P. KELLER.

Gravitating Gas-Checks.

No. 148,962. Patented March 24, 1874.

Fig: 1.

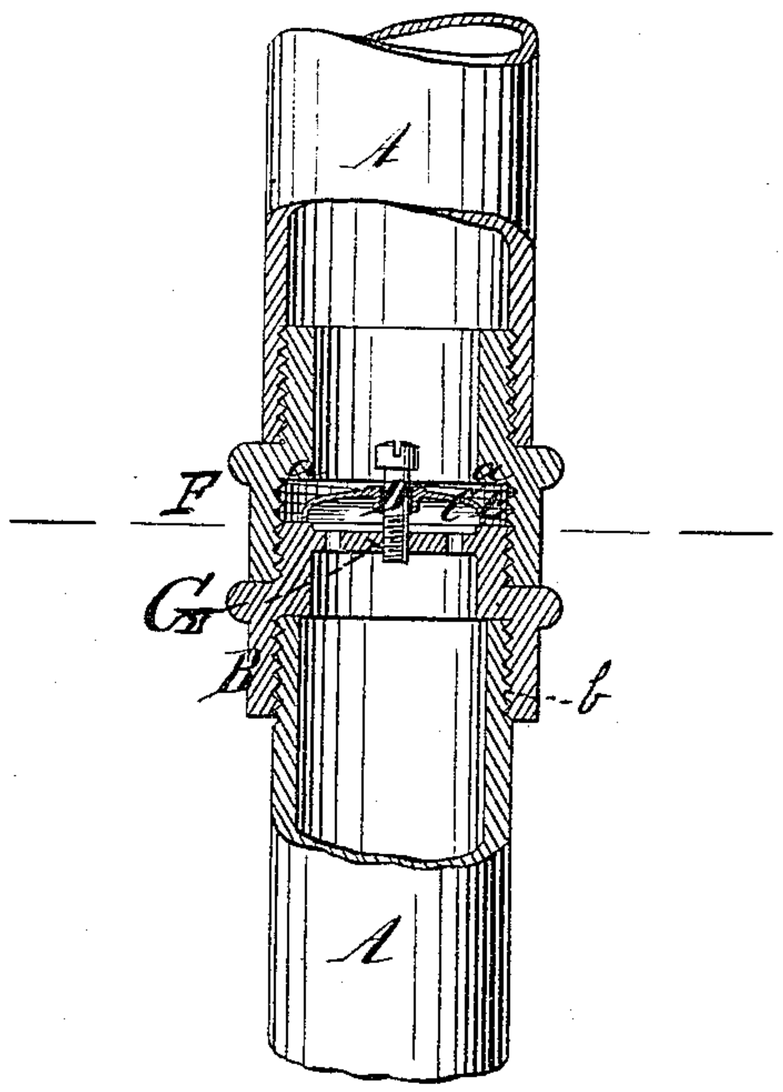
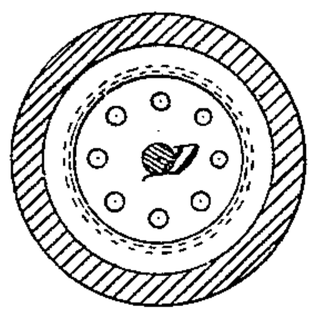


Fig: 2.



Witnesses:

Ernst Bilfinger

Henry Gentner

Inventor.

Peter Keller

per

Van Santvoord & Hauff

Attys

AM. PHOTO-LITHOGRAPHIC Co. N. Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

PETER KELLER, OF NEW YORK, N. Y.

IMPROVEMENT IN GRAVITATING GAS-CHECKS.

Specification forming part of Letters Patent No. **148,962**, dated March 24, 1874; application filed February 26, 1874.

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 Improved Gravitating Gas-Check Valve; 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 shows a vertical central section of this invention. Fig. 2 is a horizontal section, showing the valve-seat.

Similar letters indicate corresponding parts.

This invention consists in the arrangement of a cup-shaped gravitating-valve in the interior of a joint or connecting-socket of two sections of gas-pipe, one of said sockets being provided with an internal screw-thread for the reception of the gas-pipe, and with a closed top or cap-plate, which is perforated, for the emission of the gas into a chamber formed by enlarging the diameter of the upper connecting-socket, said socket being screw-threaded both internally and externally, for the reception of the other socket and section of gas-pipe, and the chamber in the same being sufficiently large to permit the movement of the valve by the pressure of the gas, in such a manner as will insure a regular flow of the latter.

The letters A A designate two adjoining sections of gas pipe, which are in communication, respectively, with the meter or gas-supply source, and with one or more burners. The pipe-sections are connected by means of coupling-sockets or joints B F, the former of which is provided with an internal screw-thread, *b*, for the reception of its pipe-section, while the other socket is made with an external screw-thread for the same object. The socket B is made with a closed top or cap-piece, G, which is perforated for the emission of gas into a chamber, E, formed in the base of the other socket, F. The socket or coupling B is also provided with an external supporting shoulder or ledge for the socket F, and with an external screw-thread above said shoulder, for forming the connection with the correspondingly screw-threaded lower end of the socket F. The chamber or space E is formed immediately above the cap-plate G by enlarging the diameter of the socket or coupling F, forming by this means also a shoulder, *a*, for limiting the motion of the valve C. Said valve, which is cup-shaped, is guided on a stem, D, and a motion of the same is possible to such an extent as the area of the chamber E will permit.

When the valve is in its normal position its weight will cause it to rest upon the cap-plate G, which thus acts also as a valve-seat; but as soon as the pressure of the gas in the inlet-pipe becomes sufficiently great to overcome the weight of the valve, the same will be moved away from its seat to permit the passage of gas through the perforations into the chamber E, from whence the gas passes between the edge of the valve and chamber into the pipe leading to the burner. The movement of the valve will always be in conformity with the pressure of the gas, for if the latter be too great the valve will be moved to its full extent until arrested by the shoulder *a*, and by this means it is possible to deliver to the burners a regular and uniform flow of gas independently of the pressure of the gas in the supply-pipe.

In order to provide means for varying the throw of the valve, I make the guide-stem D with a screw-threaded lower end, which screws into the seat or cap-plate G in an adjustable manner.

I am aware that it has been proposed to locate in a gas-supply pipe a check-valve which is operated by the pressure of the gas, to regulate the flow of the same to the burner; this feature I do not, therefore, claim broadly, but only in connection with novel means of combining the valve with the sections of gas-pipe, as above stated.

I claim as my invention—

The coupling-sockets B F, having internal and external screw-threads for connecting the same together and forming the connection with the pipe-sections A A, the socket B being provided with a perforated cap-plate, G, having the stationary stem D for the cup-shaped valve C to play upon, and the socket F having chamber E and shoulder *a*, all being combined as herein shown and described.

This specification signed by me this 23d day of January, 1874.

PETER KELLER.

Witnesses:

E. F. KASTENHUBER,

CHAS. WAHLERS.