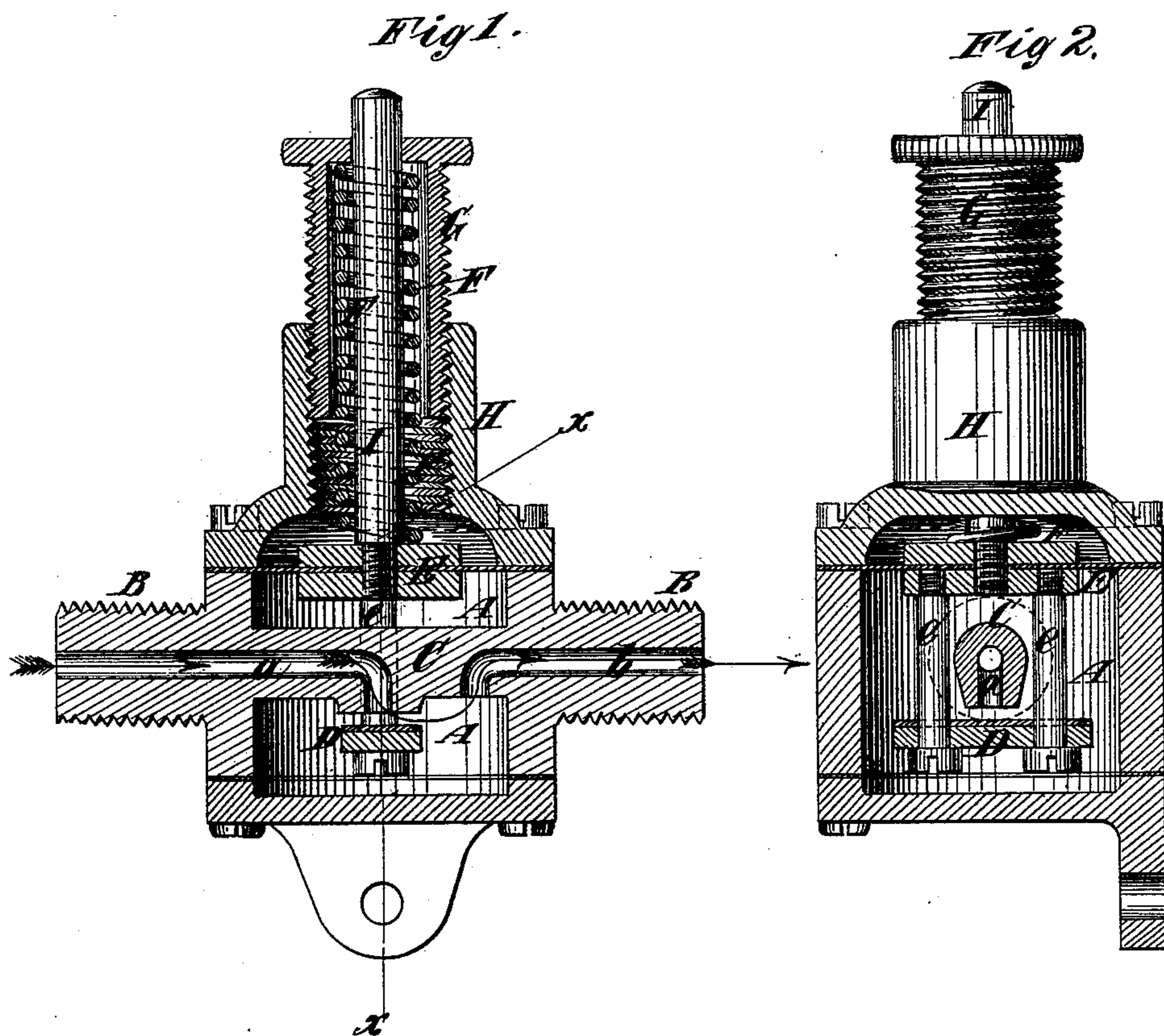


(No Model.)

C. MOORE
Pressure Regulator for Air, &c.

No. 234,051.

Patented Nov. 2, 1880.



Witnesses

John Becker
Fred Haynes

Inventor

Charles Moore
by his Attorneys
Brown & Brown

UNITED STATES PATENT OFFICE.

CHARLES MOORE, OF NEW YORK, N. Y., ASSIGNOR TO HENRY C. SERGEANT
AND GEORGE R. CULLINGWORTH, OF SAME PLACE.

PRESSURE-REGULATOR FOR AIR, &c.

SPECIFICATION forming part of Letters Patent No. 234,051, dated November 2, 1880.

Application filed March 30, 1880. (No model.)

To all whom it may concern:

Be it known that I, CHARLES MOORE, of the city of New York, in the county and State of New York, have invented a certain new and useful Improvement in Pressure-Regulators for Air, Gas, &c., of which the following is a specification.

My invention consists in the combination, in a pressure-regulator for air or gas, of a chamber, a bridge-piece extending across said chamber, a receiving passage or duct and a delivery passage or duct in said bridge-piece, a valve adapted to close against the mouth of the said receiving passage or duct, a diaphragm in said chamber, rods connecting said valve and diaphragm and extending upon opposite sides of said bridge-piece, and a spring and adjusting-nut for setting the regulator to the desired pressure.

In the accompanying drawings, Figure 1 represents a central vertical section of a regulator embodying my improvements, and Fig. 2 represents a corresponding section on the dotted line *xx*, Fig. 1.

Similar letters of reference designate corresponding parts in both the figures.

A designates the chamber of the regulator, provided with a receiving duct or passage, *a*, for the entrance of air or gas, and a delivery duct or passage, *b*, for the outflow of air or gas. As here represented, both of said ducts or passages pass outside the chamber through screw-threaded hubs B to facilitate the connection of air or gas pipes, and the inner portions of both are formed or contained in a bridge-piece, C, which extends across the chamber, but which is of small diameter, so as to allow a plentiful circulation of air or gas around it.

D designates a valve arranged in the chamber A and adapted to seat against the inner mouth of the receiving duct or passage *a*.

E designates a diaphragm, of flexible material, extending across the chamber A and adapted to be acted upon by the air or gas contained in said chamber to close said valve.

F designates a spring arranged to act upon the side of the diaphragm opposite to that acted on by the air or gas, and having a tendency to open the valve D to permit the passage of air or gas through the regulator.

The diaphragm E is connected to the valve D by means of a yoke formed by rods *e*, arranged one on each side of the bridge-piece C. In order to provide for properly regulating the degree of pressure which the regulator is intended to maintain, I provide for increasing or diminishing the resilience of the spring F, and, as here represented, this is done by means of a screw-plug, G, which is made hollow to receive the spring F, and screws into the cap or bonnet H of the regulator.

I designates a stem or rod extending upward from the diaphragm E through the plug G, and serving to properly center and guide the valve D and other parts in their movements.

As the valve D moves with the pressure instead of against it in opening, the regulator is much more sensitive to slight variations in pressure.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the chamber A, the bridge-piece C, the receiving-duct *a* and delivery-duct *b* in said bridge-piece, the valve D, adapted to close against the mouth of the duct *a*, the diaphragm E, the rods *e*, connecting said valve and diaphragm, the spring F, and screw-nut G, all substantially as specified.

CHARLES MOORE.

Witnesses:

HENRY T. BROWN,
FREDK. HAYNES.