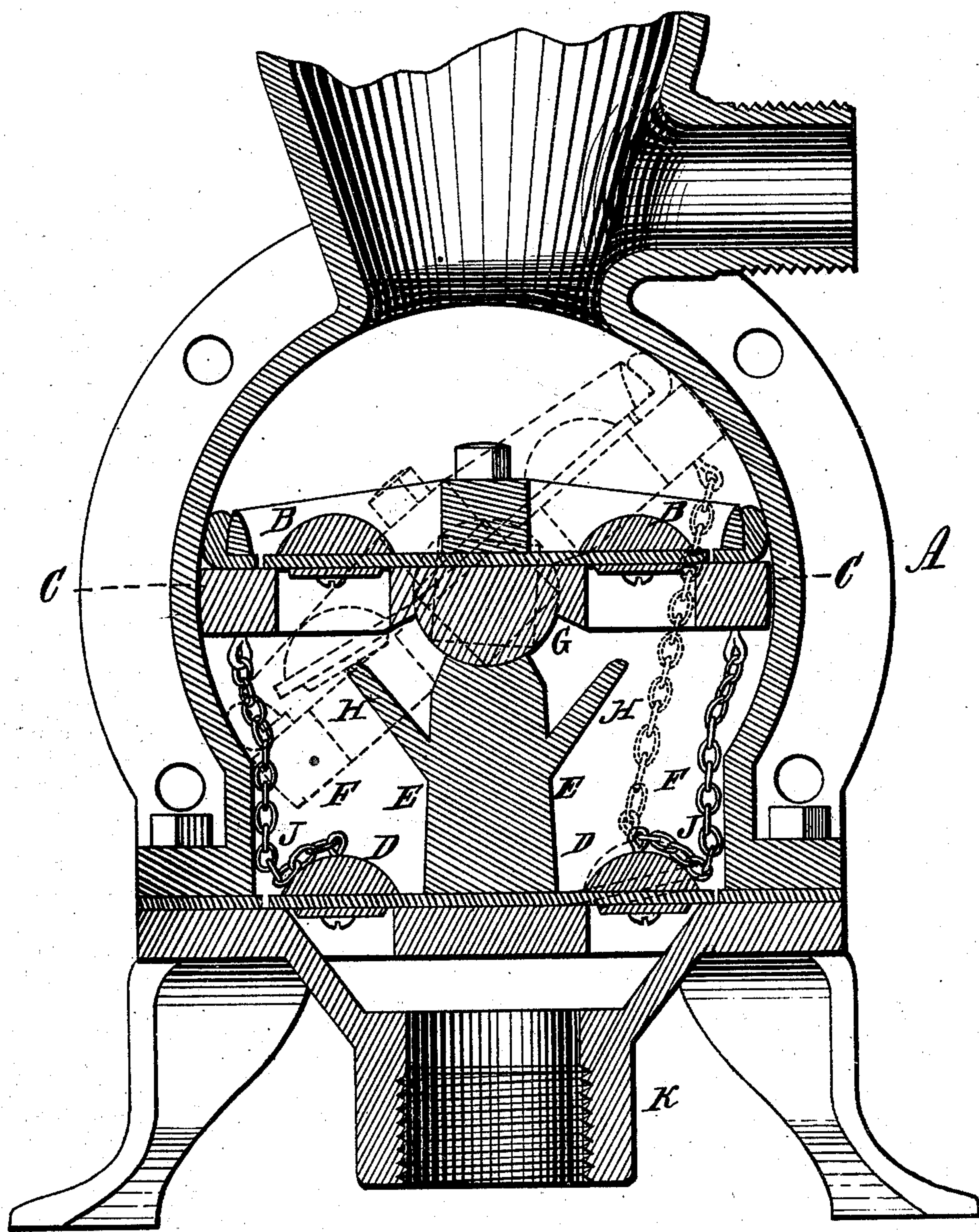


E. C. WHARTON.

Pumps.

No. 144,171.

Patented Oct. 28, 1873.



Witnesses.

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UNITED STATES PATENT OFFICE.

EDWARD CARLILE WHARTON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 144,171, dated October 28, 1873; application filed October 9, 1873.

To all whom it may concern:

Be it known that I, EDWARD CARLILE WHARTON, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Pumps; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings making part of this specification, in which the figure is a central vertical section of the device embodying my invention.

This invention consists in means for clearing or freeing the pump of water.

Referring to the drawings, A represents the cylinder; B, the upper valves on an oscillating seat-plate, C; D, the lower valves; and E, the plate which separates the cylinder into the chambers F F, and constitutes the bearings for the axis G of the seat-plate C. From opposite sides of the division-plate E there project arms H, which extend upwardly and toward the upper valves B. A chain or other connection, J, is attached to each of the lower valves D, and to the respective sides of the seat-plate C. The handle, crank, or other appliance for operating the pump is attached to the axis G, and by reciprocating the same the pump will be worked and the water raised.

It will be seen that the arrangement or dimensions of the arms H and connections J are such that they have no part in working the valves for raising the water, since the ordinary amount of motion imparted to the seat-plate C, during said working, is not sufficient to bring said arms and connection into service. To insure this a set-screw might be applied at a proper point of the cylinder; but the operator will soon be able to appreciate the amount of motion necessary to allow the arms and connections to remain inoperative.

When, however, the pump is to be cleared

of water, to prevent freezing thereof, or for other purposes, then the seat-plate is turned to the full extent of its play or stroke in one direction, whereby one of the upper valves strikes one of the arms H, corresponding thereto, and is thereby lifted from its seat and opened. At the same time the connection J, on the opposite side, is distended or raised, so as to lift the lower valve attached thereto. A portion of the water above the seat-plate can now pass to the respective chamber below it through the opened upper valve, while some of the water below the seat-plate escapes through the opened lower valve to the induction-pipe K. The seat-plate is then moved to full extent or stroke in the opposite direction, and the other valves are duly operated in a manner similar to that above stated, whereby more of the water is permitted to descend, and, by a few proper reciprocations of the seat-plate, all of the water will be passed out or returned, so that the pump is cleared or free of water, which will be found serviceable for preventing freezing, and purposes of repairs, cleansing, &c. Ordinarily, one full stroke of the seat-plate in each direction will be sufficient to clear the pump of water.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The arms H, adapted to open the valves B on the full stroke of the seat-plate, as set forth.

2. The connections J of the seat-plate and lower valves, adapted to open said valves on the full stroke of the seat-plate, as set forth.

3. The arms H and connections J, in combination with the seat-plate and the upper and lower valves, substantially as and for the purpose set forth.

EDWARD CARLILE WHARTON.

Witnesses:

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