

# WILLIAM H. LAUBACH'S IMPROVED MEASURING FAUCET

117895

PATENTED AUG 8 1871

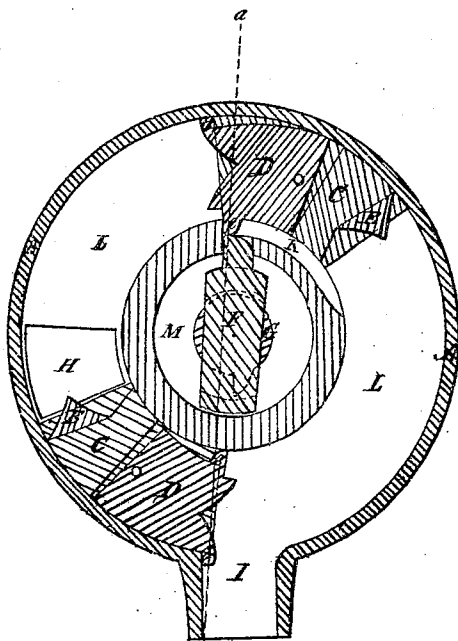


Fig. 1.

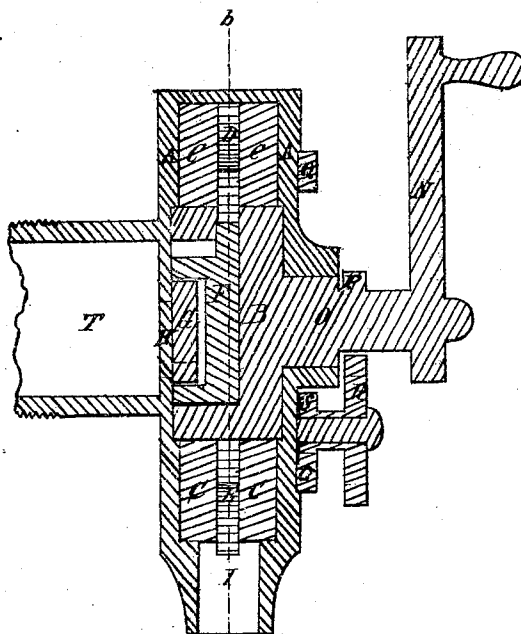


Fig. 2.

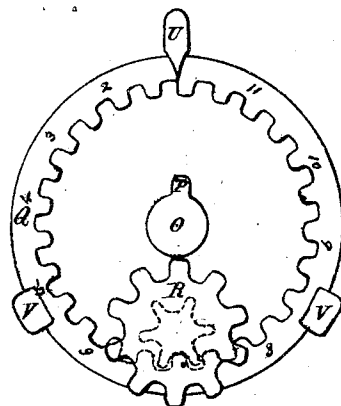


Fig. 3

Witnesses

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Inventor

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# UNITED STATES PATENT OFFICE.

WILLIAM H. LAUBACH, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN ROTARY MEASURING-FAUCETS.

Specification forming part of Letters Patent No. 117,895, dated August 8, 1871; antedated August 2, 1871.

*To all whom it may concern:*

Be it known that I, WILLIAM H. LAUBACH, of the city of Philadelphia and State of Pennsylvania, have invented an Improved Measuring-Faucet and Pump for measuring molasses or other fluids, of which the following is a specification:

My invention consists of certain devices, hereinafter described, whereby a passage of known capacity is formed in a cylinder, said passage being annular, and traversed by segmental pistons so arranged and operated as to constitute, collectively, an accurate measuring-faucet, and which can also be used as a pump.

In the drawing hereto annexed and making part of this specification, Figure 1 is a vertical transverse section through Fig. 2 in the dotted line *b*, showing the various parts of my said invention. Fig. 2 is a vertical longitudinal section through the dotted line *a*, Fig. 1, giving another view of said parts, including the index. Fig. 3 is a front elevation of the index, attached to and making part of said invention.

Similar letters refer to like parts in all the figures.

