E. L. SPENCER.

Self-Measuring Faucet.

No. 208,645. Patented Oct. 1, 1878.

Fig. 1.

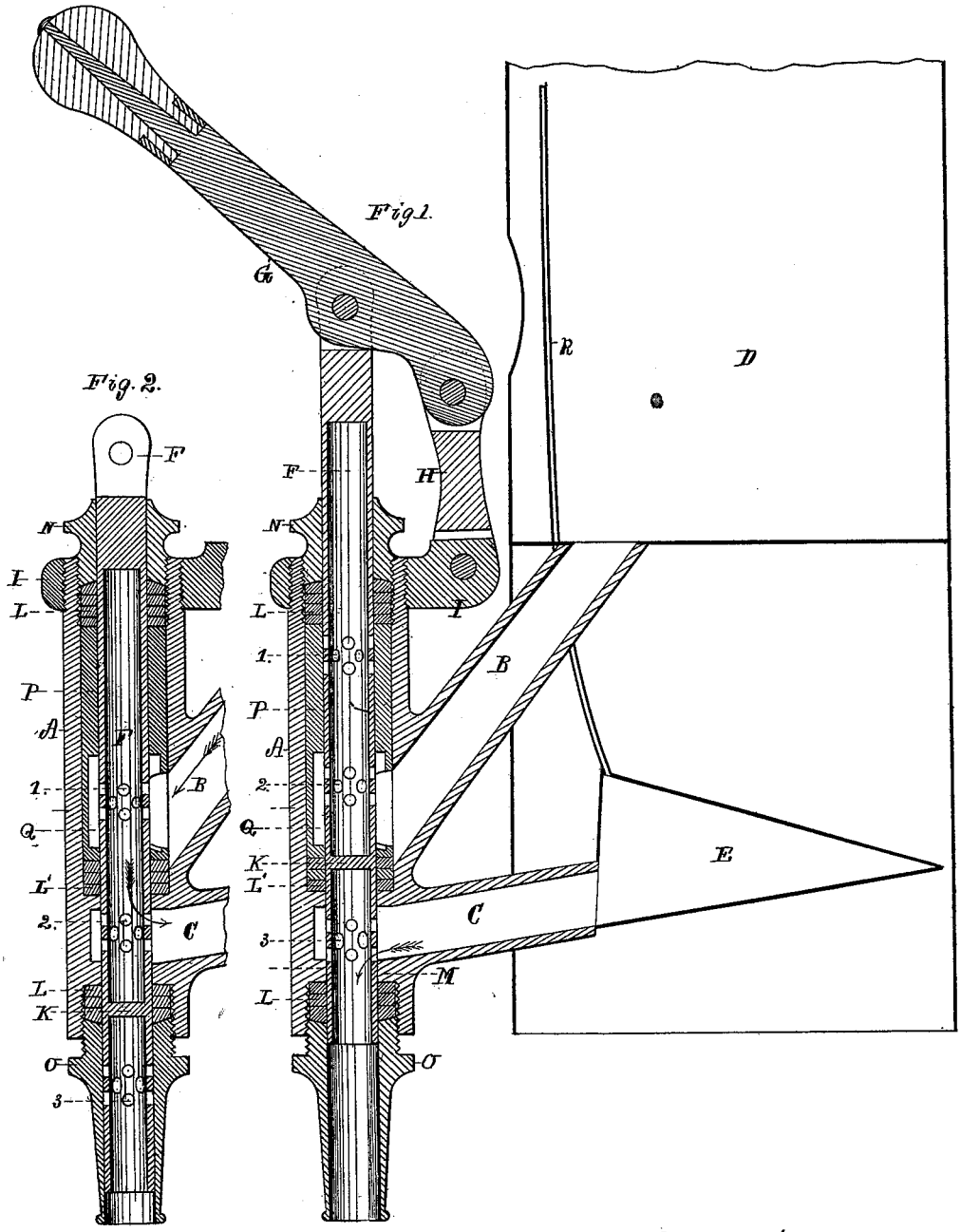

Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

ELISHA L. SPENCER, OF MILLVILLE, MASSACHUSETTS, ASSIGNOR OF ONE HALF HIS RIGHT TO THOMAS T. SMITH, OF SAME PLACE.

IMPROVEMENT IN SELF-MEASURING FAUCETS.

Specification forming part of Letters Patent No. **208,645**, dated October 1, 1878; application filed August 23, 1878.

To all whom it may concern:

Be it known that I, ELISHA L. SPENCER, of Millville, Worcester county, Massachusetts, have invented certain Improvements in Self-Measuring Faucets for Oil-Tanks, &c.; and I hereby declare that the following specification is a full, clear, and exact description of the same, and the accompanying drawing is an illustration.

The object of this improvement is to expedite and simplify the drawing, measuring, and delivering of kerosene-oil, or any other liquid to be dealt out in specified quantities without drip or smell, and with the least possible manipulation.

My invention consists, primarily, in a faucet formed with two lateral connecting-tubes and a vertically-movable tubular valve, perforated at intervals and plugged between the central and lower perforations, for the purposes stated.

