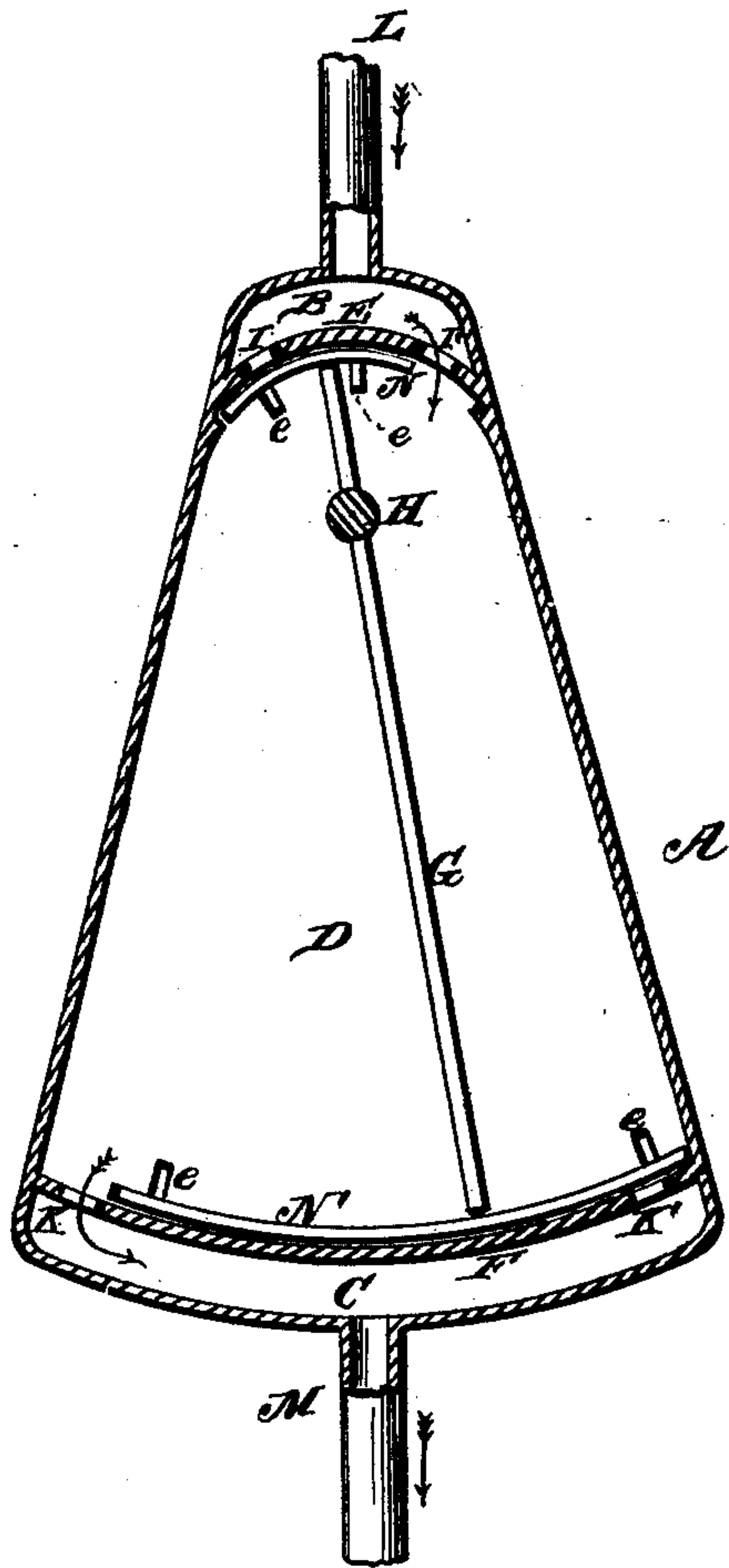


S. T. SANFORD.  
Oscillating Water-Meter.

No. 213,944.

Patented April 1, 1879.



WITNESSES

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# UNITED STATES PATENT OFFICE.

SAMUEL T. SANFORD, OF FALL RIVER, MASSACHUSETTS.

## IMPROVEMENT IN OSCILLATING WATER-METERS.

Specification forming part of Letters Patent No. **213,944**, dated April 1, 1879; application filed February 15, 1879.

*To all whom it may concern:*

Be it known that I, SAMUEL T. SANFORD, of Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Water-Meters; 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 drawing, and to letters of reference marked thereon, which form a part of this specification, in which the figure is a central sectional view.

The object of this invention is to produce an improved water-meter, which shall be simple in construction and effective in operation; and to this end it consists in a metallic casing of triangular, or approximately triangular, shape, having segmental chambers at the top and bottom, and an intervening chamber, in which is pivoted an oscillating piston, so constructed to operate suitable valves arranged to alternately open and close apertures leading from the chambers at each end of the casing into the intermediate chamber, and alternately admit and discharge the water to and from each side, the shaft upon which the piston oscillates being extended through the casing and connected to a suitable registering device, as more fully hereinafter specified.

In the drawing, the letter A indicates a metallic casing of given capacity, and of triangular, or approximately triangular, shape. Said casing is provided with segmental chambers B C at the upper and lower ends, and an intermediate chamber, D, formed by the curved partitions E F.

The letter G represents an oscillating piston, located in the chamber D, and mounted on a transverse shaft, H, one end of which passes through the side of the casing, and is connected with a registering device of any description.

The curved partitions near each end are provided with openings I I' and K K', respectively, leading into the chamber D.

The chamber B is provided with an induction-port, L, and the chamber C with an eduction-port, M.

The letters N N' represent curved slide-valves, seated respectively upon the curved partitions E F. These valves are of such length that when the aperture at one side is covered the aperture at the opposite side will be open or uncovered, and each valve is provided with tappets *e e*, which are alternately struck by the oscillating piston and shifted back and forth.

The operation of my invention is as follows: Upon admitting water through the induction-port L, the piston being in position as shown in the figure, the water will enter the chamber D through the uncovered aperture I' at the right of the piston. The opening K' being closed by the valve N', the water will force the lower end of piston to the opposite side of the casing. This will shift the valves, uncovering the apertures I and K', when the motion of the piston will be reversed, the water collected at the right hand of the piston being forced out through opening K into the chamber F, and from thence out through the eduction-port.

I claim—

A water-meter consisting of a casing provided with segmental chambers at the top and bottom, having induction and eduction ports, respectively, and an intermediate chamber, provided with an oscillating piston mounted on a transverse shaft connected with registering mechanism, and two curved valves operated by the oscillating piston to open and close apertures leading from the segmental chambers to the intermediate chamber, substantially as and for the purposes specified.

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

SAMUEL T. SANFORD.

Witnesses:

B. F. WINSLOW,  
R. CAMERON.