

P. ALBERTINE, Jr.  
FLUID PRESSURE REGULATOR.

Patented June 8, 1897.

Fig. 1.

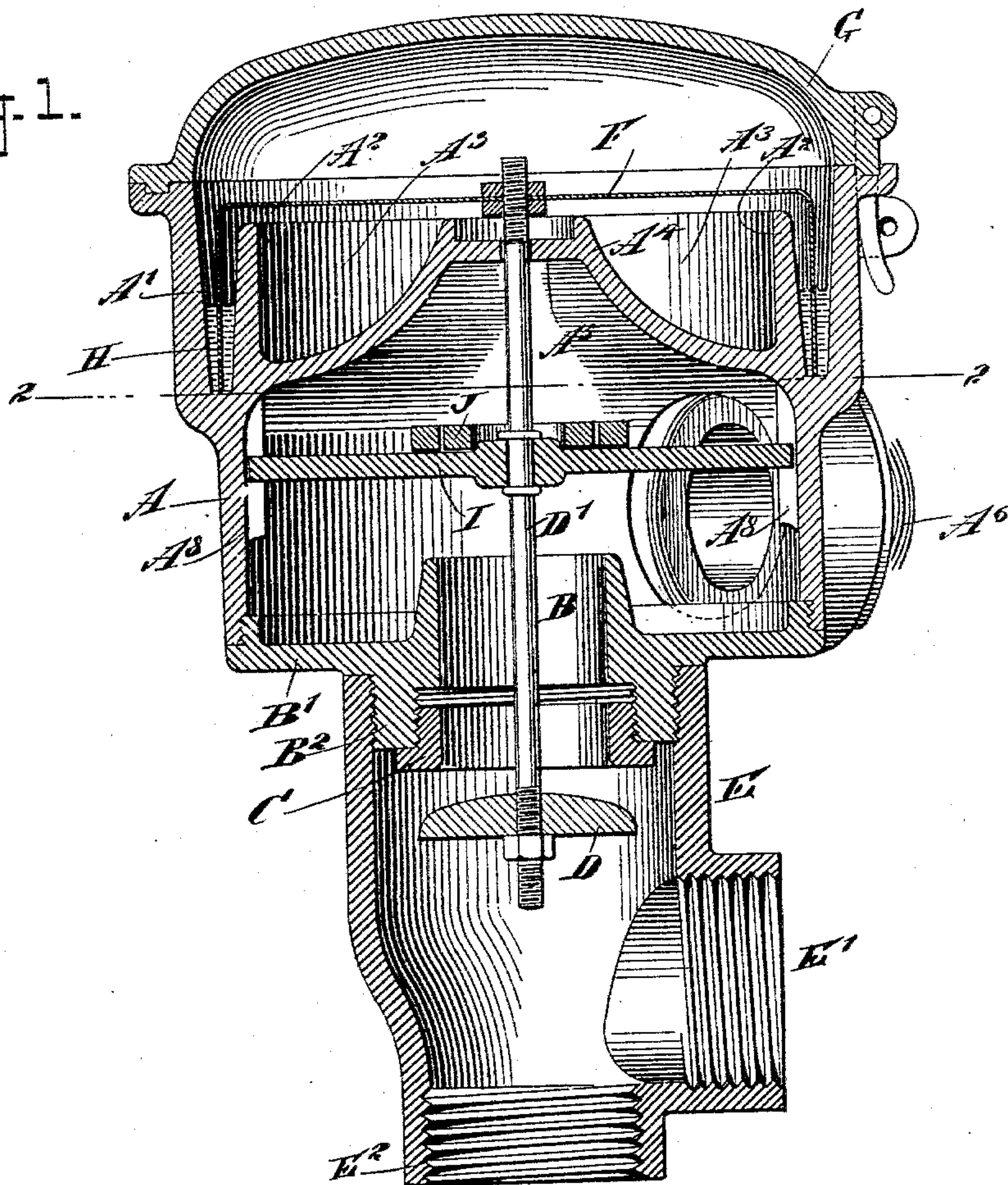
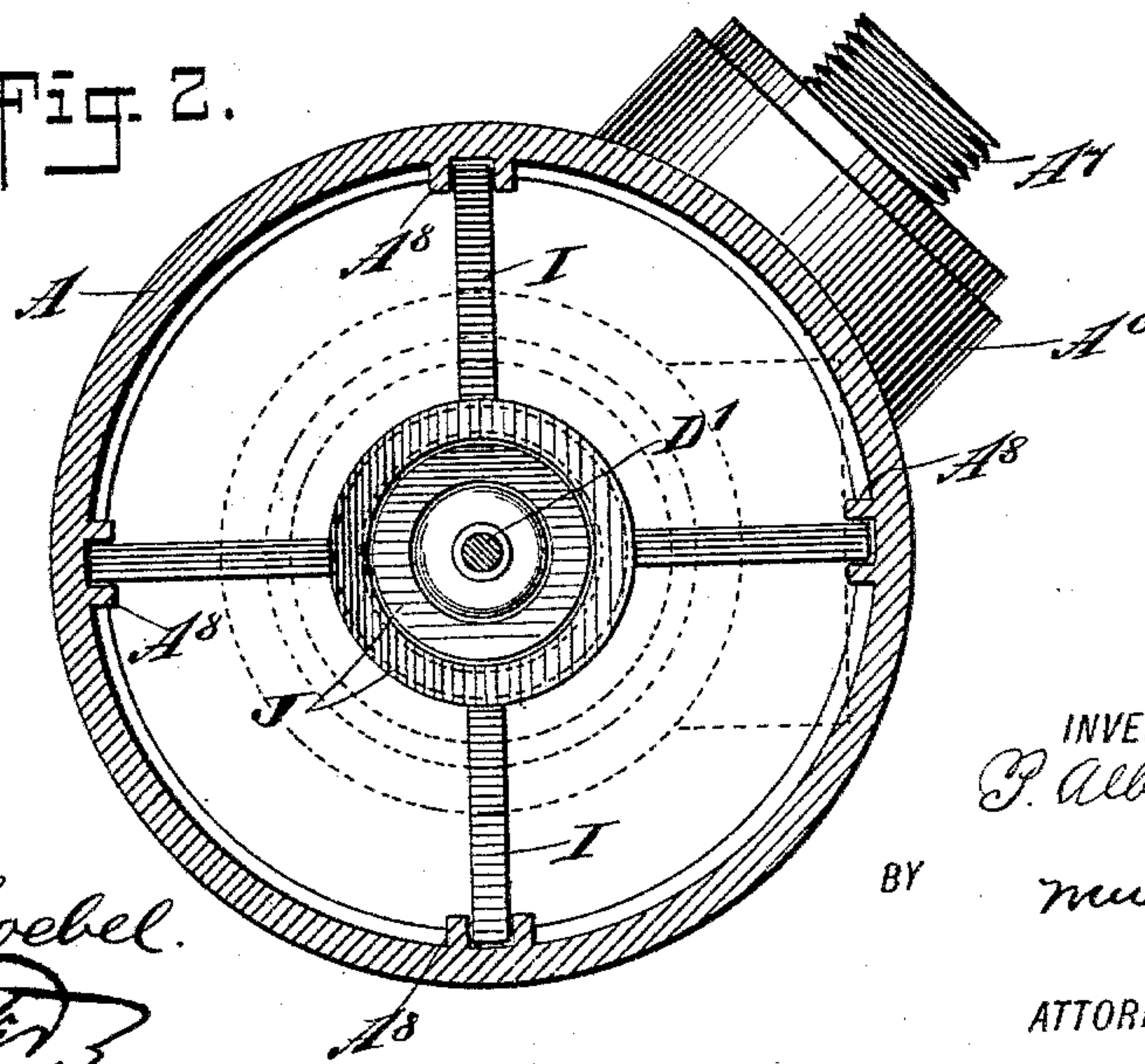