My invention also consists in the combination, with such faucet, of certain apparatus, as recited in the appended claims.

Figure 1 illustrates, in vertical section, my improved faucet as applied to an oil-tank with fixed measuring-vessels, showing the valve open for discharge from the measure. Fig. 2 represents the position of the parts while the measure is being filled.

A is the body of the faucet, and B C the lateral tubes, preferably formed integral with the body, and at about the angle thereto indicated in the drawings. The tube B is intended to enter the bottom of the tank D, as shown, and form an outlet therefrom for the liquid, and the tube C is both an inlet to and an outlet from the measuring-vessel E, which is secured to said tube.

F is a tubular valve, having a vertical or longitudinal movement in the body of the faucet, and operated by any suitable means adapted to raise and lower it. The particular apparatus for this purpose (shown in the drawing) is analogous to that described in the patent for a gage-cock granted to Wm. Andrews, March 7, 1876, No. 174,344, consisting of a lever, G, pivoted loosely to the upper end of the valve-stem, and connected by a pivoted link, H, with a projection, I, on the body A. These devices I therefore disclaim; nor do I claim, broadly, a tubular valve with a single series of perforations. I also disclaim a faucet having merely a rotary or semi-rotary movement to its spigot, my invention being limited to a device in which a plugged and doubly-perforated tubular valve operates by longitudinal reciprocation within its casing, as herein described.

The tube F is perforated at three different points, numbered 1, 2, and 3, as shown—the upper and the central series of holes, Nos. 1 and 2, being arranged opposite to the mouths of the tubes B and C, respectively, when the valve-tube is lowered to the position shown in Fig. 2. From this relative location of the parts it follows that the oil or other liquid in the tank may flow, by gravity, through the tube B and perforations No. 1 into the valve-tube, thence out through the central perforations and tube C into the measuring-vessel until it is filled.

If preferred, the apertures numbered 1 and 2 may be elongated or merged together, so as to form one series of openings only, and the operation will remain the same; but as such construction tends to weaken the valve-tube, I do not recommend it.

The oil is prevented from escaping by means of a plug, K, below the central orifices in the valve-tube.

When the valve is raised by the lever G or otherwise until the plug K is above and the perforations No. 3 opposite to the tube C, it is obvious the flow of oil from the tank will be cut off, and an outlet from the measure E will be opened through tube C, apertures 3, and the lower part of the valve-tube. (See Fig. 1.) Thus the customer's can will receive the contents of measure E and tube C, which together contain a known quantity within the capacity of the can, and no more can be drawn out until the valve-tube is depressed, as before described, to fill the measure, and raised again to empty it.

The body A has at its center, between the tubes B and C, a bore just sufficient to receive the valve-tube, and is provided with a leather or other proper packing, L, at its upper and lower ends, making a close joint with the

valve-tube, and capable of compression against internal shoulders M by means of the annular nuts N O, to compensate for wear. The nut O serves also to cover and protect the lower end of the valve-tube, and acts as a discharge-nozzle. Between the central part of the body A and the upper packing-rings I usually introduce a hollow sleeve, P, fitting within the body A and surrounding the tube F, and cast in such form as to leave an annular space, Q, around the valve-tube, so that the oil flows into or out of the perforations from all sides. With this construction I generally employ a central packing, L′; but it is obvious these features may both be omitted, the annular space formed in the casting A, and a shoulder provided therein to support the upper packing.

There may be several measuring-vessels—as, for instance, pint, quart, half-gallon, and gallon—each provided with a faucet, as described, varying in capacity according to the quantity to be drawn through them. These vessels are preferably hidden beneath the tank, and I give them a conical form for speedy drainage, and also that they may be arranged to radiate from a central point, and have their larger ends next to the faucets for connection with the tubes C.

Each measure is provided with a small vent-tube, preferably terminating in the top of the tank, for the escape or admission of air while the measure is being filled or emptied.

By my invention the process of drawing oil from a tank, measuring it, and delivering it to the consumer's can is reduced to the mere manipulation of the vertical tubular valve. I thus avoid entirely the annoyance and danger attending the operation as heretofore conducted.

I claim as of my invention—

1. In a faucet or gage-cock, the combination, with an external shell having two lateral openings only, of a longitudinally-movable tubular valve, perforated in two or more distinct planes, as stated, and plugged to close the passage between the lower perforations and the adjacent series of openings, for the purpose set forth.

2. The double-acting faucet herein described, having the body A, the lateral tubes B C, formed integral therewith, and the doubly-perforated and vertically-movable tubular valve F, constructed and adapted to operate substantially as set forth.

3. The combination, with a tank and a fixed measuring-vessel which has a common inlet and outlet, of a faucet having a body and two lateral pipes, forming a connecting-passage between said tank and measure, and provided with a vertically-movable tubular valve, substantially as set forth.

4. The combination of the improved faucet herein set forth, having a longitudinally-movable tubular valve, with a tank and measuring-vessel, and a vent-tube for the passage of air to and from said measure, substantially as set forth.

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Witnesses:
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