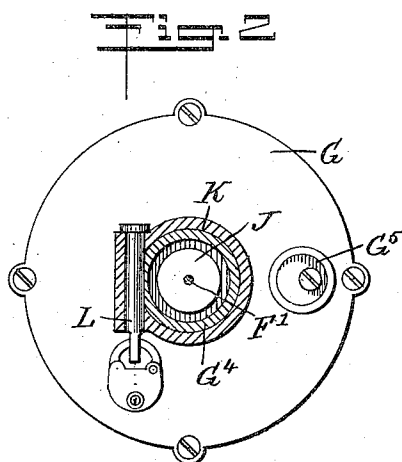
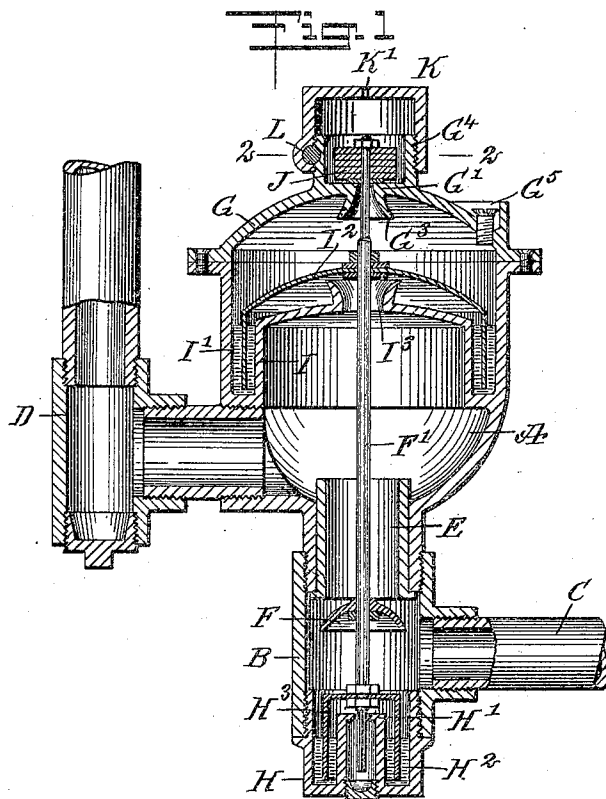


J. G. WILSON.
GAS PRESSURE REGULATOR.
APPLICATION FILED AUG. 7, 1908.

934,780.

Patented Sept. 21, 1909.



WITNESSES
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JOHN G. WILSON, OF NEW YORK, N. Y.

GAS-PRESSURE REGULATOR.

934,780.

Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed August 7, 1908. Serial No. 447,414.

To all whom it may concern:

Be it known that I, JOHN G. WILSON, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Gas-Pressure 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 pressure regulator, for use in the service pipe between the gas meter and the burners, and arranged to insure uniform pressure at the burners, to render the regulator exceedingly sensitive and to prevent the working parts from sticking.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claim.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

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 casing A is provided at the bottom with a tee B, connected at one side with the pipe C leading to the gas meter or the source of gas supply, and from one side of the casing A extends the connection D for conducting the gas to the burners.

A valve seat E is held in the bottom of the casing A, to establish connection between the tee B and the interior of the casing A, and on the valve seat E is adapted to be seated the valve F arranged within the tee B.

The stem F' of the valve F has its upper end mounted to slide loosely in a bearing G' formed on the cover G, fastened to the top of the casing A, and the lower end of the valve stem F' is mounted to slide loosely in a bearing H' formed in a mercury cup H, screwed or otherwise fastened to the bottom of the tee B. In the mercury H² contained in the cup H is mounted to rise and fall a small bell H³, secured to the valve stem F' and inclosing and protecting the bearing H' against the gas.

In the upper portion of the casing A is secured or formed a mercury cup I filled with mercury I', in which rises and falls

the bell I² secured to the valve stem F', the interior of the bell I² being in communication with the interior of the casing A by a spout I³ formed in the roof of the mercury cup I, so that the gas entering the casing A by way of the valve seat E and open valve F influences the bell I², to cause the same to rise or fall according to the gas pressure, and this movement of the bell I² causes a movement of the valve F toward or from the valve seat E, to control the admission of the gas to the casing A, and thus regulate the pressure of the gas passing from the casing A by way of the service pipe D to the burners.

The bearing G' in the cover G terminates in a downwardly-extending flange G², which prevents the mercury I' from passing through the bearing G' in case the regulator is tilted or turned upside down during storage or transportation.

On the extreme upper end of the valve stem F' are removably held the weights J, extending within the chamber G⁴ formed on top of the cover G and normally closed by a cap K, locked in place by a suitable locking device L, to prevent unauthorized persons from tampering with the removable weights J.

The cap K is provided with an air hole K' for the entrance of air to the chamber G⁴ and the interior of the upper portion of the casing A, to subject the outside of the bell I² to atmospheric pressure.

The cover G is provided with a normally closed spout G⁵, for filling the cup I with mercury or removing the latter therefrom.

By the arrangement described, the bearings G', H' for the valve stem F' are remote from the interior of the casing A, and hence the gas passing through the regulator does not come in contact with the bearings, and deposits and the like from the gas are not liable to clog up the bearings, thereby insuring at all times a proper working of the valve F and the bell I².

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

A gas pressure regulator comprising a casing provided with an inlet and an outlet, and with a bearing below the inlet and a bearing above the outlet, a mercury cup encircling the lower bearing, a second mercury cup concentric with the upper bearing

and arranged therebelow, a valve controlling the inlet and provided with a stem extending through the bearings, bells attached to the stem and rising and falling in the
5 said cups, a cover for the casing provided with a weight chamber, and provided on its under side with an annular depending flange for retaining the mercury on turning the casing upside down, a cap for closing
10 the weight chamber, a lock for locking the

cap in place, and weights on the valve stem within the chamber.

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

JOHN G. WILSON.

Witnesses:

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