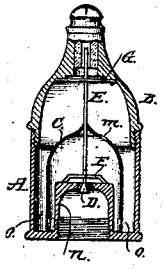
A. PARSONS.

GAS-REGULATOR.

No. 182,595. Patented Sept. 26, 1876.



Attest:

Samuel Harris.
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UNITED STATES PATENT OFFICE.

AUGUSTUS PARSONS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN GAS-REGULATORS.

Specification forming part of Letters Patent No. **182,595**, dated September 26, 1876; application filed August 2, 1876.

To all whom it may concern:

Be it known that I, AUGUSTUS PARSONS, of Chicago, Cook county, State of Illinois, have invented a new and useful Improvement in an Automatic Gas-Regulator, which Improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to regulate automatically the amount of gas consumed by a gas-burner. It consists of a casing made of brass, or other suitable material, about seven-eighths of an inch in diameter, and about the same height, which contains a float, having a valve attached to it, together with a long valve-stem of small diameter, that passes through certain guides, which prevents the float from coming in contact with the casing, thereby reducing the friction to the smallest amount practicable, the whole made in such a manner that if the pressure of gas is increased the float will rise, thereby partly closing the valve and stop the blowing of the gas; and if the pressure is decreased the float will drop, thereby opening the valve and allow more gas to pass to the burner.

In the drawing, A represents the casing having an inner projection, *n*, from the bottom upward. This projection is bored out and threaded to screw on the gas-pipe. In the top of projection *n* is a conical valve-seat, and between the sides of projection *n* and the casing A is a recess, *o*, about three-sixteenths of an inch across, and about three-eighths of an inch deep. C is a float, made very thin brass, and is an inverted cup, having a spherical top, in the center of which is a small hole drilled and threaded to receive the valve-stem. E is the valve-stem, having the conical valve D attached to the lower end. F is a guide fastened to the top of projection *n*, having a small hole through which the valve-stem E passes, and it acts as a guide to the valve D, and also to the float C. The upper end of the stem E is threaded the required distance to fit the nut in the top of float C, and is screwed into it after passing through the valve-seat and guide F. The stem passes upward from the float C through the guide G, attach to the cover B. B is the top or cover to casing A. In the top of cover B is an opening of the proper size to admit of the burner being attached to it. Near the top of float C is a hole, *m*, through which the gas passes to the burner. The lower end of float C passes down into the recess *o* and rests on the bottom of casing A. When in that position the valve is adjusted by means of the screw on the valve-stem, so as to give the required opening between the valve and seat. The recess *o* is filled up about one-quarter of an inch with glycerine, so as to prevent the gas from passing around the float C.

The hole *m* will be made of the proper size to allow a sufficient amount of gas to pass through it to supply the burner. If the pressure increases on the pipes the pressure will be correspondingly increased within the float, which will cause the float to rise, thereby partly closing the valve. If the pressure decreases the float will drop on account of its weight, thereby opening the valve.

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

1. The combination of the casing A, projection *n*, and guide F, constructed substantially as and for the purpose set forth.

2. The combination of the guide F, float C, valve-rod E, and valve D, constructed substantially as and for the purpose above described.

AUGUSTUS PARSONS.

Witnesses:

SAMUEL HARRIS,

S. S. HARRIS.