P. KELLER.

Gas Burner.

No. 108,029. Patented Oct. 4, 1870.

Fig: 1

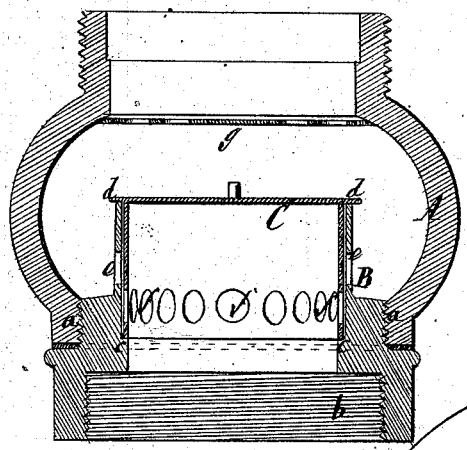


Fig: 2

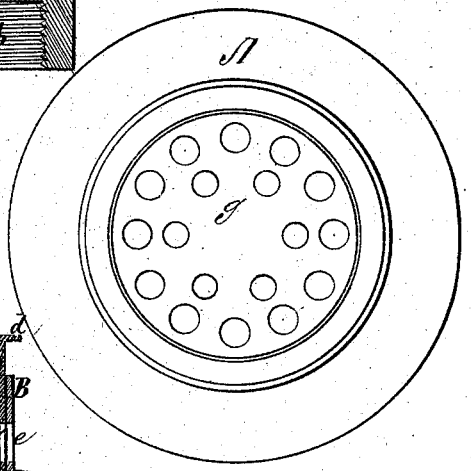
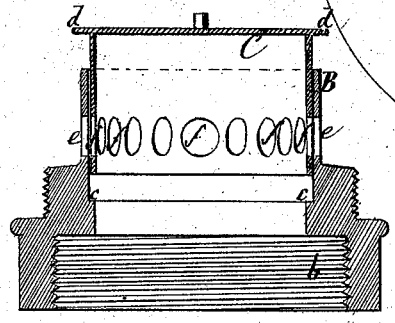


Fig: 3.



Witnesses:

C. Wahlers.

E. F. Kastenhuber

Inventor:

Peter Keller

per Van Santvoord & Hauff

Attys

United States Patent Office.

PETER KELLER, OF NEW YORK, N. Y.

Letters Patent No. 108,029, dated October 4, 1870.

IMPROVEMENT IN GAS-REGULATORS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, PETER KELLER, of the city, county, and State of New York, have invented a new and useful Improvement in Gas-Regulators; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a central section of this invention.

Figure 2 is a plan or top view of the same.

Figure 3 is a central section of the valve detached, showing the same as it appears when in operation.

Similar letters indicate corresponding parts.

This invention consists in a cup-shaped valve fitting into a nozzle, which is provided with a shoulder, to receive the bottom edge of said valve, while the valve is provided with a projecting rim, to rest in the top edge of the nozzle, both the valve and nozzle being perforated with holes, and inclosed in a globe-shaped chamber, in such a manner that, when the valve is clear down, the holes are all closed, and the contact of said valve with the shoulder, and with the top edge of the nozzle prevents the passage of any more gas than required to balance the pressure on the valve from above and below; but as soon as one or more burners are turned on, (whereby the pressure on the top of the valve is diminished,) the valve is raised, and the required quantity of gas is allowed to pass through the holes in the nozzle and in the valve, and by the action of the valve, the quantity of gas admitted to the burners is equalized, and a uniform and steady light is obtained.

A perforated screen extending over the valve protects said valve against impurities, and prevents it from rising beyond the desired height.

In the drawing—

The letter A designates a globe-shaped chamber, which is provided with an internal screw-thread, *a*, to receive the nozzle B.

This nozzle is provided at its bottom with a screw-thread, *b*, to be applied to the gas-meter, or to a pipe connecting with said meter, and another pipe attached to the upper end of the chamber A, leads to the burners.

The nozzle B is bored out to receive the cup-shaped valve C, and it is provided with an internal shoulder, *c*, for the valve to rest upon, while said valve is furnished with a projecting rim, *d*, which bears on the top edge of the nozzle, when the valve is clear down.

In the sides of the nozzle is a series of holes, *e*, and a similar set of holes, *f*, is made in the sides of the valve, but the holes *f* do not register with the holes *e* until the valve is raised a certain distance from its seat *c*.

Across the upper part of the chamber A extends a perforated screen, *g*, to protect the valve against impurities, and to prevent it from rising beyond the required height.

When the valve is clear down, and the burners are all turned off, only a small quantity of gas leaks past said valve just sufficient to balance the pressure on the top and bottom of said valve, but as soon as one or more burners are opened, whereby the pressure above the valve is diminished, the valve is raised, and a sufficient quantity of gas passes through the holes *e f*, to support the flame or flames.

By this arrangement, a uniform and steady light is produced, and all waste of gas is obviated.

What I claim as new, and desire to secure by Letters Patent, is—

1. The arrangement of a cup-shaped valve fitting into a nozzle, which is provided with a shoulder to receive the bottom edge of said valve, while the valve is provided with a projecting rim, to rest on the top edge of the nozzle, both the valve and the nozzle being perforated with holes, substantially in the manner herein shown and described.

2. The arrangement of a perforated screen, in combination with the cup-shaped valve and nozzle, constructed and operating as set forth.

This specification signed by me this 5th day of September, 1870.

PETER KELLER.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.