A is the outer and fixed cylinder, which is firmly held in place by the inlet-pipe T, attached by a screw (cut upon it, as shown in the drawing) or other device to the vessel holding the liquid. It has two circular recesses in its interior central surface to receive the inner cylinder B, which revolves therein. It is made in two pieces—that part next the vessel being a shallow circular open cylinder, and the other part being a cap fitting upon it and attached thereto by any mechanical device, so as to make a firm air-tight joint. The inclosed cylinder thus formed has an inlet-pipe, T, through which and the opening H the liquid passes into it, and an outlet or opening, I, through which the liquid passes out of it. It has in front a circular opening for the journal O, and also a circular recess which forms a shoulder for the registering-index wheel Q. B is the inner cylinder, revolving partly on its journal O and partly within the recess in the interior surface of the fixed cylinder A. It is recessed and slotted in its inner end, and has an aperture through one side for the slide F. It has also a slot, K, to receive the stop *e* of the pallet D. C C are segments of circles, forming pistons, and made to fit the transverse area of the passage L, through which they move singly, except when in

contact at and about the outlet I. They can be packed, if necessary, to prevent leakage. Each of them is slotted through the center at the rear end for one of the pallets D D, and has a lifter, E, attached to its forward extremity. This arrangement may be altered by dispensing with the lifter E and reversing the position of the pallets. D D are pallets, notched at their rear end, and provided with the stops *d d* and *e e*. They are hung at the forward end on a pin through the pistons C C. F is a slide placed in the inner cylinder B, and, while revolving with it, is operated by the cam G, when opposite the opening I, to throw out the rear end of the pallet D. G is a cam fixed firmly on the center of the interior surface of the recess in that side of the cylinder A which has the opening for the inlet-port H. I is the outlet-port or opening, which is produced and forms a short pipe. This pipe may be closed at its lower extremity by a slide. K is a slot in the side of the inner cylinder B to receive the stop *e* of the pallet D. L is the passage to contain the fluid between the pistons C C. M is the opening or cavity in the cylinder B. N is the crank or handle. O is the journal. P is the tooth for turning the wheel R. Q is the registering-index wheel, having teeth on its inner edge and index-figures on its face, as shown in Fig. 3. It revolves in a recess in the outer face of the cylinder. R is a toothed wheel, sleeved with the wheel S on a pin attached to the outer face of the cylinder A, on which pin they revolve when operated by the tooth P to turn the index-wheel Q. T is the inlet-pipe attached to the cylinder A. This arrangement of pipes must be modified to suit when used as a pump. U is the index-point of the registering-wheel Q. V V are clamps or keepers for the registering-wheel in connection with the index-point U.

To operate the faucet, the index is first set to register the required number of revolutions to measure the desired quantity. The cylinder B is then rotated by the handle N, one of the pistons C being fixed at the outlet I by the stop *d* and kept in position by the stop *e*, which bears against the edge of the cylinder B. The other piston revolves with it, (the cylinder B,) being kept in place by the stop *e* in the slot K, while the other stop *d* bears upon the inner edge of the cylinder A. Thus they maintain their relative conditions—the one in motion, the other at rest—

until, by the revolution of said cylinder B, the two pistons come in contact, when the lifter E of the piston in the rear operates the pallet of the forward piston and throws its stop *c* into the slot K, (which is then in a position to receive it,) thus detaching the stop *d* from the orifice I. This piston is then carried forward, being impelled by that in the rear until the slide F, being operated by the cam G, throws the pallet of this last-mentioned piston out so that its stop *d* comes in contact with the side of the orifice I and holds it at rest while the other is revolved. Thus the said pistons continue to alternate in motion and at rest so long as the cylinder B is revolved. By this alternation of the positions of the said pistons the fluid between them in the passage L next the aperture H is constantly drawn into the said passage, and that between said pistons next the aperture I is continually forced out of it. The numbered index-wheel is moved one degree for every revolution, by the operation of the tooth P on the teeth of the wheel R, by means of the wheel G, with which it is connected.

The said faucet and its appliances are designed to be constructed of iron or other suitable metal.

I claim as my invention and desire to secure by Letters Patent—

1. The curved pistons C C, with their pallets D D, in combination with the inner cylinder B and outer or fixed cylinder A, constructed and operating substantially as described, and for the purposes set forth.

2. The curved pistons C C, in combination with the pallets D, their stops *d* and *e*, slide F, and cam G, constructed and operating substantially as described.

3. The combination of the curved pistons C C, pallets D D, slide F, and cam G with the inner cylinder B, outer cylinder A, inlet-port H, outlet-port I, and handle N, constructed substantially as described, and for the purpose intended.

W. H. LAUBACH.

Witnesses:

CHAS. P. KITSON,  
E. H. BAILEY.