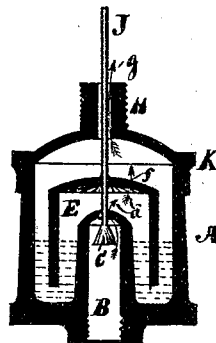


H. STACEY.
GAS-REGULATOR.

No. 179,878

Patented July 18, 1876.



Witnessed;
E. C. Whitney.
Geo. Lupton,

Inventor:
Henry Stacey
Per. E. C. Mink
his atty.

UNITED STATES PATENT OFFICE.

HENRY STACEY, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN GAS-REGULATORS.

Specification forming part of Letters Patent No. **179,878**, dated July 18, 1876; application filed May 17, 1876.

To all whom it may concern:

Be it known that I, HENRY STACEY, of Indianapolis, county of Marion, State of Indiana, have invented a new and useful Regulator for Gas-Burners, of which the following is a specification, reference being had to the accompanying drawings.

My invention consists in constructing and arranging the parts as described hereafter, to facilitate the manufacture and reduce the expense.

In the drawings I have represented a sectional view of my improved gas-regulator, the figure of which clearly shows the arrangement of parts.

A represents the reservoir or main shell of the regulator, having an annular space on the inside, formed by the upward projection of the central cylinder B. The lower end of the cylinder B is provided with screw-threads, so as to allow the regulator to be mounted on the connecting-pipe, in the usual manner. The upper end of this central cylinder B is provided with a cone-shaped opening or seat to receive the cone-shaped valve C. This valve C operates in the cylinder B, and, when raised up, closes the opening in the upper part of the central cylinder B, in the manner shown.

From the upper end of the cone-valve C projects a stem, J, which extends upward through the nipple or tube H on the cap K into any kind of burner that may be attached thereto, as shown.

The float E is made in the usual manner and form, and is immersed in glycerine, that is held in the annular space between the central cylinder B and outer case A, as shown. The top of the float E is perforated with a hole, *f*, of the required size to allow a certain quantity of gas to pass through to the burner, much in the usual manner, as represented by the arrows *d* and *g*. The stem J of the cone-valve C passes through the center of the convex top of the float E, and is there secured air-tight by solder, or other means of forming a perfect joint, and the cone-valve C is located at the proper distance below in the cylinder

B as to allow the valve to be open when the float is down on the bottom of the annular space that surrounds the central cylinder B; and the quantity of gas that passes through the hole *f* of the float to the burner is regulated in the float by means of the valve C in the central cylinder B, so that the pressure in the float is constant, and always at one inch, the float being of sufficient weight to produce the given pressure.

By this arrangement of parts the gas has to pass the float-valve C before it can pass into the float, and the pressure of gas in the float is controlled and regulated so that only a given quantity can pass through the hole *f* to the burner, which produces an even, steady flow of gas at any given pressure and quantity required. In regulators of this class heretofore made the central case B has been tapering, with a seat below the top, rendering the article difficult to cast, expensive to construct, and necessitating the use of an additional hollow fixture at the bottom to receive the valve.

By making the case B cylindrical, with the valve-seat at the top, it may be bored out and the seat turned to fit the valve by the single operation of an ordinary rotating bit. The case may be cast with but an ordinary cylindrical core, and the use of a hollow screw fixture at the bottom is dispensed with. Moreover, the tube H serves to guide the stem J and keep the valve and float in position.

I claim as an improvement in this class of regulators—

The regulator consisting of the outer case A, its central cylindrical tube B, contracted at the top to form a valve-seat, the float E, and stem J, passing through and guided by the tube H, attached to the float, and carrying a valve adapted to the seat, all as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY STACEY.

Witnesses:

E. O. FRINK,
E. C. WHITNEY.