

P. KELLER.
Gas-Regulators.

No. 137,454.

Patented April 1, 1873.

Fig. 1.

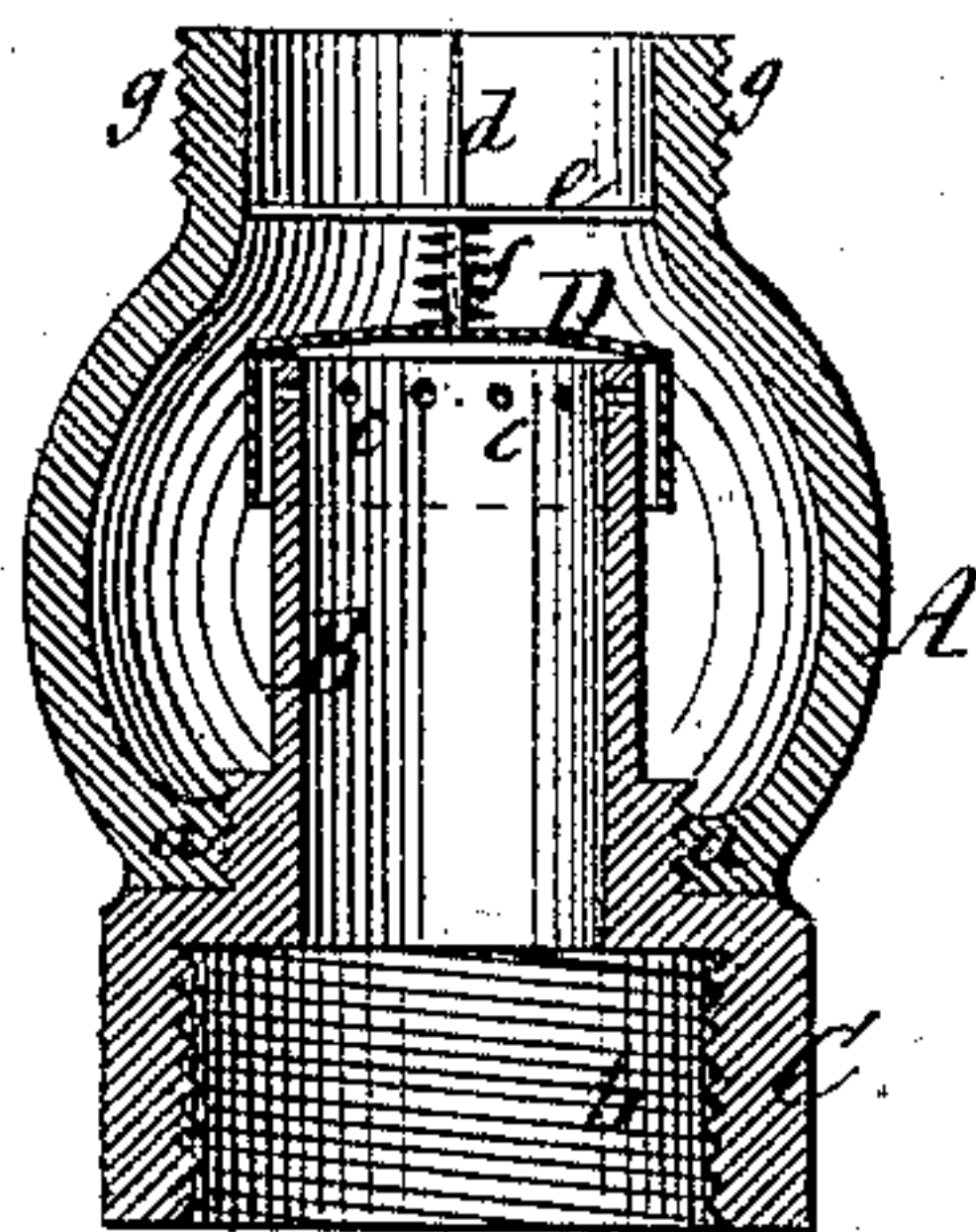
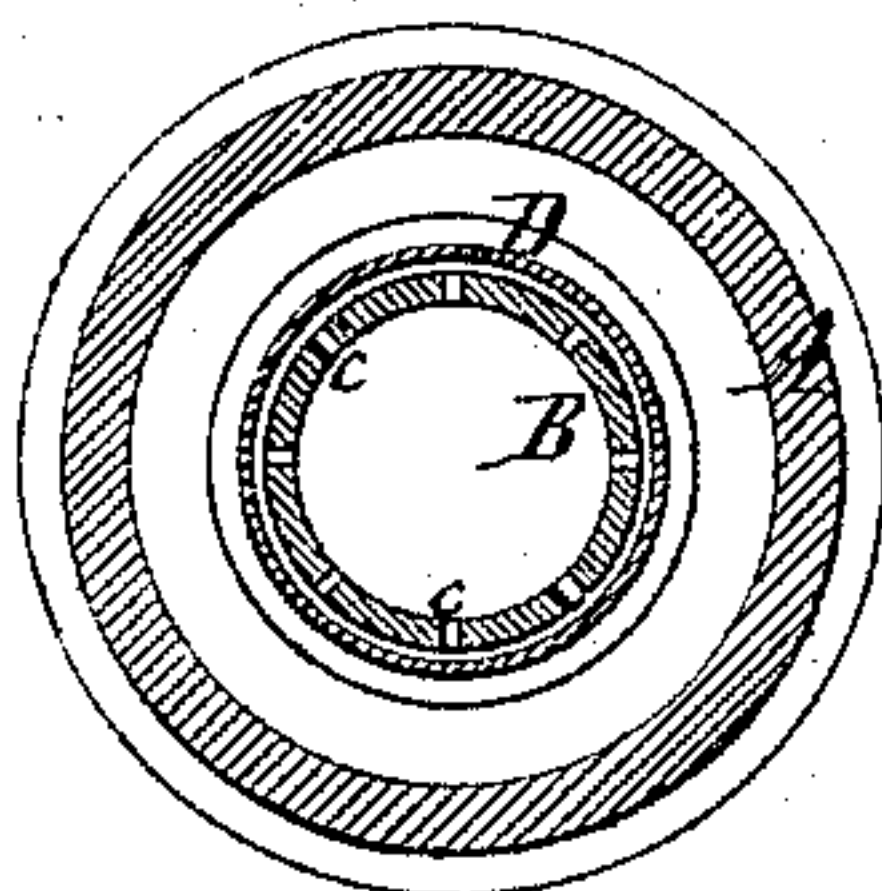