Fig. 2.



WITNESSES :

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# UNITED STATES PATENT OFFICE.

PETER ALBERTINE, JR., OF CARLSTADT, NEW JERSEY.

## FLUID-PRESSURE REGULATOR.

SPECIFICATION forming part of Letters Patent No. 584,201, dated June 8, 1897.

Application filed November 17, 1896. Serial No. 612,481. (No model.)

*To all whom it may concern:*

Be it known that I, PETER ALBERTINE, Jr., of Carlstadt, in the county of Bergen and State of New Jersey, have invented a new and Improved Gas-Regulator, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved gas-regulator which is simple and durable in construction, very effective in operation, and arranged to admit of being coupled to various supply and service pipes.

The invention consists principally of a casing having an inlet, an outlet, and an annular chamber for containing a liquid, a float dipping with its lower edge into the said liquid, a valve-stem carried by the said float and supporting a valve moving toward and from a valve-seat in the said casing, the valve-seat being arranged between the said inlet and outlet, and a guide held on the said valve-stem and engaging guideways in the said casing, the said guide receiving weights for increasing or diminishing the weight of the float.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a sectional side elevation of the improvement, and Fig. 2 is a sectional plan view of the same on the line 2 2 of Fig. 1.

The improved gas-regulator is provided with a casing A, in the lower end of which screws a bottom B', formed at its middle with an upwardly-extending inlet B, through which the gas can pass into the interior of the casing A. On the under side of the bottom B' is formed an internally and externally threaded boss B<sup>2</sup>, in which screws a valve-seat C, adapted to be engaged by a valve D, operating within a nipple E, having bosses E' E<sup>2</sup> for connection with a gas-supply pipe in either a horizontal or vertical direction, it being understood that the boss E' or E<sup>2</sup>, not connected with the supply-pipe, is closed by a plug. The nipple screws on the external thread of the boss B<sup>2</sup>, as plainly shown in Fig. 1.

The valve D is held on the lower end of a

valve-stem D', extending upwardly through the inlet B to connect at its upper end with the middle of a bell-shaped float F, the edges of which dip into mercury or other liquid H, contained in a cup A', formed in the upper portion of the casing A, between the outer wall of the casing and an internal annular wall A<sup>2</sup>, forming a chamber A<sup>3</sup> with the conical top A<sup>4</sup> of the casing. The conical top A<sup>4</sup> has its apex A<sup>5</sup> formed with an opening for the passage of the stem B' and the gas directed to the said opening by the inner surface of the conical top A.

From the casing A, below the top A<sup>4</sup>, leads an outlet A<sup>6</sup>, formed with a threaded offset A<sup>7</sup> for connection with the service-pipe carrying the gas to the burners.

On the valve-stem D', within the casing A, is arranged a guide I in the form of a spider, having the ends of its arms fitted to slide in guideways A<sup>8</sup>, arranged on the inner surface of the casing A. The top of the guide I is adapted to support weights J in the form of rings and of a predetermined weight, so as to increase or diminish the downward pressure on the float F and render the device capable of use on pipes of different diameters.

By reference to Fig. 1 it will be seen that the walls of the cup A', as well as the conical top A<sup>4</sup>, are integral with the casing and any mercury or other liquid contained in the said cup and spilled over the inner wall A<sup>2</sup> thereof falls into the chamber A<sup>3</sup>, and consequently is not liable to pass through the opening in the apex A<sup>5</sup> into the interior of the casing.

The upper end of the casing A is closed by a cup G, which when removed gives access to the cup A' and the float F, and by unscrewing the bottom B access is had to the interior of the casing, so that more or less weights J can be placed upon the guide I, according to the intended use of the gas-regulator.

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

1. A gas-regulator, comprising a casing having an inlet, an outlet, a cup for containing a liquid, a float dipping with its lower edge into the said liquid, a valve-stem carried by the said float and supporting a valve adapted to move toward and from a valve-seat in the said casing, the valve-seat being arranged be-



tween the inlet and outlet, a guide held on the said valve-stem and engaging guideways in the said casing, and weights removably held on the said guide for increasing or diminishing the downward pressure on the said float, as set forth.

2. A gas-regulator, comprising a casing adapted to be closed on the top by a lid and at its lower end by a removable bottom formed with an upwardly-extending inlet, a valve-seat secured to a boss on the under side of the said bottom, a valve adapted to be seated on the said valve-seat, a float connected with the stem of the said valve-seat, a mercury-

cup formed integrally on the said casing and containing a liquid into which dips the lower edge of the said float, the valve-stem of the said valve being connected with the said float, a guide held on the said valve-stem and engaging guideways on the interior of the said casing, an outlet leading from the casing, and weights adapted to be supported on the said guide, substantially as shown and described.

PETER ALBERTINE, JR.

Witnesses:

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