

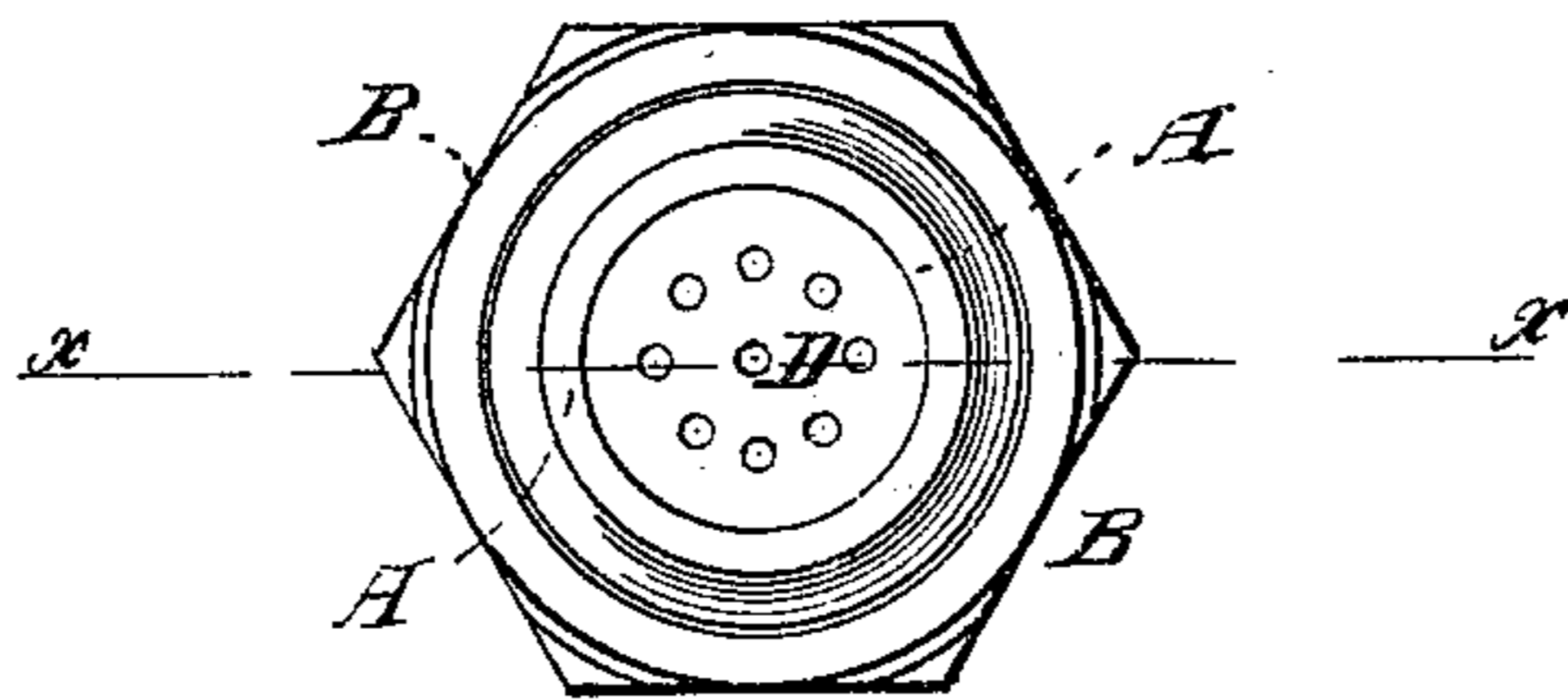
B. F. POTTER & R. C. HAYTON.

Gas Governors.

