

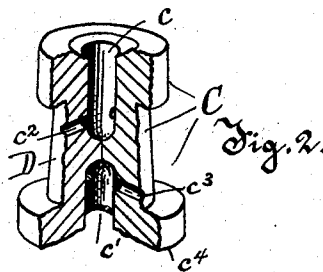
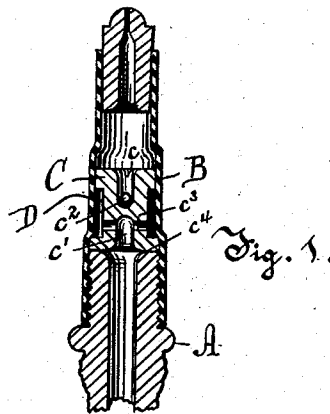
(No Model.)

N. J. DITTO.

GAS GOVERNOR AND PRESSURE REGULATOR.

No. 416,722.

Patented Dec. 10, 1889.



Witnesses:
Lawrence O. Robbins.
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UNITED STATES PATENT OFFICE.

NELSON J. DITTO, OF WASHINGTON, DISTRICT OF COLUMBIA.

GAS GOVERNOR AND PRESSURE-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 416,722, dated December 10, 1889.

Application filed August 16, 1889. Serial No. 320,923. (No model.)

To all whom it may concern:

Be it known that I, NELSON J. DITTO, a citizen of the United States of America, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Gas-Governors, and Pressure-Regulators, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in gas governors or pressure-regulators placed at or near the point of combustion, and tends to maintain a uniform flow and consequent consumption of gas where there is a varying pressure.

The invention consists in a metallic check or cylindrical plug, which may be inserted in the pillar of the burner or gas-fixture. This cylindrical plug is provided with an axial opening from the base extending to two or more centrifugal antipodal or radiating passages, which lead from the axial opening to a peripheral annular space, which space extends about one-half of the length of the cylindrical plug. From the upper edge of said annular space, and at right angles to the centrifugal passages, (though they might be placed at any angle or parallel,) two or more antipodal or radiating centripetal passages lead to an upper axial opening, thus causing the two currents of gas after having been thrice abruptly turned in their course to impinge (against) each other just below the point of combustion.

In the accompanying drawings, Figure 1 shows a vertical central section. A is the gas-pipe; B, the brass pillar; C, the plug or regulator; c , the upper axial opening; c' , lower axial opening; c^2 , centripetal passages; c^3 , centrifugal passages; c^4 , lower bearing-face of regulator, which rests on the upper end of gas-pipe; and D, annular space. This figure (Fig. 1) shows a section of my invention as applied to the pillar of a burner specially proportioned for it, the upper edge of regulator slightly conical to fit against the reduced size of the pillar and the middle section just long enough to let the lower end of cylinder rest on the thread end of gas-pipe.

Fig. 2 shows a detail vertical section of the

regulator separate from the pillar or burner, the parts indicated by letters same as Fig. 1. This regulator may become a distinct article of manufacture.

The whole device is constructed by making a slightly-conically-shaped metallic cylinder or plug of size to fit the ordinary brass pillar used in gas-fixtures, as shown in Fig. 1. This plug has a peripheral annular space, equidistant from base and capital, extending about one-half the length of plug. From the base an axial opening passes up to two or more radiating openings, the said openings being in the same horizontal plane, and passing to the circumference just where the plug is reduced to form the annular space. From the upper edge of the annular space, in a vertical plane at any desired angle to the vertical plane in which the two or more antipodal or radiating openings just described lie, (which we call the "centrifugal" passage,) and in a horizontal plane with the lower end of the upper axial opening, two or more other antipodal or radiating passages are made to the upper axial opening, which we call "centripetal" passages. The upper axial opening passes from the upper before-mentioned horizontal plane through the capital or upper end of plug. The two axial openings together extend about one-half the length of said plug, the peripheral annular space, with the openings, affording a passage for gas from the lower to the upper axial opening. This plug is made to fit tightly in the brass pillar, so that the gas cannot pass around it. When the pillar is in place, the plug will rest on the end of the gas-pipe, or near it, so that the gas must necessarily pass to the burner through the passages made in the pillar, as above described.

I do not claim a governor or pressure-regulator by virtue of the antipodal currents impinging each other, or by reason of a cylindrical plug made to fit in the pillars of a gas-burner alone.

I do claim—

1. The cylindrical governor having an axial opening extending upward from its base, and an external annular groove and passages extending from said groove to said base-open-

ing, also an axial opening extending from its top toward the center, and passages connecting said opening with the said annular groove.

- 5 2. The cylindrical governor combining base and top axial openings connected by means of horizontal passages and by an annular groove, as specified.

In testimony whereof I affix my signature in presence of two witnesses.

NELSON J. DITTO.

Witnesses :

LAWRENCE O. ROBBINS.

J. W. P. MYERS.