

(No Model.)

W. C. DOWNWARD.
FLUID PRESSURE REGULATOR.

No. 577,289.

Patented Feb. 16, 1897.

Fig. 2.

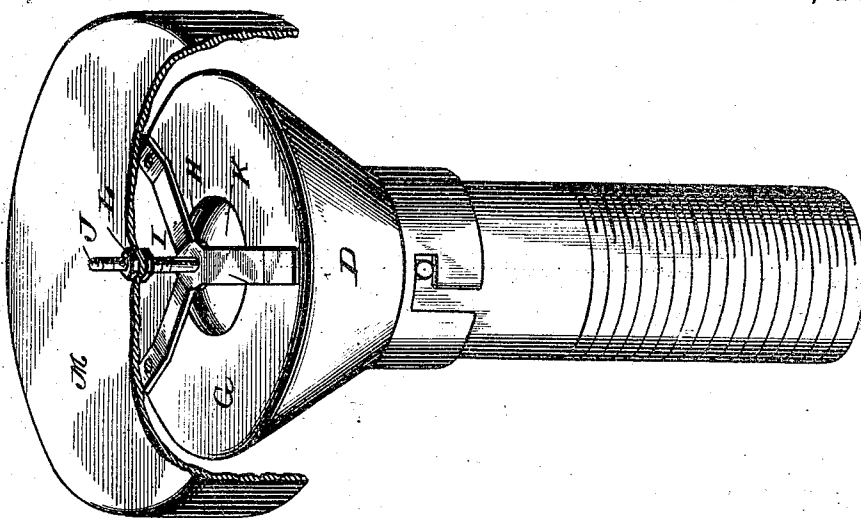
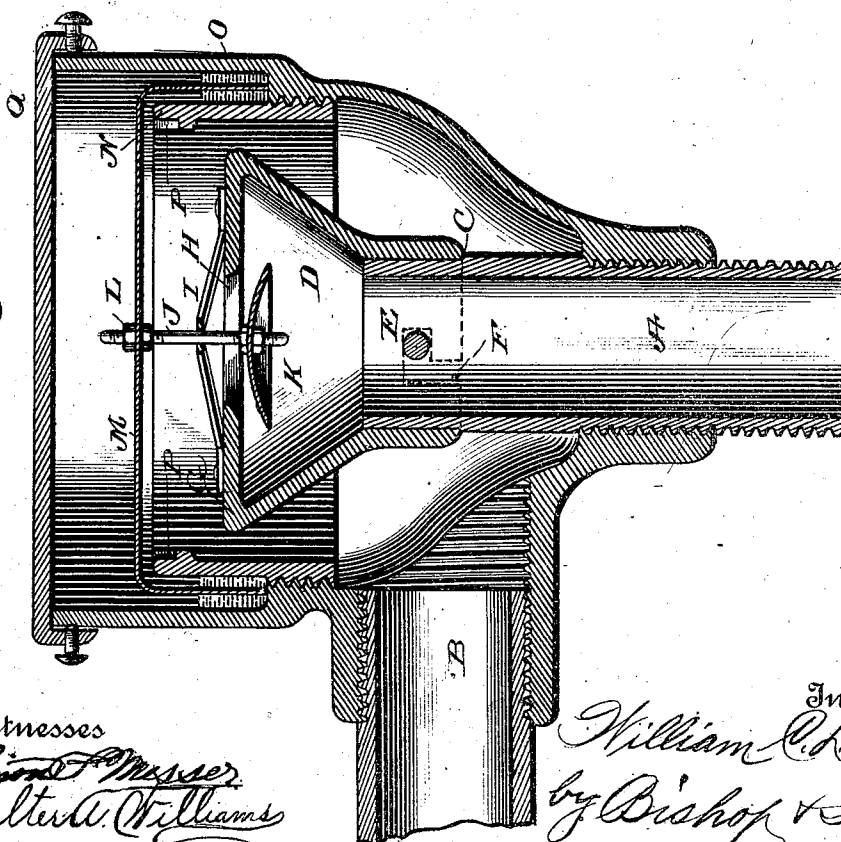


Fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM C. DOWNWARD, OF WILMINGTON, DELAWARE.

FLUID-PRESSURE REGULATOR.

SPECIFICATION forming part of Letters Patent No. 577,289, dated February 16, 1897.

Application filed November 5, 1896. Serial No. 611,105. (No model.)

to all whom it may concern:

Be it known that I, WILLIAM C. DOWNWARD, a citizen of the United States, residing at Wilmington, in the county of New Castle and State of Delaware, have invented certain new and useful Improvements in Gas-Governors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My present invention relates to improvements in gas-governors, and aims to simplify and improve the construction of that class of devices, so as to facilitate cleaning of the same.

The invention consists in certain novel features hereinafter described and claimed.

In the annexed drawings, Figure 1 is a vertical section of a gas-governor constructed in accordance with my invention, and Fig. 2 is a perspective view of the inner gas-chamber and the valve-guide.

Referring to the drawings more particularly by letter, A designates the inlet-pipe, and B the outlet-pipe. The inlet-pipe A is provided near its upper end with an annular shoulder C, upon which the gas-chamber D rests. The inlet-pipe is also provided with radial pins or lugs E, which are engaged by bayonet-slots F in the lower edge of the gas-chamber.

The gas-chamber flares upwardly and has a top G, which is provided with a central opening H. Upon the top of the gas-chamber is secured a guide I, consisting of a number of upwardly-converging arms X, through which and the opening H the valve-stem J passes. On the lower end of the stem J is secured a valve-disk K, which is adapted to bear against the top of the gas-chamber D and thereby arrest the flow of the gas.

On the upper end of the stem is secured by nuts L a float M, which extends over the ring N and has its edge playing in a liquid seal formed between the said ring and the outer wall or casing O of the governor, the said outer wall or casing being provided with suitable threaded openings, in which the inlet and outlet pipes are secured, as shown, and as will be readily understood. The ring N is provided

with the diametrically opposite lugs P, adapted to be engaged by a spanner and facilitate the fitting together of the device. A cover Q is secured over the top of the outer casing.

In operation the gas rises through the inlet-pipe and the inner gas-chamber and passes through the opening H into the outer gas-chamber and the outlet-pipe. Should the back pressure in the main be increased, the float will be raised and the valve consequently drawn against its seat, so as to cut off the flow of gas. After the pressure subsides to its normal condition the float falls by gravity, and the gas again flows through the device.

Should the device need cleaning, the cover is removed and the nut L turned off the valve-stem, after which the float is lifted out of the casing. The valve-stem guide is then grasped and the inner gas-chamber given a partial turn, so that it may be lifted from the pins or lugs on the inlet-pipe and removed from the casing. After being cleaned the parts are fitted together in reverse order.

It will be obvious from the foregoing description, taken in connection with the accompanying drawings, that I have provided a very simple and efficient device in which all the interior parts are readily accessible for cleaning and repairing, and its advantages are thought to be obvious without a further detailed reference thereto.

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

The combination of the outer casing, the inlet-pipe, the gas-chamber removably attached to the upper end of the same, the ring secured within the outer casing around the gas-chamber, the valve-stem guide consisting of upwardly-converging arms secured on top of the gas-chamber, a valve within said chamber, a valve-stem rising from said valve through the guide, and a float removably secured on the upper end of the stem and having its edge playing between the outer casing and the ring secured thereto.

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

WILLIAM C. DOWNWARD.

Witnesses:

J. JACKSON PEIRCE,

GEO. W. BUSH.