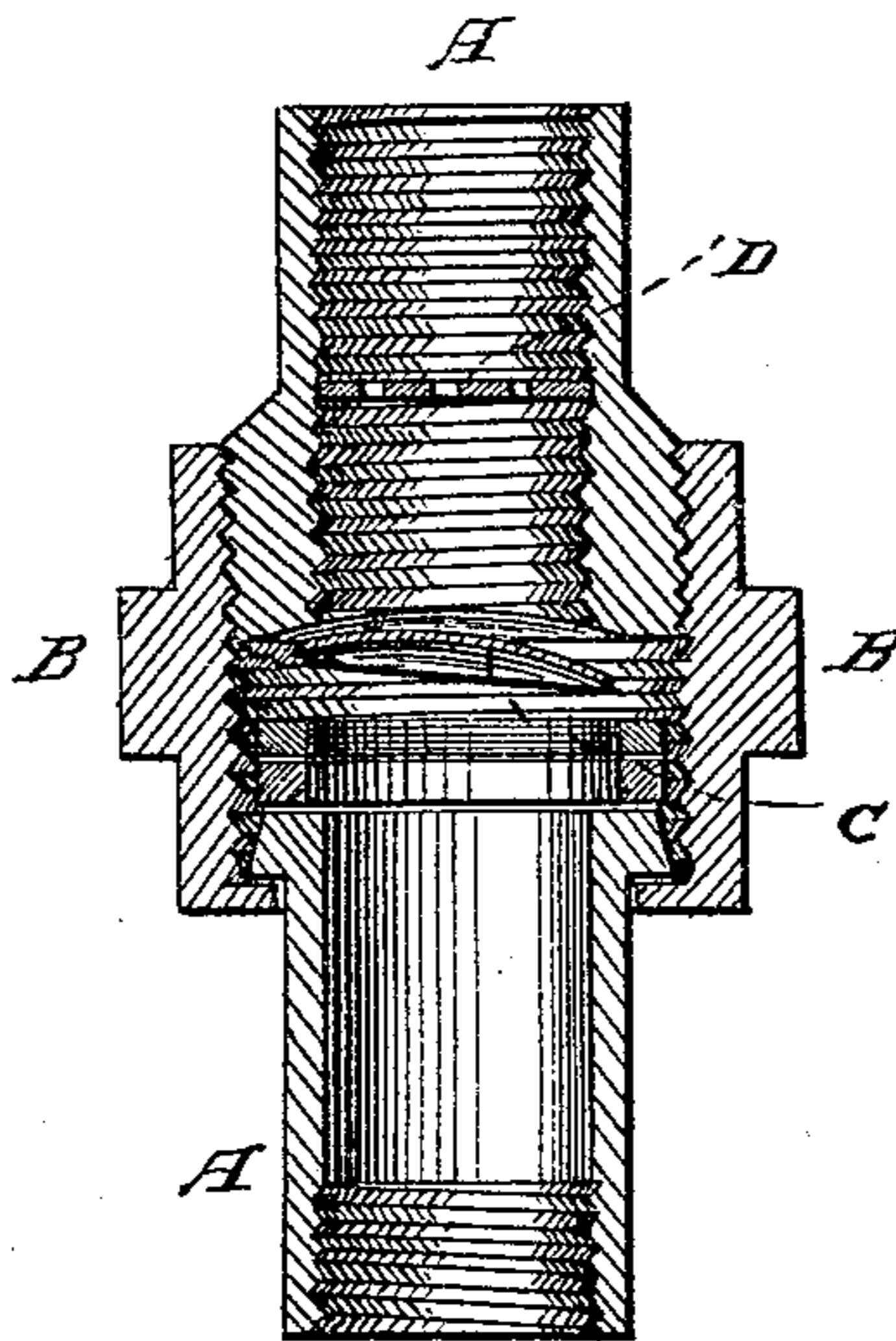
No. 151,428.

Patented May 26, 1874.

