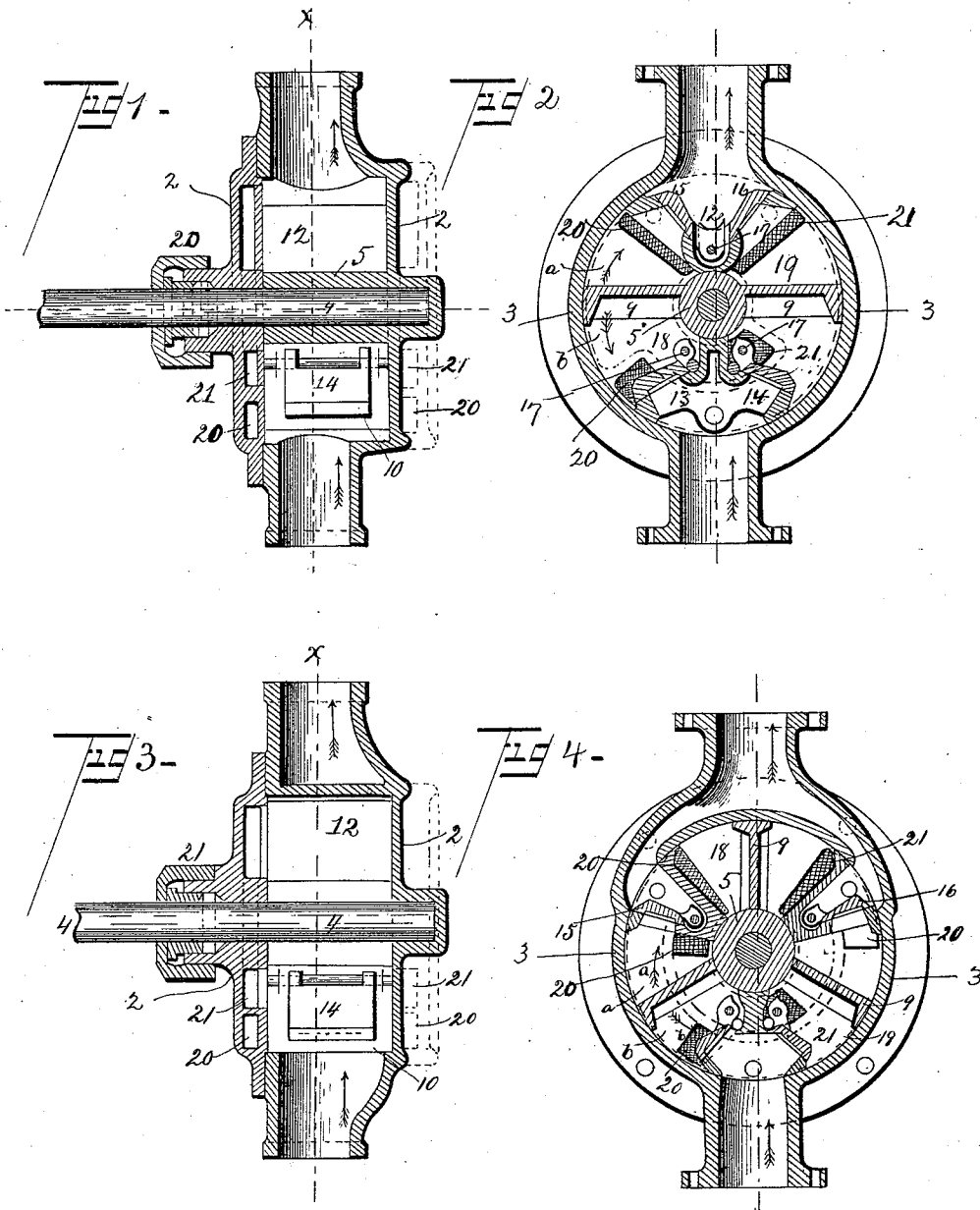


(No Model.)

A. F. ABRAHAMSON.
PUMP.

No. 472,156.

Patented Apr. 5, 1892.



WITNESSES:
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UNITED STATES PATENT OFFICE.

AXEL FREDRIK ABRAHAMSON, OF MADRID, SPAIN.

PUMP.

SPECIFICATION forming part of Letters Patent No. 472,156, dated April 5, 1892.

Application filed December 12, 1890. Serial No. 374,452. (No model.) Patented in Switzerland August 12, 1890, No. 2,133.

To all whom it may concern:

Be it known that I, AXEL FREDRIK ABRAHAMSON, a subject of the King of Sweden, and a resident of Madrid, Spain, have invented certain new and useful Improvements in Oscillating Pumps, (for which I have obtained Letters Patent in Switzerland, No. 2,133, under date of August 12, 1890;) and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in oscillating pumps in which an oscillating shaft is journaled in a cylindrical casing provided with inlet and delivery pipes, said casing being provided with radial partitions, and the shaft having a hub provided with radial wings extending to the interior surface of the casing-rim and forming an oscillating piston.

I am aware that an oscillating pump in itself is not new, and therefore do not broadly claim the same, the object of my invention being to provide a pump of this character in which the fluid will be evenly and uniformly distributed throughout the same, thus improving and increasing its efficiency.

The invention consists in the novel construction and combination of parts herein-after fully described and claimed.

In the accompanying drawings, Figure 1 is a central vertical sectional view of a pump constructed in accordance with my invention. Fig. 2 is a longitudinal section of the same. Figs. 3 and 4 are views similar to Figs. 1 and 2, respectively, showing a modified construction.

In the said drawings the reference-numeral 1 indicates the pump-casing, comprising the heads 2 2 and rim 3. Journaled centrally in the heads 2 is an axle 4, provided with the usual packing and stuffing boxes and which is oscillated by any suitable means, as is usual in pumps of this character. Mounted

upon or formed with said axle is a hub 5, provided with radially-extending wings 9. The casing is provided with partitions 10 and 12, provided, respectively, with valves 13 14 and 15 16, the former being the inlet-valves and the latter the outlet-valves. These valves are pivoted at 17 to the partitions, as usual.

Formed in one of the heads 2 of the casing are passages 20 and 21, which communicate with the chambers 18 and 19, formed by the partitions 10 and 12, the passage 20 communicating with chamber 18, while passage 21 communicates with chamber 19.

The operation will be readily understood. As the shaft is oscillated the wings, constituting a piston, will cause valves 13 and 14 to be alternately opened and closed and water be drawn into the chambers 18 and 19, from which it will be expelled through passages 20 and 21 into and out of the delivery-pipe.

The modified construction shown in Figs. 3 and 4 is identical in principle with that shown in Figs. 1 and 2, the only difference being that in the modified construction there are more partitions and wings than in the construction first above set forth.

Having thus described my invention, what I claim is—

In an oscillating pump, the combination of the cylindrical casing composed of a rim and heads with supply and delivery pipes, said heads being provided with passages 20 and 21, the alternately-arranged partitions and wings dividing said casing into a series of chambers and said wing constituting an imperforate piston, the supply and delivery valves connected with said partitions, substantially as described.

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

AXEL FREDRIK ABRAHAMSON.

Witnesses:

ERIK. WALÉUR,
ENRIQUE BÖLLER.