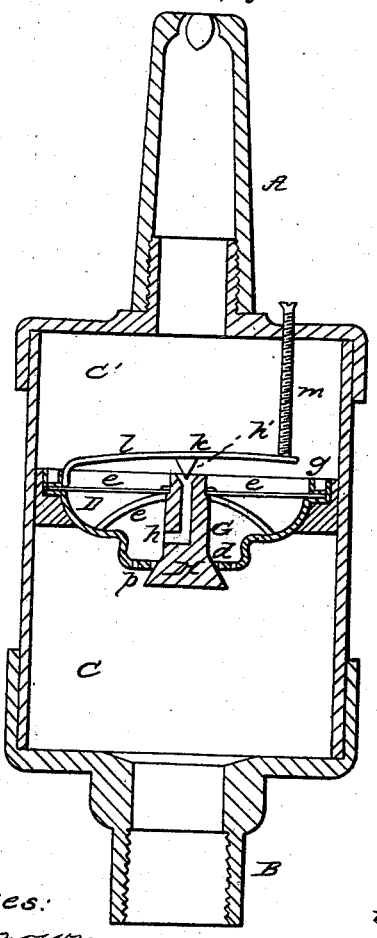
J. S. WOOD.

Gas Regulator.

No. 49,188. Patented Aug. 1, 1865.

Fig. 1.



Witnesses:
Edward F. Brown
Jos. Heiss

Inventor:
Joseph S. Wood

UNITED STATES PATENT OFFICE.

JOSEPH S. WOOD, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN GAS-REGULATORS.

Specification forming part of Letters Patent No. **49,188**, dated August 1, 1865.

To all whom it may concern:

Be it known that I, JOSEPH S. WOOD, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Gas-Regulators; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The object of my invention is to secure a steady and regular light from the burner, whatever may be the pressure from the main from the gas-works.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 is a vertical section through the regulator.

A is the burner; B, the pipe leading from the main. C is a chamber into which the gas flows from the pipe B. D is a metallic disk separating the chamber C from chamber C′ above it. To the upper edge of this disk is stretched a piece of oiled silk, *e*. This is kept in its place air-tight by the ring *g*. Thus is formed a chamber G between *e* and D. This disk D has a round opening in the center, *d*, and a much smaller hole, *p*, at one side of it. To this oiled silk *e* is fixed, in the center, the valve H. It passes through it and is made air-tight by a collar and washer on it. The lower end of the valve H has a conical head and passes through the opening *d*. This valve also has a passageway for the gas cut in it, entering at *h*, and passing out at the top at *h′*, which is slightly enlarged with a conical opening.

Above the valve H is a conical plug, *k*, secured to a spring, *l*, one end of which spring is fixed to the ring *g*. The other end is pressed upon by the set-screw *m*, which regulates the amount that the plug *k* enters the opening *h′*.

The valve-rest *o* is secured to valve H and serves to bear its weight when the gas is turned off from the main.

The operation is as follows: The gas passes through the opening *d* in disk D into chamber G, from thence into the opening *h*, and out at *h′* into chamber C′ to the burner. When the pressure in chamber C is too strong it causes the oiled silk *e* to raise the valve H, lessening the opening *d* and preventing so much gas passing through. At the same time it lessens the opening *h′* by bringing it nearer to plug *k*. The opening *p* always admits a small amount to the burner when the opening *d* is closed.

I do not claim the disk D, valve-rest *o*, nor oiled silk *e*, as they are common to many gas-regulators; but

I claim—

1. Passing the gas through the valve H by means of the openings *h h′*, substantially as described.

2. The valve H, in combination with the stop *k*, substantially as described.

3. The combination of valve H, stop *k*, and set-screw *m*, substantially as described.

JOSEPH S. WOOD.

Witnesses:
EDWARD BROWN,
JOS. WEISS.