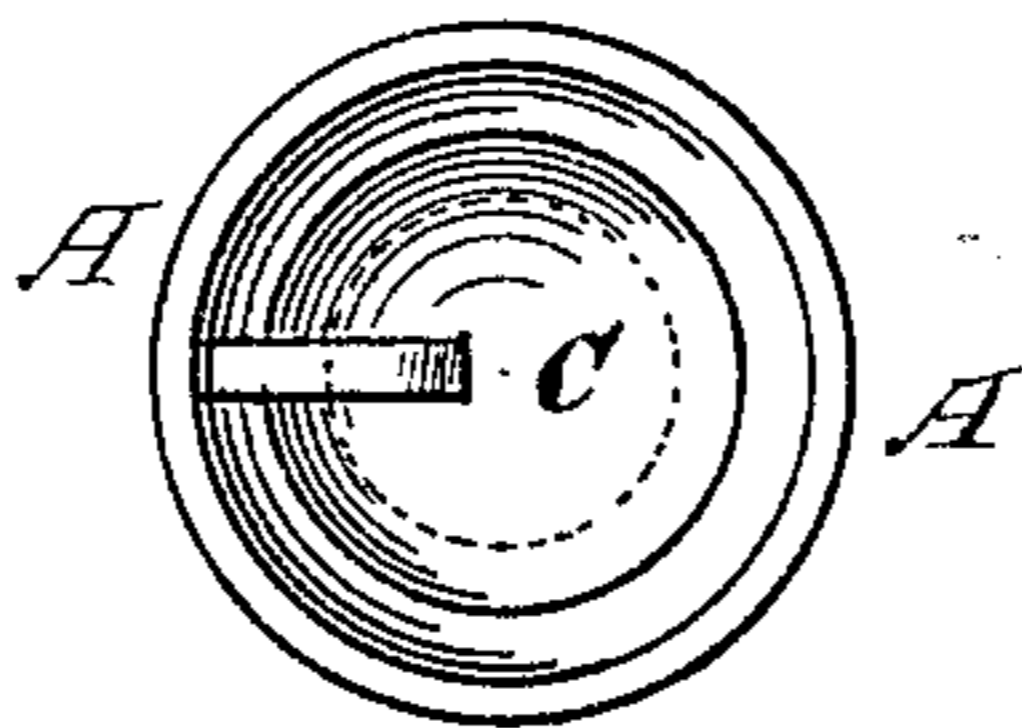
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

*P. C. Dieterich*

*Frederick Kiercher*

INVENTORS:

*Benj F Potter*

*Robert C Hayton*

*per. J. H. Alexander*  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

BENJAMIN F. POTTER AND ROBERT C. HAYTON, OF YPSILANTI, MICHIGAN.

## IMPROVEMENT IN GAS-GOVERNORS.

Specification forming part of Letters Patent No. 151,428, dated May 26, 1874; application filed April 4, 1874.

*To all whom it may concern:*

Be it known that we, BENJAMIN F. POTTER and ROBERT C. HAYTON, of the city of Ypsilanti, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in Gas-Governors; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of our invention consists in the construction and arrangement of a gas-governor for regulating the flow of gas, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view; Fig. 2, a central vertical section through line *x x*, and Fig. 3 a view of the valve *e*.

A A represent two screw-collars, coupled together by means of a coupling, B, in any of the known and usual ways, and to be used in attaching the pipe either above or below the meter. In one of the collars A is arranged a self-acting spring-valve, C, which opens toward the direction from which the gas flows, so as to be acted upon by the pressure of the gas itself, and thus forming a sure and effectual safeguard against any superfluous flow of gas. If the pressure of the gas is light the valve will open more and let more of the gas pass through; but as the pressure of the gas increases it closes the valve more and more, making the gas, so to say, regulate itself. On one side of this valve—that is, either above or below—is inserted a perforated diaphragm, D, forming between it and the spring-valve a

dead-air chamber, which may be regulated at will by moving the diaphragm up for light pressure, or down for heavy pressure, if required.

The space between the valve and the perforated cap, which we term the dead-air chamber, operates as follows: The gas, after passing the valve, is partially confined in the dead-air chamber by the perforated cap, and so checks, by a counter-pressure, the action of the valve. Without this dead-air chamber the valve under high pressure closes too quick. When the pressure upon the valve is very great the counter-pressure upon the other side of the valve from the gas in the dead-air chamber is proportionately increased. When the pressure upon the valve is light this counter-pressure is proportionately diminished. The result is, that the difference of the two pressures—forward and backward—remains very nearly constant.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The spring-valve C, arranged in the coupling A B, and acted upon by the gas, substantially as and for the purposes herein set forth.

2. The adjustable perforated diaphragm D, in combination with the self-acting spring-valve C, substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

BENJ. F. POTTER.  
ROBERT C. HAYTON.

Witnesses:

C. F. MCKINSTRY,  
S. M. CUTCHEON.