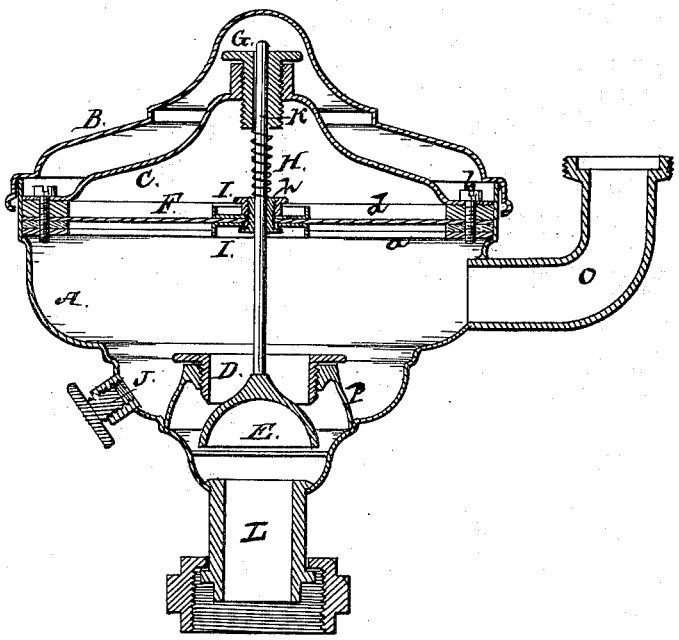
J. BASSEMIR.

GAS-REGULATOR.

No. 189,683. Patented April 17, 1877.



Witnesses:
William Dursh
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UNITED STATES PATENT OFFICE.

JOHN BASSEMIR, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN GAS-REGULATORS.

Specification forming part of Letters Patent No. **189,683**, dated April 17, 1877; application filed December 23, 1876.

To all whom it may concern:

Be it known that I, JOHN BASSEMIR, of the city, county, and State of New York, have invented certain new and useful Improvements in Gas-Regulators; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The nature of my invention consists in the particular construction and arrangement of a gas-regulator, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this specification, and which represents a central vertical section of my gas-regulator.

A represents the shell or case of my gas-regulator, provided with a suitable cap or cover, B. In the bottom of the shell A is the gas-inlet L, and in the side of said shell is the outlet O.

Directly above the inlet L within the shell is an annular conical flange or cone, P, in which the valve-seat D is screwed down from the top, as shown. Below this valve-seat is the valve E, provided with the upwardly-projecting stem K. The valve E is in the form of an inverted bowl, or, in other words, the one-half of a hollow sphere, and the inner diameter of the valve at its bottom is larger than the diameter of the gas-inlet, so that the full force of the entering gas will act on said valve, as the entire column will pass within the valve before it is checked and commences to spread around the sides thereof, and pass up into the body of the regulator and out through the outlet.

Near the top of the shell A is an interior flange, *a*, to which, by means of screws *b b*, are fastened a flexible diaphragm, F, and an annular plate-ring, *d*, on top thereof, at the edges. These screws *b* also fasten an interior cap, C, elevated above the diaphragm, as shown.

To the center of the flexible diaphragm F are secured top and bottom plates I I, and in the center of said plates is arranged a stuffing-box, *h*, through which the valve-stem K passes, and in which said valve-stem is fastened. The upper end of the valve-stem passes through a hollow screw, G, which is screwed downward through the center of the interior cap C, and forms a guide for said stem. This screw G also regulates the pressure of a spring, H, which is placed around the valve-stem, between said screw and the stuffing-box *h*, for holding the valve E open.

The spring H is to be regulated to a certain pressure of gas, to allow the gas to pass around the valve E into the lower chamber of the shell and to the service-pipes through the outlet O. Whenever the pressure of the gas increases, such pressure forces the valve E upward, diminishing the aperture through which the gas flows; and as soon as the pressure is reduced the spring lowers the valve to increase the size of said aperture, and thus always maintain the same pressure in the service-pipes.

The valve E being in the form shown, and above and of larger diameter than the inlet-pipe, the entire column of gas strikes the interior of the valve, and makes the same very sensitive to the slightest variation in the gas-pressure. As constructed, the diaphragm is entirely inclosed, and cannot be tampered with by lifting off the outside cover.

J is simply a clean-out opening.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the shell A, with cover B, annular flange P, with adjustable valve-seat D, semi-spherical valve E, with stem K, flexible diaphragm F, with plates I and stuffing-box *h*, and the spring H, interior cap C, and regulating-screw G, all substantially as and for the purposes herein set forth.

JOHN BASSEMIR.

Witnesses:

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