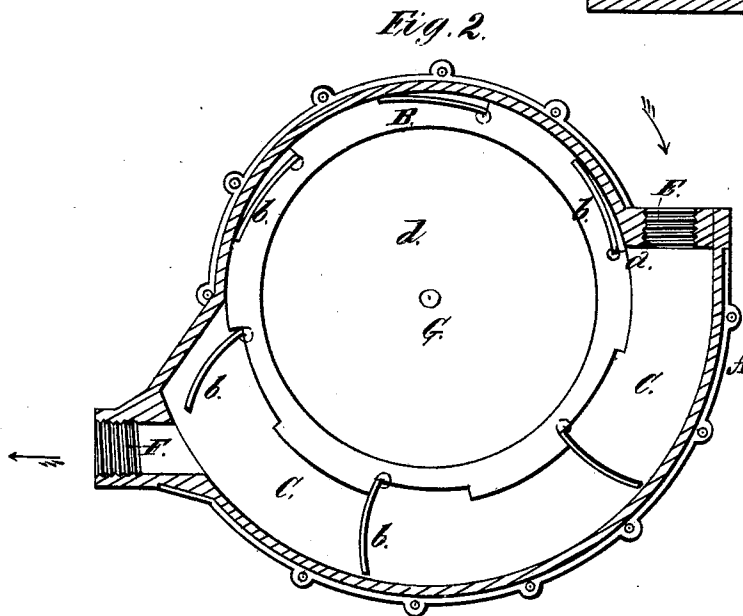
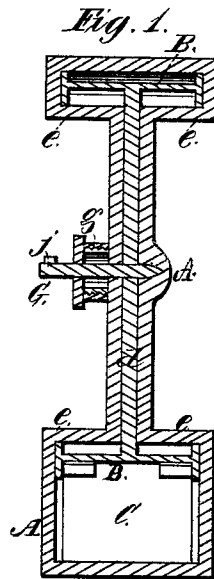


J. J. BURROWS.

WATER-METER.

No. 174,943.

Patented March 21, 1876.



Attest:

J. Kemmon,
J. B. Woodruff

Inventor:

Jno. J. Burrows.

UNITED STATES PATENT OFFICE.

JOHN J. BURROWS, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR
OF ONE-HALF HIS RIGHT TO THOMAS ADAMS, OF SAME PLACE.

IMPROVEMENT IN WATER-METERS.

Specification forming part of Letters Patent No. 174,943, dated March 21, 1876; application filed
March 21, 1874.

To all whom it may concern:

Be it known that I, JOHN J. BURROWS, of Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Water-Meters for Measuring and Registering the Flow and Quantity of Water; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 shows a sectional edge view of my improved water-meter. Fig. 2 is a sectional side view of the same, showing the internal mechanism and operation of measuring a given quantity while passing through the meter.

My invention consists in a light cylindrical rim having depressions in its periphery, into which are hinged a series of leaves or falling buckets, operating independent of each other, the said cylindrical rim being supported upon a central plate and arbor, on which it revolves, the same being inclosed in a case having two diameters and sunken sides, fitting close to the upper portion, leaving the enlarged space in the lower portion for the falling buckets to measure the flow of water as it passes through the enlarged space.

To enable others to make and use my improved water-meter, I will describe it more in detail, referring to the drawing and the letters thereon.

The case or outside A may be made of cast or sheet metal of the required thickness, and so prepared with a coating of tin, nickel, or other substance, as to prevent it from rust or oxydizing, the shape being such as to conform to about one-half of the periphery of the revolving cylinder B, on its upper portion, the lower or other portion being enlarged in its diameter sufficiently to leave the space C for the quantity of water to be measured between the leaves or movable buckets *b b*, as they, by their gravity, assume their position in the space C, to cut off and divide a given portion of the water as the cylinder B revolves to let

it pass through, there always being two of the compartments in the space C closed by the buckets *b b*, so that whether under pressure or not, on a large or small flow, the given quantity contained between each section of the buckets will pass through, and each revolution of the cylinder B will indicate the exact and same quantity.

The revolving cylinder B may be made very light, the movable leaves or buckets *b b* being so pivoted or hinged at equidistances in recesses on the periphery that they will move easily, to unfold or drop down by their own gravity into the water-space C, after they pass the point *a* in the case A, near where the induction-pipe E enters; and they fold up within the circle of the case by their own gravity immediately after passing the outlet or eduction pipe F, so that half of the buckets are closed while the others are operating.

The cylinder B is made with a single plate of metal, *d*, on which the rim and buckets are placed centrally, and the sides of the case A are recessed from the outside, so as to conform to the cylinder.

The angles *e e* serve the purpose of ribs or supports, and thereby give great strength with less thickness of plates, and also provide room for the journals of the center-shaft G and stuffing-box *g*, as well as a box to incase the registering mechanism, so that all may come within the plane of the sides of the case, where it will be better protected from injury of any kind, and cannot be so easily got at to be tampered with.

I do not claim, broadly, a rotating cylinder having vanes or floats hung eccentrically in a circular cavity; nor do I claim leaves or buckets coupled together to operate in pairs; but

What I do claim in a rotary water-meter is—

A light cylindrical rim, B, having depressions in its periphery, into which are hinged a series of levers, *b b*, or falling bucket, each leaf operating independently upon the rim B,

which revolves on the arbor G, the same being enclosed in a case having two diameters and sunken sides, fitting the plate *d* and cylinder B on its upper portion, leaving the enlarged space C for the falling buckets, *b*, to measure the flow of water, substantially as and for the purpose herein shown and described.

In testimony whereof I have hereunto subscribed my name.

JNO. J. BURROWS.

Witnesses:

J. B. WOODRUFF,
S. KEMON.