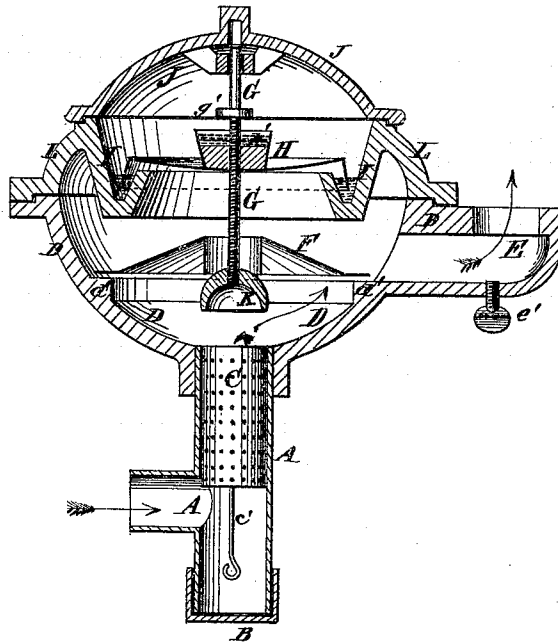


C. C. PLACE.
GAS-REGULATOR.

No. 179,726.

Patented July 11, 1876.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES C. PLACE, OF SOMERVILLE, MASSACHUSETTS.

IMPROVEMENT IN GAS-REGULATORS.

Specification forming part of Letters Patent No. **179,726**, dated July 11, 1876; application filed June 12, 1876.

To all whom it may concern:

Be it known that I, CHARLES C. PLACE, of Somerville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Gas Regulator and Purifier, of which the following is a specification:

The figure is a detail vertical section of my improved device.

The object of this invention is to furnish an improved device for attachment to a gas-pipe to check the pressure of the gas and purify it before it is allowed to pass to the burners.

The invention consists in the combination of the T-pipe, provided with the cap and the filtering box, with the lower part of a gas-regulator for purifying the gas introduced into said regulator, and in the gas-regulator formed by the combination with each other of the lower part, provided with the shoulder, the middle part provided with the V-shaped ring-flange to receive the quicksilver, the cap, the lower plate, the weighted plate, and the valve and its adjusting-rod, as hereinafter fully described.

A is a T-pipe, the horizontal arm of which is connected with the gas-pipe. The lower vertical arm of the T-pipe A is provided with a cap, B, to adapt it to serve as a trap or receiver for the water and tar separated from the gas. In the upper vertical arm of the pipe A is placed a cylindrical box, C, made of perforated sheet metal and filled with charcoal and lime or other substances for purifying the gas. The box C is provided with a stem, *c'*, for convenience in withdrawing it from the pipe A. To the upper end of the vertical arm of the pipe A is attached a cup-shaped vessel, D, upon one side of the upper part of which is formed an arm or spout, E, in the upper side of the outer end of which is formed a hole to receive a gas-burner, or a pipe leading to a burner.

In the lower side of the arm E is formed a hole closed with a hand-screw, *e'*, to enable the water or tar that may collect in said arm to be drawn out.

F is a plate, the edge of which rests upon

a shoulder, *d'*, formed upon the inner surface of the vessel D.

The plate F is made somewhat conical, and has a hole formed in its middle part, in which is inserted the end of a short tube, the lower end of which serves as a seat for the valve K. The valve K is made in the shape of an inverted cup, and is screwed upon the lower end of the rod G, which passes up through a nut, *h'*, attached to the center of the plate H, and which is made heavy to serve as a weight, or is made cup-shaped, and has quicksilver placed in it to serve as a weight, and also as a packing, to prevent any gas from passing up around the screw-rod G.

The edges of the plate H are bent downward, and are inserted in a ring-channel formed by a V-shaped flange, I, of the part L of the device.

The lower edge of the part L rests upon the upper edge of the part D, and the two edges are flanged to receive the bolts by which the said parts D L are secured to each other.

The channel I of the part L, in which the edge of the plate H rests, is filled with quicksilver to prevent any gas from passing up around the edge of the said plate H.

The upper part of the screw-rod G is provided with a hand-nut, *g'*, to enable it to be conveniently turned to adjust the valve K.

The device is covered with a cap, J, the edge of which rests upon the edge of the part L, and in the upper part of which is formed a guide-socket to receive the upper end of the screw-rod G.

The lower surface of the plate H, both surfaces of the plate F, the inner surface of the part D, below the said plate F, and the surface of the valve K, are coated with quicksilver to prevent the gas from corroding said surfaces, to cause the tar carried in the gas to be deposited, and to prevent the said tar from adhering to said surfaces.

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

1. The combination of the T-pipe A, provided with the cap B, and the filtering-box

C, with the lower part D of a gas-regulator, for purifying the gas introduced into said regulator, substantially as herein shown and described.

2. The gas-regulator, formed by the combination with each other of the part D, provided with the shoulder d' , the part L, provided with the V-shaped ring-flange I to re-

ceive the quicksilver, the cap J, the plate F, the weighted plate H h' , and the valve K, and its adjusting-rod G, substantially as herein shown and described.

CHARLES C. PLACE.

Witnesses:

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FREDERICK D. JAMES.