Fig. 2.



Witnesses.
Chas. Wählers.
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UNITED STATES PATENT OFFICE.

PETER KELLER, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND JOHN HEIM, OF SAME PLACE.

IMPROVEMENT IN GAS-REGULATORS.

Specification forming part of Letters Patent No. **137,454**, dated April 1, 1873; application filed January 21, 1873.

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 longitudinal central section of my invention. Fig. 2 is a horizontal section of the same.

Similar letters indicate corresponding parts.

This invention relates to certain improvements on that class of gas-regulators for which a patent was granted to me June 27, 1871, No. 116,321.

My present improvement consists in the arrangement of a cap having a guide-pin, and which rests on the upper edge of a tubular nipple and overlaps the same, said nipple being provided with perforations near its upper edge while the cap is exposed to the action of a light spring, which has a tendency to keep the same down upon the nipple, both the nipple and the cap being inclosed in a shell which connects with a gas-pipe in such a manner that if all the burners connecting with the regulator are closed sufficient gas will leak through between the nipple and the cap to render the pressure on both sides of said cap uniform; but if one or more burners are opened the pressure on the outside of the cap is reduced, and the cap is raised from its seat to allow a sufficient quantity of gas to pass for the number of burners opened, and thereby a uniform supply of gas to all the burners connected to the regulator is obtained.

In the drawing, the letter A designates a shell of brass or any other suitable material, which is provided with an internal screw-thread, *a*, fitting a screw-thread formed on the lower part of a tubular nipple, B. This nipple rises from a casting, C, that is provided with an internal screw-thread, *b*, to connect with a gas-supply pipe. The nipple

B is turned off flat on its upper edge, and it is provided with a series of small perforations, *c*, as shown in Fig. 1. On the upper edge of said nipple rests a cap, D, which is made of brass or other suitable material, and sufficiently light for the purpose. This cap overlaps the perforations in the nipple, and it is provided with a pin, *d*, which extends up through a bridge, *e*, screwed in the shell A, so as to guide said cap. Round this pin is placed a light spring, *f*, which has a tendency to hold the cap down on its seat. The upper part of the shell A is provided with a screw-thread, *g*, to connect with a pipe that serves to conduct the gas to the burners.

If all the burners are closed a sufficient quantity of gas leaks past the cap to produce a uniform pressure on both sides of said cap. If one or more burners are opened the pressure on the upper side of the cap is reduced, the cap is raised, and sufficient gas is admitted to restore the equilibrium, but whenever from some cause more gas is admitted to the space above the cap than the burners consume, the cap closes down immediately, and the supply of gas to the burners is thus kept as near as possible uniform.

By making the cap so as to overlap the perforated nipple on the outside, as shown, I have finally succeeded in obtaining the desired result.

I am aware that a cap having a single perforation has been arranged over a nipple having a single perforation, in such a manner that the two form a close-fitting joint, and no gas can escape to the burner or burners until the two perforations coincide, and such introduction of the gas is not uniform, since it issues only on one side of the cap.

In my invention, if all the burners be closed a uniform quantity of gas will leak between the flange of the cap and the nipple; but if one or more burners are opened the entire outside surface of the cap is relieved of pressure, and the cap will, by pressure of the incoming gas, be raised from its seat, and the gas flow out all around.

This result cannot, either, be secured by a perforated cap arranged within a perforated

nipple, for in such cases a close fitting of parts is required between the two; hence no leak can occur, which, in my invention, is essential.

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

In a gas-regulator, the cap D, having the solid depending flange for loosely overlapping the series of perforations *c c* near the top of the nipple B, and provided with the guide-

pin *d* and spring *f*, as described, in combination with each other and with the casting C and shell A, substantially as herein shown, for the purpose specified.

This specification signed by me this 13th day of January, 1873.

PETER KELLER.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.