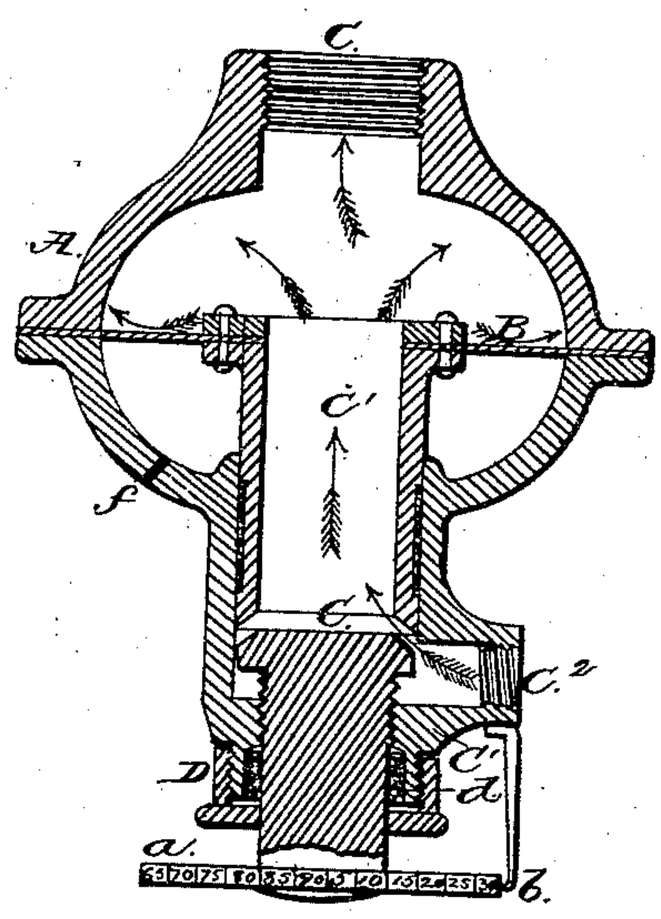
J. TAYLOR.

Pressure-Regulator.

No. 168,807. Patented Oct. 11, 1875.



Witnesses:
H. A. Daniels
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Inventor
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UNITED STATES PATENT OFFICE.

JOHN TAYLOR, OF LOCKPORT, N. Y., ASSIGNOR OF TWO-THIRDS HIS RIGHT TO LEWIS HARMONY AND JABEZ S. WOODWARD, OF SAME PLACE.

IMPROVEMENT IN PRESSURE-REGULATORS.

Specification forming part of Letters Patent No. **168,807**, dated October 11, 1875; application filed April 26, 1875.

To all whom it may concern:

Be it known that I, JOHN TAYLOR, of Lockport, in the county of Niagara, in the State of New York, have invented certain Improvements in Regulators of Pressure, of which the following is a specification, reference being had to the accompanying drawing forming a part hereof, and which represents a water-regulator in section.

The globe A of the regulator is made in halves, as shown, a diaphragm, B, being tightly secured between the same. A tubular valve-seat, C′, is secured to the diaphragm, the valve C being capable of adjustment within the lower end c^1 of the regulator, which forms a nut. D is a cap to a stuffing box or gland, within which a packing, *d*, is placed, causing a tight fit of the valve-stem. To the lower end of the valve-stem is secured a graduated index-wheel, *a*, the pointer *b* being secured to the regulator. It will be seen that by turning the index-wheel, so as to increase or diminish the opening between the valve-seat and valve, more or less pressure on the top of the diaphragm is required to close the passage for the water, thus putting more or less pressure in the house-pipes leading from the upper orifice *c* of the regulator. Thus, if it is desired to carry thirty pounds' pressure in the house-pipes, the index-wheel must be turned so as to bring the figure 30 under the pointer. The water flows from the main through the channel c^2 in the direction of the arrows, pressing on the top of the diaphragm. When thirty pounds' pressure is reached, the diaphragm, having an area much greater than that of the valve, is depressed, causing the valve-seat C′ to descend and close the valve-opening. Any water which may find its way under the diaphragm is carried off from the aperture *f*.

It is seen that this regulator is not operated by unequal pressures upon the two sides of the diaphragm, but that a pressure is exerted upon but one side.

This invention is applicable, without change in principle, to the general purposes of a pressure-regulator for liquids and gaseous bodies.

I claim as new, and wish to secure by Letters Patent of the United States—

In a pressure-regulator, the combination of the diaphragm B cylindrical valve-seat C′, and vertically-adjustable valve C, whereby the passage c^2 leading to the main is closed by pressure exerted on the top of the diaphragm, substantially as and for the purposes specified.

In testimony whereof, I have hereto subscribed my name this 13th day of April, 1875.

JOHN TAYLOR.

Witnesses:

H. A. COOKE,

FRANK J. CAMPBELL.